

Web 2.0 and Second Language Learning



Handbook of Research on Web 2.0 and Second Language Learning

Michael Thomas

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Section I **Network Communities and Second Language Learning**

This section establishes a context for the collection, with a series of chapters touching on policy issues related to the successful use of Web 2.0 and the implications for establishing learning communities in the new environment. Further chapters explore the challenges posed by ubiquitous networks and online communities for teaching and learning in an environment that is based on the easy access of information.

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<i>Michael Vallance, Future University Hakodate, Japan</i>	
<i>Kay Vallance, Brynteg Comprehensive School, UK</i>	
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This chapter introduces criteria for successful implementation of ICT-enabled tasks. It argues that integration of ICT is best supported by a pedagogy that facilitates experiential learning and a development of academic competencies. The context for demonstrating the importance of informed use of ICT is the “iPod therefore iWrite” research project where multiple-media content was developed by students in Japan and the United Kingdom.

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Communicative Networking and Linguistic Mashups on Web 2.0	20
<i>Mark Pegrum, University of Western Australia, Australia</i>	

The chapter examines current and potential uses of Web 2.0 tools in language education. Web 2.0 is principally about social networking and community building, activities which, because of the textual nature of the Web, are very much dependent on the medium of language. As a result, Web 2.0 tools can

greatly enhance the teaching of language and literacy, particularly if educators operate within a broadly social constructivist pedagogical paradigm and are prepared to work with linguistic mashups, the fluid blends of languages, codes, and media typical of Web 2.0.

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<i>Bernd Rüschoff, Universität Duisburg-Essen, Germany</i>	

This chapter discusses the principle of output orientation in language learning and considers the implications of using Web 2.0 tools in this context. It will also present an overview of a number of new pedagogical ideas indicating how the use of digital media can contribute both to the quality and quantity of learning materials. Based on Swain’s output hypothesis, it will be argued that learners engaged in negotiating meaningful and comprehensible output are very much engaged in learning experiences which foster language learners’ cognitive and linguistic growth by means of processes of reflective and collaborative learning.

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<i>Elena Benito-Ruiz, Universidad Politécnic de Valencia, Spain</i>	

The chapter explains the issue of information overload, introducing the concept of “infoxication 2.0” as one of the main disadvantages in the use of Web 2.0 tools in the language learning and teaching process. The chapter claims that the barrage of Web 2.0 information and communication resources for language learning might become an obstacle in the cognitive processing of such resources. Thus, in order to deal with this problem, two kinds of solutions are identified, those based on time management and those based on Web 2.0 technology agents such as RSS readers and RSS mash-up tools.

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<i>Margaret Rasulo, University of Naples L'Orientale, Italy</i>	

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<i>Tony Mullen, Tsuda College, Japan</i>	
<i>Christine Appel, Universitat Oberta de Catalunya, Spain</i>	
<i>Trevor Shanklin, San Diego State University, USA</i>	

This chapter analyzes the strengths and weaknesses of the Skype service as a tool for tandem language learning and presents a variety of ways in which its strengths can be enhanced and its weaknesses overcome by incorporating the exchange into a wider Web 2.0 environment, based on insights we have gained over the course of an ongoing study. Preliminary qualitative results are reported for two years of ongoing Skype-based tandem exchanges between Japanese students of English at Tsuda College, Tokyo, and American students of Japanese at San Diego State University. Finally, a prototype is presented for a new dedicated Web 2.0 environment designed to optimize the Skype tandem learning experience and to facilitate further research in the field.

Chapter VII

A Context-Based Approach to Web 2.0 and Language Education 119

Gary Motteram, University of Manchester, UK

Susan Brown, University of Manchester, UK

The chapter describes the introduction of social software into a master's level teacher education program at the University of Manchester, UK. It explores the potential roles that such social software play in the development of language skills and provides a rationale for why such software fits into the context-based approach that are espoused on the degree. The student perspective is represented via two case studies.

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The Use of Communities in a Virtual Learning Environment..... 137

Lut Baten, K.U.Leuven, Belgium

Nicolas Bouckaert, K.U.Leuven, Belgium

Kan Yingli, K.U.Leuven, Belgium

A project with graduate students of Business English was set up to develop a learning environment in a Google community. Google and Web 2.0 applications were used to publish content in a student driven way. A qualitative results survey reports on the satisfaction of the Google community compared to Blackboard.

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Digital Natives, Learner Perceptions and the Use of ICT 156

George R. MacLean, Tsukuba University, Japan

James A. Elwood, Tsukuba University, Japan

Prensky (2001) posited the emergence of a new generation of “digital natives” fluent in the language of cyberspace and familiar with the tools of user-generated content. If correct, the existence of this group would necessitate a thorough reconsideration of pedagogy to meet their radically different learning needs, which dovetail with the nascent Web 2.0 and its communities of users. The study examined in this chapter addressed a series of questions about the implications of digital natives in Japan, and found contemporary users of technology to be in firm control of only a limited number of skills. Learner use and perception of technology appeared to be mediated by several variables: technological proficiency or the lack thereof, tradition, willingness to use technology (WUT), and gender. The research instruments utilized in this chapter were analyzed and found to be psychometrically adequate. It is argued that these

categories and scales will provide a useful resource for further attempts to understand the potential of Web 2.0 and the concept of the digital native in other educational traditions and contexts.

Section II **The Read/Write Web and Second Language Learning**

This section provides a series of chapters examining social networking sites, podcasting, and blogging in more detail. All three areas help to define and clarify the shift from Web 1.0 (the read-only Web) to the second generation or read/write Web. Chapters examine such sites as Mixi in Japan and MySpace, as well as a number of prominent podcasting and blogging sites, and the challenges and opportunities they present to students and teachers.

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Social Networking Behind Student Lines in Japan 181
Steve McCarty, Osaka Jogakuin College, Japan

Through the Japanese social networking service Mixi, the author opened up a supplementary online dimension with the potential to motivate EFL language learners from before admission to after graduation. With explanatory frameworks including Japanese socioculture and metaphors of lines in crossing cultures, this chapter shows how and why students responded in ways that were complex, in terms of peer group dynamics, yet indicative of enhanced integrative motivation toward the target language community. Authentic Web 2.0 CALL classroom activities are described along with Mixi functions that can be utilized to go behind student lines for educational purposes.

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Blogging for Self-Determination with L2 Learner Journals..... 202
Antonie Alm, University of Otago, New Zealand

This chapter discusses the use of language learner blogs with reference to self-determination theory. It argues that blogging needs to be modelled on real-life blogging practices in order to support the learner's need for autonomy. The chapter provides insights into L2 learners' perceptions of blogging and highlights the value of blog-based reflective writing for language learning.

Chapter XII

Using Mobile Technology and Podcasts to Teach Soft Skills 223
Revathi Viswanathan, ICFAI National College Chennai, India

The chapter introduces mobile technology and podcasts, the two Web 2.0 technological tools that enable ESL teachers to train students in Soft skills and Employability Skills. It discusses the procedure by which these tools could be effectively used in the classroom. By highlighting the research studies conducted in a tertiary level classroom using mobile technology and podcasts, it further shows the need for training students in communication skills for facing the corporate world with confidence.

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Andy Halvorsen, Nagoua University of Commerce & Business, Japan

This chapter explores the potential relationship between critical language learning and the use of social networking sites by second language learners. Through the examination of a case study in which Japanese university students made use of the MySpace social networking site, this chapter argues that the use of social networking sites by second language learners of English can have a beneficial impact on critical language learning. Particular attention is paid to the issues of identity formation online, learner autonomy, critical literacy, and empowerment as they relate to second language learners and their use of social networking sites.

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Nicolas Gromik, Tohoku University, Japan

Web 2.0 is concerned with making users the creator of online content. This chapter documents how advanced English as a Foreign Language (EFL) students created cell phone video diaries which were delivered over the Internet. It reflects on the development of this project and the implications for second language learning in a Web 2.0 context.

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The Use of Weblogs in Language Education.....	274
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Thomas Raith, The University of Education Heidelberg, Germany

The chapter discusses the question in how far Weblogs as a Web 2.0 tool have changed foreign language learning. It argues that through the Web 2.0, new genres have emerged which learners need new literacies for. The findings of a qualitative comparative case study in a German secondary school, between one student group with Weblogs and one with paper journals, imply that Weblog students write to a much higher degree to interact with an audience. This supports the assumption that Weblogs have created a new genre of social interaction in new communities of practice.

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Blogging in Foreign Language Education.....	292
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Nat Carney, Kwansei Gakuin University, Japan

This chapter offers a detailed description and overview of the use of blogs in foreign language education. The chapter describes how blogs are an important communication hub on the Internet and are a useful tool for foreign language education that merit more thorough research. Through analysis of current research and the promise and concerns about blogging in foreign language education, the chapter suggests future trends and research areas.

Chapter XVII

Improving Learners' Speaking Skills with Podcasts..... 313

Pete Travis, ICT Consultant, UK

Fiona Joseph, ICT Consultant, UK

This chapter explores the role of podcasting to improve the speaking skills of advanced level English language students. Recent research in education has highlighted the transformational possibilities of Web 2.0 tools such as podcasting, especially with regard to user-generated content and mass participation. The authors will show that the creation of podcasts in an English Language Teaching context demands little in terms of technical expertise, and is a Web 2.0 tool that learners are eager to adopt as consumers of listening content.

Chapter XVIII

Mobile Technologies, Podcasting and Language Education 331

Volker Hegelheimer, Iowa State University, USA

Anne O'Bryan, Iowa State University, USA

The main point of this chapter is to discuss various areas of research relevant to the use of podcasting in language learning. In doing so, the authors first review the concepts of podcasts, address practicality issues, and outline how podcasts are currently being used for self study, test preparation, and as part of the intact classroom. The authors then suggest fruitful avenues for future research in terms of podcast content, interaction, and integration. They then conclude by highlighting possible research methodologies ideally suited to continue and deepen the principled investigation of podcasts in the area of language learning.

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Podcasting as a Next Generation Teaching Resource..... 350

Jenny Ang Lu, National Taiwan Normal University, Taiwan

The chapter introduces podcasting, the distribution of audio content through the Internet. It claims that podcasting is a valuable resource in augmenting classroom instruction, especially language education in a foreign context. The chapter further proceeds to dissipate the prevailing misconception that creating and accessing podcasts is a daunting process.

Section III

Pedagogy 2.0 and Second Language Learning

The final section of the collection examines a broad range of themes related to the pedagogical implications of Web 2.0. Chapters focus on reading strategies in an online environment; developing an online corpus; the use of Web 2.0 for professional development; interactive whiteboard technology; mobile learning; course management systems; and social networking sites aimed specifically at language learners.

Chapter XX

The Pedagogical Implications of Web 2.0 367

Matthias Sturm, ICT Consultant, Canada

Trudy Kennell, ICT Consultant, Canada

Rob McBride, ICT Consultant, Canada

Mike Kelly, ICT Consultant, Canada

This chapter aims to bring perspectives rooted in educational theory to a domain too often dominated by the technological implications of its tools and argues that social constructivism is the pedagogical paradigm for learning and teaching facilitated by the next generation of Web technology. It reviews basic theoretical tenets and discusses their implications. Teachers and students who take full advantage of these emerging tools will participate in more dynamic, immediate, and communicative environments that provide opportunities for meaningful experiences through social constructivist learning.

Chapter XXI

Improving Online Readability in a Web 2.0 Context..... 385

John Paul Loucky, Seinan Jogakuin University, Japan

This chapter describes a task-based assessment (TBA) approach to teaching reading and writing online, and analyzes key factors emerging from results of implementing such a course with graduate Japanese engineering students in Tobata, Kitakyushu. It is hoped that this course can serve as a model of what can be done to enhance online EAP/ESP/ETP courses, as well as any other online reading or writing course being designed for speakers and readers of languages other than English. This chapter's goal is to summarize research that aimed to integrate some of the most useful Web sites for English language learning, into a user-friendly system for optimal online vocabulary development, which could also be self-monitored by students as well as tracked by teachers via a course management system.

Chapter XXII

Concordancing 2.0: On Custom-Made Corpora in the Classroom..... 411

Jarostaw Krajka, Warsaw School of Social Psychology, Poland

The chapter introduces and explains some of the crucial notions of corpus linguistics in the Web 2.0 era. The philosophy of custom-made (or “do-it-yourself”) concordancing is elaborated upon, together with the reflection on the procedure of compiling a custom-made corpus and the discussion of freeware text analysis and the Web as a Corpus tool. It is hoped that given careful selection of relevant sources, the learning process will become significantly enhanced thanks to more authentic and relevant language data, promoting teacher autonomy and discovery-based procedures.

Chapter XXIII

Internet Technologies and Language Teacher Education 432

Darren Elliott, Nanzan University, Japan

This chapter looks at the ways in which teacher training and teacher development are taking place online. It seeks to address the ways in which teachers learn to teach and considers how “Web 2.0” applications

and other collaborative, interactive technologies may transform teacher education. The author concludes that, although the pace and nature of change does not appear to be uniform, there are indicators which suggest a need for further research into teacher cognition and digital technologies.

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<i>Sarah Guth, University of Padova, Italy</i>	

This chapter discusses the potential of social software and Web 2.0 tools to enhance language learning in a blended learning context. It describes an English as a Foreign Language course that introduces students to several Web 2.0 tools with the aim of helping them develop their own Personal Learning Environment. The chapter argues that accompanied with the right pedagogical approach, these tools transform learning by allowing students to engage in self-directed learning in a social context. Working together, students gain skills and resources that are transferable to their informal, lifelong language learning.

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<i>Shudong Wang, Hiroshima Shudo University, Japan</i>	
<i>Neil Heffernan, Ehime University, Japan</i>	

This chapter introduces Mobile 2.0 applications, which essentially are applications that stem from Web 2.0 and are integrated with the unique features of mobile devices. The primary focus of the chapter is how these applications can be used for language learning purposes, while highlighting both the empirical and proposed usages of Mobile 2.0, including timely teaching feedback, real-time email alerts, registered or un-registered Mobile 2.0 sites, GPS for context aware learning, SMS integrated with instant messengers, foreign language acquisition through mobile blogs, SNS, games, and mobile search. The chapter aims to view mobile assisted language learning in the era of Web 2.0.

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<i>Euline Cutrim Schmid, University of Education Heidelberg, Germany</i>	

The first part of this chapter discusses the transformative potential of Interactive Whiteboards (IWB), by analyzing the opportunities of using this technology in conjunction with Web 2.0 tools to support constructivist practice in the language classroom. The second part draws upon research data and literature review results to examine the role played by teachers in the realization of this potential. A special focus has been placed on the various evolutionary stages that teachers go through as they integrate IWB technology into their teaching. The research data derives from a case study conducted with nine English teachers from a secondary school in German.

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<i>David Miller, Keele University, UK</i>	
<i>Derek Glover, Keele University, UK</i>	

In this chapter we explore the impact of new classroom technologies on the pedagogy of modern language teaching. The link to Web 2.0 is through the development of interactivity as teachers develop confidence in the technology and develop understanding so that there is a move from enhanced presentation, through strategies for motivation, to pedagogic change. As the technology becomes the spur to re-thinking of conceptual and cognitive development through interactivity there are signs that teachers explore links between interactive whiteboards and other learning and multimedia technologies.

Chapter XXVIII

Web 2.0 and CMS for Second Language Learning	526
<i>Samuel Holtzman, Nagoya University of Commerce & Business, Japan</i>	

This chapter introduces and explains the composition of Web 2.0 courseware management systems (CMS), and the functions and features that are relevant to second language written acquisition. These are powerful tools with embedded assumptions about teaching and learning. Therefore, special attention must be paid to the process of inclusion and the need to evaluate existing curricula to ensure instructors' pedagogy remains the central concept to classroom design and management.

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Foreword

When I first used the Internet in the early 1990s, I was immediately impressed with its exciting potential for second language learning and teaching. By the mid-1990s, a number of us were writing books about this potential, organizing conferences, conducting research, forging online communities, and otherwise working to promote new ways of learning languages through networked communication. For the first time since its inception in the 1970s, the field of computer-assisted language learning had expanded beyond the purview of a narrow group of specialists and was attracting the attention of a large numbers of educators.

At the same time, the Internet was still in its infancy. Only a small percentage of the world's population had access to the Internet in the 1990s, and often through slow and unreliable dial-up connections. Publishing information online required specialized commercial software or knowledge of complex code. And online material existed for the most part in isolated information silos, rather than in interactive community-generated well-indexed sites. The Web was thus developing more as a tool for accessing information created by small numbers of people, rather than for creativity and collaboration on content contributed by the broad public.

A decade later, the situation has changed dramatically. Today, Internet access is nearly ubiquitous in developed countries and increasingly commonplace in developing countries. Most people now connect to the Internet through direct high-speed connections, often wirelessly. Desktop and laptop computers have fallen in price, and the Internet can also be accessed through a variety of handheld devices such as mobile phones. At the same time, barriers to online publishing, collaboration, and creative production have fallen dramatically. Widely available software and sites allow computer users of all types to interact through blogs, collaborate through Wikis, play multiplayer games, publish podcasts and video, build relationships through social network sites, and otherwise shape the content of the Web through feedback and evaluation mechanisms.

The technical definition of Web 2.0 has been the subject of debate, but the social significance of this next generation of the Internet is clear. Whereas the first generation of the Web linked information, this next generation links people, and does so in ways never before possible. Those of us who were excited before about the potential of the Internet for language learning and teaching thus have even more to be excited about today. And learners, teachers, publishers and others are already showing great creativity in exploiting this potential. However, efforts to do so are so dispersed and localized that it is hard to keep track of basic information about this fast-breaking field, much less gather critical, reflective analyses.

Fortunately, this Handbook brings together a wealth of thought-provoking material about the field. A wide range of important Web 2.0 topics are covered, from blogging to podcasting, to social networking and learning with mobile technologies. Perspectives of theory, research, and practice are artfully combined within the individual chapters and across the book. The editor has done a superb job of bringing together cutting-edge work on this topic. Though I have been investigating technology and language

learning for some 15 years, and authored a major review article on Web 2.0 and applied linguistics a year ago¹, many of the projects described in this book are so recent that I had not been aware of them before reading it.

Yet while this book is forward looking, it is not dreamy-eyed. Complex cognitive, social, and technological phenomena are critically addressed throughout. Web 2.0 is not viewed as a magic bullet to solve educational problems, but rather as a powerful tool that can have both positive and negative impact, and that must be carefully exploited in line with learner needs, teacher capacity, and local social contexts. The relationship of Web 2.0 to language learning is considered in all its breadth, from its use to promote diverse skills (e.g., listening, speaking, reading, writing) to its relationship with an array of cognitive and social processes (e.g., identity formation, critical literacy, information overload). Contributions to understanding Web 2.0 in higher education settings are particularly valuable, though many of the topics will be of value to those interested in K-12 education as well.

I was fortunate to have authored and edited several of the books that helped spark interest in the use of the Internet for language teaching in the 1990s. Some of these, such as *E-Mail for English Teaching*, *Internet for English Teaching*, and *Virtual Connections*, brought together practical ideas for language teachers. Others, such as *Telecollaboration in Foreign Language Learning*, *Network-Based Language Teaching*, and *Electronic Literacies* focused on research and theory. Today, this Handbook brings together in a single volume about Web 2.0 much of what I tried to accomplish in multiple books about Web 1.0, providing a valuable overview of research, theory, and practice related to the current iteration of educational technology. The Handbook will be of value to a wide range of teachers, administrators, policy makers, and researchers concerned with technology-enhanced learning and will contribute greatly to timely debates affecting language education around the world.

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Endnote

- ¹ Warschauer, M., & Grimes, D. (2007). Audience, authorship, and artifact: The emergent semiotics of Web 2.0. *Annual Review of Applied Linguistics*, 27, 1-23.

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Preface

The *Handbook of Research on Web 2.0 and Second Language Learning* is one of the first collections of scholarly essays, empirical research, and case studies to grapple with the pedagogical implications of Web 2.0 technologies. Moreover, it is perhaps the first sustained study to do so with relation to second language learning, one of the most active and dynamic interdisciplinary areas, which draws on theories of teaching and learning from a wide range of disciplines in the humanities and social sciences. The book is a timely study in that Web 2.0 has emerged as the latest in a long line of developments to catch the imagination of educators interested in the use of instructional technology in the classroom.

The application of Web 2.0 to education has changed rapidly over the last two years, with many new developments and applications emerging at an ever increasingly rapid pace. One of the dangers of such emergent technologies is that a significant number of teachers will be left behind, with only a few in a position to apply these new ideas in the classroom. The risks involved are not to be underestimated, and the history of educational technology tells us that teacher development and meaningful teacher training have often been neglected and marginalized by the drive to install new hardware and software without a proper rationale. With these deficiencies in mind there has been a need to consider the role of Web 2.0 in teacher training and how the application of these tools and associated theories of teaching and learning can become a part of teachers' continuing professional development. While those involved in educational technology often assume that their pursuits are central to what is happening in their institution, the reality is that a rather limited percentage of any given group of educators, either in the school or university sector, consistently integrate technology to any great effect. Web 2.0 technologies signal the need to move toward a greater emphasis on digital literacy skills, but one that applies to teachers as well as to students, the latter often being more familiar with the opportunities presented by the technologies than the teachers themselves.

This book has its origins in a number of recent conference events that I have organized at Nagoya University of Commerce and Business in Japan examining Web 2.0 and the application of tools such as blogs, Wikis, podcasting, video and photo-sharing, to the field of second language learning. The first conference, *Wireless Ready: Podcasting Education and Mobile Assisted Language Learning*, took place in March 2007. The second event, *Wireless Ready: Interactivity, Collaboration and Feedback in Language Learning Technologies*, occurred a year later, in March 2008. Both events attracted an interested and intrigued audience as well as a sizeable group of presenters for this relatively new area. In the spirit of innovation, both events took advantage of the facilities on the Second Life island of EduNation to offer selected presentations, either by audio or streaming video, direct to a virtual audience from around the world. A number of presenters from both events have refined and developed their work and it is included here. The organization of a further international event, the JALT CALL Annual Conference in June 2008 at my university, also included an increasing number of presentations and workshops on Web

2.0 technologies, indicating just how far these new tools have become a part of teaching and learning in the second language classroom, within a relatively short period of time.

Clearly Web 2.0 tools have generated a great deal of interest, not just from teachers and learners around the world, as millions of people have started a blog, accessed information from a Wiki, or listened to a podcast. The aim of this collection has been to gather together a representative selection of projects and research currently under way around the world, and to provide a snapshot of work-in-progress. It is hoped that the collection will represent the need to progress to a second stage in the use of Web 2.0 technologies in the field of education and second language learning, moving beyond the opportunities apparently presented by these tools, to more of a rigorous engagement with actual research and pedagogical contexts. We know these tools are of great interest to students in their lives outside of the classroom. What effect can they have on the enhancement of teaching and learning in the classroom and in the changing spaces of learning in a global and networked world?

THE SECOND GENERATION INTERNET

The cover page of *Time* magazine in December 2006 famously announced that the person of the year was YOU. To prove the point, a computer screen containing a mirror allowed readers to see their own image reflected; simultaneously the reader occupied two positions, becoming at once both a consumer and a *prosumer* in the publishing process, and deconstructing the frontiers between reading and writing. Ironically for a traditional print publication, *Time* magazine's point was that we are witnessing the emergence of new forms of participatory publishing on the Web, based on sharing, collaboration, feedback, enhanced interactivity and evaluation.

The emergence of “user-generated content” on the “participatory Web” (O'Reilly, 2006, n.p.) is embodied in the term Web 2.0. As opposed to the “read-only” or “first generation Web” which precedes it in chronological time but only in fact came to prominence after Web 2.0 was identified, the second generation of the Web rests on one main transformation. Whereas Web 1.0 connected *information* together and led to the development of search engines, Web 2.0 connects *people*, and thus underpins fundamental changes in the way the millions of people who use blogs, Wikis, and podcasts, communicate and access their information and mediate their world through digital technologies on a daily basis. With the advent of Web 2.0, a whole series of entrepreneurial Web-based applications have been developed that no longer travel with a person's laptop computer. Rather these new applications are accessible wherever and whenever users have a fixed or increasingly wireless Internet connection. A number of key terms have been devised to map this new area — blogosphere and cyberspace being two of the main ones — the central point being that information no longer exists in self-contained spaces but rather inhabits shared spaces or ubiquitous and ambient networks.

Whereas the 1980s and 1990s were greeted with a wave of optimism from teachers who wanted to use computers to enhance learning in their classrooms and lecture halls, the mood could not be sustained due to the limitations presented by the equipment or lack of it on the ground. Within 10 to 15 years, however, increased rates of Internet usage and access to hardware and software around the world are negotiating a new position and importance for the role of Information and Communication Technologies (ICT) in society and especially in the educational field.

While still less than half of the world's global population has access to Internet technology, there has been a dramatic improvement on the situation that existed some ten years ago. Indeed, access to ICT and the spread of information literacy is set to increase more with the widespread use of portable telecommunications devices such as mobile phones and laptop computers, the latter due to such initiatives as

the MIT sponsored One Laptop Per Child Foundation (OLPC, 2008). As Warschauer and Grimes (2007) argue in a research article on Web 2.0:

The new Web's architecture allows more interactive forms of publishing (of textual and multimedia content), participation, and networking through blogs, wikis, and social networking sites. These participatory sites enable and rely on user-generated tagging of content, which itself can be aggregated into a user-generated taxonomy known as a folksonomy. Sites such as Flickr, Napster, and Wikipedia thus allow users to generate, link, evaluate, and share a wide variety of online content. (p. 1)

This understanding of Web 2.0 as signifying a change in the way people publish, communicate and collaborate is precisely the point at which these developments become important for educators, linguists and language learners. As Warschauer and Grimes continue:

The way that both information and people are linked on Web 2.0 has deep significance for the field of applied linguistics. In particular, the types of interaction on Web 2.0 raise questions about what it means to exercise authorship, communicate with an audience, and produce a text or multimodal artifact. (pp. 1-2)

In the first major research article on the subject of Web 2.0 and applied linguistics, Warschauer and Grimes define Web 2.0 not so much in terms of “a new version of Web technology” as a development that promotes “changes in the communicative uses of the underlying Web platform” (p. 2).

Consequently, the use of Web 2.0 tools in education has been one of the most appealing to date. In their book on *Web 2.0: New Tools, New Schools*, Solomon and Schrum (2007) capture this optimistic vision:

The shift to Web 2.0 tools can have a profound effect on schools and learning, causing a transformation in thinking. This will happen because the tools promote creativity, collaboration, and communication, and they dovetail with learning methods in which these skills play a part. For example, when students collaborate on a project and present what they've learned, they've honed their thinking and organizational skills. ... The old way of doing things is presentation-driven; information is delivered and tested. This approach prepares students for jobs that require simply following directions and rote skills. The new way is collaborative, with information shared, discussed, refined with others, and understood deeply. It prepares students to become part of a nimble workforce that makes decisions and keeps learning as the workplace changes. What makes the difference is preparing students with 21st-century skills using a flexible approach rather than teaching just what will be tested. (Solomon & Schrum, 2007, p. 21)

In place of the transmission mode of learning in which information is passed from teachers to students, Web 2.0 is largely based on a social constructivist framework which is not oriented solely towards examination results and testing. Students are challenged to engage in collaborative work that better allows them to express themselves in a mode of self-discovery. Web 2.0 tools are concerned with challenging the assumptions of existing educational curricula which will bring them more in line with learning methodologies appropriate for students entering the knowledge economy and promote task- and project-based learning. Indeed, many of the chapters of this handbook discuss the implications of a constructivist framework or related approaches such as connectivism (Siemens, 2004).

Following in the footsteps of Merriam Webster's dictionary and the Oxford American English Dictionary, which declared blogging and podcasting words of the year, *Time's* reflecting mirror identified a new

generation of “Internet everyman” who blogged on the Web, sent iReports via camera phone to CNN, shared digital photos on Flickr, videos on YouTube and bookmarks on Del.icio.us. Inside the cover, Lev Grossman wrote about the wider socio-cultural trends indicative of these technological developments. What was happening was a re-narration of history, a decentralization of authority in which technology was playing a central role:

But look at 2006 through a different lens and you'll see another story, one that isn't about conflict or great men. It's a story about community and collaboration on a scale never seen before. It's about the cosmic compendium of knowledge Wikipedia and the million-channel people's network YouTube and the online metropolis MySpace. It's about the many wresting power from the few and helping one another for nothing and how that will not only change the world, but also change the way the world changes. ... The new Web is ... a tool for bringing together the small contributions of millions of people and making them matter. Silicon Valley consultants call it Web 2.0, as if it were a new version of some old software. But it's really a revolution. (Grossman, 2006, n.p.)

Time's cover page then, signaled nothing short of a dramatic transformation in the way information is created, shared and disseminated — the movement from a closed, proprietary space, to a more democratic, ubiquitous network in which anybody could contribute user-generated content. Solomon and Schrum (2007) apply this vision to education, arguing that Web 2.0 offers to “revolutionize” and “transform” education as most teachers and students have understood it for over a century. The authors sum up their vision neatly near the beginning, where they argue that students:

can now write directly online in a blog and get immediate feedback from peers and others who could be anywhere. They can collaborate with peers near and far — in a wiki, also directly online. They can post photos, videos, podcasts, and other items online. The difference is that they can do the posting. They control the tools of production and publication. There are no more gatekeepers. (p. 2)

Advocates of the transformative potential of Web 2.0, however, have taken up the challenge with much the same sense of conviction that led previous generations to champion the cause of talking movies, radio, television, and microcomputers: “Each of these highly touted electronic marvels went through a cycle of high expectations for reforming schools, rich promotional rhetoric, and new policies that encouraged broad availability of the machines, yet resulted in limited classroom use” (Cuban, 2001, p. 137). As Cuban reminds us then, previous rounds of excitement about new technologies have shown that words of caution must always temper the often extravagant claims made about them, lest they remain readily available but underused. While for a number of commentators on technology and society, Web 2.0 is a term still very much under erasure, all of the authors in this book emphasize its potential to enhance collaboration, participation and community building. One of the main questions of this book is to what extent Web 2.0 is able to transform learning and learning environments. Many of the studies included here indicate that while it is still too early to provide definitive answers to such questions, Web 2.0 tools have a tremendous potential that must be properly contextualized and developed in relation to curricula.

OVERVIEW OF THE HANDBOOK

The Handbook of Research on Web 2.0 and Second Language Learning approaches many of the preoccupations mentioned above in three sections.

Section I: Network Communities and Second Language Learning. This section provides an overview of some of the broader contextualizing factors behind the implementation of ICT strategies in language education. It includes chapters dealing with a diverse range of subject areas including ICT policy guidelines in a Web 2.0 era; the implications of multiliteracies on online learning environments; strategies to combat the dangers of information overload in an age of syndicated information flows; the protocols of online communities; tandem exchange projects using online communities and discussion forums; and an assessment of the ICT skills and competences of students and teachers.

Section II: The Read/Write Web and Second Language Learning. The second part of the handbook focuses on a number of practical examples of Web 2.0 tools, principally weblogs, podcasting, social networking sites and the use of video. A number of chapters focus on blogging in foreign language education with popular sites such as Mixi and Blogger. Others provide an introduction to podcasting and a range of case studies dealing with actual classroom projects, as well as attempting to move towards a framework for evaluating their usefulness.

Section III: Pedagogy 2.0 and Second Language Learning. The final section examines some of the broader pedagogical aspects of Web 2.0. Like the previous section, the focus is on practical examples including the implications of reading online; corpus linguistics in a Web 2.0 era; language teacher education; mobile learning; personal learning environments; and interactive whiteboards.

Being able at this point in time to assemble 28 individual chapters on the evolving phenomenon of Web 2.0 is indicative of the experimental projects and case studies that are now being done around the world. The contributors to the handbook come from over 15 different countries, from Asia, Australia, Europe and North America, and present a truly international perspective on the trends powering Web 2.0. It is too early to judge the fate of Web 2.0 in the second language classroom, whether it will go the way of talking movies, radio, or instructional television, but it is hoped that this handbook will make a valuable contribution to the ongoing conversation about its merits and its place in our classrooms and learning environments around the world.

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Finally, I would like to thank my family for their support and my two young children, William and Hannah, for having allowed me to invest so much time in the editing of this book. I dedicate this book to them.

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Section I

Network Communities and Second Language Learning

Chapter I

Criteria for the Implementation of Learning Technologies

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ABSTRACT

The grand narrative of educational policy statements lack clear guidelines on Information Communications Technology (ICT) integration. A review of current academic literature fails to provide consistent strategies for institutions and practitioners determined to adopt ICT in an informed way. This chapter introduces criteria for the successful implementation of ICT-enabled tasks. It argues that the integration of ICT is best supported by a pedagogy that facilitates experiential learning and a development of academic competencies. The context for demonstrating the importance of the informed use of ICT is a research project entitled, “iPod therefore iWrite,” in which multiple-media content was developed by students in Japan and the United Kingdom.

INTRODUCTION

In the past two decades the uptake of Information Communications Technology (ICT) in education has been inconsistent. Some countries, districts, and educational institutes have certainly embraced ICT as a central component of their teaching and

learning experiences: Singapore’s Masterplan for IT in Education (Goh, 1997) and one-to-one learning in Maine, USA (Greenstone, 2006) come to mind. There are also a number of excellent research studies of “good practice” in ICT integration (Sandholtz, Ringstaff & Dwyer, 1997) and extensive literature reviews (Sivin-Kachala &

Bialo, 1996; Parr, 2003). Despite the huge financial investments made by nations and individual institutions, however, many practitioners recognize that ICT adoption is not universal in mainstream education. Becker and Ravitz (2001) found that only 25% of secondary English instructors, 17% of science instructors, 13% of social studies instructors, and 11% of maths instructors in the USA made weekly use of computers. Moreover, the computers were not used to develop a deeper understanding of concepts, tackle difficult topics or change the approach to teaching methods. In Japan the uptake of technology in education, “remains comparatively low, and ICT does not appear as a priority in national education policy” (UNESCO, 2007, para 1). Additionally, educators like Stanford University professor Larry Cuban (2002) are unimpressed by attempts to inculcate ICT into mainstream education:

Although promoters of new technologies often spout the rhetoric of fundamental change, few have pursued deep and comprehensive changes in the existing systems of schooling. The introduction of information technologies into schools over the past two decades has achieved neither the transformation of teaching and learning nor the productivity gains that a reform coalition of corporate executives, public officials, parents, academics, and educators have sought. (p. 195)

Cuban’s observation appears to be supported by academic research and agency reports of ICT adoption. For instance, academic literature that considered the effect size of research in the 1990’s portrays a varied picture of *some* gains in quantitative tests by students in experimental groups (Kulik, 1994; Wood, Underwood & Avis, 1999; Parr, 2003). Kulik (1994) used meta-analysis to aggregate the findings from 254 controlled evaluation studies, and discovered that technology rich classes produced an effect size of 0.3 on quantitative measures of educational performance; considered significant but moderate (Fitz-Gib-

bon & Morris, 1987). Apologetically, the British Educational Communications and Technology Agency (BECTA) reports that it will take time for empirical evidence of the benefits of ICT integration to emerge (Cox, Abbot, Webb, Blakeley, Beauchamp & Rhodes, 2003). The conclusion is that computer assisted learning is no more effective than other types of intervention (Parr, 2003). Why is this? Selwyn (1997) points to education policy statements and the discourse of promoters of technology which often lack a solid rationale for ICT adoption. In other words, despite the attempts of implementation of technology in schools and universities, there lacks direction about ICT’s integration into course curricula and pedagogical practices. This deficiency is supported by Avriam (2000) who argues that, “the introduction of ICT into education has often been carried out with vague and confused conceptions of the desired model of learning which the new technologies were supposed to enhance and without clear conceptions of any guiding educational values” (p. 332).

A policy example in Asia is Singapore’s first Masterplan for IT in Education (Goh, 1997). Four key statements summarize the Masterplan’s goals:

- Instructors and pupils will communicate and collaborate with other institutions.
- Innovative processes in education will be generated.
- Creative thinking, lifelong learning, and social responsibility will be enhanced.
- Administrative and management excellence in the education system will be promoted.

How these objectives were to be achieved however remained unclear (Deng & Gopinathan, 1999). Towndrow (2001), in an article explaining the human capital construct in the modern Singapore context, considered that without a solid rationale, ICT investment in education is “a leap of faith in the dark” (p. 27). For instance, the

development of a networked infrastructure was initially given less prominence until it emerged that technology adoption was not becoming ubiquitous in the Singapore schools as initially desired by the policy makers. Technology implementation appeared to sustain and reinforce an instructor focused, didactic pedagogy and not facilitate the student-centred, constructivist pedagogy anticipated. Policy makers later acknowledged the need to move beyond equipping schools with computers and network access to a focus on pupil-centred pedagogies (Pearson, 2005). However, nearly a decade after the launch of Singapore's Masterplan, policy makers provide little help about how any change in pedagogy, with or without technology, can be achieved. Pearson (2005) explains:

The relationships between “pedagogy” and the conditions that might help to bring them about, receive scant attention in these policy statements. Most comments about pedagogy are general in nature (“student-centred” and “active learning”), and there is seldom any recognition that the ways in which infrastructure has been installed, and what has been done — or not done — in “basic training” are likely to impact on current pedagogical practices and attempts to change them in the future. (p. 141)

Whether or not such high investments generate returns in the form of pedagogical change may be a moot point as, after all, parents, students and institutional leaders want computers in their classrooms. However, it should be recognized that adding ICT to the learning situation may indeed solve some problems (e.g. universal access to information; development of computer skills) but will bring new, additional problems (e.g. how to evaluate information; development of digital literacy skills). It is acknowledged that ICT has the potential to impact upon a pedagogical evolution as, “computers not only bring something new to the learning environment . . . they change it and they change learners too” (Heppell, 1993,

p. 233), yet the impact has not been as dramatic as anticipated. Fourteen years after Heppell's comment the UK Government released its Education 2020 Review where it categorically admits schooling needs to change further: “It seems clear to us that the education system will not achieve the next ‘step change’ in raising standards simply by doing more of the same: a new approach is required” (Facer, 2007).

In Japan the promotion of the use of ICT has been publicized by an e-Japan Strategy to develop an energetic, worry-free, exciting and more convenient society (Naito & Hausman, 2005). Although the policy makers recognized the need for utilization of technology though, no specific guidelines were offered in the education space beyond commenting upon the need for more support for private enterprise within public universities, and flexibility of research for public academics in the university sector.

How can educational institutes move forward then in light of inconclusive research findings, cautious report comments and lack of pedagogically focused guidelines for educators? Laurillard (2002) in her book, *Rethinking University Teaching*, proposes that, unlike in the business sector, technology cannot be standardized in an educational context and goes on to suggest that nationwide policies are unhelpful. She asserts that governments should not be responsible for ICT integration. The accountability lies with academics as it is they who are responsible for what and how students learn. Laurillard proposes a *conversational framework*: “At the heart of a university is the iterative dialogue between instructor and learner, nurturing the ideas and skills that constitute understanding” (p. 241).

Supporting such collaboration and communication, Facer (2007) recommends transforming schools into knowledge building communities:

- In curriculum — knowledge creation, collaboration, community navigation, learner responsibility.

- In pedagogy — how we teach, who teaches, techniques. Authentic activities — immersion and reflection.
- In institutions — knowledge building communities, networked to the wider world — children, education professionals working alongside others from (virtual/physical) community.

There is a recognition that financial investment and the “grand narrative” of policy statements do not necessarily lead to the desired transformation in practice. Returning to Singapore, a Core Research Program has been set up, at great expense, for a systematic focus on classroom practices throughout the nation. The multidisciplinary evidence will be used to inform pedagogical innovation and educational reform (Luke, Freebody, Lau Shun & Gopinathan, 2005). How different pedagogies (with or without ICT) are compared has historically been problematic in its methodology. The common finding is “no significant difference . . . although it is more likely to mean that we have failed to demonstrate the differences that exist, rather than the literal meaning that these two different ways of learning are identical to the learner” (Laurillard, 2002, p. 26).

It has also been suggested that a reason for failure to adopt and adapt technology in mainstream education is due to the inadequate training of new instructors (Mouza, 2002). It has been argued that often training is provided in technical literacy skills focusing heavily on the hardware and software, whereas effective training has been shown to focus upon curriculum development and integration into pedagogical practices (Vallance, 2006a). Teachers are also unprepared for any changes that may be brought about by technology adoption at schools in Japan. A Ministry of Education, Culture, Sports, Science and Technology (MEXT) survey revealed that more than 33% of teachers were unable to use a computer and less than 25% were able to provide computer instruction (Morris-Suzuki & Rimmer, 2003).

There have certainly been attempts to implement technology centric education policies in Japan. For instance, in 1999 the Information Technology in Education Project (ITEP) was launched with the aim that all elementary and secondary schools would use computers in teaching by 2005. However, by 2003 only 29.2% of classrooms in public schools were connected to the Internet (Naito & Hausman, 2005).

It is also acknowledged that Computer Assisted Language Learning (CALL) tasks, for instance, can work toward the development of a social identity in a target language (e.g. English), strengthening cultural awareness and subsequently developing strategies for language learning (Chapelle, 2001). In Japan though there is still little evidence to suggest that new or better learning is happening as a result of technology investment. Returning to the role of the teacher, Ying and Hui (2002) state that in education systems throughout Asia, “the teacher decides which knowledge to be taught and the students accept and learn that knowledge” (p. 48). The teacher is seen as authoritative, paternalist and knowledgeable resulting in students’ dependence upon authority rather than a development of learner autonomy. In effect, knowledge is transmitted rather than developed. Consequently, reform is a slow process in an education system which “puts a lot of emphasis on acquiring knowledge through memorization and repetition” (Fujitani, Bhattacharya & Akahori, 2003, p. 34). This in turn impacts upon the use of technology to mimic didactic pedagogies rather than transforming learning (Ying & Hui, 2002).

It has been shown above that the literature on ICT integration and its impact on learning do not provide a clear picture. Consequently, researchers must respond to the lack of a solid rationale and supporting guidelines for ICT integration (Selwyn, 1997), and ask what the conditions are for technology to be integrated successfully in an informed manner, and how practitioners can best apply ICT-enabled tasks in the classroom to

Criteria for the Implementation of Learning Technologies

make a difference. The literature highlights some key factors for informed ICT usage and these can be further categorized into four characteristics: activities, integration, collaboration and shared spaces (Selwyn, 1997). These characteristics are used to summarize a portion of the literature (Vallance, 2006a). See Table 1, Key factors for informed ICT integration.

In an attempt to answer Selwyn's call for comprehensive guidelines on informed ICT integration, Towndrow and Vallance (2004) turn to Candlin's (1987) criteria for good task design, believing that tasks are at the centre of an instructor's daily practice. Tasks should:

- Promote attention to meaning, purpose and negotiation
- Draw objectives from the needs of learners
- Allow for flexible approaches and different solutions
- Involve (target) language use in task process
- Provide feedback and co-evaluation — instructor and students
- Allow students to estimate/predict consequences of task solutions
- Promote awareness of data and learning process
- Share information and expertise

Table 1. Key factors for informed ICT integration

Characteristic	Key factors	Description
Activities	Flexible	Be flexible enough to address different learning styles (Jordan & Follman, 1993; Sandholtz et al, 1997).
	Pedagogy	Focus on the quality of teaching and types of learning as many studies in technology integration tend to concentrate merely on the practical advantages (Knipe & Lee, 2002).
	Opportunities for learning	A key factor in the success of synchronous inter-networking is the instructor's skill in creating opportunities for interaction (BECTA, 2003).
Integration	A constructive environment	Use technology to create constructivist environments which supported higher level thinking skills (Hesselbring, Barron & Risko, 2000).
	Integration	Training in the integration of technology into the curriculum is nearly always more helpful than basic technology skills training alone (Parr, 2003).
	Adding value	If ICT is used in learning then it should be done with the intention of adding value to good tasks. That is, the technology should make these tasks even more worthwhile (Towndrow & Vallance, 2004).
Collaboration	Collaboration	Collaboration among students (Sivin-Kachala & Bialo, 1996).
	Cooperation	Use cooperative learning models (Sandholtz et al, 1997).
	Communication	Increase communication between students and instructors (Jordan & Follman, 1993; Sandholtz et al, 1997).
Shared spaces	Shared space	The activities, learning context and shared space should aim to meet the five qualities within a knowledge construction, constructivist learning environment: (1) instructors supporting instructors; (2) dialogues; (3) reflections; (4) observing best practice; (5) taking risks (Jonassen, Peck & Wilson, 1999).
	Making connections	Relate the skills to real-life situations (Jordan & Follman, 1993; Sandholtz et al, 1997).

Candlin does not specifically mention tasks that require the use of technology. However, he has provided a useful list for practitioners to refer to as a checklist to begin the process of informed integration. The list is used by Towndrow and Vallance (2004) as a point of reference in order to develop a set of criteria for instructors when considering integration of technology in their daily practice. Tasks which use technology should:

- Encourage discussion, consultation and sharing
- Focus upon process and product of task and learning objectives
- Integrate multiple-media
- Allow access to a wide range of information
- Facilitate and/or negotiate students' periodic outcomes
- Provide a channel for feedback and assessment
- Be flexible in when and where learning occurs
- Question whether the activities required in the task process can be done "without" IT

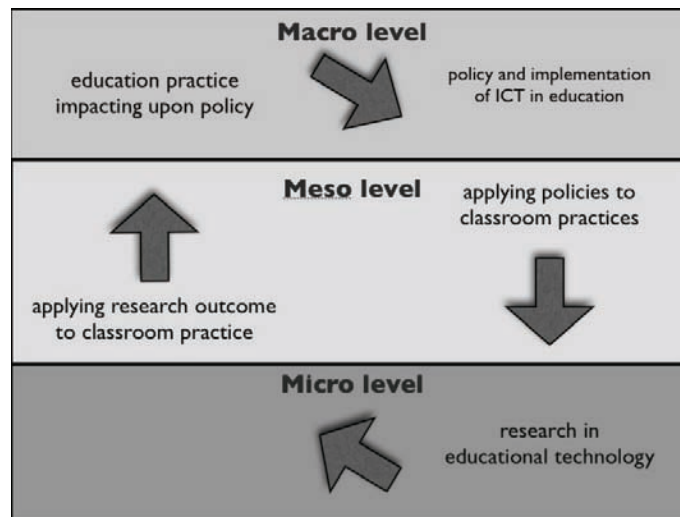
This criteria will later be referred to in the implementation of a project to support the communication of students in Japan and Wales, UK.

To reiterate, it has been shown that although nations are embracing ICT in education, the grand narrative of policies lack specific guidance as to how to effectively integrate the technologies into informed pedagogical practices. In Japan technology is designed to be ubiquitous in the daily life of Japanese citizens so one may surmise that policy writers and decision makers at MEXT are actively observing the research and developments of other educational policies worldwide. For instance, it has been shown that another Asian country, namely Singapore, is adapting its education system towards a social constructivist, problem and project-based learning philosophy as research provides the necessary indicators of

a need to change in order to continually compete economically (Luke *et al.*, 2005). However, in Japan "the technology revolution appears to be caught in a series of organizational 'short circuits' that sap the forward momentum of those trying to implement IT so that real forward movement is blocked" (Bachnik, 2003, p. 309). To close these short circuits, ministry and institution leaders need to recognize and actively support educators in their efforts at ICT integration (Narita, 2003). Educational guidance that can best serve all teachers and learners in developing appropriate skills for an increasing digital landscape is sorely lacking in Japan's policy documents and resultant efforts of institutionalized implementation. As confirmed by Bachnik (2003): "Technology is expected to transform education in a pedagogical vacuum, rather than being incorporated into effective teaching approaches. Teachers receive little pedagogical assistance in utilizing IT since pedagogy is collapsed into technology" (p. 314). In effect, educators in Japan require a set of indices "different from numbers of computers, degree of access to Internet, and the development of IT infrastructure" (p. 332) to challenge the transmissive model of learning (Thomas, 2005).

A review of the literature highlighted key factors for effective ICT integration and these were further categorized within the characteristics of activities, integration, collaboration and shared spaces. It was then suggested that good task design may provide a solution for practitioners given that tasks are at the centre of an instructor's daily practice. Criteria for informed use of ICT was then proposed. The next section will provide an example of applying the criteria of informed ICT integration in practice (*the micro level*) that attempts to marry the notion of "informed use" (*the meso level*) with the ideals of future education (knowledge creation, collaboration, learner responsibility) by policy makers (*the macro level*).

Figure 1. Macro, Meso, Micro levels



THE “iPod THEREFORE IWRITE” PROJECT

Web 2.0 and the Relevance of the iPod

There is something qualitatively different about today’s Web tools to those of a decade ago when Mozilla and Netscape brought graphical browsing to a diverse audience, transforming the World Wide Web from military and academia to businesses and citizens. Built upon a global network of computers called the Internet, this first iteration is now referred to as Web 1.0. Due to a proliferation in technologies that support a more social and collaborative networked environment a new term has emerged: Web 2.0. Overuse of the Web 2.0 meme though has led to it being viewed as marketing hype for new (and old) Web-based companies. The originator of the World Wide Web, Tim Berners-Lee, has questioned whether the term can be used in any meaningful way and suggests Web 2.0 is simply jargon. In reference to the origins of the World Wide Web Berners-Lee states, “Web 1.0 was all about connecting people. It was an interactive space” (Laningham, 2004, para. 46). Therefore, it is prudent to offer a

definition and a description of Web 2.0 within the context of the research study under investigation in this chapter.

Tim O’Reilly and his media company presented the term Web 2.0 in 2004. Web 2.0 envisages the World Wide Web as a strategic platform in which data is inserted by users leading to a collective intelligence (O’Reilly, 2005). To expand upon O’Reilly’s definition, Web 2.0 can be considered as a knowledge-oriented environment where users cooperatively create malleable content with shared presence that is synchronously and asynchronously distributed in wired and wireless networks to fixed and portable technologies. This statement best serves the purpose for the implementation of the “iPod therefore iWrite” project where content and delivery are created and managed collectively by students in Japan and Wales, UK using asynchronous and synchronous tools for communication. The results of the collective intelligence within the “iPod therefore iWrite” project are digital artifacts in movie, text and image formats which are then later distributed on portable iPods and additionally altered by the Japanese or Welsh students or instructors.

The Apple iPod is an example of the intersection of computing and Web 2.0 (Bull & Ferster,

2005). The iPod thrives in an ecosystem with components created by Apple (the physical hardware and the iTunes software) and other components created with an existing infrastructure (audio and video from commercial providers). However, the iPod also allows users to further the ecosystem by leveraging these capabilities to create multiple-media, hyperlinked, user-generated components such as Podcasts and Vodcasts (video Podcasts). Podcasting harnesses the power of the Web platform through user participation in developing content with hyperlinks to images stored on an iPod or Web pages if online. Plain text content can also be added and linked (i.e. hypertexted) to the audio, video and images on the iPod. Users can also use cell phones such as Apple's iPhone to upload images to a website with customizable tags supporting a Podcast's content. It is this encouragement of user participation that attracts educators and learners to O'Reilly's philosophy of collective intelligence. Instead of consuming information, learners participate in creating knowledge in user-defined or negotiated contexts with specific personal and cultural content

Project Summary

It has been shown in an earlier section of this chapter that there is support for the development of autonomous learners that needs to be facilitated by a social constructivist approach to teaching and learning (Luke *et al.*, 2005). A constructivist approach is about constructing knowledge, not receiving it; thinking and analyzing, not accumulating and memorizing; understanding and applying, not repeating back; and being active, not passive. (Marlowe & Page, 2005). Individuals create meaning through social interactions (Kim, 2001) resulting in knowledge being socially and culturally constructed. With particular reference to Japan, Prefume (2007) argues that the implementation of a constructivist approach enhances the ability of foreign language educators to develop better communicators. Web 2.0 and its emphasis

on social communication and collective intelligence fits well with the constructivist approach to teaching and learning.

In support of the desired constructivist pedagogy it has also been argued above that task design and informed use is central to the successful implementation of ICT. The research aim of the "iPod therefore iWrite" project was to implement purposeful task design to support learners' development of literacy skills expected in the Digital Age. Literacy has changed much since the inception of the Internet and ubiquitous access to information that such connectivity serves (Towndrow, 2007). Lacking however are specific guidelines regarding implementation of effective and measurable opportunities for learning supported by an appropriate pedagogy. To reiterate, central to pedagogy and implementation are tasks (Luke *et al.*, 2005) which require educators to consider task design (Towndrow, 2007). The project was thus initiated to seek components of task design based upon measurable outcomes of implementation and iterative development of tasks that involve learners within a Web 2.0 context.

The learning aim of the project was to support the communication of Japanese undergraduate students at a science university with "A level" students at a Secondary school in Wales, UK. The project was implemented in an existing Communications course for first-year undergraduates at a Japanese university, supported by a fourth-year Graduate Study student. The Communications course is split between a Strategies module (which provides explicit delivery and instruction of language exponents and skills) and a coordinated Practices module (which provides opportunities to practice the exponents and skills). Affective aims of the project also need to be considered. For instance, it was anticipated that the exposure to authentic use of English for communication in both written and oral modes would motivate the Japanese students to actively use their acquired language. Moreover, the use of technology for communication (synchronous and asynchro-

nous) would engage students in the meaningful development of digital artifacts. An additional uniqueness of the communication was that the Japanese students communicated with pupils in the UK who use English but are schooled in another language (i.e. Welsh). In turn, the students in Wales had never communicated with Japanese students so it was reasoned that such exposure would result in both groups seeking information about one another using the World Wide Web and Web 2.0 communication tools. A number of positive factors (participants in Japan and Wales keen to communicate; students motivated to share something about their respective cultures; opportunity for social networking; curiosity and interest of fellow teenagers overseas) support a desire to communicate and potentially negative factors (nine hour time difference; varying English language ability of Japanese students; reciprocal lack of cultural awareness of Japan and Wales) were considered prior to the project.

The study observed students planning and developing multiple-media content for the portable iPod. Due to a “notes reader” in the iPod it is possible to add text and link that text to audio and video files such as podcasts, movie clips, and multiple-choice questions. This becomes a multi-modal, hyper-media artifact similar to text-based mazes that were discussed in an English language learning context over two decades ago, and summarized in Vallance (2006b). Additionally, many instructors are (or should be) familiar with online diaries, blogs and wikis. These Internet resources provide the writer with an extended readership beyond the classroom. Readers can also add comments to blogs for consideration by the author. In addition, wikis allow for text to be amended so resulting in a collaborative writing artifact. Some instructors and probably many learners may perceive such writing as typically 21st century. But online writing by English learners, and differentiated by computer technology, originated over two decades ago as exemplified by the works of Higgins and Johns (1984) and Rinvolucri and

Berer (1981), and demonstrated by a computer-based text simulation entitled London Adventure (Hamilton, 1986). These early types were called mazes, which were essentially hypertext stories. At the beginning of a maze (or, in digital jargon, *interactive story*) a problem is posed and a number of solutions are offered. The learner selects one of the given options which will then link to the next corresponding link. Subsequent actions are offered and the maze progresses until some outcome is reached. The paths taken by learners differ based upon their responses. Durani (1989) comments positively, “In maintaining the learner’s interest, the branching structure of the maze is without doubt more stimulating than the linear or circular structures of routine exercises” (p. 43). Mazes though are inflexible and can become rather repetitive and boring. For potential language learning success, the simulation that a maze represents needs to be connected to planned, real-world activities. Higgins and Johns (1984) called this the “briefing-execution-debriefing paradigm” (p. 67). The provision of portability of such interactive stories is facilitated by using iWriter software (<http://www.talkingpanda.com/iwriter/>) so that instructors and students can develop the interactive stories that can, in turn, be displayed and manipulated on iPods (Vallance, 2006c). If students do not have access to iPods then the interactive stories developed in iWriter can also be displayed in a Web browser.

Procedure

The next section will discuss the procedure for students developing content using technology, facilitated by a process of sharing, cooperation, student-centred engagement and good learning, and tag the criteria of Towndrow and Vallance’s “informed use.” The initial plan was the development of Podcasts, multiple-choice questions (MCQ) and text using the iWriter software for the iPod. The content, called an iStory (see Figure 2 – iStory), could also be uploaded to a Website for

Figure 2. *iStory*

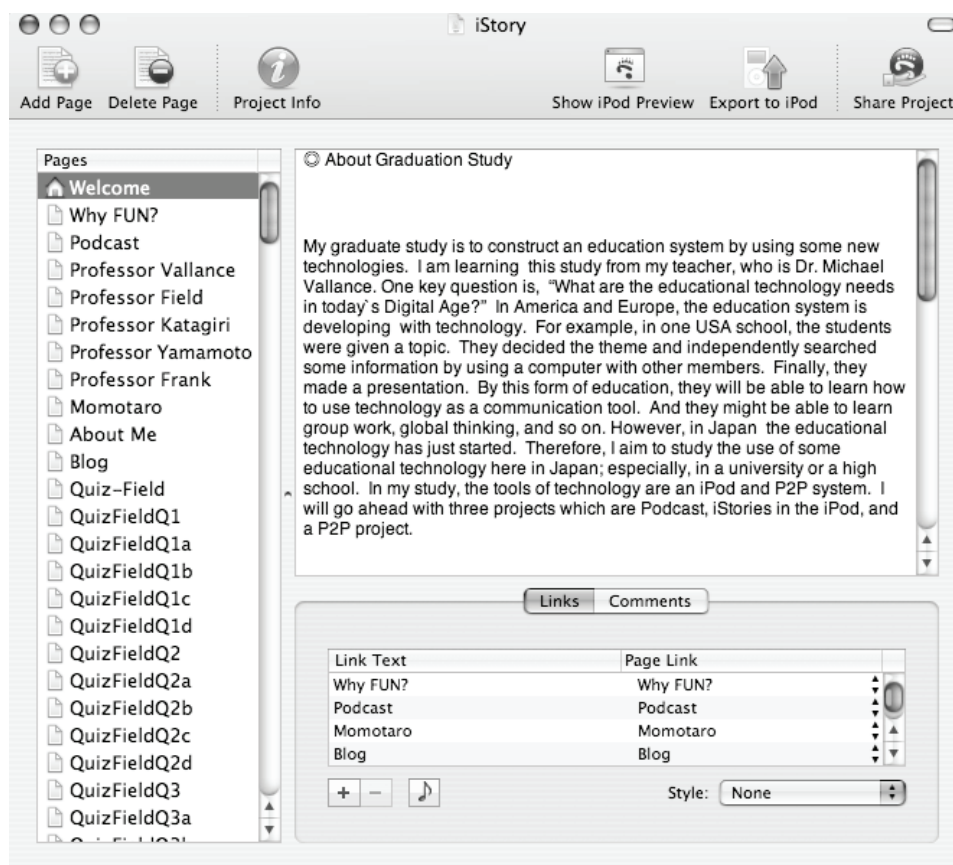
students to review the materials. The participants were first year undergraduate students studying on a fifteen-week, 1.5 hours a week, Communication Skills course at Future University, Hakodate, Japan (the location of this project) and “A level” students studying Welsh at Brynteg Secondary school, Bridgend, South Wales, UK. Students in Japan (n=41) negotiated a project objective with the instructor: to produce English content about Future University-Hakodate aimed at local university students and the Brynteg Secondary school students in the UK. The Japanese students formed teams, and ideas were brainstormed using Inspiration software (<http://www.inspiration.com>). Consecutively, a Graduate student at Future University began work on his Graduate Study and developed similar content.

This was an opportunity for the undergraduate students to discuss and share ideas about useful and informative content for their peers and those outside the university. In addition, all students searched and evaluated relevant information about Future University and their target international audience using measures (informative, current, navigation, and attractive) proposed by Townsend and Vallance (2004). All relevant Websites and commentaries were also shared on a course Bulletin Board System (BBS) for others to view and respond. The students gradually began to

piece together ideas for a meaningful project. One activity in particular that motivated the students was the digital photography week. Five themes were chosen (study, fun, resources, free time, and courses) and all students had to use their cell phones or a digital camera to take one picture that represented each theme. These were all uploaded to the BBS for sharing and selection. Nearly two hundred photographs became a useful resource throughout the course, with no copyright restrictions.

However, inputting text into iWriter and the iPods was becoming time-consuming for the first year, undergraduate Japanese students and they were having difficulties with the non-linear and hyper-thread format. In other words, short text (up to about 25 words) written by the students could be linked to a number of other small chunks of text. The reader can then choose a link and a thread, as desired. However, the writers needed to carefully consider the options of each of the possible paths of text. Although students are familiar with Web page hypertext and linking, they found it difficult to conceptualize the process in their writing (as well as enabling links to images and audio to support their text). As the students grappled with this multiple-media content creation, they were reminded about the aim of the project, that is, to communicate information about their university to

Figure 3. iWriter interface



students in the UK. This led to a decision to develop video-based presentations of Future University of the aforementioned themes (study, fun, resources, free time, and courses). Once the undergraduate students' presentations were completed according to a pre-determined deadline, they were copied to CD-R's and posted to the students in Wales. The digital videos were uploaded and linked to text on the iPods at a later date.

Meanwhile, the Graduate student had recorded five interviews with academic staff at Future University, and uploaded as enhanced Podcasts to iTunes online. In addition, he used iWriter to create text-based, multiple-choice quizzes and relevant background information for each Podcast. In all, 217 pages were created. Figure 3 – iWriter interface, provides an illustration of

the work involved. It was encouraging that the Graduate student developed so much content and linked up with the first year students to share the information.

Meanwhile, the A-level students studying Welsh at Brynteg School, Bridgend in South Wales created a five-minute video to promote the language and culture to Japanese students. This was planned and discussed in the Welsh language in lessons specifically scheduled to improve the pupils oracy. First the students agreed to inform the Japanese students about their Welsh culture and introduce some basic phrases. The students then planned their video. Also, they needed to consider the transfer of their video to Japan. They decided to use Apple's iMovie software, burn the digital video to a CD-R and post to Ja-

pan. A Local Education Authority policy meant that server restrictions at the school disallowed uploading and downloading large files. In addition, the video was converted to *mp4v* format for iPods. The instructors and the students were unfamiliar with the technology but soon picked it up after some online support from Japan. To combine an introduction to Welsh culture and inform the Japanese students about their school and language, the students dressed up in traditional Welsh costumes and toured the school with their camera. The interactions with other students were spontaneous and conducted in English with some basic Welsh added in context. The students also introduced themselves in Welsh. Images such as the Welsh dragon and love spoons were used throughout to further display artifacts of Welsh culture. Finally, some Welsh music was added to complete a unique view of British culture rarely seen in Japan. In addition, the video's content, the developmental process and the theme represented learner ownership of a digital artifact made by students for students across different cultures. In effect, the communication within the Welsh group and the information offered to the Japanese group were authentic and meaningful.

When the iMovie file was received from Wales an activity was developed for Japanese students to locate specific information within the video. This was a matching exercise where students had to locate instances which best matched short selections of a transcription supplied by the instructor. The activity was saved as an Inspiration software file and uploaded to the class BBS for checking by the instructor. The aim was to ensure comprehension of the content and to encourage further questions about the students in Wales, their school and their Welsh culture. Questions were then posted to the BBS by the teams in Japan. The English was checked by the instructor. Similarly, students in Wales e-mailed questions to Japan. This asynchronous communication provided a context for a later synchronous question and answer interaction via iChat (a real-time

text and video-conference application available on the Apple computers).

In week 12, four students from Japan volunteered to communicate with four students from Wales via the iChat application. After brief introductions and some predictable social discourse, the students soon began to ask questions about one another's learning environments and experiences. Images were also posted in the iChat window. Due to a network bandwidth limitation the video-conference option could not be activated. Nevertheless, the students communicated for over fifty minutes while the instructors stepped back until help was requested. The instructor as a facilitator and not a disciplinarian or an expert became an important factor in supporting the authentic communication between the Japanese and Welsh students. A printed transcript was provided for the students immediately after the synchronous chat.

The final component of the project allowed the student teams to present their learning outcomes to their peers. Students also wrote summaries of their learning experiences and posted these on the BBS to share with the students overseas. All the projects were graded using an assessment rubric (Markham, Larmer & Ravitz, 2003).

Meeting the Challenge of Informed Use

How does the project meet the criteria for informed use? This can best be shown in Table 2 – Informed use and the “iPod therefore iWrite” project. Although opportunities for discussion and sharing were provided and encouraged, the interactions in the monolingual group in Japan were conducted in Japanese. English was only used to present the product of the groups' artifacts. Opportunities for communication and cooperation between the remotely located students can be furthered by asynchronous technologies such as e-mail, BBS and Wiki, and synchronous technologies such as CHAT, video-conferencing and

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Table 2. Informed use and the “iPod therefore iWrite” project

Informed use	iPod therefore iWrite
Encourages discussion, consultation and sharing	Discussion, consultation and sharing within class BUT limited use of English for communication.
Focus upon process and product of task and learning objectives	Students negotiated process and product.
Integrate multiple-media	Multiple-media used. In order of usage: 1. PowerPoint with movie. 2. iMovie. 3. iPhoto book. 4. iPod story.
Allow access to a wide range of information	WWW access with an evaluation criteria.
Provide a channel for feedback and assessment	BBS (Moodle) used.
Flexibility of when and where learning occurs	University has 24/7 room access.
Facilitate and/or negotiate students’ periodic outcomes	Poor time management.
Question whether the activities required in the Task process can be done “without” IT!	IT required for sharing and communication.

document sharing (Vallance, 2006a). Using these networking tools a strategic approach to planning and meaningful, authentic communication can be implemented.

The integration of multiple-media was undertaken by the students in the development of their projects. The modalities of text, audio, images and video were used in stand-alone applications such as Microsoft’s PowerPoint and Apple’s Quick-Time, and networking technologies such as a Web browser, a BBS using Moodle and synchronous communication using Apple’s iChat. In addition, the instructor used these technologies to support the delivery of information and assessment. For example, a number of online quizzes on grammar and syntax were made available to the Japanese students on Moodle with the advantage of being able to track students’ scores. This allowed the instructor to respond with further quizzes based upon those previously found difficult. The students could access the quizzes at any time and complete at their own pace. This flexibility in development and usage of the online resources also applied to the open access of the computer equipped classrooms at the Japanese university.

Accessing Web resources is not difficult. Accessing appropriate Web resources can, however, be challenging. Therefore, students were guided in their search for relevant information through the provision of an evaluation criteria (informative, current, navigation, attractive) and techniques for more efficient searching. For example, students were shown how to use Google’s Advanced Search options, make use of synonyms and apply the Find command to locate words or phrases within Web pages.

Throughout the 15-week course, the instructors’ pedagogical approach encouraged students to take ownership of learning by allowing them to negotiate roles, plan the project stages and set periodic outcomes within experiential learning environments (Dewey, 1997): real and online.

To gather data on perceptions of learning, a survey was completed by the participating students. The statements of the survey were considered appropriate for collecting data on the self-reporting of learning as a development of generic, epistemic and declarative competencies (Knipe & Lee, 2002; Vallance, 2006a). Consolidation, new ideas, and

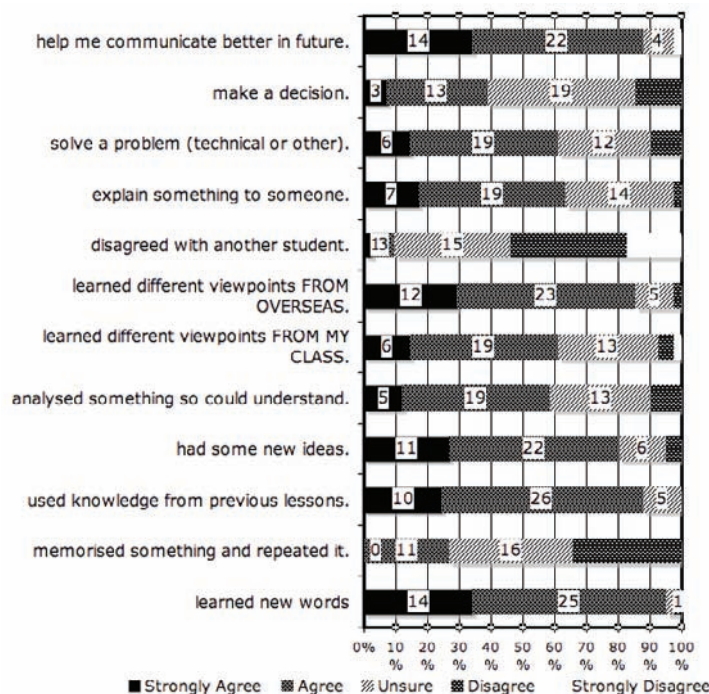
core skills were deemed generic competencies and linked to what Goodyear (2001) calls “transformative potential” which includes the willingness to learn, to have fresh ideas, to be critical and have problem-solving skills. Demonstrating understanding, responding to different points of view, and expressing their own explanations represented declarative conceptual knowledge and applying such knowledge in problem solving or arguments, sometimes referred to as “academic competence.” Epistemic fluency, where learners are required to be flexible in their use of knowledge (Morrison & Collins, 1996), was represented in this study by participants’ values and connections to their school environment.

The data highlights an overall positive impression of the project. By combining the Strongly Agree and Agree responses, the students indicated a positive impact upon their perceptions of their learning experience. 88% were sure that the international communication would help further their communication skills in the future. 85%

recognized they had to make independent decisions during the project. Explanations, whether in Japanese or English, provided opportunities for students to check their own understanding of the topic. 62% acknowledged they had to explain some concept to their peers thus engaging students in authentic communication while clarifying their own knowledge of the topic. New ideas and different viewpoints are often the hallmarks of inter-cultural communication and using technology to communicate across the globe allowed for such interaction. This was recognized positively by students: 80% for New Ideas; 85% for Viewpoints from overseas; 61% for Viewpoints from classmates. Other positive results for syllabus development, for example, is the recognition by students of the connections between each of the Communication Skills lessons as the project developed: 88%. In other words, lessons were not viewed in isolation and knowledge gained in one lesson needed to be recalled in ensuing lessons.

To summarize, the instructors purposely uti-

Figure 4. Students’ responses



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lized a social-constructivist pedagogical approach to engage students in experiential learning that may lead to future independence in knowledge acquisition and lifelong learning. The technology was used to support the students' access, presentation and sharing of information, their remote communication and learning, as well as supporting the instructors' teaching goals and communication. Without the blend of online communication facilitated by Web 2.0 technologies, iPods and applications such as iMovie and iWriter, the aim of the project, the teaching goals and the development of the students' academic competencies could not have been achieved.

RECOMMENDATIONS

The data reveals that that there was a development in generic competencies as student engaged in a meaningful and authentic communication project facilitated by the use of networking technology and portable digital media. For practitioners implementing technology integration in their

classrooms, the observed successes of the project were particularly: (a) the flexibility in the task process and teaching strategies, and (b) the universal access to information afforded by the technology. These two pragmatic outcomes begin the process of supporting Selwyn's call for a framework of informed ICT utilization that consequently informs the research literature (*the meso level*) and should be considered by policy makers (*the macro level*). A number of recommendations can therefore be offered to further support the notion of informed use when using ICT to support an instructor's pedagogical practices (see Table 3 – Recommendations for furthering informed use of ICT). It is acknowledged, however, that further "research in action" in the domain of educational technology that can add to the development of comprehensible guidelines for informed ICT practice needs to be undertaken in Japan.

Japanese students have limited exposure to the specific development of digital literacy skills and MEXT papers provide little guidance to schoolteachers. Consequently, Japanese students lack the skills expected of undergraduates

Table 3. Recommendations for furthering informed use of ICT

Informed use	Recommended
Encourages discussion, consultation and sharing	Require more frequent instances of authentic communication through use of e-mail, BBS, chat, video-conference.
Focus upon process and product of task and learning objectives	Students negotiate process and product.
Integrate multiple-media	All students require iPods for a tangible artifact rather than HTML export/viewing.
Allow access to a wide range of information	Make use of Deep Web such as OPAC and other online library sources. Use Website evaluation criteria.
Provide a channel for feedback and assessment	Encourage periodic peer evaluations.
Flexibility of when and where learning occurs	24/7 technology access.
Facilitate and/or negotiate students' periodic outcomes	Need milestones.
Question whether the activities required in the Task process can be done "without" IT!	Consider how technology is used for sharing and communication.

attending a modern university in today's digital age and knowledge-based economy. In contrast, UK students are exposed to experiential learning throughout their education and there is an emphasis on a social-constructivist pedagogy in order to develop autonomous, lifelong learners. In the UK there is also a drive towards furthering the use of mobile technologies to deliver course content and facilitate communication between academics and undergraduates in an increasingly competitive education market for a limited number of students. The same cannot be said for Japan despite the widespread usage of mobile technologies. Integrating technology in purposeful ways is a challenge for instructors at Japanese schools and universities but failure to do so will result in an unprepared workforce for the knowledge-based economy with the potential for the huge economies of China and India to surpass Japan.

CONCLUSION

This chapter has outlined a research project that aims to bridge the divide between policies (*the macro level*) and implementation (*the micro level*) by responding to Selwyn's call for a solid rationale for informed technology adoption by educators. While Web 2.0 applications seemingly present greater opportunities for student-centred styles of learning they must be similarly grounded in sound curricula practices. The foundation of the research (*the meso level*) has been laid by constructing and implementing criteria for "informed use" to support a desired change in education. The development of multiple-media content for authentic and meaningful sharing by students within an institution and internationally set the context for some early observations of mobility in access to information and learning, flexibility in task process and informed teaching strategies. It is anticipated that as similar, pragmatic "research in action" by teachers and researchers becomes mainstream in Japanese educational

institutes, further advice supported by empirical data can inform policy makers, practitioners and the community about "informed use" of ICT in Japan. Learning aims that support "the ability to transform information into knowledge using new technologies [that] can be considered the critical factor contributing to wealth and power in today's world at both the individual and national level" (Warschauer, 2007, p. 43). Moreover, implementation at the classroom level needs favorable support at the school and government level (UNESCO, 2007). Quite simply, "technology integration requires a coherent vision for systematic reform, a vision that must be supported by the entire educational community" (Brooks-Young, 2007, p. 1). Informed use is absolutely essential, especially in the context of Web 2.0 applications, for sound pedagogical practices that support good learning and to not simply use technology because it's there. Practitioners are therefore recommended to consider the criteria of "informed use" provided in this chapter and continually reflect upon the challenges to their daily pedagogy posed by Information and Communications Technology.

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KEY TERMS

Collaboration: A process where students work together to achieve an outcome not possible otherwise.

ICT: Information Communications Technology may be described as technologies that enable access, retrieval, storage, and sharing of data. Often viewed as a technology subject at schools, Web 2.0 is shifting the onus towards communication by users.

Informed Use: Adding value to good tasks, or making tasks worthwhile.

Policy: A plan of action adopted by a government or ministry.

Shared Spaces: A common location, usually online in a Bulletin Board System, where remote students can contribute.

Task Design: An arrangement of a scheme of actions leading to a learning outcome or artifact.

Chapter II

Communicative Networking and Linguistic Mashups on Web 2.0

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ABSTRACT

This chapter discusses the application of a range of Web 2.0 technologies to language education. It argues that Web 2.0 is fundamentally about networking, community building, and identity negotiation. Given the textual nature of the Web, all of this is made possible primarily through the medium of language. Consequently, Web 2.0 is ideally suited to the teaching of language and literacy. To be most effective, this requires a broadly social constructivist pedagogical approach as well as a willingness to work with the messy reality of linguistic “mashups,” the hybrid uses of languages, codes, and media which inform Web 2.0.

INTRODUCTION

There continues to be widespread confusion and apprehension about the effects of the Internet and new technologies on education. Recent discussions of the web in versions ranging from 1.0 to 3.0 have done little to alleviate this situation, with at least one spurious reference to Web 6.0 (Motteram & Ioannou-Georgiou, 2007) making the point that labels and numbers are not the important thing. However, a glance at Web 1.0 and Web 3.0 can be helpful in an understanding of Web 2.0, the term popularized by Tim O'Reilly through

the first Web 2.0 Conference in 2004 (O'Reilly, 2005) and now commonly used to describe the current state of the web.

The retrospective term Web 1.0 refers to the initial *information-oriented web*, authored by a small number of people for a very large number of users. Consisting mainly of static webpages, it offered little room for interactivity. Educational uses largely fell into two categories: information retrieval (as in webquests) or rote training (drill exercises). While there were some clear benefits in terms of student autonomy, use of authentic materials and exposure to multiliteracies, and

while problem-based learning and guided discovery approaches to Web 1.0 were not unknown, it was most often used in ways corresponding to traditional transmission or behaviourist models of pedagogy.

Web 3.0, a speculative term describing a possible future version of the web, refers most commonly to the *semantic web*, where software agents will collate and integrate information to give intelligent responses to human operators, and/or the *geospatial web*, where location will be used to index information. These are, however, long-term projections, whose educational implications are impossible to assess at present.

In between is the presently dominant Web 2.0, also known as the *social web*, which comprises a loose grouping of newer generation social technologies whose users are actively involved in communicating and collaborating with each other as they build connections and communities across the world, negotiating their online identities in the process. What happened, as Davies puts it, was that “society got more technical while software got more social” (2003, p. 5). The 2007 Horizon Report describes Web 2.0’s social networking sites as being “fundamentally about community” (New Media Consortium, 2007, p. 12), while Jimmy Wales (2007), founder of Wikipedia, has linked Web 2.0 to the new digital literacies concerned with “inclusion, collaboration and participation”. In brief, Web 2.0 technologies, from blogs and wikis through social networking sites and folksonomies to podcasting and virtual worlds, are all about communicative networking. Such networking is likely to become increasingly important as a digital native ethos takes over from a digital immigrant one (Prensky, 2001), as more technologies become available to those with little specialist expertise in IT, and as today’s technologies converge to form ever more versatile hybrids.

Web 2.0 has many applications in education, both current and potential, but its greatest impact may well be in subjects which foreground language

and communication. After all, given the textual nature of the web, all the connections made online and all the communities established there are enabled primarily through the medium of language. As a result, for language and literacy educators, the advent of Web 2.0 presents great opportunities: to decentralize the role of the classroom (Coleman, 2007), escape the language lab, and engage with the younger generation of digital natives on their own territory. It is a territory whose geography is forged through language and whose key navigation tools are literacies. Teachers can help their students develop greater language competence and additional linguistic tools to navigate Web 2.0, as the students engage in the process of making connections, building communities and shaping their own self-representations online. In this way, language and literacy educators can play a key role in the collaborative enterprise that is Web 2.0. It is important to acknowledge, however, that effective use of Web 2.0 requires a rethinking of approaches to literacy and pedagogy which may have traditionally seemed unproblematic, but which are less than ideally suited to the new online environment — or the wider world in which it is embedded.

This chapter begins by examining recent changes in conceptions of literacy and pedagogy which may enable educators to better frame their use of Web 2.0. It then goes on to discuss common Web 2.0 tools and their applications to language education, focusing firstly on collaborative technologies such as discussion boards, blogs and wikis; secondly on social networking technologies; thirdly on information linking technologies like folksonomies and RSS; and fourthly on cutting-edge technologies such as podcasting, m-learning and virtual worlds. Finally, the chapter explores some of the main limitations of Web 2.0 in education, in a discussion which ranges across pedagogical, social, sociopolitical and philosophical issues. Drawing these threads together, the conclusion offers recommendations for language and literacy educators who wish to use Web 2.0 more extensively in their teaching.

CHANGING LITERACIES AND PEDAGOGIES

It has been clear for some time that traditional print literacy alone is no longer sufficient to allow people to operate effectively in society. Web 2.0 greatly exacerbates the problematical aspects of this situation. As a result, there is an urgent need to pluralize the concept of literacy, as has been claimed in recent work on literacies and *multiliteracies* (Barton & Hamilton, 2000; Cope & Kalantzis, 2000; Kist, 2004; Street, 1994; Unsworth, 2001). It is important to challenge the focus on “formalised, monolingual, monocultural, and rule-governed forms of language” inherent in print literacy pedagogy (New London Group, 2000, p. 9). In their place, multiliteracies should be promoted and developed to facilitate the navigation of “our culturally and linguistically diverse and increasingly globalised societies” as well as “the burgeoning variety of text forms associated with information and multimedia technologies” (ibid.). The multiliteracies paradigm can thus refer to multiple cultural and linguistic codes on the one hand, and to multiple media on the other. Both aspects, but particularly the latter, are reflected in the rapidly multiplying treatises on computer, electronic and hypertext literacies (Dudfield, 1999; Kern, 2006; Selber, 2004; Warschauer, 1999, 2003; Wray, 2004).

In short: in the Web 2.0 environment, there is a dynamic fusion of media and a rich blend of cultures, languages and, within languages, evolving codes and registers. While English may be the default lingua franca, it is less a single international English and more a loosely concatenated assemblage of World Englishes. And generational differences ensure that, even among speakers of single varieties of English, there is a bewildering mixture of modes of self-expression. Indeed, the multilingualism and multiliteracies which underpin Web 2.0 parallel the increasingly productive mixing of pre-existing video, graphics, music and text commonly referred to as *mashups*

(a term derived from the hip hop practice of mixing songs to create new hybrids). “Linguistic mashups,” then, would seem to be in the nature of international socialization and online networking: the emphasis is on communication, which involves sophisticated aggregations of multiple media drawing on increasingly porous cultural and linguistic codes. Web 2.0 is not about neat definitions or clear borders. Rather, its users must find ways to work with the global cacophony of voices which make up its textual fabric.

Fortunately, there is a range of appropriate pedagogical tools at hand. While Web 1.0 lent itself to transmission pedagogies and behaviourist drills, working effectively with Web 2.0 demands a more constructivist orientation. Social constructivist pedagogy, with its roots in the work of Vygotsky and carrying influences from Dewey and progressivism, views social interaction as the source of all learning. Acknowledging and valuing students’ pre-existing knowledges and multiple perspectives, it helps students deconstruct and reconstruct these as they engage actively and collaboratively in building new understandings through scaffolded learning experiences (Dalgarno, 2001; Finger, Russell, Jamieson-Proctor & Russell, 2007, p. 119; Jonassen, 1992). As Hoppe, Joiner, Milrad and Sharples (2003) state, “there is an imperative to move from a view of e- and m-learning as solely delivery mechanisms for content”—the transmission approach typical of Web 1.0—and to embrace contemporary pedagogy with its “high valuation of *active, productive, creative and collaborative learning methods* [which go] much beyond the ‘absorption’ of codified information” (p. 255; italics in original). It might be argued that a constructivist approach is becoming ever more relevant in a world where, as Warschauer (2007) indicates, “[t]he ability to draw on rote answers is inadequate” because “yesterday’s answers are outdated faster than ever” (p. 42). What is relevant in such a world is the ability to seek out information through networks of contacts, and to collaboratively build

understanding with others engaged in similar pursuits. The social networking, dialogue building and collaborative knowledge construction tools of Web 2.0 are uniquely suited to preparing students for this world.

Another useful perspective is provided by the communities of practice paradigm, where learning is conceived of as “social participation,” meaning that people engage in the “process of being active participants in the *practices* of social communities and constructing *identities* in relation to these communities” (Wenger, 1998, p. 4; italics in original). Communities of practice have, in fact, been defined as “networked learning systems” which connect “all participants and learning system components across multiple levels of practice and inquiry” (Quinton, 2006, p. 563). This is precisely the kind of educational networking that can be fostered by Web 2.0 applications. As students begin to use these tools, they are not only gaining important future skills but may well find themselves entering, as legitimate peripheral participants, the very communities of practice in which they will eventually become full participants. It is implicitly a community of practice orientation that Holmes, Tangney, FitzGibbon, Savage and Mehan (2001) ascribe to when they express the hope that, in a “communal constructivist” approach to new technologies, “students will not simply pass through a course like water through a sieve but instead leave their own imprint in the development of the course, their school or university, and ideally the discipline” (p. 1).

In language teaching itself, the last decade of the twentieth century witnessed a move away from the ideals of the communicative approach — which, having dealt with some of the key limitations of preceding approaches, came to create its own problems — and towards a conception of intercultural communicative competence. While continuing to recognize the importance of the communicative element, the intercultural communicative competence movement has rejected

any insistence on the imitation of native speaker models along with the accompanying goal of integration into a target culture. Rather, the language learner is encouraged to move into a “third place” (Kramsch, 1993) between cultures; from here, he or she will be able to explore his/her own culture as well as other cultures, which are not seen as static entities into which full integration might be possible, but rather as multiple, contradictory and in flux (Byram, 1997; Corbett, 2003; Kramsch, 1998; Phipps & Gonzalez, 2004). Intercultural competence is thus very much about negotiating communication in “the messy real world of cultural flows and mixes” (Pegrum, forthcoming 2008a) — one whose messiness is exponentially increased by the technological affordances and communicative possibilities of Web 2.0.

In the new millennium, the notion of identity has also emerged as a major focus of research in language pedagogy, thanks in large part to the work of Norton (2000), who observes that “an investment in the target language is also an investment in a learner’s own identity” (p. 11). Pavlenko and Blackledge (2004) foreground the questions of power and empowerment which underpin identity concerns:

individuals are agentive beings who are constantly in search of new social and linguistic resources which allow them to resist identities that position them in undesirable ways, produce new identities, and assign alternative meanings to the links between identities and linguistic varieties. (p. 27)

Ricento (2005) goes even further in describing:

the central role of language in the negotiation of a person’s sense of self at different points in time and in different contexts, and in allowing a person access (or lack thereof) to powerful social networks that give learners the opportunity to speak. (p. 898)

Web 2.0 places an even greater premium on such issues for language teachers and learners: it elevates to the level of a constituting principle the notion that identity is constructed through language.

In sum, if the limitations of a “single-mode, single-language, single-culture literacy” (Pegrum, forthcoming 2008a) were always apparent to some, they are all the more obvious in our shrinking world, where members of the net generation are simultaneously bound together and yet differentiated from each other through their use of Web 2.0 tools. What Pennycook (2007) has recently written in regard to the rapidly globalizing culture of hip hop—original source of the mashup—applies equally to students’ desire for linguistic and cultural self-realisation on Web 2.0:

If we believe that education needs to proceed by taking student knowledge, identity and desire into account, we need to engage with multiple ways of speaking, being and learning, with multilayered modes of identity at global, regional, national and local levels.

Unless we get in touch with this as educators, the flow will pass us by. ... Languages will flow and change around us, new combinations of languages and cultures will be put together, texts will be sampled and mixed in ever new juxtapositions. Students are in the flow; pedagogy needs to go with the flow. (p. 158)

Of course, it is not only about multiple Englishes, but multiple languages. It is not only about multiple texts, but multiple textualities. It is time, as Canagarajah (2003) has suggested, to begin teaching the “fluid literacies” (p. xi) essential for navigation and negotiation in this new hybrid world:

Rather than developing mastery in a ‘target language,’ we should strive for competence in a repertoire of codes and discourses. Rather than

simply joining a speech community, we should teach students to shuttle between communities. Not satisfied with teaching students to be context-sensitive, we should teach them to be context-transforming. (p. xiii)

Few can doubt that students are part of this world already, on the web and beyond it. But that does not mean they are fully accomplished navigators, have all the language and literacy skills they need, or always exercise appropriate critical judgement. Most students, Hubbard (2004) notes, can “profit from some formal, sustained training in how to take *operational* competence in a given computer application and transfer that into *learning* competence” (p. 51). More than this, students need to learn critical literacy skills to sort through, evaluate and prioritize the masses of data with which they are confronted, turning information into understanding (McFarlane, Roche & Triggs, 2007; Pesce, 2007). They also need a grasp of the powerful linguistic and media options at their disposal for shaping their identities and engaging with others online. It is a fallacy to think that educators in this new virtual world are no more than facilitators. As has been widely argued in the literature about online learning, and in line with social constructivist pedagogical models, teachers must be prepared to play a central organizing, guiding and mentoring role (Garrison & Anderson, 2003; Pegrum, 2007; Warschauer, 2007).

In doing so, they have a golden opportunity to engage with their students. They can support the latter’s online self-presentations and endorse their community building by helping to enhance their language and literacy skills. At the same time, teachers should be open to learning from their students about their digital lifestyles — and in the process, teachers may well find their own language and literacy skills enhanced in unexpected ways. Collaboration which brings together teachers’ pedagogical and critical expertise and students’ technological and practical expertise

is the only way to unlock the full educational potential of Web 2.0.

THINKING COLLABORATIVELY

Much of Web 2.0 is devoted to fostering communities of interest or practice which nurture collaborative thinking. As such, it effectively illustrates the potential, noted by Kaye in the early days of computer-mediated communication, for the “weaving together of ideas and information from many peoples’ [sic] minds” (1989, p. 3). This principle underpins asynchronous discussion boards (DBs), in some ways a spiritual precursor of Web 2.0, along with the more multifaceted blogs, wikis and hybrid blikis (or blokis), all of which may contain in-built discussion or comments features.

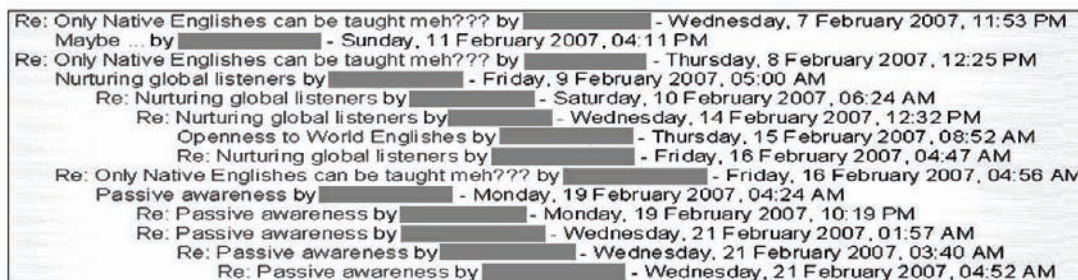
Being text-based, asynchronous DBs are natural vehicles for the development of writing skills, while there is some limited evidence they may also support the development of oral skills (Burgmer, 2006, p. 96; Levy & Stockwell, 2006, p. 182). It has been widely observed that writing on the Internet, because of its conversational nature, often takes the form of a hybrid code, mixing together features of speech and writing with its own peculiar elements (Crystal, 2001a, 2001b; cf. Al-Sa’Di & Hamdan, 2005, on synchronous chat). It is worth bearing in mind, then, that DBs may not only help students learn about standard spoken and written language, but about hybridized language uses of the kind with which they need to be familiar in order to enter fully into many online environments.

If structured carefully, asynchronous DBs can promote the formation of learning communities where students, reacting to and building on each other’s ideas in branching discussion threads, collaboratively construct their understandings of the subject matter at hand — all through the medium of written language, which is probably more conducive to reflective educational dis-

cussion than newer voice alternatives (whether synchronous VoIP or asynchronous voiceboards). See Figure 1 for an example of threaded postings in an international Master’s forum for language teachers. Used in conjunction with face-to-face classes, DBs may help cater to differing learning styles and needs. For example, they allow more time to be spent on composition of contributions by less extroverted or non-native students; the time-independence of DBs may thus “mitigate the effects of certain inequalities” (Locke, 2007, p. 188). It has also been widely claimed that DB exchanges typically display a high level of cognitive sophistication (e.g., Garrison & Anderson, 2003, p.26; Heckman & Annabi, 2005; Hiltz & Goldman, 2005, p.6). This may be because “[t]he historical divide between speech and writing has been overcome with the interactional and reflective aspects of language merged in a single medium” (Warschauer, 1999, p.6). This particular aspect of online hybridity would certainly seem to have major advantages.

When they involve multilingual or multicultural cohorts of students, DBs may equally promote the development of intercultural competence. In the ongoing *Third Space in Online Discussion* research project, which involves language teachers enrolled in Master’s courses at the University of Western Australia and Canterbury Christ Church University, UK, discussion forums (like that seen in Figure 1) are being analyzed as educational “third spaces” which exist in the interstices between students’ cultural and educational experiences, and where there is ample space for the deconstruction and reconstruction of pedagogical, linguistic and cultural knowledge and understanding (Pegrum & Bax, 2007). It is apparent that, as Zieghahn (2001) realized some years ago, “the online environment offers a unique medium through which to reflect upon individual cultural position and on intercultural communication” (p. 144). While most educational DBs necessarily operate in a single lingua franca, multilingual forums are possible in some

Figure 1. Sample discussion thread replies from Third Space Trial 1, Feb. 2007



language learning situations. Linguistically as well as culturally, then, DBs can help educators respond to Canagarajah’s aforementioned plea to teach students to shuttle between communities. In the process, their sense of their online — and perhaps offline — selves may be shaped through their interactions with peers.

While blogs — described by Doctorow (2002) as “outboard brain[s]” — can function as reflective diaries, they can also be conversational centrepieces: readers may leave comments for a blog’s author and each other, thereby forging connections and community around topics of mutual interest. Students can certainly join the conversations on others’ blogs, but they can equally set up their own. Receiving feedback on blog entries from peers and teachers can facilitate knowledge construction as well as perspective shifts as they go about developing their online personas. Indeed, with fully public blogs, students can potentially receive feedback from anyone on the entire Internet and may, as a result, invest themselves more fully in writing and publishing tasks.

Because blogs can be multilingual (allowing some mixing of the mother tongue with the target language), multimodal (allowing pictures, video and audio to support written text), and carefully designed (drawing on technical knowledge and artistic flair), students at even the lowest levels of linguistic proficiency need not feel the work they are creating fails to capture or express important aspects of their identities or beliefs. At higher lev-

els, as students’ linguistic competence develops, they can present more nuanced versions of themselves. As Kazan indicates, “[w]ithin cyberspace, writers have flexibility in how they construct a self and the more strategies they acquire, the more flexibility they have” (2007, p. 264). The task for teachers is to help students make more “informed rhetorical decisions” (ibid.), which will allow them not only to shape their online identities as they wish, but also to “develop a public voice about issues they care about” and so come to understand “their literacies as citizenship skills as well as avenues to entertainment” (Rheingold, 2007).

Wikis are even more strongly oriented towards collaboration than blogs since they are effectively co-operatively authored websites. They turn the element of collective intelligence implicit in blogging communities into a structural principle. Students are able to engage in a form of process writing in which they draft and redraft work collaboratively, each contributor adding to and modifying the work of peers. With a private wiki, feedback can be received from the class teacher and peers, or, with a public wiki, from the entire Internet. As Mitchell (2005) notes, it has even been suggested that wikis are an example of “the tried and trusted system of peer review taken to a new level” (p.120).

One option is for students to contribute to pre-existing wikis such as Wikipedia or, for learners, Simple English Wikipedia, thereby entering into established communities of prac-

tice. Alternatively, dedicated class wikis can be set up on subjects of relevance or interest, and in time new communities of practice may form around these. Even a course constrained by a tight, exam-oriented syllabus can exploit wiki technology: under the guidance of the teacher, each individual's or group's research could feed into a network of student-constructed documents reviewing material to be covered in the exam. This might include vocabulary accompanied by definitions and examples; grammar points accompanied by explanations and illustrations; or set literature accompanied by summaries and quotations. Once again, there is ample opportunity for multilingual, multimodal, technically sophisticated and artistically creative presentation. The more sophisticated the wiki, the greater the students' facility with multiliteracies will need to be — or become.

SOCIAL NETWORKING

Social networking technologies also promote collaborative thinking, many of them effectively harnessing the power of collective intelligence, but the accent is on the networking aspect. It has been suggested that Facebook, for example, “puts the social community first, with content — including, but not limited to, educational content—being the medium of exchange” (Downes, 2007). Some observers claim that virtual networks are replacing the gradually disappearing or increasingly inaccessible public spaces in which young people formerly gathered (boyd, 2006). These networks are intimately bound up with selfhood; the sense of empowerment that comes from the crafting of personal identity on social sites (Coghlan, 2007) goes hand in hand with negotiating membership of the groups of friends and acquaintances who congregate there. The potential effects on language education are an extension of the paradigm shift neatly captured at the start of the millennium by Kramsch, A’Ness & Lam (2000, p. 97) in their comments on language learning through participation in informal online interaction:

The kind of language experience ... in which rules are learned first and then put to use in conversation, has given way to a learning by doing, and learning to meet the demands of doing in specific contexts, to solve immediate problems together in the small culture of communities of practice (Holliday, 1999; Lave & Wenger, 1991; Uber Grosse & Leto, 1999; Wenger, 1999). Rather than an object of reverence or study in itself, language is viewed as a tool which brings people together and creates intimacy (Harmon, 1999). What is important is how you relate, emotionally, and physically, to that world.

Social networking sites, with MySpace and Facebook being by far the most popular, allow each user to set up an online identity, or profile, and to keep in touch with friends and acquaintances by constantly updating this profile while regularly viewing others' profiles; new contacts can be established through mutual acquaintances or shared interests. Since 2006, Facebook has used a news feed system to keep users updated on changes to the profiles of their contacts. Typically, social networking sites integrate a range of other communication channels, which may include email, instant messaging (IM) and even blogs, with facilities for sharing photos, videos and audio files. There is a fine line separating these sites from social sharing services, such as Flickr for photos or YouTube for videos. Facebook allows the integration of Flickr photos as well as del.icio.us tags (see below) into profiles, while it is now also possible for users to assemble friends and acquaintances from the virtual world Second Life alongside their other contacts.

Social networking sites are perhaps the most maligned feature of Web 2.0, mainly due to fears of Internet predation but also because of concerns over time spent online, as well as the possible degeneration of literacy skills as the digital natives communicate ever more rapidly in ever more truncated “netspeak.” Yet the reality is that students are already using social networking

sites and educators have the choice to work with or against them. The advantage of the former strategy is that it is possible to openly address concerns over Internet safety or time spent online, attempting to provide guidance in such areas. This might be extended to include a focus on what Barney (2007, p. 279) refers to as “critical technological literacy”: asking questions about the presuppositions and blind spots, the benefits and drawbacks, in short, the “affordances and ... denials” of different technologies. Helping students adopt a critical distance to all technologies will do them a much greater service in the long run than simply closing down all discussion in the classroom, leaving them to conduct their explorations, unguided, in their own time.

At the same time, there are many educationally beneficial aspects of social sites which can be more fully exploited. According to recent US statistics, some 59% of 9-17 year olds say they talk about topics broadly related to education on social networking sites, while 50% claim to discuss schoolwork (National School Boards Association, 2007, p.1). Thus, whatever educators may think, students have already appropriated social networking as a constructivist learning tool. However, educators could certainly do more to encourage the use of this tool for groupwork outside the classroom. The potential for language learning partnerships is undoubtedly great. Lakshimi (2007), discussing her English language students’ use of the social networking site Orkut, comments: “Students who have been incommunicado in the classroom are so interactive on Orkut that it leaves me wondering if Orkut would be a better teacher than I am in helping students learn to use English to be socially interactive” (n.p.). Interaction, of course, is precisely the motivation: the wish to communicate and participate, with language being an essential tool.

Social sharing sites offer the additional possibility of posting individual or collaborative work to the web, with students viewing each other’s materials and, for example, commenting on their

peers’ photographed posters (Flickr), PowerPoint slides (Slideshare), presentations (YouTube) or short films posted to blogs (such as the *English Advertising Class*). As Coghlan (2007) observes with regard to student-created advertisements on the last of these sites, some examples may involve little traditional language use, but there is a lot of learning potential in the areas of “multiliteracy, digital literacy and e-literacy.”

The communication on social networking and social sharing sites offers, finally, a unique opportunity to explore with students the nature and uses of netspeak, when and where it is appropriate, and how to codeswitch between netspeak and more standardised language forms. One of the main reasons for the widely criticized spread of netspeak into more traditional domains of literacy may well be students’ ignorance of codeswitching or their inability to carry it out appropriately. Teachers’ failure to explicitly address this area with students can only limit the latter’s repertoire of literacies and constrain their ability to access and move between linguistic communities.

INFORMATION LINKING

Folksonomies are a step beyond social sharing. Relying very much on the principle of collective intelligence, they are a way of indexing distributed knowledge, which is then typically presented in the semi-organic form of a tag cloud, as seen in Figure 2. In essence, they allow information linking with a social element, because people (the “folk”) have a central organizing role, which gives rise to rich “person-mediated serendipity” (Lambe, 2006, n.p.). After all, people who use the same tags are likely to have similar interests; and a folksonomy allows tags to be traced to users, and those users’ other tags to be explored. The potential for “collaborative information discovery” (Alexander, 2006, p. 36) may be exploited by students working together to create class folksonomies dependent on criteria negotiated and evaluated by the students

Figure 2. Extract from E-language Tag Cloud (<http://e-language.wikispaces.com/e-learning-tagcloud>)



themselves. This could even involve the tagging of the students' own material posted on wikis or social sharing sites. Given the usefulness of well-constructed folksonomies, they might also be consulted by members of wider communities of practice on the Internet and could provide a means of entry into such communities; as Wenger (1998) reminds readers, learning communities should not be isolated but should “use the world around them as a learning resource and be a learning resource for the world” (p. 275). In all cases, tagging, like indexing of any kind, requires a high level of facility with the language being used for classification. With sufficient scaffolding, folksonomy building can function as a literacy enhancement exercise.

RSS (Really Simple Syndication) feeds provide automatic updates of syndicated content — ranging from blog entries to podcasts—from sites to which a user subscribes. Many homepage, blog and wiki services now make it very easy to include selected RSS feeds on webpages. Drawing in feeds from other sites in this way amounts to the incorporation of others' views and perspectives, leading to the co-construction of knowledge within a new frame. At the same time, as Anderson (2006) notes with respect to blog feeds, distribution of content by RSS allows “public review, argument and resolution of topic issues by students globally—in the process

creating outstanding international learning opportunities” (p. 146).

Incoming feeds naturally entail a constant stream of information flowing into a desktop aggregator or webpage. The language could be that of native speakers; thus, learners could conceivably subscribe to media or blog feeds in languages they know or are learning, and would be exposed to extensive authentic input. There is also an argument, however, for subscribing to non-native language feeds. For example, TESOL students working in a World Englishes paradigm might find it beneficial to subscribe to feeds from Kachru's outer or expanding circles. Incorporating both native and non-native feeds would lead to a rich patchwork of first and additional language usage, approximating in some ways the multi-dialectal reality of today's world. Awareness of multiliteracies can be enhanced through feeds which distribute audio or video content in addition to or in place of written text.

MASHUP FRONTIERS

Some of the greatest educational promise is to be found in the areas of podcasting, vodcasting, m-learning and virtual worlds, all of which offer considerable language learning opportunities, especially for those prepared to work with multiple literacies and language mashups.

M-learning refers to education involving mobile technology. The best-known example is podcasting, where syndicated audio files, potentially with accompanying text or image files, are downloaded from the web and transferred to a portable device such as an iPod or MP3 player, thus facilitating “time and place shifting to access the content” (Molina & 2006 EDUCAUSE Evolving Technologies Committee, 2006, p. 122). Listening to podcasts is widely perceived as advantageous for learning foreign languages or even brushing up on grammar, vocabulary or style in one's first language. Surveying a selection of national

iTunes stores on the randomly selected date of 17 October, 2007, for instance, it was found that the majority of the 25 most popular educational podcasts in each country were related to foreign language learning or first language improvement: 24 in Spain, 22 in Germany and Switzerland, 21 in Australia, New Zealand and the UK, 20 in Canada and Ireland, 19 in France, Sweden and the US, and 17 in Italy.

M-learning can also involve regularly sending students digestible chunks of information via mobile phones, as has been done, for example, with Italian vocabulary accompanied by quizzes at Griffith University in Australia (Levy & Kennedy, 2005). However, there is the potential for greater levels of interactivity than this, as suggested in a recently proposed definition of m-learning as “the processes of coming to know through conversations across multiple contexts among people and personal interactive technologies” (Sharples, Taylor & Vavoula, 2007, p.225). For example, students can work individually or, better still, collaboratively to create podcasts or even vodcasts – as video podcasts are usually known – for publication to the web. Moblogging, or mobile blogging, allows students to use devices like mobile phones to post text, audio or video files to blogs. Peers and teachers can then respond to these postings in traditional text or mixed-media formats, addressing the communicative intent while possibly also critiquing features of language or composition. In many cases, spoken language will be foregrounded, thus helping to balance out the heavy emphasis on written text still typical of the web, including Web 2.0. Sometimes there may be room for multiple linguistic codes and registers if not multiple dialects or languages. More sophisticated versions of m-learning involve participants interacting with real-world environments and each other with the aid of GPS-enabled phones and other portable devices, which may provide instructions and information as well as a variety of communication channels; salient examples range from the

MOBilearn Uffizi Gallery trial in Florence, Italy (Sharples, Taylor & Vavoula, 2007, pp.236-242) to the *Handheld Augmented Reality Project*, or *HARP*, conducted at Harvard University in the USA (Harvard University, n.d.).

Virtual worlds are perhaps the most striking realization of the possibilities of Web 2.0. The avatars which inhabit them are certainly Web 2.0’s clearest example of the potential for identity creation, shaping and development. These worlds are very much about networking. Within them, avatars’ understandings of their new environment are constructed largely through their engagement — their sharing and building of knowledge — with other avatars. Externally, virtual worlds are supported by and increasingly integrated with blogs, wikis, and social networking sites. Operating around and through these sites are distributed knowledge systems where, as in the gaming communities discussed by Williamson and Facer (2004), the key information is found “in the interconnections between the ‘nodes’ (the people, texts, tools and technologies) in the network, rather than with isolated individuals” (p. 266, with reference to Gee). In a comment which captures something of the richness of the virtual/non-virtual interface, the best-known of these worlds, Second Life (SL), has been described as “a playground [and] a crucible for ideas about how people can augment their interaction through constructive, and constructivist, play/work/whatever” (Stevens, 2007, n.p.).

Since the rollout of voice technology to SL in mid-2007, in-world avatar-to-avatar interactions can involve a mixture of spoken and written language not unlike that found in the real world. This creates valuable opportunities for students to try out new language, building up confidence and fluency before embarking on real world encounters. Language teachers have been quick to pick up on this potential, with the inaugural SLanguages Colloquium taking place on 23 June, 2007, and bringing together around 50 educators from across the globe; a snapshot of the open-

ing talk by Gavin Dudeney is shown in Figure 3. Language teaching is already underway in SL, with English classes on offer, for example, through The English Village and LanguageLab.com. SL also offers immersive linguistic experiences outside formal classes, a point emphasised at the inaugural in-world Festival of European Languages in 2007, which promoted the idea of learners seeking out target language areas of SL in which to practise their skills.

A certain degree of linguistic versatility is advantageous for anyone wishing to develop a fuller SL presence, since language is the glue which holds together any community which establishes itself there. Community, in fact, has been described as the killer app of SL (Yowell, cited in Panganiban, 2007). Different languages, and certainly different dialects and registers, are necessary for effective participation in a range of contexts and communities, with an increased linguistic repertoire being a concomitant of increased community involvement and wider social networking. This is not unlike the real world, except it is now possible to cross linguistic and cultural boundaries without leaving one's desk.

Anecdotal evidence suggests multilingual interactions in SL are becoming more common.

Figure 3. Inaugural SLanguages Colloquium on EduNation in Second Life, 23 June 2007. Reproduced by kind permission of Gavin Dudeney, EduNation.



A striking example of a four-person, five-language (Catalan, English, French, Portuguese and Spanish) conversation has been described by Gavin Dudeney, who writes of “the ease with which some of us switched between the languages we knew, and typed furiously to reformulate things we thought one of the others wouldn’t understand into a language they would,” resulting in “a very rich evening” (personal communication, 11 Oct. 2007). Vance Stevens (2007) quotes a comment about SL which hints at intriguing language education possibilities: “Yesterday a cheerful Italian gave me a Babblor translator so we started teaching each other Italian and Hungarian using English as the common language, which was real fun, especially that we were figure ice-skating meanwhile” (n.p.). Participation in such conversations — and teaching scenarios — requires a willingness to engage with the unruliness of linguistic globalization as reflected through virtual world encounters. It demands a capacity to codeswitch and a facility with intercultural communicative competence skills: in short, the agility to shuttle between linguistic and cultural communities. This, in turn, reads like a set of lesson aims compiled from recent thinking on language pedagogy. While a single target language will necessarily remain the focus of most language lessons — and can be supported with SL immersion experiences — there is no reason why students should not occasionally be exposed to multilingual, multicultural interactions, especially as these are likely to become ever more central not only to the SL microcosm, but to the wider web, and indeed the world which lies beyond it.

LIMITATIONS OF WEB 2.0 IN EDUCATION

This chapter has discussed the potential of Web 2.0 for education generally and language education specifically. However, it will take time for current practices to become more widespread and for the

potential of Web 2.0 to be fully realized. This requires further “normalization” of computing, so that the majority of educators eventually come to regard it with neither fear nor awe, but see it as simply providing a set of tools which may be used in the service of particular pedagogical goals (Bax, 2003; Chambers & Bax, 2006). Teacher training has a major role to play in demystifying computing. Specifically, this entails providing teachers with appropriate pedagogical frameworks for e-learning; an overview of the range of tools available; and adequate technological skills so that they do not feel intimidated by their students’ know-how and, moreover, have the confidence to draw on the latter’s technological expertise to complement their own pedagogical expertise. In addition, Web 2.0 provides very serviceable tools for building social constructivist professional development forums, and it is possible to imagine that in time “Web 2.0 may well become the biggest training institution in the world” (Consultants-E, 2007). This point will only be reached, however, if intensive preparatory work is carried out by today’s teacher training institutions.

While learning about the advantages of Web 2.0, teachers must equally come to understand that e-learning is not, in and of itself, automatically constructivist or pedagogically progressive (Pegrum, forthcoming 2008b), and demands for speed, flexibility and cost saving can easily lead to impoverished content delivery systems. As suggested earlier, some creativity is needed to work within the constraints of rigid syllabi or assessments. As rewarding as it may be, well-designed online learning will normally require a heavy investment of time and energy by both staff and students. There is also a danger that, in their current state of “continuous partial attention” (Stone, 2006), technology users will lose the ability to focus clearly as well as the will to occasionally power down their multifarious communication channels and make time for reflection—a crucial part of education (Pegrum, 2005). And, even while acknowledging the benefits of constructivism, it

might be asked whether it is possible or desirable to teach everything in a constructivist manner all of the time. It is important to maintain balance in all of the above areas.

If students are already spending a lot of time online, added educational demands should have a clear value. The identity issues permeating online presence are complex and delicate, and educators should beware of aggravating narcissistic tendencies which may be nourished by social networking (Ryan, 2007). Teachers must also face the fact they may not be welcome to approach students on some sites and through some channels; sensitivity is needed in negotiating educational uses with students.

Collaborative work raises questions of authorship and ownership, while non-participation is often not an option, as Conrad (2002) has noted with regard to virtual learning environments: “you cannot run *and* you cannot hide. Online life is a fishbowl existence” (p.208; italics in original). There is some cause for concern over privacy on social networking sites like Facebook (boyd, 2008). What is more, a lot of online material is preserved indefinitely so that, as Friedman (2006) warns in a more general context, “whatever you do, whatever mistakes you make, will be searchable one day” (p. 185).

Of course, the continued presence of a digital divide—or, more accurately perhaps, a digital spectrum (Haythornthwaite, 2007)—means that not everyone around the world, or within any given society, has equal access to the Internet. While the rapid spread of mobile technologies partially alleviates this situation, it is not the end of the issue: in recent years, the digital divide has come to be seen less in terms of access to technology and more in terms of skills and patterns of use (*ibid.*; Warschauer, 2003) or, in short, digital literacy. It should also be remembered that “global communication technologies are cultural artifacts that are produced by and productive of socio-historically located subjects” (Belz & Thorne 2006, p. xviii), and that they carry the

Anglo-centric and, more broadly, Western values of their creators (Ess, 2007; Goodfellow, 2003; Reeder, Macfadyen, Chase & Roche, 2004). Students from varying linguistic, cultural, ethnic, religious, social and educational backgrounds may have their reasons for not wishing to participate in some or all online activities—reasons whose legitimacy is often eclipsed in Western secular education. Compromises must be sought with students who, for example, may struggle with the radically egalitarian nature of social networking technologies or who, as Sabre (2007) notes, might be uncomfortable with virtual worlds because of religious prohibitions on graphic representations of humans.

But perhaps the greatest single issue for would-be Web 2.0 educators may be an inability to step outside traditional philosophical and sociopolitical frames of reference. This could mean an inability to see outside the frame of Enlightenment rationalism and objectivism and to grasp the socially constructed nature of knowledge and learning, a fundamental flaw in Keen's timely if hyperbolic critique, *The Cult of the Amateur* (2007). It might mean an inability to value collaboration and community on their own terms outside of a capitalist paradigm of competition, as seen in Tapscott and Williams' otherwise informative *Wikinomics* (2006). It could mean an inability to perceive that, for the net generation, the notion of a prophylactic divide between "virtual" and "real" life makes little sense: like the radio or the telephone for older generations, the virtual is just another part of the real (cf. Davies, 2003; Thorne, 2006, p. 20). In fact, the connections between them are becoming ubiquitous, as seen in services such as Vodafone's InsideOut, which allows calls between the physical world and Second Life.

For this reason, despite initial evidence which points to a lowering of cognitive performance and efficiency through multitasking (Baron, 2008; Wallis, 2006), it is possible that students who monitor multiple IM channels while writing assignments or who send text messages during

lectures are engaging in what, for them, is "a natural way to interact and construct their own learning" (Reddekopp, 2006). Through practice, they may have adapted to such behaviour (Baron, 2008). What if, moreover, such a melding of learning, networking and identity building could give rise to lateral connections and a more holistic mode of education? In the absence of empirical evidence, these reflections are necessarily speculative. However, it is important not to close off new possibilities before they are fully apparent, thereby perhaps losing valuable educational opportunities—and losing students' allegiance along the way. While the digital natives have much to learn about language and literacy from an older generation of teachers, the teaching profession as a whole has much to learn from its digital native students, especially here at the technological and social frontier of Web 2.0.

CONCLUSION

The technologies covered in this chapter — discussion boards, blogs, wikis, social networking, social sharing, folksonomies, RSS, podcasting, vodcasting, m-learning and virtual worlds — comprise a representative Web 2.0 list, but one which is both incomplete and unstable. New technologies and applications are constantly appearing, while there is an overall tendency towards functional convergence. Yet, however this list might look a few years from now, it is likely to still be informed by the fundamental features this chapter has described as underpinning Web 2.0: communicative networking, community building and identity negotiation, performed through hybrid codes, multiple media and linguacultural mashups.

Writing of Web 2.0, McIntosh (2006) suggests that "[t]he reason these social technologies work is because they are social. But they are also changing the way that we socialise" (p. 72). As has been seen, socializing and networking on Web 2.0 are very much dependent on language. Web 2.0 is,

after all, “a means whereby just about anyone can contribute to an ongoing ‘conversation’ in which knowledge is both discovered and constructed as it goes on” (Freedman, 2006, p.13), and there can be no conversation without language. It is little wonder, then, that Crystal (2001a, 2001b) has called the Internet a linguistic revolution; that Macfadyen & Doff (2005, following Cicognani) have claimed that cyberspace must be viewed in linguistic terms; or that some observers feel Web 2.0 comes close to realizing Tim Berners-Lee’s original idea of the web as a “read-write medium” (Lee & Berry, 2006, p. 20).

It has been suggested in this chapter that language and literacy educators are in an ideal position to exploit the linguistic nature of Web 2.0. This requires a conception of literacy – indeed, of multiliteracies – which is appropriate to Web 2.0 and the increasingly interconnected world of which it is both a symbol and a product. It requires a suitable pedagogical base for e-learning, drawing on social constructivism, communities of practice, intercultural communicative competence and identity studies. It requires a familiarity with the advantages and drawbacks of each Web 2.0 tool, coupled with an ability to tailor such tools to particular cultural contexts. It requires some reflection on how to address pedagogical, social, sociopolitical and philosophical limitations on the use of Web 2.0 in education. In all of the above, teacher training has an important role to play.

Beyond this, if language and literacy educators are to fully exploit the potential of Web 2.0 as a platform to enhance language teaching and to help their students become more sophisticated users of language(s) within — and beyond — the digital environment, they need to adopt an open, exploratory and flexible attitude. They need to appreciate and work with the social orientation of Web 2.0. They need to become comfortable with linguistic and media mashups and actively foster the codeswitching and shuttling skills demanded by the untidy realities of globalization, on- and offline. And, while continuing to provide the same

level of educational input and guidance as good teachers have always done, they need to trust the digital natives to help them map what, for education, is still largely uncharted territory.

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KEY TERMS

Codeswitching: This term refers to the use of more than one language or language variety in a given context, for example to aid communication or to signal aspects of identity.

Continuous Partial Attention: According to Linda Stone, citizens of Western societies increasingly live in a state of *continuous partial attention*, as they continuously monitor multiple communication and information channels in an attempt not to miss anything. She argues that this is a post-multitasking behavior motivated less by the need to save time or be efficient than by the desire to always be connected to the network.

Folksonomy: An index produced in a bottom-up manner by adding user-generated tags to webpages of interest through a service such as del.icio.us. The resulting list of tags is known as a *folksonomy* and may be displayed in the form of a *tag cloud*, in which more prominent tags are shown in larger and darker type.

Mashup: This term, which stems from the hip hop practice of mixing music and/or lyrics from different songs to create new hybrids, can refer to web applications which combine data from different sources or, more commonly, to digital files which mix together pre-existing video, graphics, music, text, etc, in new combinations.

Social Constructivism: *Social constructivism* is a theory of learning which draws heavily on the work of the Soviet psychologist Lev Vygotsky (1896-1934). It suggests that learners add to and reshape their mental models of reality through social collaboration, building new understandings as they actively engage in learning experiences. Scaffolding, or guidance, is provided by teachers or more experienced peers in the learner's zone of proximal development, that is, the zone between what a learner can achieve independently and what s/he may achieve with support.

Third Place: This term is used by Claire Kramsch to refer to the space between cultures which language learners may reach as they develop intercultural (communicative) competence.

Web 1.0: A retrospective term which emerged after the advent of Web 2.0, *Web 1.0* refers to

Communicative Networking and Linguistic Mashups on Web 2.0

the original, information-oriented version of the World Wide Web. Created by Tim Berners-Lee in 1989/1990, it consisted of largely static web-pages developed by a small number of authors for consumption by a large audience.

Chapter III

Output–Oriented Language Learning With Digital Media

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ABSTRACT

Current thinking in SLA methodology favours knowledge construction rather than simple instructivist learning as an appropriate paradigm for language learning. Within this context, project-based and task-oriented scenarios have often been regarded as the real forte of digital media and technology-enhanced tools. Such approaches to learning are also rooted in the output hypothesis, which argue that learners should actively engage themselves in the creation of “comprehensible output” in order to develop linguistically and cognitively. Following the apparent upgrade of the Internet to Web 2.0, expectations are running high as to the innovative potential of this (supposedly) new platform for Technology Enhanced Language Learning. This chapter will discuss the principle of output orientation in language learning and consider some of the tools the “new” Internet has to offer in such an approach. It will also present a few ideas for learning projects and samples of best practice in order to show how the use of digital media can contribute both to the quality and quantity of product.

INTRODUCTION

This chapter will look at the potential of digital media for output-oriented language learning with a special focus on new platforms and tools for social networking and collaborative knowledge construction and knowledge sharing available on the so-called Web 2.0. Based on Merrill Swain’s output hypothesis, first put forward in the 1985, it

will be argued that learners engaged in negotiating meaningful and comprehensible output as part of language learning are very much engaged in learning experiences which foster language learners’ cognitive and linguistic growth by means of processes of reflective and collaborative learning (Swain, 1985). Considering the long tradition of exploiting computer and Internet within task-based and project-based learning, it is suggested

that social platforms such as wiki-spaces and podcasting, provide an appropriate framework for more authentic and more real-life-like learning experiences than in the past. The chapter aims to discuss both the theoretical framework and demonstrate the practicability of using digital media in innovative ways. Specific examples of such experience-oriented learning scenarios from school and university contexts, will be described in the final part of this chapter.

Digital Media have had a significant impact on the way foreign languages are being taught and learned. In recent years, Computer Assisted Language Learning (CALL) and Technology Enhanced Language Learning (TELL) have come of age. Consequently, Stephen Bax pointed out in 2003 that we are now at the stage of integrated CALL and TELL, where digital tools for learning have become integrated elements of foreign language syllabuses. In view of the development of even more flexible tools for social networking and knowledge sharing, this chapter also argues that the use of CALL and TELL applications has reached the stage of normalisation as much as the so-called Web 2.0 has become a common social phenomenon. However, the impact of digital media and Web 2.0 applications is by no means restricted purely to a utilitarian level and to methodological changes in classroom practice — changes which can be observed in almost any context within which languages are learnt. Rather, the growing diversity and flexibility of digital media, together with the increased ease with which the communicative, multimedia, and networking potential of computer and Internet can now be exploited, have also had a considerable influence on the deliberations concerned with the theoretical framework underlying foreign language learning methodology. Furthermore, new opportunities for research into language acquisition processes are opening up, as the tools and platforms available on the new web make traceable both the processes of creating and publishing meaningful output as well as the actual products themselves.

Computer and Internet tools can facilitate the implementation of a methodology for language learning that focuses on authenticity in contents, context, and task. Even in the earlier stages of the Internet, now often referred to as the days of Web 1.0, cognitive-constructivist approaches and participatory knowledge building were no longer just theoretical concepts but could be put into practice, drawing on the wide range of tools and applications available in digital form: “The web ... has always been an exciting place for education in terms of the possibilities it offers for research and collaboration” (Freedman, 2006, p. 13). A number of (multimedia) authoring tools have emerged over the years, which allowed for greater flexibility and authenticity, for example in the preparation and exploitation of non-text-book materials in the language classroom and beyond. However, there was still the issue of an existing technical barrier in terms of accessibility, compatibility, and user-friendliness, and the apparent upgrade of such tools to open platforms and public resources for social networking and knowledge sharing have now led to a point where the implementation of output-oriented learning scenarios within a project-based and task-based framework is more easily manageable than in the past. It is the author’s opinion that a healthy interaction between theory and practice will lead to further insight into how language learning actually works, because, as stated above, both the processes and results of learning become more tangible. Consequently, this chapter will at the outset consider the specifics and the potential of the so-called Web 2.0 for language learning and finish with the description of a few suggestions for Web 2.0 enhanced learning scenarios, with a clear focus on the production and sharing of output.

In-between these two parts, the chapter will also consider current language learning theory. A number of studies on second language acquisition processes suggest that authenticity in content, context, task, and classroom interaction are crucial

issues in language learning methodology (van Lier, 1996). However, it needs to be kept in mind that authenticity cannot be limited to occasionally replacing the textbook with a sample of “real language,” but that true authenticity necessitates the provision of learning experiences which include authenticity of language, authenticity of task, authenticity of learning situation, and authenticity of interaction in language learning. A key term in this context is *agency*, as it encompasses both the principle of learning and the desired outcome of any kind of language learning. As far as the aims and outcomes of language learning are concerned, it is suggested that these are no longer being defined in terms of isolated skills and competencies. Rather, the overall aim of learning a language needs to be regarded in terms of an integrated set of skills and competencies which, coupled with a degree of language awareness, enable learners to become competent agents in a foreign language.

Consequently, on the one hand, *agency* focuses on the idea of empowering the learner with the skills and competencies needed to interact and communicate in a meaningful and appropriate manner in a given context. This is for example reflected by the fact that the Common European Framework of Reference for Languages (CEFR) defines competence levels in terms of a differentiated set of “can do” statements rather than knowledge areas. Furthermore, *agency* also entails the idea that learners acquire the meta-skills needed to become autonomous learners, capable of controlling and self-directing their learning experiences. After all, Murray defines *agency* as “the satisfying power to take meaningful action and see the results of our decisions and choices” (Murray, 1997, p. 126). Therefore, on the other hand, *agency* refers not only to the *what* but also to the *how* of language learning. *Agency* addresses the fact that any kind of successful language learning should be based on the principle of “language learning as language use” — as Ellis (1985, p. 10) put it. Consequently,

learners need to be exposed to learning scenarios within which they can use the target language as active and productive agents. Active, experience-oriented learning together with a high degree of productivity and interactivity are considered to be one way “to empower learners by offering them agency in an environment rich with opportunity and necessity for purposeful language use” (Murray, 1999, p. 296).

The challenges entailed in these assumptions will be an additional focus of this chapter. As indicated above, from a technological point of view, the text will address the opportunities and options now available as part of the numerous communication and social networking spaces which have emerged on the Internet as part of its upgrade to Web 2.0. From a theoretical point of view, the text will consider how a socio-cultural approach to language learning can be put into practice by offering learners meaningful learning experiences with a focus on the negotiation and production of meaningful output. Based on this, the chapter will then show on a methodological level how Swain’s (1985, 1995, 2000) understanding of product and output oriented learning might have found its perfect match in the use of tools for the production of podcasts and wikis — to name but a few of the tools available — as part of project-based language learning. Finally, a few examples of practice together with some of the options the new web has on offer in terms of facilitating research into language acquisition processes based on the negotiation of meaningful output will be outlined.

WEB 2.0: SOMETHING OLD — SOMETHING NEW?

The Internet was always intended to be a platform for communicating, publishing, and sharing information. Consequently, it is with a certain degree of justification that some researchers ask the question whether the label Web 2.0 can be regarded as

something truly new and innovative or whether it should be discarded as nothing more than just a label, cleverly introduced as a marketing gimmick. Considering its history and development, the Internet in its first Web 1.0 iteration did actually function mainly as a read-only resource rather than starting off as a true read-write web. Still, access to authentic materials from real contexts within which a target language was actually used became so much easier that this fact already had a tremendous impact on language learning. However, any exploitation of the web beyond the resource level remained somewhat complicated. Production-oriented projects conducted within a Web 1.0 environment did necessitate a lot of effort and technical expertise on the part of both teachers and learners. Self-installation was a key element of such projects: server space needed to be assigned, web editors in different shapes and forms needed to be installed on the computers to be used, the structure of a proposed website needed to be designed carefully in order to avoid dead links, file-transfer software and uploads of the final version of a website needed to be organized in order to actually publish a product, and so on. The list of what “self-installation” actually meant in terms of product-oriented language learning on the Internet could be extended even further.

As a result, only the motivated (and technology-minded) amongst the language teaching community ventured into the domain of Internet projects with a publication angle. It is interesting to see that amongst the many project-oriented exploitations of Web 1.0 environments, webquests were for a long time regarded as the true forte of web-supported projects, as they provided a kind of framework and set of parameters for learners being guided through Internet resources needed for the completion of a given task, but the outcomes and products of a group’s activities did not necessarily have to be published online. Still, there are numerous examples available indicative of the flexible and innovative ways in which the potential of the Web 1.0 for product-oriented

learning experiences have been exploited. Quite a number of these project ideas now form a starting point for trying to establish the kinds of learning scenarios which can turn the “new” Web 2.0 into an even more effective tool with even more benefit for language learning. The question is, of course, whether the Internet in its re-born Web 2.0 format really is something new. According to Tim Berners-Lee, this is the case. In an interview broadcast on the BBC in 2005, the “father” of the Internet said quite clearly: “For years I had been trying to address the fact that the web for most people wasn’t a creative space; there were other editors, but editing web pages became difficult and complicated for people. ... The idea was [however] that anybody who used the web would have a space where they could write. ... What happened with blogs and with wikis, these editable web spaces, was that they became much more simple” (Berners-Lee, 2005). Even though the entry on Web 2.0 in Wikipedia suggests that the term is “a trend”, it can still be said that Web 2.0 is a second generation of “web-based communities and hosted services, such as social-networking sites, wikis, blogs, and folksonomies” which aim to “enhance creativity, information sharing, and, most notably, collaboration among users” (Wikipedia, 2008, para 1). Consequently, the new web as a true read/write environment as well as participation-platform is a step forward in technical terms. As Freedman (2006) puts it, the new Web 2.0 “is now regarded more as a participatory platform ... in which ‘ordinary’ people can publish their views, ... [and] whereby ... anyone can contribute to an ongoing ‘conversation’ in which knowledge is both discovered and constructed as it goes on” (p. 13). Consequently, in addition to technical developments, a real change of attitude towards the Internet has become a widespread phenomenon in our society.

To sum up these deliberations on the character and potential of the new web, it seems justified to identify as the one true distinction between the Internet in its 1.0 and 2.0 shape the fact that — in

view of the numerous pre-installed social software applications, public platforms and community spaces — self-installation now is less of an issue when planning output-generating Internet projects for (language) learning. On a technological level, we now have an integrated platform with tools for social networking, knowledge sharing, and collaborative learning in the widest sense at our disposal. On a philosophical level, there has been a considerable development in many users' attitudes towards the role and use of the web with a clear focus on participation, collaboration, socializing, and democracy of content and use in general. As far as the content is concerned, current buzz words are wisdom of crowds, citizen media, collective intelligence, folksonomy, and user-generated knowledge and information. Finally, it might be appropriate at this point to refer to the statement made by Prensky in 2001, referring to an noticeable generation shift from users from the earlier days of digitization, i.e. the so-called “digital immigrants,” to a current (and future) generation of digital natives (Prensky 2001). All this can be seen as a fitting setting for the implementation of collaborative, output-oriented learning experiences into language learning by means of digital media.

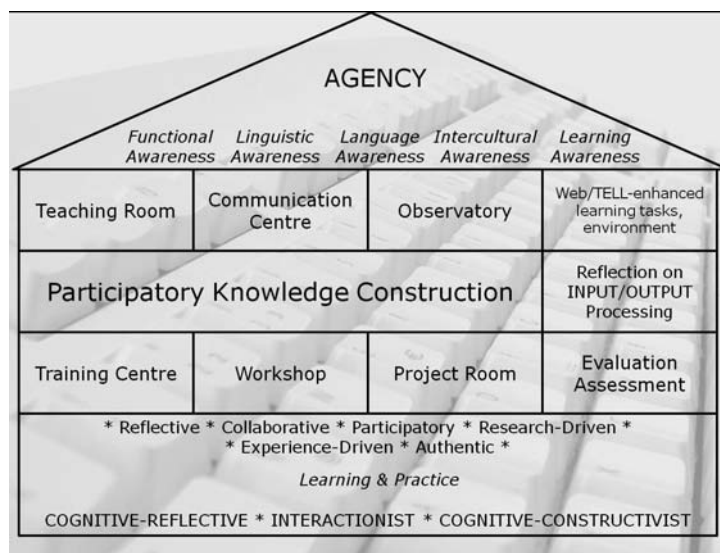
CURRENT PARADIGMS IN LANGUAGE LEARNING

Language learning is more than the simple learning of grammatical rules or the acquisition of vocabulary. Learners need to be put into a position where they can develop a deeper understanding of the linguistic and cultural specifics underlying the target language. Theorists as well as practitioners are beginning to accept that a traditional transmission model of learning cannot foster the kind of skills and competencies needed to successfully communicate in a target language context. A high level of agency can only be developed by models of learning which emphasize informa-

tion processing and knowledge construction as the fundamental acts of learning. Education and teaching in the knowledge society can no longer be reduced to “*the act, process, or art of imparting knowledge and skill*” as Roget's Thesaurus proposes, but learning must be recognized as an act in which a learner plays the role of an active constructor of knowledge. Learning should be viewed more in terms of “an active, creative, and socially interactive process and ... knowledge as something children must construct and less like something that can be transferred” (Harper, 1996, p.1). Criteria based on such principles need to be considered when evaluating learning materials, learning contexts, and the effectiveness and value of technology enhanced materials for language learning. Figure 1 outlines a model of language learning in a Web 2.0 context.

Starting from the top, the roof of the building representing a model of language learning identifies a series of aims related to the process and outcome of learning. However, the governing term *agency* needs to be defined in more detail. Language learning should aim at empowering learners to become active and competent agents in using a target language. Thus, agency can be broken into five areas. Obviously, agency is more than the knowledge of rules and vocabulary and the ability to utter well-formed, grammatically correct sentences. Agency is all about functional awareness, which has to do with the choices one has when selecting a given turn of phrase in order to appropriately perform a given communicative function. It is also about linguistic awareness, as learners do need to have a certain level of knowledge about structure as well as well as the ability to keep, in Hallidayan terms, an appropriate balance between function and form. Furthermore, a general kind of language awareness is important, which goes beyond just functional and linguistic knowledge but offers learners the opportunity to integrate the target language into their mental and communicative system. Intercultural awareness, of course, is a very important part of this level of

Figure 1. A House of Language Learning in a Web 2.0 Context



awareness, because in today’s global village language use is embedded in intercultural encounters almost constantly. Finally, learning awareness and learning to learn, are important parts of agency as well. Language learning has become such a fundamental part of education in the age of globalization that successful learning requires learners to be able to draw on a fully developed set of appropriate strategies and learning skills according to the type of linguistic challenge involved. Again, language policy in a multilingual Europe, identifying the need to potentially learn more than just one foreign language, emphasizes the need to develop language learning awareness as an important part of its framework of reference for languages.

As far as the foundation of the “house of language learning” sketched in Figure 1 is concerned, the terms listed as part of an agency-based as well as agency-oriented approach to learning reflect methodologies and activities geared at supporting learners’ independence and proficiency as far as learning and language use is concerned. Language learning and language acquisition activities must be regarded as interactive and dynamic processes

in the sense that “studying, learning, reviewing and recalling are not simple input — output activities any more than using language is” (Di Vesta, 1974, p. 28). Research into language learning and acquisition processes suggests that mere training in structural (grammatical) and vocabulary knowledge will not result in real agency in terms of linguistic competence and language proficiency. The communicative classroom of the 80s favored and focused mainly on basic communicative competences. Over the years, however, additional issues have been added to the portfolio of what language learning should aim for. These include the fostering of strategies of language processing and language learning competence as much as the development of language awareness. In addition, skills in knowledge perception and knowledge construction are regarded as essential for the successful outcome of any language curriculum. In addition, in today’s globalized “world wide village,” cultural awareness is regarded as an important additional aim of language learning.

However, awareness cannot be developed within a traditional instructivist paradigm of language learning, and the constructivist para-

digm is often proposed as a suitable framework for learning scenarios designed along the lines discussed so far. A methodology based on such principles focuses on “learner orientation, process orientation and learner autonomy” (cf. Wolff, 1994, p. 407), all of which ought to be regarded as extremely important in the context of language learning and acquisition. Learning should be regarded as a process of information gathering as well as discerning patterns, drawing connections, hypothesizing, testing truth, critiquing reliability etc. as well as interacting and output negotiation and knowledge processing. Within such a framework, the interaction between knowledge previously acquired and new information gathered leads to the acquisition and even to the production of new knowledge. Therefore, learning can be described as an active process in which learners interact and construct new ideas based upon their current and past knowledge (Bruner 1990).

Learning based on constructivist principles will allow learners to tap into resources and acquire knowledge rather than force them to function as recipients of instruction. Furthermore, learning activities are always social activities with learners co-operating and working together. Such approaches have been meeting with growing approval and are regarded by many educational thinkers as a suitable theoretical framework for the learning environment of the future. This kind of approach “perceives students as active learners who come to ... lessons already holding ideas ... which they use to make sense of everyday experiences. ... Such a process is one in which learners actively make sense of the world by constructing meaning” (Scott et al., 1987, p. 4). Consequently, language learning, as well as learning in general should be described as an interactive, dynamic process, in which new knowledge is most fruitfully acquired when learners are placed in a situation where they can explore sources and resources rather than in a context of mere formal instruction. The central building block of such an approach can be summed up by the term participatory

knowledge construction. Further building blocks, following Legutke’s suggestions (Legutke, 1999), regard the language classroom not simply in terms of a teaching room or training centre, but consider the classroom as a flexible environment, where communication, project work, and observing and encountering authentic language are integrated into the learning experience. In such an environment, learners are encouraged to reflect on the way in which they process input and generate output. Consequently, acts of knowledge construction with learners combining new information with previous factual (declarative) and procedural knowledge and drawing new conclusions from this process are becoming part of language learning. It is felt that the following quote — though already put forward in 1991 — sums up best the basic idea of the concept underlying this constructivist approach: “knowledge is not passively received, but is actively built up by the cognizing subject. ... That is, as much as we would like to, we cannot put ideas into student’s heads, they will and must construct their own meanings” (Wheatley, 1991, p. 9). Such a process-oriented approach to learning will not simply lead to a better understanding of linguistic facts (e.g. structure and vocabulary) and more effective acquisition of language proficiency; it will also lead to more learning competence as well as language awareness and cultural awareness in general.

Within a framework for language teaching and language learning based on the approach outlined above, authenticity in content, task, and classroom interaction are important factors. It is hoped that the information on constructivist, socio-cultural pedagogy given in this chapter underlines the view that authenticity of language, authenticity of task, authenticity of learning situation, and authenticity of interaction are key factors to be considered when discussing language learning. However, authenticity cannot be limited to occasionally replacing the textbook with a sample of “real language,” but that true authenticity always necessitates all aspects and elements just mentioned. The ques-

tion, however, as to how authenticity at these levels can be achieved in language learning has not been completely resolved. All too often, contributions made in numerous debates on this issue focus exclusively on the suggestion of making use of authentic texts rather than relying exclusively on textbook material created for language learning purposes. But authentic texts — usually defined as a text “not written for teaching purposes, but for a real-life communicative purpose” (Lee, 1995, p. 324) — and other authentic materials are only part of the challenge of achieving true authenticity in the language classroom. One important aspect is that we need to provide learners with tasks and activities which make learning not simply more learner-oriented but also what Griffiths and Keohane define as “person centred.” In an interesting publication entitled “Personalizing Language Learning” they suggest that “[p]ersonal involvement is one very effective way of enhancing motivation” (Griffiths & Keohane, 2000, p. 1). The authors continue their deliberations by advocating not just the use of materials relevant for the learners but also suggest activities which value learners’ feelings, thoughts, opinions and knowledge. Therefore, when defining language curricula, it should be kept in mind that true authenticity in task can only be achieved if learners are confronted with tasks which they can both relate to and identify with.

OUTPUT-ORIENTATION IN LANGUAGE LEARNING

Agency in a methodological sense needs purpose. That is to say, language learning should be organized in scenarios which provide learners with a context which they experience as personally relevant and within which they feel a real need to act and become involved in a given task. According to Murray (2004), Spratt, Humphreys and Chan suggest in 2002 “that teachers might develop students’ intrinsic motivation by using activities

and materials that students find engaging” (Murray, 2004, p. 6). Other case studies, including a number of studies conducted by Swain, suggest that task-based and project-based learning with a clear focus on output and product have a motivating effect on learners and also contribute to the development of the levels of awareness discussed earlier in this chapter (cf. O’Dowd, 2006). Such learning experiences are most certainly key to the cognitive growth of learners along the lines of the areas of awareness specified above. The importance of agency, authenticity, and the situated nature of learning is often stressed in recent literature, and output-orientation is often referred to as an important aspect of such an approach (Swain 2007). In a draft version of a paper on “Defining Authenticity,” Brown and Menasche (2006) propose a model of authenticity which distinguishes five types of input authenticity and three types of task authenticity. Among these, genuine task authenticity in particular is an important issue. According to the above authors, this type of authenticity “exists when learners engage in tasks in ways and for reasons they would in the real world” (Brown & Menasche, 2006, p. 3).

The need to focus more on output and the kinds of processes that are involved in negotiating meaningful output in language learning was originally proposed by Swain and Lapkin, who in 1995 stated that “sometimes, under some conditions, output facilitates second language learning in ways that are different from, or enhance, those of input” (Swain & Lapkin, 1995, p. 371). In more recent years, in an effort to stress the fact that research needs to focus more on the processes involved in the production of output rather than merely evaluating the quantity and quality of a given product, Swain introduced the term “*linguaging*” as a way to refer to the use of language in learning processes to mediate cognitively complex acts of thinking. It is “the process of making meaning and shaping knowledge and experience through language” (Swain, 2006, p. 95). In a more recent paper, Swain defines the processes involved in

linguaging as follows: “Through *linguaging*, defined as the use of speaking and writing to mediate cognitively complex activities, an individual develops cognitively, and ... affectively. The act of producing spoken or written language is thinking in progress and is key to learners’ understanding of complex concepts” (Swain, 2007, p. 822).

Consequently, authenticity in terms of a framework for learning which stimulates linguaging and agency are key elements in language learning, and such a concept is most fruitfully put into practice in collaborative, task-based and project-oriented settings. Furthermore, it is felt that digital media have often been a key influence on the implementation of learning scenarios based on such a paradigm. It is interesting to note that research on the use of an electronic medium in writing and output-oriented learning has been major concern of those involved in TELL from its beginnings. A publication which provides some insight into the processes of negotiating meaningful and comprehensible output is a volume edited by Martha C. Pennington entitled, “Writing in an Electronic Medium: Research with Language Learners” (1999). The volume presents qualitative and quantitative studies into the use of word processing as well as e-mail communication and the creative processes involved in the creation and publication of web pages. The findings of these studies seem to confirm that even a traditional digital tool such as a word processor “facilitate[s] the generation, revision, and dissemination of text [and] create[s] the conditions for quantitative and qualitative effects on language learners’ writing process and products” (Pennington, 1999, p. 1). The communicative aspects of negotiating meaning and collaboratively gathering information and building relationships in e-mail projects are also addressed in this volume.

Therefore, it is safe to assume that technology and web-enhanced tools even of the first generation facilitate not only access to authentic materials as well as the processing of such materials,

but also the provision of authentic frameworks for learning with a focus on the production and publication of sharable output. Tschirner argues “that multimedia applications ... [in general] ... provide language teachers and learners with effective means to make language acquisition in the classroom viable in a way that has not been possible before the advent of powerful multimedia computers” (Tschirner, 2001, p. 305). In addition, a certain motivational effect of using technology to support output-oriented learning has been researched to some extent in the early days of CALL and TELL. The use of simple word-processing tools within group-based writing activities together with the significant impact on awareness raising, strategy building, and quality of text was reported on even before Pennington’s publication by Legenhausen and Wolff as early as 1991. Warschauer discusses similar research in his paper on motivational aspects of using computers for writing and communication in 1996 (Warschauer, 1996, pp. 29ff). And Felix argues that “one of the great strengths of the Web is the potential to engage students in creative information gap activities and real experiential learning in the form of meaningful, process oriented projects in authentic setting” (Felix, 2002, p. 2). This chapter also draws evidence for such a claim from various other sources, including an overview of the literature as well as samples of best-practice and some research-oriented case studies conducted at the author’s institution. It is interesting to note that Felix identifies the need for CALL and TELL to focus on creating connectivity rather than content as the real potential for the integration of digital media into language learning even before the term Web 2.0 was coined. The following sections set out to explore, where and how the tools of the new web has to offer can be of benefit for language learning experiences rooted in the theoretical and methodological framework outlined above.

SOCIAL SOFTWARE AND PARTICIPATORY LEARNING

As alluded to above, agency necessitates urgency, i.e. learners need to feel the need to become actively involved in learning scenarios they consider as valid, valuable, and purposeful. This is, in fact, where some advocates of digital media, including the author, see the real potential for the exploitation of the kinds of tools and social software available on Web 2.0. Projects with the aim of producing and “broadcasting” podcasts in a given target language could be referred to in order exemplify this aspect in a general sense. Audio production in the form of recording and sharing materials within a classroom has a long tradition within language learning. However, setting up a group’s own “radio program” on one of the podcasting platforms available on the Internet has a more authentic quality. Here, learners are encouraged to share with a real audience topics or experiences that are of concern to them on a regular basis. They not only produce and publish “radio clips” and other kinds of broadcasts on a public podcasting “station” — the feedback that “listeners” often provide by e-mail can also be integrated into follow-up activities in the classroom. There are already numerous examples of such activities available from around the world. The international podcasting workshop for German as a Foreign Language at the Technical University Berlin (<http://skbpodcast.podspot.de/>) might serve as a first example — a site on which foreign students produce podcasts as part of their coursework on a regular basis. As far as English as a Foreign Language is concerned, a wiki created by the ELT Podcasting group (<http://pod-efl.wikispaces.com/>) to support the Podcasting for ELT session at TESOL’s Electronic Village Online (EVO) provides access to numerous examples from around the world. Furthermore, a Podcasting Review is a regular feature of the *CALL Review*, i.e. the journal of the IATEFL Learning Technologies SIG, available at (<http://ltsig.org.uk/>).

Apart from podcasting, the participatory nature of the Internet in its current Web 2.0 format offers a large number of options for output-oriented language learning opportunities. The challenges involved where summarized by Purushotma (2005), where he states: “With live materials and customized social applications becoming increasingly available to non-programmers, the primary challenge will be to find models for how to connect various web applications together into coherent learning experiences” (Purushotma, 2005, p.1). Despite the fact that the web has always been regarded by many as a valuable access-point to up-to-date authentic materials, there is a new quality to the kinds of materials available on the “new” web. In view of the fact that individuals from almost any walk of life publish and share very personal information there is a noticeable increase in the possible options in which such materials can be made relevant in the language classroom. Text-based blogs, for example, together with audio or video blogs could be a valuable resource. Learners can be offered real texts in the form of blogs which are authored by people with a very individual touch and intended to share opinions, experiences, and viewpoints. Such electronics texts offer a more personal insight into the cultural and social contexts within which the target language is used. But the exploitation of materials available on the web is only one option to integrate digital media into language learning experiences. In the following, a few project-based scenarios will be outlined in order to demonstrate where the potential of Web 2.0 for the implementation of coherent and motivating learning experiences with a focus on output production might lie. These suggestions are based on some of the projects and case-studies conducted in the author’s department at Duisburg-Essen University.

Blog and wiki spaces, easily set up by means of numerous platforms and social software on the Internet, offer opportunities for creative and cooperative language learning similar to the ones

described above on podcasting. Following the model of Wikipedia it is now possible to set up a wiki, i.e. a web-platform for collaborative writing and sharing information, and such platforms can be integrated into output-oriented learning scenarios with great ease. Wikis can be set up for any kind of collaborative project and can be described as true collaborative environments. A wiki space for use within a classroom project can be set up on existing platforms for educational purposes which are hosted and made available on the Internet by a growing number of providers. Alternatively, one can download one of the many existing versions of wiki software modelled on the software engine driving the original Wikipedia and install this on one's own server. The advantage of a wiki created and maintained as part of tele-cooperative writing and information gathering activities is the fact that such a workspace is a lot easier to set up and maintain when compared with more traditional web projects or webquests.

A first example refers to a recent project undertaken in cooperation with a comprehensive school in Essen as a pilot in preparation for a more extensive research initiative into the effects of wiki-based collaborative writing activities on language learning. The project focused on the topic of "needs and wants" in terms of how media and advertising as well as social contexts have an effect on why and how a person considers certain material or spiritual matters as necessary and important. The group of learners involved was a class of 11 year olds with English and Economics as the subjects in a bilingual CLIL (Content Language Integrated Learning) track. In order to become prepared for the kind of writing needed to successfully contribute to a wiki, learners initially authored and published a personal profile, including a description of their own sets of values, needs, and wants. In a next step, the teams were then assigned the task of writing a wiki entry on where they see the most significant influences on their personal needs and wants. Obviously,

advertising and commercials were an important aspect of the topic. Consequently, each team had to search Youtube and look at video advertisements for a product reflecting the needs and wants identified in their texts with the aim of selecting one ad which the team members considered as particularly effective. The next task was the writing of a statement on the ad of their choice to be published on the wiki together with a link to the video clip on YouTube.

In an effort to integrate other social software tools into the project, the learners were asked to script and produce their own advertisement for a product of their choice in the form of a video or audio clip. In the next phase of this project, to be further developed in the course of the coming school year, it is planned to publish such results on a videocasting or podcasting platform and invite students from the school's partner institutions in other countries to join the platform and share their views and comments on the materials produced and published. The comments received from both the teacher and learners did confirm a few of the assumptions identified in this chapter. Learners did feel more involved in the learning experience as the need to publish and share was seen both as a tremendous challenge and as a motivational factor. The tasks were accepted as real and relevant, and the processes of negotiating the teams' output led to a noticeable increase in the quality of the written products. Finally, both the teacher and the class volunteered without hesitation to participate in the next phase of the project.

In order to further exemplify the potential of wiki-based language learning, another project idea will be described in the following pages. This is based on a project which has a long and successful tradition rooted in Web 1.0 based activities. The basis for this output-oriented learning project is the song "We didn't start the fire" by Billy Joel. To illustrate the song, I would like to quote the first stanza:

We Didn't Start The Fire (Billy Joel)

Released on the album Storm Front in 1989

*Harry Truman, Doris Day, Red China,
Johnny Ray*

South Pacific, Walter Winchell, Joe DiMaggio

*Joe McCarthy, Richard Nixon,
Studebaker, Television*

North Korea, South Korea, Marilyn Monroe

Rosenbergs, H Bomb, Sugar Ray, Panmunjom

*Brando, The King And I, and
The Catcher in the Rye*

*Eisenhower, Vaccine,
England's got a new queen*

Maciano, Liberace, Santayana goodbye

In the days of Web 1.0, groups of learners were set the task of creating a website explaining the meaning and historical background of the personalities and events mentioned in the song via appropriate hyperlinks learners had to research and create. In addition, further activities were designed around this song, which follow the concept of webquests. More recently, the project idea was transferred onto a wiki platform, and expanded the scope of the task in terms of fostering cultural awareness. Within projects with a focus on intercultural learning, it is important to design task cycles which take into consideration the necessity of encouraging learners to look at the target culture as well as to look at and reflect on their own culture. Therefore, the first step of the project required groups of learners to create a wikipedia-like knowledge space on the historical background, personalities and events. However, groups were then also asked to write their own version of the song, following and observing its

format. This creative writing task usually has two stages. The first stage is to expand the song from its original American perspective and write additional stanzas for the song considering the decades after its original release, i.e. the 90's and the new millennium. The second stage then invites the learners to write a completely new version of the song, focussing on events and historical figures from either a German or more general European perspective. These new versions are then also "published" in the wiki, and the groups were given the task of elaborating on their specific choices. In order to encourage the exploitation of the true collaborative and participatory nature of wiki spaces, a further extension of this project scenario is currently being prepared by integrating this kind of project into e-mail encounters with learner groups from other countries.

The next example refers to the use of literary texts as a stimulus for output-oriented learning and the potential of social software in the shape of platforms for the publication of self-produced videos or photos. Again, the original project idea is one which has been developed on the basis of computer assisted tools and the Internet in its Web 1.0 format. When it comes to stimulating creativity in the language classroom by means of literary texts, drama – together with creative, production oriented activities based on plays in general – is often regarded as a genre which by definition lends itself to achieving some form of "realism" and real personal involvement in language learning (Wessels, 1987, p. 53). Reading and performing plays is regarded by many as a perfect way of allowing learners to act out authentic language use in an authentic context. Drama, it is said, "provides cultural enrichment by revealing insights into the target culture and presenting language contexts that make items memorable by placing them in a realistic social and physical context" (Robinson, 2005, p. 5). While the view that drama texts and plays do have their place in language curricula is also held by the author of this chapter, it should also be kept in

mind that either simply discussing and analysing such texts, i.e. reading and decoding them in the traditional sense, or performing (re-enacting) them is falling short of exploiting drama with a view to achieving true authenticity and fully exploiting their potential for generating negotiated output. Putting a play or scenes from a play on a stage, be it in the classroom or on a grander scale, is often nothing more than simulating social and physical context as seen, interpreted and defined by the playwright rather than representative of true learner involvement.

If one really intends to enable learners to link “the language-learning experience with [their] own of life” (Wessels, 1987, p. 54), one needs to use a different setting. Of course, a play needs to be read and discussed, but it is suggested that true authenticity can only be achieved if learners are placed in a situation where they do not simply follow stage directions but become creative themselves. Student-generated dialogues might be one way of truly involving learners, and such activities are, for example, sometimes suggested as a powerful option (Griffith & Keohane, 2000, p. 48ff). In order to exemplify this concept and the potential of tools available on Web 2.0, a few ideas developed with students at Duisburg-Essen University during a series of seminars on this topic shall be elaborated on in the following. One of the texts used as a basis for deliberations concerning intercultural learning, digital media, and output-oriented learning was an extract from David Hare’s 2002 play *The Breath of Life*, in which two women, Frances and Madeleine—both in their sixties, discover during a single night the way in which their lives are interwoven, as the text on the cover states. One might argue how a play focussing on two elderly ladies revealing the hidden courses of their lives can be made relevant for young learners, let alone turned into authentic learning interaction.

With regard to this, it is important to keep in mind that it was not suggested to read the complete play, but rather to select extracts from the text

which could be regarded as suitable and relevant by groups of learners. While discussing this issue, one particular scene was accepted as a suitable stimulus for language learning activities by all students in the seminars. In this scene, the two ladies discuss Frances’ divorced husband Martin, who moved to America some years before. The USA as a country, American attitudes, ways of life and habits are all discussed in rather stereotypical terms. The following short quote from this scene, which is part of Act I, is intended to illustrate this:

Madeleine: That’s how they are. Because they are richer than everyone else, so they have to insist their dramas are more significant (Madeleine shakes her head). And my God, all that behaviour in restaurants ...

Frances: What behaviour?

Madeleine: Even here, on the island, you hear them in restaurants ...

Frances: Who?

Madeleine: Americans.

Frances: Oh.

Madeleine: “Does this chicken have skin on it?” What’s that all about?

Frances: You tell me.

Madeleine: This incredible fear. This terror. What’s the waiter meant to say?

Frances: I don’t know.

Madeleine: “No, this chicken never had a skin. This chicken shivered skinless in its coop at night, just pure flesh and feather, terrified it might one day give an American a calorie” (Hare, 2002, p. 10).

And so it continues. In the class, with a group of students working towards a degree in language teaching, we discussed how this text could be exploited to its full potential beyond simply discussing the stereotypes which are present throughout the scene and possibly relating them to materials addressing the same topic often found in textbooks and curricula. Students immediately rejected the

idea of simply re-enacting the scene as written by David Hare. However, the universality of stereotypical viewpoints as a global phenomenon quickly came to mind, and the first suggestion was to work on this aspect. The starting point was, of course, a reading and discussion of the extract with a view to identifying “stereotype” as one of its topics. One of the ideas for a lesson plan with a clear orientation on the production of output which evolved focussed on encouraging groups of learners to write a similar kind of scene, using other nations and stereotypes associated with them as its theme. The products of these group projects were then to be performed in class.

Such a learning situation certainly goes beyond a simple re-writing activity. Rather, it is an attempt to involve the learners both in the original text and a task which they can address in any way they choose. Thus, learners become responsible for their own learning and its outcome. Furthermore, the product to be developed within each group becomes the true personal property of its members. Therefore, the subsequent performances differ distinctly from simple acts of simulation and role-playing. In an effort to put theory into practice in the seminar in question, a session was dedicated to trying out this idea in real-time. It was interesting to observe how this idea worked particularly in student groups with members from mixed ethnic backgrounds, as within these groups the issue of stereotype and prejudice became possibly more tangible and authentic, than in some of the other groups.

The idea was then taken a step further with a view to make use of digital media, based on teacher training materials and concepts developed during a Socrates project — entitled *Staging Foreign Language Learning* — in which the author was involved until 2004. As deliverables of this European Union funded project, teacher training materials were published. The volumes included titles such as *The Media*, exemplifying the creative use of authentic materials in the form of advertisements as well as Tandem Learning, *Words in*

Context with ideas on how to use poems, songs and fairy tales, and *Intercultural Competence*, and all materials had a clear focus on project-based and output-oriented language learning. A central volume entitled *Performing* presented suggestions for the integration of drama and performance into language learning (NLI, 2003). One of the concepts presented in this volume is based on projects designed around the creation of photo-stories similar to the kind of photo-soaps to be found in numerous kids’ magazines.

Based on the materials which resulted from the *Staging* initiative, a project-based scenario for classroom interaction was designed which started off by re-writing the scene in the way described above but then asked learners to produce the scene as a digital photo-story. The task was to consider the issue of stereotype as such and, based on these considerations, invite learner groups to script and create any kind of photo-soap that — according to the group — addresses the theme appropriately and effectively. Worksheets taken from the Socrates project, and tools such as digital cameras, picture editors, storyboards, text editors, and the photo soaps were then presented either as an animated PowerPoint presentation or a webpage. In order to see how well such an approach actually works, project groups were formed in the seminar, and a number of photo stories were created as part of an assignment and subsequently presented and discussed in one of the seminar sessions.

This project provided a lot of insight into the creative and linguistic potential of learners, in this case university students of English, when confronted with a task with which they could identify. In a next step, it is planned to produce and prepare such photo-soaps for publication on platforms such as *YouTube*, where a growing number of examples for output-oriented projects can be found. Unfortunately, it is beyond the scope of this chapter to include detailed descriptions, let alone pictures, of all the products generated by the groups.

Therefore, a mere mention of the topics worked on must suffice. For example, a group with female students, including a blonde and a student from a Turkish migrant background, scripted and produced scenes based on a number of stereotypical jokes on ethnicity, gender, hair colour and so on. Another group produced a photo-story entitled “Stingy Scots,” and other stories addressed issues varying from “Home, Sweet Home” to “Men are better drivers” and “The Typical German.” It was a rewarding experience to observe how involved all students in all groups became, and how enthusiastically the products were both presented and received. In addition, it was interesting to note that all groups had taken the notion of irony from the original text and integrated it into their stories, as all photo-stories were created with a view to demonstrating how ridiculous prejudice and stereotypes are.

CONCLUDING REMARKS

As far as exploiting Web 2.0 tools is concerned, this chapter suggests that platforms for the publication of podcasts or videocasts, such as YouTube, might be an option to broaden the scope of output-oriented project work in language learning. This position appears to be in line with current deliberations within the CALL and TELL community. Interest in Web 2.0 enhanced learning is growing, as can for example be concluded from the number of presentations on the topic at conferences dealing with language learning and digital media. Both at EUROCALL 2007, the annual conference hosted by the main European network, as well as at CALICO 2008, its North-American partner, presentations dealing with Web 2.0 and the exploitation of its social software took up a significant part of the programme. It is interesting to note that a significant number of these papers presented examples and case-studies of creative and output-oriented learning. As one abstract of a paper given at CALICO by Johnshoy and Kato

(2008) on “Media-Enhanced Wikis” put it in the abstract, wiki-enhanced learning is an option to offer learners the opportunity to “create their own products [and] to demonstrate what they know and can do in the target language” (Johnshoy & Kato, 2008, p. 35). As far as the examples presented in this chapter are concerned, it is planned to further integrate a larger selection of the social software platforms available into the projects. Within the projects based on the extract from David Hare’s play, the next step will be to encourage student groups in a class in the summer term 2008 to produce either a radio play or a video sequence rather than a static photo-soap. In a trial run it was recognizable how the task of producing something potentially viewed or listened to worldwide had a significant effect on motivation and quality of product. *YouTube* and similar platforms already contain a lot of materials which were produced as part of language learning projects at school and also tertiary levels.

Obviously, the examples mentioned in this chapter represent only a small selection of how digital media in the form of the kind of social software offered on Web 2.0 can be integrated into language learning scenarios. Of course, there are numerous alternative and additional ideas being put into practice by teachers in schools and other educational institutions around the world. Podcasting, blogs, wikis as well as the exploitation of platforms such as *YouTube* or *MySpace*, to name but a few, are increasingly beginning to enter the standard repertoire of language teaching and learning. However, the ideas put forward here are intended to provide some additional stimulus for the development of further work on how to create output-oriented scenarios for language learning with the aid of digital media. As said at the outset of this chapter, its purpose was to elaborate on the theoretical framework currently discussed as a potential basis for the use of digital media and for assessing the innovative potential of the “new” Web 2.0. Furthermore, the examples given were chosen to demonstrate the practicabil-

ity of integrating digital media into flexible and learner-oriented language learning scenarios with a focus on stimulating meaning negotiation and output production. There is growing support for the theoretical perspectives and practical implications outlined in this chapter. As Swain put it, “participation has found its place alongside acquisition” (Swain & Deters, 2007, p. 831). The challenge that needs to be faced, with regard to the full integration of digital media into language learning, is to define appropriate frameworks for research into the actual processes that learners go through when participating in learning opportunities of the kind outlined in this chapter. The use of social software tools, such as wikis and podcasting, do offer some support for such research, as processes of output-production are often traceable and, therefore, become observable. Text entries into a wiki, for example, can be looked at from the very first draft up to the final version. Consequently, all edits can be considered in terms of what they document and represent as far as acts of languaging are concerned. Research of this kind is much needed in order to broaden the understanding of the effects and effectiveness of digital media in output-oriented, creative and participatory language learning.

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KEY TERMS

Authenticity: A concept which suggests that language learning needs to be based on real-life materials and rooted in real-world learning experiences. This includes the authenticity of language, authenticity of task, authenticity of learning situation, and authenticity of interaction in language learning.

CALL & TELL: Computer Assisted Language Learning and Technology Enhanced Language Learning, acronyms which address any kind of use of computers and digital media in language learning. In contrast to terms, such as CBI (Computer Based Instruction), these terms focus on the supportive and facilitative function of the computer and stress the role of digital media as tools for learning.

Constructivism: A learning theory that focuses on learning as a cognitive process, in

which knowledge is expanded on the basis of learners interactively using their prior knowledge and new information in order to generate new knowledge.

Languaging: A term coined by Swain (1985) relating to the cognitive process of negotiating and producing meaningful, comprehensible output as part of language learning.

Output Hypothesis: The output hypothesis argues that learners should actively engage themselves in the creation of “comprehensible output” in order to develop linguistically and cognitively.

Participatory Learning: Collaborative learning which focuses on raising learners’ awareness and competencies rather than simply supporting the learning of facts and figures.

Project-Based Learning (PBL): PBL can be described as a pedagogical approach to language learning which emphasizes learning activities that are learner-centered and offer learner product-oriented, real-life rooted tasks within a rich learning environment.

Social Software: Web-based software programs offered on Web 2.0, which allow users to publish, communicate, interact and share data with other users. Examples are *Wikipedia*, *MySpace*, *Facebook*, and media platforms such as *Flickr* and *YouTube*.

Task-Based Learning: According to Willis (1996), TBL regards language learning as set of activities where the target language is used by the learners for a communicative purpose or goal in order to achieve an outcome.

Chapter IV

Infoxication 2.0

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ABSTRACT

This chapter reviews the issue of information overload, introducing the concept of “infoxication 2.0” as one of the main downsides to Web 2.0. The chapter describes some of its potential effects on the learner; on the one hand, and puts forward some solutions to deal with the informational and communication barrage worsened by Web 2.0 plethora, on the other. The review of the issue reveals that although the problem of information overload has existed for many years, the massive abundance of fragmented Web 2.0 informational and communicative resources for the language learner might become an obstacle, i.e. it is often difficult to find what’s useful. Two kinds of solutions are identified, those based on common sense and time management, and those based on technology agents such as RSS readers and especially the future generation of RSS mash-up tools. An emphasis is placed on the role of the teacher as the facilitator to provide the know-how on these tools.

INFOXICATION 2.0

The idea that computer technology introduced the age of information is completely misleading and fallacious. The printing press began that age (Dewar, 1998; Borgman, 2000; Darnton 2000a). But, computer technologies enlarged it exponentially. One of the most overwhelming features of present western society is the rapid sequence in which events, thoughts, and products occur due to technological progress (Bolter, 1984). If *Google* is handling the processing of exabytes of information

with difficulty, users, consumers and producers of information (i.e. prosumers) are being surpassed by the amount of time devoted to absorb and, in the process, to purge gigabytes of information. After all, when searching for information what is actually being done is to filter contents in order to keep only what is interesting or that what is agreed with. Whatever it is that is being processed, e.g. audio, text or video, a conversation, a newspaper article or a TV documentary. The human brain, whose mechanisms science would like to emulate, is then responsible for processing, tagging and storing information on our cognitive servers.

But there is so much to see and read in the Web and time is too short. There is no Web 2.0 site that gives vouchers to get more time for free. Learners need to handle all that draws their attention in Web 2.0 without feeling dizzy or overwhelmed by their own information/communication eagerness. This eagerness to know more is not a new thing. As Shenk (1997) explained, human beings have always pursued information and contact, but nowadays the problem is not so much getting hold of it as it is differentiating what we expose ourselves to. It is that ancestral desire to know more and to communicate with others that took society to our current situation. Thus, the stimulus is not new — as will be seen later — but the available answers to that stimulus are indeed new in terms of quantity, quality and accessibility. In the current information glut, learners have to differentiate what is useful from what is not. At this point, it should be emphasized that in this chapter the discussion is not about deontological distinctions such as “what is good vs. what is bad” because who can define the inherent “goodness” of information? From a pragmatic viewpoint, this chapter will refer to that sort of information that is somehow useful to language teachers and learners. It is not concerned with the process of accessing information but the process of accessing by means of which we can *find* useful knowledge, whatever this may be.

In a normal studying day, a learner will have to pick up calls, read emails, read the press, chat through an Internet messenger, answer SMS, read Web feeds and carry out their job, as well as pay attention to their social and personal life. And although there are some mechanisms, which will be seen below, to help with some of these tasks, there is no way to control this flood of data that comes increasingly as a commodity. As Postman noted, “information is now a commodity that can be bought and sold, or used as a form of entertainment, or worn like a garment to enhance one’s status. It comes indiscriminately, directed at no one particular, disconnected from useful-

ness; we are glutted with information, drowning in information, have no control over it, do not know what to do with it” (Postman, 1990, para. 27). What could Postman’s view be now, 18 years later, when there are millions of Web pages, blogs, wikis, and social networks?

The University of Berkeley (Lyman, 2003) attempted to quantify in bytes the information available in our society. Their first attempt dates from 2000 (with data from 1999) and their most recent attempt was in 2003 (with data from 2002). It might be interesting to know if the reason why there have not been further attempts was the tsunami of information caused by the wide adoption of blogs (a significant application of Web 2.0) in 2004. In any case, the numbers identified by the 2003 study are already staggering — all production information in various formats for the year 2002 occupies a trillion and a half gigabytes of storage or about 250 MB per person. However, from the amount of information produced in 2002, “only” 1.75% came from Web pages. For example, email generated much more information with 8% of the total. But, although talking about these figures creates a certain impact on us, it will not help us see the whole picture (Brown & Duguid, 2000), because “storage” does not mean importance, or “volume” value. Some times figures lead to “tunnel vision.”

Web 2.0 is said to be a fuzzy concept that has been carrying a lot of hyperbole (JISC, 2007; Spool, 2007) since the moment it was introduced by D. Dougherty (O’Reilly, 2005). However, when Berners-Lee (IBM developerWorks, 2006) argues that Web 2.0 is a jargon term nobody can grasp and that provides no advance compared to Web 1.0 technologies, his reasoning is questionable because, nowadays, with Web 2.0 tools, non tech-savvy people can create and distribute content on the Web without needing to become experts. Web 2.0 is not a piece of software or a tangible thing, but a conceptual framework or approach with different characteristics, as shown in Table 1 (O’Reilly 2005; JISC, 2007; Spool, 2007).

Thus, the emergence of Web 2.0 over the past few years, with blogs, wikis, social networks and sites such as YouTube has radically changed the overall availability of publications, notes, documents, opinions and resources in general and more specifically in education and foreign language learning. Indeed, resources are not only in libraries or bookstores, but one click away. The main question that motivated this chapter, then, is how all this affects language teaching and language learning and what can language teachers and learners do about it? How will, for instance, English for engineering students face an assignment on “diesel engines” when *Google* yields 1,970,000 hits on this? Or if asked to practice their listening skills with podcasts in English, where do they start from with 13,800,000 results currently at *Google*? Moreover, now that Personal Learning Environment (PLE) (Kelly, 1996) is such a fashionable term, how can a learner integrate Web and mobile information and communication tools in a useful way that does not consume all their time?

Therefore, this chapter is specifically aimed at introducing and discussing the scenario of a viral syndrome here referred to as “infoxication 2.0” as one of the main downsides to Web 2.0 and its educational application. Firstly, the medical history of this process evolved from “information overload” is analyzed, then the chapter moves into the diagnosis, showing most recurrent symptoms, i.e. possible consequences on the cognitive system and the performance of the learners. Finally, a treatment 2.0 is suggested, that is, always in upgradeable beta status in order to combat data smog (Shenk, 1997). Currently the treatment is the use of RSS readers. The final sections will then identify not only the advantages of RSS readers in terms of helping teachers and learners keep their language resources organized, but also some of the main limitations of current RSS technologies and the need for a new generation of truly semantic RSS will be explained.

MEDICAL RECORDS

Is information something gradable? If there’s a statement such as “there is little information” then “there is too much information” should be accepted as well. However, there is something negative in the latter, as if there were an interest in limiting the information. Can there be something like too much information? The issue of how to access and organize information has been a topic of discussion for more than two decades, begun initially by librarians and information specialists, who focused on the improvement of information retrieval (Allen, 1969; Brookes, 1975; Belkin, 1978; Bates, 1979; Atherton-Cochrane, 1981; Hiltz & Turoff 1985; Ingwersen 1992). However, archives and library funds are tangible and therefore more manageable and classifiable by information retrieval (IR) systems. The unstoppable growth of websites makes the same information retrieval task a much more complex process.

Following the advent of the Web, various buzzwords have been coined to address the issue of information growth and specifically the effects of such growth (Toffler, 1970; Bell, 1973; Shenk, 1997; Johnson, 1997; Ganzel, 1998). The growth of information caused by the Web has been named in the following ways, more or less denotative: the widespread Information Society, data flood and information explosion. The Information Society (Bell, 1973) refers to the necessity and future of knowledge-driven societies. It was a hegemonic concept that hit the global political agenda in the nineties; the G-8 summits were focused on the diffusion of the Information Society as the buzzword to be included in any institutional and educational report. There are some other connotative and negative terms referring to the impacts of information expansion. The most widely used associated term is “information overload” (Toffler, 1970), which refers to too much change in too short a period of time. Information overload is a term that has been nowadays related to computer-mediated communication to describe

the condition of having too much information to make a decision or be informed about a topic. That excessive amount of available information on the Web 1.0 and 2.0 implies a low signal-to-noise ratio (Berghel, 1997), which makes relevant information difficult to find.

Once we go deeper into the effects caused by the exponential growth of data in the network, i.e. that there is so much noise that we do not see / hear the signal, we turn to loaded concepts such as Shenk's (1997, pp. 30-1) "data smog" and "data obesity." Web usability expert Jakob Nielsen found that smog fell too short and coined the phrase "information pollution" as information overload taken to the extreme, occurring when the information overload ceases to be a burden and becomes a crippling, "impediment to your ability to get your work done" (Nielsen, 2003, para. 9). This happens when Web users are littered by a lot of anecdotal data that keeps them from their original intention (Grossberger, 1998). If this often happens to language teachers, it should not be very difficult to imagine that a similar fate can happen to language learners who are forced to do a certain assignment and enter, for instance, *Wikipedia* or the blogosphere to work on it.

In general, a distinction is drawn between two kinds of information overload depending on the etiology. Jordan (2000) identifies two types, one that occurs due to quantity and that which occurs due to organizational matters. The former arises from excessive volume and the latter from information so badly organized that it turns out to be useless. In other words, the first implies that the technology is volume, and generates huge amounts of data, and the second refers to the functionality of the system, i.e. if it can organize, sort and effectively deliver the generated volume. Can search engines effectively index every generated piece of content? Can users tag each multimedia resource efficiently? Do those engines index these tags wisely? Do prosumers have to learn complex Boolean search, for example? Web 1.0 and Web 2.0 contents (either a post in a blog on

EFL, a community of photos on *Flickr* or an article on RP accent in *Wikipedia*) are often affected by inconsistencies, errors and broken links. When looking for something, it is common to get misinformation or something that does not relate to what was initially sought. Therefore, language teachers and language learners face a twofold task: to develop both searching abilities and finding abilities (which also should include discriminating skills).

Nevertheless, the language learning community is not the first one to deal with those tasks. Even before Gutenberg's press, it was all about keeping up with the fast pace of knowledge acquisition and dissemination. As stated at the beginning of this chapter, the information society was not born today. Neither are scholars' worries about the amount of information and the effects of new technologies (i.e. written code, a book, a printing press, a telephone or the net) on society. Blair (2003) cites Seventeenth Century French scholars fearing that the multitude of books would make their society fall into an uncivilized state. Rozek (2007) cites Sixteenth Century scholar Gesner, known to librarians as the creator of the bibliography, forewarning on the confusing and harmful overabundance of books. Several scholars tried to implement solutions to respond to this trend. Ramelli's bookwheel, for instance, would be a hefty *Google* predecessor from the Sixteenth Century. On the other hand, commonplace books, born in the Fourteenth Century as scrapbooks to be filled with writings of any kind, are seen as the originary forms of blogs and wikis (McDaniel, 2005). These commonplace books were used by writers, artists and scientists as an aid to remember any sort of acquired knowledge. According to Darnton:

Whenever they came across a pithy passage, they copied it into a notebook under an appropriate heading, adding observations made in the course of daily life. Erasmus instructed them how to do it. ... The practice spread everywhere in early

modern England, among ordinary readers as well as famous ... early modern Englishmen. ... [They] broke texts into fragments and assembled them into new patterns by transcribing them in different sections of their notebooks ... they reread the copies and rearranged the patterns while adding more excerpts. Reading and writing were therefore inseparable activities. They belonged to a continuous effort to make sense of things, for the world was full of signs: you could read your way through it; and by keeping an account of your readings, you made a book of your own, one stamped with your personality. (Darnton, 2000b, para. 1)

As a step toward a working definition of infoxication 2.0, it should be emphasized that the above definitions have the concept of “information” in common, a fuzzy or rag bag concept onto which we can actually dump almost anything. However, it should be acknowledged that this concept implies the existence of data or facts as an informational flow. Like Himma pointed out, it can be agreed that:

strictly speaking, we can define “information” in a number of ways to discuss the concept of information overload, what the content of this concept is depends on what the content of the concept of information turns out to be. Indeed ... given the ordinary meaning of “information,” “information overload” is something of a misnomer for the affliction with which information scientists are becoming increasingly concerned. “Content overload” is ... a more accurate characterization of the problem. (Himma, 2007, p. 4)

Indeed, to speak of “content overload” is perhaps the most accurate and the least ambiguous option but it is not the aim of this chapter to trigger a definition debate and therefore this chapter conveniently starts from the commonly known concept of “information overload.”

Thus, climbing up in the hyperonymic ladder, a more comprehensive further distinction between types of overload must be included: communication overload and information overload. This distinction draws upon the belief that information and communication are related aspects but not synonymous. Information may be a true or false fact; it can be a reified experience; it can be the illocutionary force of a given communicative act. It could be the target of communication, but not all communication is aimed at informing. The very choice of the term Information and Communication Technologies (ICT) proves that point. Communication implies some sort of dialogue, not always intended to share information or representational or propositional content. Therefore, if information overload is agreed to be the simple notion of receiving too much information, communication overload would relate to the excess or overload of verbal exchanges in various ways that a person bears during a normal day. The worst thing is that both overloads are compatible. Facing the unread feeds is part of the information overload; coping with the emails, SMS, messages on the *Facebook* wall, *Flickr* comments, blog posts and comments are part of the communication overload.

If Web 1.0 is the Web of information, the Web 2.0 is the Web of communication and participation, as seen in Table 1. Every day we hear of new applications and mash-ups to communicate with people around the globe and of applications that do nothing more than reinforce the phatic nature of communication such as *Twitter*. The more applications we embrace, as teachers or learners, the more prone we are to suffer symptoms of communication overload. As of November 2007, the blog search engine *Technorati* was tracking 112.1 million blogs and over 250 million pieces of tagged content. This is all obsolete data by the time you are reading this. Technological advance always brings a jack-in-the-box: a new device and a challenge to add. Some people may think that the best solution is to give up all these

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Table 1. *Web 1.0 vs. Web 2.0: Different Ecologies*

<i>Web 1.0</i>	<i>Web 2.0</i>
Web as Read-only	Web as Read-Write.
Web as Medium: Where content is transmitted from a webmaster or company to an audience.	Web as Platform: Where content can be stored, created, shared, remixed and commented by each user.
Web of large documents.	Web of small pieces of data.
Web of Software: The success of the software company does not depend directly on the end-user. If the user bought and downloaded the piece of software but doesn't use it, they still make a profit.	Web of Content: If people do not use the web-based application (i.e. by sharing, rating, uploading, networking), the application does not exist (nor the company or startup behind).
Web of geeks and techies: Html knowledge needed.	Web of anyone willing to try: Web-based publishing platforms (<i>Wordpress, Blogger, Wikispaces</i>), no need of technological language.
Web as Broadcast: One to many.	Web as Conversation: Social participative nature of web 2.0 tools, users can share comments, posts, trackback other users' comments. Many-to-many.
Web as Static: Applications and Web sites are closed.	Web as Dynamic: Applications are open and remixable via APIs (Application Programming Interfaces), recombining and deconstructing web.
Web of Search Engines: You go to the web to find what's out there.	Web of RSS: Content and data can be subscribed to. They get to your computer.
Web of Copyrighted Content	Web of Copyleft and Commons: Content can be licensed for re-use and derivative works.
Web of Categories: Content organized and stored in large and fixed categories by webmasters.	Web of Tags and Folksonomies: Smallest units of content tagged by anyone in the online community. It is the people organizing web content.
Web of Forums	Web of Blogs and Social Networks.
Web of "Stable" Releases	Web of Beta Releases.

new media. However, if western society became somewhat successful in this respect, it is precisely because whatever was needed was in fact created

at the appropriate time. Accordingly, the possible consequences must be faced.

Thus, as stated previously, it seems that human beings' medical history proves that we have always

been stirred up by our desire to know more, to create more and yet, to keep the outcome under control. Millennia ago it was the written code; centuries ago, the book; then came the printing press, the telephone, the radio, the television, the consumer Web and now the prosumer Web or Web 2.0. They are all cumulative, that is, Web 2.0 adds more overload to that caused by everything else and it raises this overload to exponential levels. Before the advent of Web 2.0, that information overload was therefore set to status 1.0. With the Web 2.0, “infoxication 2.0” has come, i.e. information pollution taken to the extreme and with wide open flanks, a malady affecting the cognitive and interactional schemata. Infoxication 2.0 is a viral process, a ripped, mixed and burned virus coming from our most essential needs — infoxication standing for information and communication — exponentially worsened by the myriad of Web 2.0 communication and networking possibilities. It refers to an intoxication of excessive informational and communicational demands. The more engaged with Web 2.0 a person is, the more time s/he will have to spend to meet the various demands: website syndication, reading feeds, reading comments, responses to comments, searching and filtering tags, communicating with other members of a social network, listening to podcasts or watching uploaded videos.

Consequently, language teachers have to confront a twofold challenge: on the one hand, to introduce and guide learners in terms of the benefits of using Web 2.0 resources in their language learning process (blogs, wikis, podcasts, vodcasts) and, at the same time, to implement strategies aimed at fostering critical time management skills as well as at learning available technologies to facilitate this process in order to keep them/us from dying of infoxication 2.0.

DIAGNOSIS

At this point, innumerable metaphors could be thought of to diagnose the current situation,

it is no longer about surfing the Web (back to the 90s and Web 1.0) but about being deluged by a churning wave, or being definitely lost in *the long tail*. Educational institutions (NCTI, Council of Europe, etc.) are currently promoting innovation in the classroom, at least theoretically. On the one hand, traditional language teachers and lecturers have to unnervingly embrace new technologies and figure out a methodology to use them in class. Tech-savvy language educators, on the other hand, have to catch up with the fast pace of Web 2.0 tools and their mash-ups. Many authors have claimed the benefits of the use of Web 2.0 in education (Prensky, 2001; JISC, 2007; BECTA, 2007; Warlick, 2007; Downes, n.d.) and in foreign language learning in particular. The belief underlying this chapter is that Web 2.0 is a framework that offers enriching possibilities for the foreign language classroom (Godwin-Jones, 2003; Campbell, 2003; Johnson, 2004) due to its social tilt (social networking) and to its participational nature (e.g. learners/readers become writers, anyone can upload content and tag it, like-minded people can link each other through matching filters, etc.).

Web 2.0 is the latest stage of CALL (Davies, n.d.). If one of the objectives of CALL is “to orchestrate challenging activities that involve and empower students, stimulate thought and production, and create more instances of authentic interaction between students using the target language than might be the case in the analog lab or conventional classroom” (De Szendeffy, 2005, p. 5), then the age of Web 2.0 shows a more powerful potential than any other prior CALL stage because it offers possibilities for authentic communication and cultural exchanges; it fosters peer-to-peer learning, connections and communities. Moreover, Web 2.0 is basically multimedia (text, podcasts, vodcasts, audio and video sharing, etc.) and most of its services are free, lightweight and ubiquitous, i.e. software runs on the server not on the learner’s computer and it can be accessed anytime anywhere (teach-

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ers/learners do not depend on the language lab anymore). Nowadays language learners have a myriad of Web 2.0 resources in which they can interact, leave comments and socialize in the target language.

Then, it is very common to meet language learners asking questions such as *how can I practice my listening skills? Can I practice with other native speakers?* A “short,” straightforward answer would be: use the Web 2.0, i.e. read blogs in the target language and leave comments or start your own; subscribe to podcasts and vodcasts in the target language and download them to your mp3 player; join web-based language exchange communities such as *My Language Exchange*, *Mixer*, *xLingo*, *LiveMocha* or *Worldia*, where you can interact with other native speakers as well as language learners for free; create your own dictionary and share definitions and tags with other users with the so-called (Web 2.0) social dictionaries such as *Lingoz* or *Wordsource* or simply read the teacher’s blog where she has already posted hundreds of resources addressing these issues. But then, wouldn’t it have been easier to tell those inquisitive language learners the simple truth? *Get lost*. Literally.

Indeed, as hinted at the beginning of this diagnosis of infoxication 2.0, they will be lost in the long tail, since to combine their learning process with learning assignments and Web 1.0 and Web 2.0 can be somewhat dangerous in terms of teaching and learning objectives. Of course, in case there isn’t any remedial method behind. The hyperlinking nature of Web 1.0 and the social hyperlinking nature of Web 2.0 resources foster centrifugal serendipitous wanderings, serendipity being a wonderful fulfilling faculty we should not put down. However, untrained serendipity in the Web 2.0 can lead to learners’ procrastination, to start with. As can be found at the Web site of the Department of Information Technology at the College of William & Mary, “the last year has seen an explosion in the number of internet tools that allow students to collaborate, communicate and

procrastinate in ways that previous generations could only dream about!” (The College of William & Mary, 2007). Everyone procrastinates to some extent, as the aphorism goes “there is much pleasure to be gained from useless knowledge.” Then, it is easier for learners, when there are so many interesting and funny things out there in the Web, to push boring learning to the bottom of the to-do list.

However, procrastination is not the only potential symptom of infoxication 2.0. There are some other downsides to be considered here. Since the rate of change of Web 2.0 resources is faster than Web 1.0’s, learners will have to filter obsolete resources from updated ones and in a rapid fashion. They will have to develop multi-tasking and multi-literate skills (Benito & Bonamie, 2007) based on autonomy and strict time management in order to avoid what British psychologist David Lewis (Waddington, 1996) coined Information Fatigue Syndrome (IFS), i.e. the inability to “keep up” with the ever-increasing amounts of available information. On the other hand, technology is not neutral and as McLuhan (1964) stated, the medium shapes the message. The “less is more” philosophy behind Web 2.0 mediated communication messages — perhaps originally aimed at avoiding information overload — has changed the way people approach texts, making them shorter so that people do not tune out (e.g. tumbleblogging, blogging posts meant to be short, etc.). Thus, information and communication become nuggetized and “the less is more” becomes “a lot more of hundreds of less” which they will have to skim, once again. In some learners, this could lead to *fragmentia*, i.e. a cognitive disorder based upon Gestalt theory where one feels cut off from a sense of wholeness due to excessive exposure to incomplete information (Shenk, 1997). This is probably the reason that explains why most language learners prefer to work with a textbook rather than learning only with classroom handouts, they need to feel that wholeness instead of dealing only with parts and never completing wholes.

Furthermore, there are two apparently opposing forces: on the one hand, classrooms and on the other, Web 2.0 with its blogs, wikis, social networks, podcasts and the vast array of resources many language teachers recommend their learners to resort to for further practice. Apparently opposing forces because as Shenk (1997) put it:

Schools are stringent filters, not expansive windows onto the world. Teachers and textbooks block out the vast majority of the world's information, allowing into the classroom only very small bits of information at any given time. When organized well and cogently presented, these parcels of data are metamorphosized into building blocks of knowledge in the brains of students. The computer, by and large, is designed for a very different purpose. It helps access and deliver enormous stores of information at high speeds. It is not a filter, but a pump. (p. 211)

The solution, however, should not be to block the pump or to filter it somehow, but to let language learners become critical independent learners by letting them know the advantages and disadvantages of that pump in their learning process and providing them with know-how on existing tools that may help them to save attention for other things. In a world in which we talk about renewable and non-renewable resources and foster the use of the former, what will language teachers do concerning a sustainable use of a non-renewable resource such as learners' personal time?

The main problem suggested in this chapter is that people's and more specifically language learners' attention is continuously being distracted by messages and gizmos (Wakin, 1998) which compete for it and that, consequently, it could be claimed that both learners' and teachers' attention has become a scarce commodity. Simon, for example, suggests "what information consumes is rather obvious: it consumes the attention of its recipients [and therefore we] need to allocate that attention efficiently among the overabundance

of information sources that might consume it" (Simon, 1971, p. 40). In the following section, some solutions aimed at allocating attention and time efficiently will be outlined.

TREATMENT AND PROGNOSIS

As stated in the introduction, this chapter is not only intended to pinpoint "infoxication 2.0" as the downside caused by the plethora of Web 2.0 resources for language learning but also to outline a possible treatment 2.0, that is to say, a beta version. Needless to say that if the "beta" concept were rendered in this chapter as many current Web 2.0 startups do, i.e., their "beta" meaning that we will have to diagnose *their* bugs and in some cases altruistically work them out on *our* backs, the chapter would end here.

However, beta is here understood as a state of iterative revision which becomes a need due to the aforementioned fast pace of technical change. Some of the solutions offered here may be outdated in a couple of years or even less, that is why the only way to treat infoxication 2.0 is to be ready for newer versions of the solutions provided to deal with the problem, which may, funnily enough, worsen the infoximating process.

At this point, it is necessary to distinguish two sorts of treatments, subjective and objective. The subjective approach is not a beta but a gold release. It is retail-ready and does not depend on any sort of technology whatsoever because it refers to common sense. Indeed, there are some ways to keep oneself somewhat away from the infoxication barrage which are basically based on the logic of common sense and refer to DIY time management (Lively, 1996; Shenk, 1997; Rosen and Weil, 1997; The University of Hull, n.d; Krill, 2000). The most commonly used techniques mentioned are:

- Language learners should create a study plan and organize their schedule.

- Language learners must know what they need, and consequently, what they want and where to find it.
- Language learners should establish boundaries, avoid interruption overload (i.e. when communication disrupts, such as a phone call, SMS, a messenger message, an unread email pop up window, etc.) especially when talking about young learners. As proven by UK's Ofcom annual reports (Ofcom, 2006), youngsters love doing multi-tasking, such as writing an e-mail, listening to mp3 tracks and talking on the phone, all at the same time.
- Language teachers should facilitate this process by telling them how and showing short-cuts.

The objective approach relies on the technological advances throughout the last decades to beat informational deluge back. In the Web 1.0 era, the brand new technologies devised to close the spigot of the informational firehose were filtering email clients and firewall software and www search engines, such as *Google* or *Yahoo!* (Lake, 1998). In the Web 2.0 or “participation era,” RSS has been seen as the new breed of applications to help manage information overload. The objective of this section, however, is not to describe the complicated history of RSS. RSS (Really Simple Syndication) refers to a family of Web feed formats that are used to publish frequently updated content such as blog entries, news headlines or podcasts. An RSS document, “feed” or “channel,” contains either a summary of content from an associated website or the full text. RSS therefore makes it possible for users to stay up to date with the latest information in an automated fashion rather than manually downloading it. In order to read any site RSS feed, an RSS reader (also called RSS aggregator) is needed, which can be desktop-based or web-based. Just like an email program does with incoming emails, RSS readers display news from various sources

(from all the feeds or sites you have registered with, or subscribed to). Unread entries are typically in bold, just as unread emails. Therefore, instead of language learners going to different websites to check for any new uploaded content, any new uploaded content goes directly to their RSS reader account. To do so, all they have to do is to look for the RSS logo (an orange button) in a given site (for instance, *English Baby!* lesson channel or the *British Council* podcast archive) and subscribe to the feed in various ways, like dragging the URL of the feed into the RSS reader or by cutting and pasting the same URL into a new feed in the RSS reader.

RSS cannot only be used to organize information (e.g. websites, blogs posts or wikis) but also communication (e.g. people's comments on blogs). There are many popular and free web-based readers such as *Google Reader*, *Bloglines*, etc. RSS advantages for learning and teaching have been outlined showing different ways that RSS feeds can add to a learner's and teacher's knowledge base (Richardson, 2005; D'Souza, 2006). Language teachers working with learners' blogs can use RSS to track their learners' work in a simpler way, i.e. instead of checking out all learners blogs every day one by one, they can subscribe to their blogs and get their work compiled in just one place, the RSS reader. On the other hand, the benefits of using RSS for a language learner are also very obvious since RSS can assist them in collecting Web 2.0 resources in just one place. For instance, a Business English student can gather all the posts and comments left by learners or tutors and all the podcasts from the Blogosphere, all the videos from *YouTube* and all the PowerPoint slides from *SlideShare* tagged as “Business English” in just one place — a web-based RSS reader such as *Google Reader* — and get updated content automatically.

Other RSS application into language teaching can be to create digital content in the target language with Web 2.0 tools such as *Odeo* (to create, upload and share audio) or *YouTube* (to

create, upload and share video), tag the new content in those sites (i.e. describe it with keywords) and ask learners to subscribe to the feeds associated to the new tagged content. Learning a foreign language requires multimedia, audio and video to foster aural and comprehension skills. For decades, CALL experts have been creating a myriad of multimedia materials. Nowadays, by uploading those creations to blogs or other Web 2.0 tools (for instance, mixed media channels such as *SplashCast*), language teachers are putting their media into blog search engines and therefore their material becomes feedable (they can create a RSS or subscription channel for your learners). Thus, any teacher's uploaded material can easily be accessed and followed through RSS readers. It is about letting the content go to the learners' computers and not the other way round. Teachers can make their PowerPoint presentations, their podcasts or audio files, everything subscribable and that is the first step to lessen learners' infoxication (as well as teachers'). Indeed, instead of creating a Web 1.0 static website in which grammar explanations and multimedia files are uploaded on a regular basis but cannot be tracked and subscribed, language teachers should gather all that content in dynamic Web 2.0 sites such as blogs, wikis or social networks, which are written in a different code and are therefore subscribable. Once there, the next step is to show language learners how to make the most of RSS tools for their own learning process. To do so, language teachers have to delve themselves into the analysis of these tools since the best way to know how RSS readers and removers can work for teaching and learning is to play around with their interfaces; if a mistake is made or what has been tried doesn't work, it is as simple as closing the browser window and trying again.

There are also downsides to this Web 2.0 tool. RSS readers were hailed as the indispensable tool to combat information overload (Singel, 2003), but when subscribed to many RSS feeds (maybe hundreds), the same and old overwhelming feeling

of overload may turn up again if the RSS folder is filled with piles of unread posts. This is being referred to as "RSS Stress" or "RIO," i.e. RSS Information Overload (Agarwal, 2007). Some of the possible RIO effects are the following:

- **Scanning reading skills:** Since there is a pile of unread posts or comments, the RSS user has to scan through the swamped posts and comments for keywords.
- **Skimming reading:** If there's a post or a comment with a snappy title that pulls the learner in, the feeling of hastiness (i.e. *I have to hurry up otherwise I won't be able to slog on through the unread pile*) leads to superficial reading, selecting the lines in the beginning and the end of each paragraph; skimming and predicting content. The hurriedness of Web 2.0, that feeling of *there's a lot to see and read, I won't be able to know it all*, may be causing a decrease in reflection skills, as A. Lightman, a Humanities professor and Physics lecturer at the M.I.T., points out: "I think that the high-speed information technologies, while very useful in many ways, have robbed us of our necessary silences of time to reflect on values on who we are and where we're going" (Krill, 2000, n.d.).
- **More time spent:** Although the all-in-one place sort of advantage saves time, the fact of screening through hundreds of posts and comments titles in order to end up reading only those of interest may take more time than before.
- **Missing potentially interesting resources:** When scanning and skimming RSS entries, the learner may involuntarily miss interesting and useful data, concepts, ideas or resources. Relatively new launched RSS services such as *aideRSS* use postrank systems to score and filter your RSS feed entries, as their logo claims "only top stories and read what matters." In this case,

they render as “intelligent assistance” to equate top ten ranked stories (one of the main characteristics of Web 2.0 compared to Web 1.0 is that readers and writers can vote content through ranking 2.0 systems such as *Digg* and others) with information that matters. However, this is a dangerous and misleading approach to RSS since a lot of users voting for a given entry should not grant this entry “a must” status. There are thousands of potentially interesting online resources for language learners that may not have been ranked or voted yet

- **Procrastination tendencies:** *Or I will keep on catching up tomorrow.*

However, there are some ad hoc solutions that can be shared with language learners such as:

- Numbering the feeds in order of relevance (what’s important and relevant to them).
- Creating a “Pending Content” folder to be read on a weekly basis, for instance.

Therefore, RSS readers are a critical daily tool to filter information but they are being seen as a short-term solution by many Web technologists (Eggertson, 2005; Eisenstadt, 2005) precisely because the swamped effect of unread or undone tasks kicks in again. In the long run, it is all about adjusting RSS technologies to users’ specific semantic needs i.e. if a learner is only interested in reading feed entries related to “EFL podcasts,” they should only get mp3 tracks and not theory on EFL podcasting, for instance. Besides, current RSS technologies do not avoid semantic duplication. Indeed, to post entries that are links to other posts, or entries that comment on something that has already been discussed on some other sites is a very common habit in the blogosphere. The blogosphere behaves somehow like a big mirror. Thus, RSS readers do not eliminate similar stories or duplicates to whittle down the feed, which means our language learners can end up reading

more or less the same type of content from different entries, which doesn’t help them to struggle with their time crunch. Quite often, if entries which have been marked as read are republished in the site for any reason whatsoever, the RSS will show them up as new again. Of course, there must be a reason that explains why the general public and many so-called “digital natives” do not know what RSS is.

Nonetheless, new RSS tools have come into existence in 2007 and the trend seems to be growing. Nowadays, for instance, one of the new RSS tendencies is to move all the feeds in just one place to all the feeds in just one feed through RSS mixers. On the other hand, we have the self-proclaimed “intelligent RSS readers” such as *RSSbrief*, a service that tries to give an overview of specific blogs’ entries, extracting an executive summary about the content to help you determine whether the full content is relevant, so that it somehow helps you avoid skimming or predicting entries’ contents. Some of the drawbacks are that short entries are not considered and that it is not a real feed aggregator but a briefing piece of software. Besides it only summarizes entries in English, so it would be only useful for EFL learners.

Most interestingly, there are new Web 2.0 tools that allow the end-user to remix and reformat the content of different sources (blogs, wikis, *Flickr*, *YouTube*, *GoogleMaps*, etc.) in a countless different ways, adding more customization. It could be described as Web 2.0’s mash-up approach on RSS technologies. The most interesting RSS mash-up tool is probably *Yahoo!Pipes*. It is a hosted service launched by *Yahoo!* at the beginning of 2007 that allows the user to play with the Web 2.0 as database, to munge different multimedia sources together in just one place by dragging and dropping blocks, connecting them and applying different filters. Web 2.0 guru O’Reilly claimed that *Yahoo!Pipes* “democratizes Web programming, making it easier for people to have more control over the internet information services they consume, and providing a general-purpose

platform for interacting with sites that is more powerful than the browser or feed-reader alone, but without requiring full programming skills” (O’Reilly, 2007, para. 26). Any foreign language teacher, with no programming knowledge, can plumb into *Pipes* and notice that despite its nifty visual programming environment (just like WYSIWYG editors), it is not as user-friendly as it could be. It may end up being a tool for a novice or in a hurry programmer rather than for language teachers or learners. Nevertheless, the idea is to mash-up the content you like from feedable Web 2.0, to tweak it and filter it and then you get a customised remix feed you can subscribe to in your favorite RSS reader.

On the plus side, this Web 2.0 rewire service does a fairly good job in mashing up contents and its power relies on its filtering and replacing options. After tinkering with *Yahoo!Pipes* explanation on what their drag and drop modules offer, some benefits or applications of *Yahoo!Pipes* for foreign language educators or learners could be the following:

- A teacher of a language course for specific purposes, for instance *English for Tourism*, working with blogs, *Flickr* pictures and *GoogleMaps* can create a customised feed for learners which will collect any data from the Web tagged “famous tourist destinations” and replace the texts with related pictures from *Flickr* and put those texts and pictures on a *Google* map. So instead of getting just a feed with texts including those keywords, they will get a customized feed for their learning purposes which will save them time and effort.
- On the other hand, if interested in videos as a resource for language learning, a feed which replaces blog posts tagged as “Spanish accents” with *YouTube* videos tagged as such can also be customized with this sort of service.
- With *Yahoo!Pipes* different sources can be translated to different languages, with the

translation module. Therefore, a language teacher can create a feed getting the news from different newspapers in English and ask the feed to offer a translation into a chosen language of key terms, or let the learner select the target language, which can be quite useful for multicultural classes or for translation courses.

- If the teacher owns a blog or a Web 2.0 site where course-related materials are uploaded, s/he can tell his/her learners to subscribe to the site through an RSS reader. However, the students of following semesters, when subscribing to the site, will not be able to see the old posts in their brand new subscription in their RSS reader. With *Yahoo!Pipes* that teacher can create an RSS feed of his/her own content and add an update interval, which will tell the pipe to update and refresh old content at the beginning of each semester allowing new students to get old posts freshly baked.
- A very simple application can be the typical merging or gluing of feeds, e.g. the combination of all the learners’ and teachers’ blogs just like the BBC pipe does.

The possibilities, thus, seem to be endless, and they depend mostly on the teacher’s imagination and attitude towards web-based assisted learning and technology in general. Moreover, the problem of duplicated stories in one feed is said to be solved with the “unique module” of *Yahoo!Pipes*. Its main caveat from the language teaching/learning viewpoint is that, as it stands right now, it requires technical knowledge and, definitely, technological multiliteracy to be understood and used efficiently. Getting wide adoption outside the technological community will be difficult if they do not offer more how-to tutorials and change the language of modules.

Web 3.0 and next generation RSS technologies for human-like semantic distribution and classification of knowledge should focus on integrating

informational and communicative content, i.e. information and relationships. As pointed out before, the overload is twofold, as infoxication stands for information and communication overload, what happens then with the second side, i.e. communication overload? Current tools such as the ones explained so far are aimed at filtering, gluing and delivering information. With so many communications channel options there is nothing to control the sequencing or interaction between different channels. It would be a great advance if we could integrate and filter our communicative demands (emails, messages in social networks, online chat, blog comments) just like we can do with informational chunks. A promising tool such as *Twine*, presented in October 2007 at San Francisco's Web 2.0 Summit, may turn out a fairly good advance since it brings these issues into sharp relief. This is to be said the first semantic social network in which people can share, organize and find information with people they trust. Google and the like can help language learners to find information on Spanish verbs or English conditionals but they can't help them realize what other learners and teachers have found or are saying on these topics and which are the most downloaded and shared in that network. This is what *Twine* as a social semantic network aims at providing as it can be read in their site: "Get more organized. *Twine* provides one place to tie everything together: emails, bookmarks, documents, contacts, photos, videos, product info, data records, and more. And, because *Twine* actually understands the meaning of any information you add in, it helps you organize all your stuff automatically. Finally, you can search and browse everything and everyone you know, about anything, in one convenient place" (<http://www.twine.com>). At the moment of writing this chapter, *Twine* was unfortunately a beta-invite only.

In the meantime, RSS remix feeds are the future of RSS and certainly one way to try and filter information overload, at least one of the sides of the coin, for our language learners. The future of

RSS is to reach a wider target once and for all, to become a killer app like email used by everyone not only by bloggers or Web 2.0 savvy users. The future of RSS is that people, like language teachers or learners, do not have to subscribe exclusively to a list of bloggers or authors but to tags and keywords through remix feeds that do their skimming/scanning for them. Language teachers may or not use/read blogs, but language learners do use the Web as a database, as companion to their language textbooks and in that database they have to find knowledge (signals) among the informational deluge (noise) and dialogue among the communication channels barrage.

Language teachers have a final say on this previously mentioned noise-signal ratio. Teachers often require language learners to learn a myriad of facts and structures and tell them to resort to many Web resources for further practice instead of teaching them how to cull, interpret, use and organize those resources, and to develop multi-literate skills (Becta, 2007). To do so, language teaching communities need to develop more flexible syllabi (Russell, 2000) which integrate and foster the teaching of these tricks and tips, some of them outlined here, in the foreign language classroom. When asked those questions outlined in Diagnosis, language teachers should not only tell learners where to go but how to do it and integrate those tools in normal language lessons whenever possible. Teachers should help language learners become critical readers in order to see the forest through the trees by developing 2.0 reading skills (a sort of transversal knowledge which will not be only useful for their language learning process) and teaching them how to *chew the tags* (Bonamie & Benito-Ruiz, 2007). Teamwork and task-based approaches as a filtering method to cope with the excess of Web 2.0 resources should be used, e.g. organizing tasks in groups which are focused on finding Web resources to practice a specific skill or language structure; creating groups working on different blogs or wikis in which they compile resources about previously assigned language

skills. As a common-sense measure, only those 2.0 tools which are really useful for their learning needs should be explained, i.e. meaningful and with a purpose, such as the RSS technologies explained in this chapter that will help them keep their findings more organized. Further quantitative research could be conducted to determine language learners' attitudes towards the use of Web 2.0 and RSS in their language learning process and the extent to which they contribute to their infoxication, if any.

CONCLUSION

Even though the approach shown in this chapter regarding the benefits of using Web 2.0 in foreign language learning is clearly positive, the objective has been to introduce one of the threats of Web 2.0, i.e. the feeling of not knowing where to start and how to keep organized. This chapter could have become a book-length treatment due to the labyrinthine nature of the information overload concept and the massive volume of literature on the issue. However, obvious spatial needs imposed a selective look at the situation. Hopefully, a few of the more crucial aspects of information and communication overload facts and effects have been highlighted. On the one hand, the relatively new linguistic forays to name the problem; on the other the fact that the human feeling of frustration over our limited information processes is not a new thing; some examples have been provided. However, it has also been claimed here that it is the rapid changes and the fast and easy access provided by computer networks which have complicated the situation. As predicted by Toffler (1970), it is the sense of inadequacy caused by rapid changes in western society. Facts have been accumulating for centuries and the Web 2.0 mass of multimedia resources has increased the volume of available data and the pace at which these appear. On top of that, Web 2.0 is not only data and

propositional content such as videos or podcasts that may be useful for the language learner, but also a network of communications, comments, messages and relational links. Thus, there is not only an informational volume increase but also a communicative one.

This is the reason why the concept infoxication 2.0 is introduced as well as some of the effects, such as learners' overwhelming feelings, low performance and procrastination and Shenk's *fragmentia*. Infoxication 2.0 can be a manageable problem however. Some of the solutions referred to personal time prioritization and others to technological mechanisms such as RSS technologies like RSS readers. Moreover, a cursory glance is taken at the future generation of RSS, i.e. RSS mash-ups using Web 2.0 as a database (e.g. *Yahoo!Pipes*). These RSS technologies can offer some direction and support but there are also some caveats. They might be too difficult to learn and, on the other hand, they do not address the issue of excessive communication channels. Next generation RSS technologies should allow learners to connect to each other, even if they avoid public blogging, and to let them gather all communicative messages in just one place along with the filtered informational content in the easiest possible way. Finally, the foreign language teacher also has a say to stop overload by creating subscribable learning materials and by showing the ways to cut through the noise to discover knowledge and communication possibilities within Web 2.0. As the aphorism would say, knowledge is a process of piling up facts; wisdom lies in their simplification.

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English, Baby!: <http://www.englishbaby.com/>

Flickr: <http://flickr.com/>

Google: <http://www.google.com>

Google Reader: <http://reader.google.com>

Lingoz: <http://www.lingoz.com>

LiveMocha: <http://www.livemocha.com/>

Mixxer: <http://www.language-exchanges.org/>

MyLanguageExchange: <http://www.mylanguageexchange.com/>

Odeo: <http://odeo.com/>

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Slideshare: <http://www.slideshare.net>

Splashcast: <http://web.splashcast.net/console/>

Technorati: <http://technorati.com/>

Twine: <http://www.twine.com/>

Twitter: <http://twitter.com/>

xLingo: <http://www.xlingo.com/>

Yahoo!Pipes: <http://pipes.yahoo.com>

Youtube: <http://www.youtube.com/>

Wikipedia: http://en.wikipedia.org/wiki/Main_Page

Wikispaces: <http://www.wikispaces.com/>

Wordsource: <http://word.sc/welcome>

Worldia: <http://www.worldia.net/>

KEY TERMS

Beta Version: A stage of the software release cycle. A beta version is the first version released outside the organization or community that develops the software, for the purpose of evaluation or debugging. In the world of Web 2.0, the beta stage is almost a must so that Web 2.0 tools should be always in a perpetual beta or developed in the open.

Feed: A feed refers to syndicated website content; a feed is a document (based on XML) including a headline, a short summary of the content and a link back to the place on the reader's website where the content resides (if it is a partial feed) or the full article/content (if it is a full feed). Orange or gray icons in websites indicate that the website's content is available in a feed, and therefore, can be syndicated (or subscribed using an RSS reader).

Information Fatigue Syndrome (IFS): The cognitive inability to keep up with the ever-increasing amounts of available information.

Infoxication 2.0: Infoxication 2.0 is a viral process, a ripped, mixed and burned virus coming from our most essential needs (information and communication), exponentially worsened by the myriad of Web 2.0 communication and networking possibilities. It refers to an intoxication of excessive informational and communicational demands.

Long Tail: An expression first coined by Chris Anderson in an October 2004 *Wired Magazine*

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article. Although intended as a business principle, The Long Tail is also being used to discuss information retrieval on the Internet to emphasize the fact that information is being fragmented into thousands of blogs, feeds, social networks, etc.

Tag: A tag is a keyword or label. People can tag their posts, photos, videos and any content uploaded to web 2.0 with any keyword that makes sense. While categories tell users the specific location, i.e. where a given piece of content is, tags indicate what that content is about. They offer another way to navigate content on a site, show-

ing how popular different keywords are. Tags that are large are mentioned a lot, tags that are smaller have only been written about a few times.

Web 3.0: Probably another buzzword like Web 2.0 for marketing purposes. Web 3.0 is referred to as the Semantic Web, in which the web itself will be used as a database with more intelligent search engines, filtering tags and where the information will be widgetized.

WYSIWYG: An acronym for What You See Is What You Get, an interface in which content during editing appears as the final product.

Chapter V

The Role of Community Formation in Learning Processes

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ABSTRACT

The aim of this chapter is to discuss the effectiveness and the necessity of forming a community when engaged in online learning. The Internet and its online communities offer new learning opportunities for many who cannot attend full-time, residential training sessions or higher education courses. Web-based course delivery affords these students and professionals the opportunity to work together, “anytime, anywhere,” exchanging information, resources, expertise, without leaving their homes or their jobs.

INTRODUCTION

The term Web 2.0 has clearly taken hold since its appearance following the 2004 O'Reilly Media 2.0 conference (O'Reilly, 2005). The term refers to an improved form of the World Wide Web and new ways of using it. The concept behind Web 2.0 technologies that sees the Web as a platform to be constructed and enriched by the users themselves, has literally revolutionized Internet environments, transforming them from passive, read-only websites to highly interactive, participatory and service-oriented “platforms” with an obvious focus on inter-human connectivity (Siemens, 2005).

As testimony of what is affirmed in terms of the role of community in online language learning processes and the significant capacity of Web 2.0 social software to facilitate such processes, the chapter includes examples of computer mediated conferencing messages from a case study, which presents the experience of two online groups of participants training on-the-job and in the process of forming a community of practice. The case study includes messages posted on the First Class network conferencing system (<http://www.first-class.com>) of two online groups, the Australian Community and the International Community, whose common denominator was the nature of the participants themselves: they were all pro-

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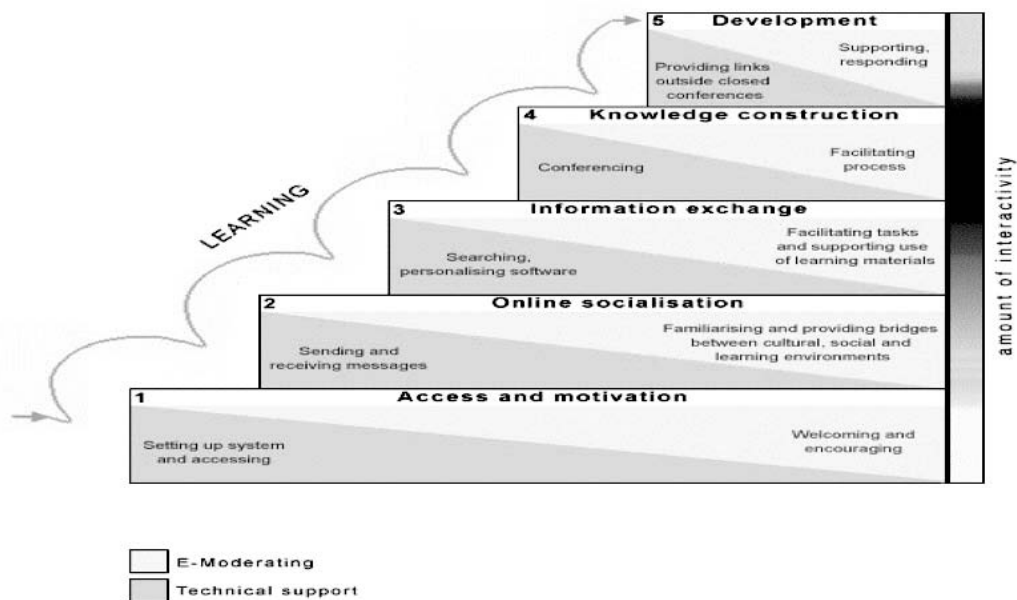
professional educators who convened online for 5 weeks to re-qualify as e-moderators in order to include an e-learning component as part of their training or teaching methodology. The e-moderating courses were based on Salmon's five-stage model shown in Figure 1, which has a twofold purpose. Its step-by-step structure is designed to scaffold a successful development process for learning online as well as provide a framework for e-moderators that illustrates what interactive skills they need to apply at each stage in order to help the learners achieve this success (Salmon, 2004, p. 28).

Although the participants were not involved in *learning* a language, they were *dealing with* language issues, thus, it is this study's view that their experience can be easily transferred to the world of language education, as it embraces all learning processes occurring through social software, and in this case by means of CMC. By providing a set of lenses to observe the community members through their discourse behaviours, this

chapter hopes to provide insight into the broader use of the concept of Web 2.0 technologies and its role in online language education, going beyond the implications behind learning the language to include learning *about* how language works when the interlocutor is the Internet.

In considering a variety of other issues connected with online education and community formation, the discussion begins by exploring the advantages as well as the pitfalls of online learning and the role that it plays alongside its more traditional classroom approaches to teaching and learning. This naturally leads to a discussion of the importance of retaining some of that human contact, along with the regular buzz and social dynamics that characterize the classroom and this is where the idea of a learning community steps in. However, as not all social groups that convene online actually form a community, even with the aid of social software which naturally tends to facilitate networking processes, this chapter also discusses some of the salient attributes that

Figure 1. 5-step model of e-moderating



Note. Adapted from G. Salmon (2004). *E-Moderating, The Key to Teaching and Learning Online* (RoutledgeFalmer, 2004).

can be considered as criteria for community development.

It becomes obvious that one of the main thrusts of this chapter is the presentation of authentic messages taken from a case study conducted on the two online groups mentioned above. The 12 Australian-based participants attended their course from May 2004 to June 2004, posting in this lapse of time a total of 1194 messages. The 13 International participants were from Japan, Italy, Portugal, Ulster, Ireland, England, UAE and South Africa. Their course ran from October 2002 to November 2002, with a total of 630 posted message. Thus, the corpus of the study consisted of 1824 postings from the conference environments during the five-week duration of their individual courses. The messages were analyzed by using coding and counting methods in order to explore the discourse behaviours exhibited by the participants especially when they were reflecting on their learning processes. This analytical approach established that collaborative learning processes facilitated by social networking strategies support community formation and that these processes are indeed intertwined.

Based on this extensive argument for the importance of collaborative learning processes within community grounds, the attention is shifted towards the individuals that constitute community. The analysis of the messages and the discourse behaviours from the two online groups yielded information on participant role definition and especially on the formation of an online personae, a new identity who is about to explore the undiscovered territory of self-disclosure. Examples of such online behaviours stimulated by problem-based activities that foster community belongingness through self-governed behaviour are presented and discussed.

The chapter ends by considering the person who is involved in guiding collaborative activity and in the orchestration of online voices, the e-educator, also known as e-facilitator or e-moderator. The added value of the technological “e” has

undeniably transformed many aspects of the role, but has preserved the essence of the educator’s job. Understanding how to set the stage for online activity and maintain the motivational drive is not a simple task, and the e-moderator, as noted by Salmon (2001), “is the person responding to and building on the contributions to an online conference ... and ... should prompt, encourage and enable ... openness, while acknowledging the personal experience” (p. 45). These e-experts, she argues, act as “companions in the democratic online learning process” and have the “ability to visualize others in their situations” (p. 46).

Through the extensive discussion of such issues, the aims of this chapter are to:

- Evaluate the fundamental role of Web 2.0 social software in learning processes, including language learning.
- Emphasize the importance of community formation when involved in online learning.
- Reaffirm that constructivist principle that collaboration is at the basis of all learning processes.
- Discuss the use of Computer Mediated Communication as social software and its role in community formation.
- Demonstrate that community building is recognizable and visible through participants’ discourse behaviours.
- Highlight the importance and the diversity of the role of e-educator.

BACKGROUND

The Advantages of Online Learning

Over the last decade the rise of e-learning, and specifically online learning has resulted in enthusiastic claims for its ability to provide solutions to a variety of problems investing the field of education. The most pressing ones are clearly identified by

Schank (1993) who affirms that e-learning lowers and even removes the two biggest traditional barriers to a workforce's continuous learning and improvement: time and money. Faced by increasingly troublesome constraints, it is the ambition of many institutions to satisfy the ever increasing demand for higher and continuing quality education delivered to larger numbers, accompanied by the prospect of lowering costs associated with student travel time, staff expenses and classroom space. However, the unprecedented widespread adoption of online learning is only partially justified by financial and organizational benefits. The period dedicated to experimentation and careful evaluation of such an approach to learning has given way to the design of second generation online courses. These courses are characterized by interaction promoted among all participants, including the e-moderator, and built-in interactivity. Palloff and Pratt (2005) suggest that some of the most effective ones are:

- Small group assignments
- Research assignments asking students to seek out and present additional resource material to their peers
- Group work on case studies
- Simulations
- Shared facilitation
- Homework forums
- Asynchronous discussion of the reading and discussion questions
- Papers posted to the course site with mutual feedback provided (pp. 9-10)

These activities, as stated by Palloff and Pratt, "lend themselves to creating the sense of social presence and the learning community through which learning happens" (p. 10). The proliferation of such courses and the favourable reception on the part of many learners demonstrate that online learning works.

However, there are many educators and students who are still adopt a justifiably skeptical

approach towards online learning, mainly because both parties are still anchored to their traditional roles within the four walls of the classroom or the lecture hall. What frequently causes this cautious attitude is the "openness" of the system and its easy access to the exposure to large amounts of information, which can be overwhelming if not supported and scaffolded by significant learning experiences. Garrison and Anderson (2003) argue that while "openness offers conservative forces and narrow views unfettered access to differing perspectives and ideas ... there must be limiting and stabilizing influences if e-learning is to maintain a sense of community and purpose, not to mention sustainability" (p. 4). Hence, gaining access to knowledge is not a problem, but making sense of it is a challenge for both learner and educator. The real issue, then, is to establish the credibility of online learning as a conveyer of high-quality education to rival those of the more traditionally delivered face-to-face approaches. Even if they are obviously virtual, web-based environments need to feel "physical," where people "do" things like in a real classroom or workshop venue, such as exchange opinions, "listen" to others, participate in group conferences and debates, prepare projects etc.

The above discussion can be relocated within the realm of language learning and the use it makes of the increasingly enhanced forms of software tools such as those of the Web 2.0 generation. It is a well-established principle that technology for language teaching can be an effective force for improving foreign language instruction, and it is much more powerful and affordable today than ever before. The permeation of technology available in educational contexts around the world affords language teaching professionals the opportunity to adopt a variety of applications in their teaching routine, both in the form of software tools as well as in the use of Internet communications (Dudeney, 2007). Some of the most commonly used and highly interactive tools of the Web 2.0 generation are:

- Wikis
- Blogs
- Podcasts
- RSS feeds
- Social networks
- Open-source
- Open-content
- File-sharing
- Peer production

These Web 2.0 applications mentioned above, with their “hands-on” task design philosophy, the built-in interactivity and especially the social software which facilitates the integration of diverse tools, foster these conditions and allows learners to explore, create and construct new meanings, both at an individual and a collective level. However, this research study argues that although these new technologies afford a wealth of opportunities in language learning, experience teaches us that a technologically rich course architecture alone does not guarantee the opportunity to individualize instruction while working collaboratively. Effective and successful language learning occurs under specific conditions where learners have opportunities to interact, be involved, be exposed to authentic language, have enough time to learn and receive immediate feedback through skilful guidance in support of autonomy. This is achieved by integrating technology into regular instructional practices.

ONLINE COMMUNITIES

As this chapter illustrates, CMC social software, also known as collaborative software (Dalsgaard, 2006), is the medium through which the participants of the two online communities presented in the case study interact and share data. They do so within social structures known as online communities. This study strongly argues that CMC social software, by weaving in its technological tools with sound pedagogy, draws from the con-

structivist principle that collaboration supports mechanisms of interaction such as individual and group expression, performance and social presence.

Hence, understanding the nature of the environment within which these phenomena take place is of paramount importance, as they provide the key to the interpretation of the behaviours occurring within that environment. As stated above, the learning environment under discussion is an on-line community, characterized by unique features which make it still quite difficult to define and notwithstanding a plethora of articles and other publications on the subject, the literature does not provide us with an agreed definition. Preece (2000) describes an online community as “a group of people who come together for a purpose online and who are governed by norms and policies” (p. 10). In his seminal work on virtual communities, Rheingold (1994) affirms that an online community can be found in cyberspace, where “we chat and argue, engage in intellectual discourse, perform acts of commerce, exchange knowledge, share emotional support, make plans, brainstorm, gossip, feud, fall in love, find friends and lose them, play games and metagames, flirt ... we do everything people do when people get together, but we do it with words on computer screens, leaving our bodies behind ... our identities commingle and interact electronically, independent of local time or location” (p. 58). An interesting point of view that taps into the concept of online community is the one given by Jones. He states that online communities are “incontrovertibly social spaces in which people still meet face-to-face, but under new definitions of both meet and face” (Jones quoted in Rheingold, 2000, p. 349).

From this growing body of research, it follows that an online community is not a physical grouping of people, but it is more appropriate to regard it as a network of interpersonal ties that provides support, information, a sense of belonging and social identity (Rheingold, 1994; Wellman, 2002). Therefore, it is not simply a “place,” but it

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is a process that develops over time and involves a complex network of social relationships with identifiable discourse behaviours that are formed within the “infrastructure” of Computer Mediated Communication.

Attempts to define the concept of an online community necessarily lead to the identification of its salient characteristics. Preece’s (2000) Online Community Framework provides the following list of attributes that can be considered as criteria for community identification (pp. 10-13). An online community is characterized by Table 1.

In the attempt to establish a correlation, this chapter places social software in the much broader context of technology in education in general, rather than strictly within the language learning arena. Having said that, the perplexity surrounding the role of computer systems in learning processes is common to both contexts. Many debates have been conducted on the performance of technology in learning and, consequently, in the formation of a learning community. Undoubtedly, human interaction and software are closely related and compensate for each other, but because “learning” and “community formation” are processes, it is essential to place the emphasis on pedagogical principles based on social communication and collaboration and how they can counterbalance the often overwhelming presence of technology.

The issue which naturally follows from the discussion is the “usability” factor of computers in instruction. The questions asked by many educators today still concern how computers have been used for instruction since the new technology

revolution and specifically if teaching and learning approaches have changed as a result of improvement in software and hardware. As experienced educators indicate, it is a well-known fact that it is not an easy task for teachers to come to terms with technology and pedagogy, and one can still sustain Cuban’s claim made a few years ago that “computers have been oversold and underused,” as a result of the lack of integration of computer technology on the part of the teachers into their regular teaching routines (Cuban, 2001, p. 179). This leads us to the assumption that language learners will benefit from the new learning tools only if coherent and effective models of implementation are devised. It is, of course, equally true that Web 2.0 social software represents a transition and has undoubtedly contributed to a wider application of e-learning practices and this is precisely the crucial point that the present study is trying to get across. The concepts of creativity, collaboration and knowledge sharing that underlie Web 2.0 technologies as well as the integration of the tools that allow for this to happen can be exploited at their best within online learning communities. As online learning can be a very lonely affair, feelings of isolation filter in easily and motivation can take a downward leap. A careful analysis of the messages written by online participants and especially by those who are less willing to participate has revealed that motivation is down to the minimum when participants are overwhelmed by the technology as well as by the lack of physical contact. Community learning can reduce learner isolation and enhance learning

Table 1. Key components and factors at the basis of the OCF

People: who interact socially as they strive to satisfy their own needs or perform special roles, such as leading or moderating.	Computer systems: which support and mediate social interaction and facilitate a sense of togetherness.
Purposes: which is an interest, a need for information exchange, or a service that provides a reason for the community.	
Policies: that occur in the form of tacit assumptions, rituals, protocols, rules and laws that guide people’s interactions.	

outcomes because of its learner-centred environment that generates learner input.

Community Types

There are many types of online communities belonging to different domains: health, commerce, entertainment, education, etc. They can take the form of email distribution lists, chat rooms, instant messaging groups, and cell phone communities. They may or may not have activities as part of the interactional processes, or be structured around a goal or a timeline. Their purpose can be more informal such as “finding friends online,” or sharing ideas about photography, or about teaching practices, and so on. Conversely, they may be completely scheduled within a rigid time period

and with specific tasks and topics to work on collaboratively.

Operationally, they all serve different purposes, but share the most important one, that of information exchange and communication. However, research suggests that if online communities were solely a means of information exchange, they would only be static and indifferent environments. On the contrary, even when online communities are not designed to be collaborative and supportive, they often are. As human beings, online members also seek companionship, social support and a sense of belonging.

It is not within the scope of this chapter to list or examine the myriad of communities that are present on the Internet today, but in order to facilitate an understanding of the type of com-

Table 2. Community types

Community genre	Software characteristics and synchronicity of communication
Web-embedded communities, closely associated with the site purpose (photography, teacher resource sites).	Web pages, with asynchronous and synchronous software (forums, chats).
Special purpose communities: health, commerce, education, not necessarily linked to a specific web site, but owned by individuals or large companies or institutions.	Web pages, with asynchronous and synchronous software (conferencing systems, forums, chats).
Listserver communities.	Asynchronous: email-based communication; communication one-to-all, no reply to single messages, no threading.
UseNet-based communities.	Asynchronous: email communication, no control (any one can leave a message; communities classified hierarchically under different topic headings).
Discussion-based communities with bulletin board software system.	Asynchronous: messages are threaded by topic, private mailing is possible.
Chat-based communities.	Synchronous: rapid exchange of comments, control over number of participants.
MUDs, MOOs.	Synchronous text with graphical environment, avatars (MUD) and object-oriented (MOO); participants engage in fantasy games with others or interact in a metaphoric community.
Communities functioning in Asynchronous Learning Networks (ALN).	Custom-built software environments that support synchronous and asynchronous communication (First Class).

Note. Adapted from Preece (2000), Online Communities: Designing Usability, Supporting Sociability (West Sussex: John Wiley & Sons Ltd.)

munities involved in this research study, the table provided below summarizes some of the most common community “genres” and their basic characteristics.

Virtual communities overcome the constraints of time and place that limit meetings of traditional face-to-face groups, and always have someone online with similar interests to talk to or to exchange ideas, 24 hours a day.

Computer Mediated Communication

The phenomenal growth of communication “that takes place between human beings via the instrumentality of computers,” known as Computer Mediated Communication (CMC), has gone hand-in-hand with the widespread use of the global network of the Internet (Herring, 1996, p. 1). Digital technology has marked the era of the instant transmission of information, text and knowledge around the world, and today millions of people are engaged regularly in text-based CMC, which has radically changed the way we think and speak and concepts such as space and time are conceived differently in our minds.

CMC can greatly benefit foreign language teaching and learning and through its communication modes such as wikis, blogs, folksonomies, etc., can facilitate creativity, collaboration and sharing among users. CMC, as affirmed many times in this study, accentuates the idea that software is *a* service and is *at* the service of learning, always supporting and enhancing it through time. Moderators and participants networking within an online community, learning languages or other subjects, work together towards a collective goal and this is strengthened by CMC, which certainly facilitates the sharing of ideas.

Herring identifies three main characteristics of CMC. The first is that CMC is mainly typed, and has unique features of its own, including different styles and genres, that are either determined by the multitude of its structural forms, chat modes, forums, email, and others, or by a

communicative purpose. The second important feature is that interaction occurs without extralinguistic cues, and the third is that it promotes the phenomenon of community formation. CMC may be synchronous, such as real-time chat, or instant messaging, or asynchronous, such as a listserver, a bulletin board or a conferencing system. It may be text-only, or provide facilities for displaying images, animations, hyperlinks, and other multimedia.

As mentioned earlier, the software that allows communication among members of a learning community plays an essential role in community formation, and will shape, to some extent, the community’s character and identity. To illustrate, in reference to the issue of coherence and cohesion, conferencing software sorts out the messages into folders, corresponding to the thread and to individual mailboxes for private exchanges. There could be, of course, different folders for different threads that can go on simultaneously. This is extremely important, as hundreds of messages can be generated in a single thread 24 hours a day. The different folders allow the user to keep track of the thread and respond accordingly, regardless of the time of posting. To exemplify the many turn-taking exchanges that a single message can generate, the diagram below shows one of the possible ramifications.

The essential theme, called the participatory theme, branches out into requests, clarifications and acknowledgments (Herring, 1996, pp.81-106). Community formation is highly dependent on this type of online communication as it is organized in “discursive threads,” which provide explicitness of connections between contributions as well as the extent of community development in an online discussion.

COMPUTER MEDIATED DISCOURSE

Online “written-talk,” as this genre of discourse is described by Yates (1996), is known as Com-

puter Mediated Discourse (CMD). Herring (2001) explains that the realm of CMD “is a specialization within the broader interdisciplinary study of Computer Mediated Communication (CMC), distinguished by its focus on *language and language use* in computer networked environments, and by its use of methods of discourse analysis to address that focus” (p. 612).

CMD in all of its forms, whether synchronous or asynchronous, is free from physical context, and conveys messages that are visually presented through textual representation of auditory information such as prosody, laughter and other sounds. The language that is displayed contains non-standard features, such as unconventional use of grammar, orthography, punctuation and capitalization, deletion of pronouns, determiners, and auxiliaries. Language is often abbreviated and typos are usually not corrected, as shown in the messages analyzed in Table 3.

Participants’ discourse behaviours are the only access into the life of a community and into processes that support learning. As all posted messages are the natural vehicle of these behaviours, their interpretation calls for an analytical approach which enables the understanding of human interaction and collaboration. This approach is Computer Mediated Discourse Analysis (henceforth CMDA), described by Herring (2004) as a methodological toolkit which integrates methods

from various language-focused disciplines such as linguistics, communication, and rhetoric, and affords insight into both linguistic and non-linguistic phenomena (pp. 338-376).

This chapter presents the application of Herring’s approach in the selection, interpretation and analysis of data from the two online groups from the case study. However, as Herring (2004) states, this approach can be used in researching all online interactive behaviour that is grounded in empirical, textual observations.

The starting point for the selection of significant phenomena from the messages was to choose discourse behaviours that were representative of linguistic phenomena. Subsequently, these behaviours were grouped into 3 main categories:

- Language structure
- Social behaviour
- Interaction and participation patterns

Analysis of the linguistic phenomena belonging to these domains was conducted by operationalizing the key concepts, which meant breaking them down into subcategories of observable behaviours and subsequently associated to the corresponding issues of interest, which confirmed the initial research hypothesis that community formation is possible online (Herring, 2004). The result of such coding procedures can be seen

Table 3. International community participants’ unconventional use of language structure

Anyway, would suggest that 17 is way over the top. Would be very difficult to keep up with the replies, and threads, etc.	Omission of pronouns “I” and “it”
can i phone anyone, need help???? now ok, thanks Moderator 1, have got to the end of week 1 , you beaut	Unclear sentence boundaries
Val I think this is far to long, do you? Perhaps I could have kept the quotes from the postings briefer and I really would have liked to include more postings so as not to leave anybody out, but then this would have got bigger and bigger and bigger	Typography

in Table 3, which shows that as social software becomes more widely used even in educational situations, and as more language learners of all age levels participate in electronic discourse, language experts may have to consider how to respond to such unconventional use of language and structuring of ideas. What is essential to understand is *if* and *how* these changing conventions may be contributing to the construction of online learning communities and to the development of a new “genre,” and whether it is insightful to focus on a different concept of genre in order to understand the complex nature of social software such as CMC.

ONLINE PERSONAE AND STYLES OF COMMUNICATION

All collaborative activity taking place within community grounds will occur under a new identity. Manifestations of support, solidarity, knowledge sharing, and information exchange that regularly foster learning processes in face-to-face environments, can also characterize online learning, if that environment nurtures a sense of belonging to the same community and sharing the same purpose. As mentioned above, this interaction is known as “social presence” and it promotes the creation of an online personae, a new guise that

Table 4. Coding categories of discourse behaviours hypothesized to indicate online community formation

Language	Phenomena Type	Subcategories
I Structure	Pronouns	Pronouns and specific community reference words
	Grammar /syntax	Omission of function words; fewer subordinate clauses
	Typography	Punctuation (omission, use of); capitalization
	Orthography (unconventional use)	Abbreviations; contractions; (mis)spelling; typos
	Compensatory strategies	Emoticons
	Questions	Question tags and wh-questions
	Verbs	Use of specific verb tenses
II Social Behaviour	Subject lines	Topic setting
	Linguistic variation/use Information exchanges	<ol style="list-style-type: none"> Participant demographics; markers of individual differences and commonalities: word choice Provide global knowledge and solutions; express ideas and opinions; share personal narrative
	Interpersonal discourse behaviours	<ol style="list-style-type: none"> Agree, disagree, counterpoint; acknowledge, thank; joke, tease, apologize; negotiate conflict Express social behaviour Support/solidarity Express norms and values
III Interaction and Participation	Establishing online identity	<ol style="list-style-type: none"> Self- representation Face-management Community-group representation
	Turn sequences Concerns structures	<ol style="list-style-type: none"> Turn taking Cross-turn coherence Linking/quoting
	Participation	<ol style="list-style-type: none"> Number of messages engagement: minimum, regular, frequent Typology of roles Reciprocity (interactive patterns and styles) Message and thread length

will define each participant's personality and communication style which others can relate and respond to unequivocally. This is due to the fact that participants in closed textual conferencing do more than just play a role while they communicate and form relationships. Turkle (1995) states that when online, people "sense the possibilities for self-discovery, even self-transformation" (p. 260).

Self-disclosure in this medium of communication is truly powerful, as participants leave an impression of who they are or would like to be online and social presence theory provides the background for examining this behaviour. In her seminal study on virtual communities and interpersonal communication, Preece (2000) explains that "social presence depends not only on the words people speak but also on verbal and nonverbal cues, body language and context" (p. 150). Physical appearance, race, age and gender are social markers that have an enormous impact on the impression that we make on others. If, on one hand, there is a reduction of such social cues within a computer conferencing system, on the other, communication is greatly favoured by this medium, as it conveys cues that involve the senses. Voice and video support, for example, are expedients that can help deal with the absence of physical cues, although they require high bandwidth, and are typical features of synchronous communication. For low-tech computer mediated conferencing systems, some software developers have tried to solve the problem by offering participants the possibility of adding icons, photographs, and avatars in order to increase their social presence.

DISCOURSE BEHAVIOURS OF ONLINE COMMUNITIES

Palloff and Pratt (2005) state that "collaboration in a constructivist classroom results not only in personal meaning-making on the part of the

individual student, but also creates a container wherein social construction of knowledge and meaning can occur" (p. 6). This collaborative activity is evidenced by communicative events, or discourse behaviours, that highlight aspects of the participants especially when working "off-task" or reflecting on the task at hand. Online learning goes far beyond acquiring the content, regardless of the subject, but the analysis of these discourse behaviours reveals the true nature of the community, as it takes into account that when interacting online "people use language in order to communicate ideas or beliefs (or to express emotion), and they do so as part of more complex social events" (van Dijk, 1999, p. 2). The only means to identify and interpret these language behaviours is to consider them as part of the more complex unit of a communicative event, which is described by Boswood as a unit that is characterized by "certain kinds of participants, in certain role relationships, having certain conventional personal purposes, using certain channels and codes within a framework of conventional acts" (Boswood, 1994, p. 9).

One of the most interesting discourse categories is that of Participant Demographics, which is an indicator of mutual acknowledgment and convergence towards "community goals." In the message exchanges shown in Box 1, participants present themselves by sharing their feelings, expressed in terms of fears, opinions and expectations.

Exchanging personal narratives is also another vehicle for establishing a sense of community. In the messages shown in Box 2, the participants disclose information about themselves as well as other bits about their surroundings or cultural nuances.

Community concerns is another interesting category that provides testimony of how it is natural for community members to adopt a supportive and encouraging attitude. It is an important index of involvement with others, which reveals aspects of self-representation and community identifica-

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Box 1.

Please call me ...! By the way, my name is pronounced ...

...my first frustration ... I want to know participants better.

I'd really like someone to respond to one of my messages...my favourite thing ... (is) reading people's responses to my posts.

... I get a bit 'nervous' before emailing in, checking my spelling, grammar etc.

... to be perfectly honest, I am really not sure- after all, what we are doing is leaning to converse online ...

... I feel rather stupid but I can't find anything about red flags in the help file ... can someone tell me how to go about it, please.

Hi, there group! Here's a new 'late comer'. I share everybody's fears about getting through the e-tivities of this week. There's an awful lot of things to read, do, absorb. Ant the worst is still to come! I still haven't visited the help section!!! But I have seen that some you have done a good job. I hope I will benefit from what you have already done!

My name is Participant D. I am interested in cultural tourism, creative writing and theology, and have just finished a book on Pilgrimage Down Under. I will bring a manuscript of the new book to the party. My teaching areas are generally management and education.

Save some red wine for me.

Box 2.

I react to new situations by dropping my bags, not unpacking but going for a look around.

It's luch time (I haven't eaten yet) and I'm in small office at the Instituto Nacional de Administracao. The sun is shining outside and I can see oleanders.

it's 6:15 on Friday evening here in the UAE. I can hear the noises of the air conditioning machine ... 'looking forward to meeting the rest of the group ... are there any crow eaters out there?'

- (response) What's a crow eater?
- (response) a crow eater is Australian slang for a South Australian

(response) 'Mate, do you really fish, I thought I was the only fisherman. I have an old shock and a little tinny on a mangrove creek...

... this course is for higher education with a broad cultural backgrounds so that it shall be more exciting to collaborate.

It's PG from SA, really keen to learn!

completed the same online course as ... and currently doing some modules towards a masters with the University of Ulster, I am hoping this course will help with that.

For this course, my expectations are to know how the real learning takes place online through communications /collaborations/reflections' from you.

tion, resulting from the participants' perception of themselves in relation to other members of the group, as shown in the messages of Box 3.

CMDA uses the paradigms of Discourse Analysis to capture social processes such as acknowledging, thanking, asking for information, inviting feedback, offering advice, joking, apologizing and negotiating conflict. Through

Speech Act Analysis and Conversational Analysis, it was evident that the participants were intent on building interpersonal friendships as well as community partnerships, by exhibiting the same behaviours as offline community members. They supported each other while they were intent on carrying out their tasks. Table 5 shows some examples of messages that exhibit these behaviours.

Box 3.

Does this now make us a Community of Practice or Knowledge? how i can benefit from the learning by applying it within my consulting work? Re learning process – what is the content like? – is it interesting, academic, practical etc. Will i be able to take / fit it all in? Whats the background of my fellow participants?

What were we doing? Learning new skills for the new millennium – |we all started out a little cautious, captured by contributions such as quite painless, overwhelmed, impressed to date, I had no idea what I was doing.....

How did we fare with our progress? With really 'readable' chunks of content, over whelmed by all the 'traffic' for you to review, took it at one's own pace, talking to myself, be in the right headspace, enjoying the experience, frustration, but will emerge a little more connected. Participant F

...clearning online is problematic! It makes time stand still, is shared with a learning community, suits time constraints, and has to have time made for it.

thanks Participant H, a good summary, and the advantage too of bringing the whole group together, so also a sense of community. Participant B said last week that she still did not have a sense of who everyone was, this posting brings us a ll together, and hopefully that feeling of isolation and sepration from the group is diminishing. Thanks

Table 5. Australian community and international community participants (communicative events)

Acknowledging	<ul style="list-style-type: none"> • I like the way you have structured your thinking, Participant G. I would like to use your process as a framework for myself ... • ... these are great suggestions, Participant B. It is important to practice what you preach...
Apologizing	<ul style="list-style-type: none"> • ...I didn't understand what you tried to express and I thought it was better to say that I had no intention to bother others (for help... I sincerely hope I don't hurt your feelings.
Teasing	<ul style="list-style-type: none"> • some of your messages are highlighted in red, <u>now, may look good at your end, but fro old blind people like me, blue type under red is not a good combination,</u> • does this group have any "issues" that require the services of AA????? • See ya in the bar later to discuss this. Clink, clink
Expressing personal needs	<ul style="list-style-type: none"> • I need visuals to help connect, to build collaboration. I know it's not everyone's cup of tea but it helps me. Participant UAE • ...please bear with me while I play catch up.. • I don't feel like I've connected with anyone really... • ...I'd really like someone to respond to 1 of my messages, ...
Self representation using community concerns structures	<ul style="list-style-type: none"> • My favourite thing this week has been reading people's responses to my posts... • ...this group learning is great for building a community. • ...our community motto from a long holiday journey is "we go forward." • I think the people on this journey are a big part of our learning and I am glad to have you on board. • ...and the advantage too of bringing the whole group together, so also a sense of community. • Just goes to show that through the geographical separation and cultural differences we can all learn from each other within this community

Online Participation

Participation is at the core of online communities and participation percentages do more than just reveal how many messages individuals have posted. They also help to establish the role type

and communication style of the "new online identity." Table 6 illustrates an example of a participation frequency continuum which classifies participation styles ranging from the least active to the most active participant as follows: lurker, dropout, returning, selective, stable and dominant.

Table 6. Role definition

Participation engagement	Posting activity	Online role of participant	Personality type
Complete responders	Frequent	Dominant Stable	The divers The explorers
Unit / item responders	Regular	Selective	The questioners The little brothers
Unit / item responders	Irregular	Returning	The little brothers
Non responders	Minimum/none	Drop out Lurker	The questioners The little brothers

Box 4.

Hi everyone, looks like I'm a Bluey and last to log on. I am full of admiration for those who are not computer literate, can't type or whose first language is not English. Makes my indolence look even worse[...] I'm still not quite confident about who the recipient(s) of my messages are. I'm hope Moderator will put me right.
(Australian Community participant)

A complete study of online personality types has also been conducted by Schank (1993), Director of the Institute for Learning Sciences at North Western University. As shown in the same table, Schank classifies the different roles as: the divers, the explorers, the questioners, the little brothers, depending on the extent to which each role was willing to participate without hesitation or help from others (pp. 54-56).

Schank describes the dominant/stable participants as those who “dive” into the learning task and are usually the first to explore the virtual environment. They are also called the “divers” or the “explorers.” The participants who are regular posters, also called “selective” participants, prefer to respond only to those messages that are meaningful to them. They do not follow up on every bit of “chit-chat” that participants normally engage in while discussing the more “serious” messages. Schank calls them “the questioners” or the “little brothers,” because they usually like to be led up to the point where they are obliged to do something. Schank has also observed silent learners, which he calls “the questioners” or “the little brothers.” They are described as participants

who have nothing to say or are unwilling to interact with others, but Schank feels that they, too, might be waiting for someone to lead them until they feel self-confident enough to participate. Some, however, never reach the point of autonomy, as in the case of a participant who dropped out, shown in Box 4.

FROM DOMINANT PARTICIPANTS TO REFLECTORS

The purpose of a community is sociologically important in defining roles and behaviours, which directly or indirectly influence the decisions of the community and give it its unique character. Personality traits such as extroversion or introversion, assertiveness, dominance, and shyness, influence feedback from other community participants and generally cause variation in conversational style. The more imposing style, known as the “high involvement style,” finds its equal in the dominant participant, while the non-imposing style, called the “high considerateness style” (Yule, 1996, p.

76), is characteristic of the participant known as the “reflector.”

It follows that the dominant “star” participants, who are always involved in a turn sequence, normally leave an impression in terms of the advice they give out to others, the information they share and the language they use. However, “lurkers” are also thought to impact the communities they are in by provoking mixed feelings among the other members. Participants usually react negatively to lurkers by posting judgemental messages, or they choose to ignore them completely. However, some participants try to follow what netiquette and community protocol recommends, and that is urging the “shy” or “fearful” lurker to take a more active part in community life.

CHARACTERISTICS OF THE DOMINANT PARTICIPANTS

Participant D is a member of the Australian Community. The text produced by Participant D and submitted to the Linguistic Inquiry Word Count software program (Pennebaker et al, 2001) is 16,928 words in length, corresponding to 16,4% of the total participation rates of the community,

followed only by the Moderator with 14,7%. Participant D is undoubtedly the “dominant participant,” described as a very active member of the community who usually answers all message posted by other members. From the very beginning of community life, Participant D adopts a very open and supportive attitude in the interaction with the other members, revealing the willingness to be “group-friendly,” as shown in Table 6.

The message extracts in Boxes 5 and 6 show that the Participant’s involvement in reflection processes which are shared with the rest of the group. With the use of an evident sense of humour, the Participant is very able in using hedging, in both acknowledging the opinions of others as well as expressing personal differences of opinion.

The Participant’s messages convey a feeling of “reality,” as “real” personalities are engaged in sharing bits of information outside of course-related content. Jargon words are also interspersed to add to the feeling of “belonging” to the same cultural group.

The Japanese participant from the International Community was identified as the “dominant” participant because of the extraordinary number of messages posted to the community conference, but also because of the striking quality of the

Box 5.

<p>Much of my final reflection is centred on what I have gained in a learning community. People, virtual friends really, fellow pilgrims along the e-learning road.</p> <p>... So I’m a fan, I learnt from my favoured methods and least favourite.</p> <p>Re: 3 weeks in: How does my garden grow? -</p> <p>Participant D form the Australian community</p>
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Box 6.

<p>Re: time management –</p> <p>Hi Participant L, enjoying your thoughts about individual differences. I also know you are right about the advantages of online flexibility, but I value being a learning community, which has some implications about pace and keeping together. I expect we will return to this over the course.</p> <p>cheers Participant D</p> <p>Re: Room with a view</p> <p>Hi Participant B, a creek view is nice, I guess you have kookaburras at Magill</p> <p>Participant D</p>

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message content, able to convey cultural nuances, interesting descriptions of customs, beliefs and educational practices. The text submitted to LIWC software was 6,885 words in length, corresponding to 10.79% of the total participation rates of the community. The only participant who wrote more messages than the dominant participant was the Moderator, with 23.7 % of the total messages posted to the community.

It is evident that, although the participant claims to be quite familiar with online messaging writing styles, the following “letter format” is maintained throughout the first two weeks of discussion:

- Greeting: “This is (name) from Tokyo Japan” (“Hi” and “Hello” appear only at the end of Week Two)
- Message body
- Closing remark and Salutation: “I am very pleased to work with you,” or “sorry for my English” + (name)

The participant worked harder than most others in the community in order to be as clear and as accurate as possible in the use of language, as this was the participant’s main preoccupation as shown

in Box 7. There is also an attempt to “sound” closer to the other “mates” in the community. Indeed, as the participant gradually gains control of the fear of “losing face” due to the language barrier, there is evidence of message quoting (Box 8), which is indicative of the participant’s move towards full interaction with others.

In the message shown in Box 9, the participant shares the strong and pervasive feeling of gratefulness with other members of the community. Participant Japan adds the suffix “san” to the member’s name, which is an “honourable” title in Japanese as a sign of respect for the other person.

However, in communication “what is meant is not always what is said,” and this is especially true online where strategies that compensate for prosodic and paralinguistic features are often misunderstood by different cultures and situations of conflict may arise. The sequence of messages that follows in Box 10 contains numerous examples of diverse speech acts, hedging and politeness strategies, which are used by the participant in the attempt to clarify events in an unfortunate exchange, caused by what is perceived to be the language barrier. This is also evidence of how online communities need to deal with critical

Box 7.

1. Greeting: English is not my mother tongue and writing a message takes me for long time and makes me hungry and thirsty. I appreciate your great patience. Anyway, I am very excited to work with you!
2. Greeting: This is M. again from Tokyo. I am not a tech person ... And I am quite sure ... I won't be able to contribute at all to discussions of the more complicated issues
Participant from Japan

Box 8.

(quoted message) I like Kim’s metaphor because it makes students feel safe and relieved. I also pick up another metaphor, which I sometimes use. “Shall we create an inspiring and cooperative atmosphere and shape up a joyful journey together. Bon voyage!” (participant from Japan)

Box 9.

(quoted message) M.C. writes:
I had to do a bit of finding out about the topic :-) ... I find someone reliable on the other side of the computer screen. This is the most important fact to me.
Thanks, M.-san!!
Participant from Japan

incidents involving conflict resolution that are regularly part of face-to-face environments.

THE “LITTLE BROTHERS”

The term *lurker* always evokes negative connotations among net citizens. The most common definition of a lurker is someone who does not “speak,” but likes to look around the goings on of the community without participating. Knowing that there is a lurker in the community can also be annoying, as they are often considered as free-loaders, spies, observers who do nothing but judge others. Indeed, Preece (2000) states that lurking is sometimes seen as “sufficiently threatening to the well-being of the community” (p. 889).

However, there is more to the word lurker than just its conventional meaning. Behind the word there are people who like to silently evaluate the nature and the general attitude of the community before participating. These are “the little brothers” that Schank describes as people who obviously don’t feel at ease at the very beginning and who like to reflect before venturing in.

Preece (2000) provides an interesting account of reasons given by lurkers for not posting and for their silent participation (p. 889). They include:

- Unclear community purpose
- Personal factors
- Lapse of time in posting
- Privacy and safety
- Unfriendly interaction mechanisms

Box 10.

K. writes:
I am a bit different from you Masako, you don't "care much about making mistakes and, personally, don't mind taking risks and have nothing to lose"
I am a bit nervous when I have to put anything up... regards
Participant from Ireland

(response from Japan)
Hi K,
I am sorry if I made you feel bad because of my behavior and attitude. I don't mean to compete/dispute with someone. I just want to feel I am doing my best. I trust in V. who will guide me to the right direction if I am wrong.
I will be more sensitive and careful.
.....
Of course I didn't mean to disagree with K's note. I respect her way. I just wondered how I could respond in a polite and proper way. I wanted to apologize if I behaved badly though I didn't mean to. Oh, no, this is a kind of misunderstanding because of my lack of language skills.
Sorry if I might hurt someone's feeling and THANK YOU!!
M.
Participant from Japan

Box 11.

reflections - Participant G - Fri, 13 May 2005, 02:48
the first week has helped to prepare me to get into the “guts” of the learning and to want to learn as a part of a community

To: Participant England 3
Hi Everyone
... I will try to catch up today and tomorrow.
I have read all you postings.

I feel like the late arrival at the party and everyone has already (drunk!) too much. I therefore want to see what works and what is hard, how the dialogue is different from face to face etc, and learn the techniques ...

- Poor community responsiveness

Some comments extracted from their messages are shown in Box 11. They all show a willingness to participate, but they never manage to do so.

The Multiple Roles of the “E-Moderator”

It goes without saying that the role of the e-educator in virtual classrooms is just as important as the instructor in a face-to-face setting, albeit the former needs to adopt a different approach. It is the skilful e-educator who provides the kind of support needed to progress successfully through a learning path and Palloff and Pratt (2005) offer a model which allows the e-educator to do just that, by following four basic phases: setting the stage, modelling the process, guiding the process and evaluating the process (p. 29). Listed

in Table 7 are the main abilities of an e-educator followed by extract from messages that illustrate the characteristics.

CONCLUSION AND FUTURE TRENDS

This chapter has mostly discussed the impact factor of Web 2.0 technologies as they relate to learning in general and to language learning processes as well as to processes of community formation. To some extent, the discussion has also touched upon the issue of what web-based education has inherited from face-to-face learning environments and what it will never inherit in terms of the physical “feel” of learning and social dynamics. Future prospects continue to envisage online learning as a reality and there can be no doubt that it has and it will continue to change our professional and personal lives.

Table 7. Moderator messages

Ability	Examples
Understanding of online process <ul style="list-style-type: none"> • Provides focus • Builds online trust and purpose • Intervenes strategically • Encourages “sense of community” • Writes concise, personable and energizing messages • Triggers debates 	Thank you and well done blue and red groups for your thoughtful and interesting footprints. I think it would be useful to reflect on how you arrived at a group decision, e.g. was there a given leader, did a leader emerge etc. It could provide useful insights into online working. (To participant G) You are actually 2 weeks behind everyone, and unless you move quickly over the next few days I am not sure that this is a valuable experience for you, as you will have very little interaction online in these postings.
Online communication skills <ul style="list-style-type: none"> • Confident • Respectful • Able to diversify • Values cultural sensitivity 	Here is a way of weaving Use the Conferencing, Summarize Selected Messages to collate all the messages, then copy and paste into a new message and delete the ones you don't want. Hope this helps. M. ... many thanks for responding to M.'s e-tivity. To answer your question yes it's great to respond to each other's e-tivities and very supportive. It's a good learning process for everyone and enables you to learn from each other.
Personal characteristics <ul style="list-style-type: none"> • Establishes online identity as e-moderator • Shows sensitivity • Shows positive attitude towards online learning 	I admire your discipline and motivation here, you have been most diligent in participating and being connected, thanks. We all have to bear in mind that people work at different speeds and have different needs, a fact that I think you've acknowledged here.

The discussion began by acknowledging that Web 2.0 “loosely joined” technologies — weblogs, wikis, instant messaging, etc., have greatly improved language learning because of their appeal and the way people can use them in a social environment (<http://careo.elearning.ubc.ca/wiki?SmallPiecesLooselyJoined/AboutSmallPieces>). This has led to the pedagogical claim that the educational potential of Web 2.0 technologies is the social software and specifically CMC, which facilitates learning by fostering problem-based and collaborative activity within the social structure of a learning community. According to this chapter, collaboration and participation are at the heart of learning because they bring structure and coherence to what can sometimes be an overwhelming experience for the language learner.

The analysis of discourse behaviours from a case study supported the argument that CMC can facilitate collaboration by enabling the discussion of problems, ordering of thoughts and sharing knowledge openly and at the right time for each individual. The analysis of linguistic data also led to the discussion on the formation of roles within community grounds. Both participants and e-moderators learned to survive online by developing an online personae who interacted with others in diverse ways, demonstrating that styles of communication are recognizable online and should therefore be respected and understood. CMDA, as an analytical tool, provided the key for the understanding of what lies behind the “written talk” that is often neglected by those who are more interested in the technology rather than in how learning processes can shape that technology.

In thinking about future developments, as amply illustrated in the chapter, learning within community grounds is to be encouraged in order to preserve the valuable experience of classroom teaching and learning processes, especially in reference to language learning, where the impact of affective filters is even more obvious. This can be done by focusing on the design of dedicated social

spaces where the human-computer interaction can unfold and become “real.” This also implies understanding the role that technology will be allowed to play in this new arena. The significant issue which should be under continuous discussion is how technology and the practices that it generates can improve the facilitation of online social presence and provide learner support.

Sociability (Preece, 2000, p. 379) is the word which best summarizes the purpose of all online communities, but especially those with a learning purpose, such as the ones under discussion in this chapter. In Lave and Wenger’s definition, these learning communities are also known as “communities of practice,” which is probably the closest instrumental description of sociability, as it focuses on the full participation of all its members and supports the community’s purpose. It is this study’s view that the way forward is to work towards the improvement of sociability within communities of practice in order to empower participants with knowledge management abilities as well as with the power of acquiring “an attitude of respect for the many within us and the many within others” (Turkle, 1995, p. 261). Web 2.0 technologies, undoubtedly, will play an increasingly decisive role in supporting online language learning through its existing social software tools.

However, future prospects also need to consider that the effort must be directed towards educational purposes and the integration of social software tools to support learning activities. The research undertaken in this study has only begun to scrape the surface of how the above can be accomplished and therefore calls for further developments in this field. Learner-centeredness needs to be the norm in language education and unless educators and software developers know how to devise instructional programs that individualize instruction and social interactivity, learning will not be supported or enhanced and reinforces learning.

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Web Sites

<http://www.firstclass.com>

<http://careo.elearning.ubc.ca>

KEY TERMS

Community Formation: The process established by online collaborative activity which empowers learners to take on the responsibility for their learning processes.

Computer Mediated Discourse Analysis: A methodological multidisciplinary approach to the

analysis of online communication and specifically of textual observations.

Discourse Behaviours: Language phenomena manifested through online communication in both synchronous and asynchronous conferencing systems.

E-educator: The person responding to and building on the contributions to an online conference within a learning environment.

Interaction: The student-to-student and student-to-instructor contact that characterizes online learning.

Online Community: Defined as a process rather than a physical place, in which people interact, through a shared purpose, by following policies and by means of a computer system.

Online Personae: A new online identity that plays a role in the online environment. This role can vary depending on the community type.

Operationalization: This method refers to the breaking down of key concepts related to online community behaviours into subcategories of observable patterns, which are subsequently associated to corresponding issues of research interests.

Chapter VI

Skype-Based Tandem Language Learning and Web 2.0

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ABSTRACT

An important aspect of the Web 2.0 phenomenon is the use of Web-embedded and integrated non-browser Internet applications to facilitate community-building and direct user participation and interaction. Social Networking Services, online noticeboards, chat rooms, and other interactive environments enable students to engage directly with native speakers of their target languages. As a way of bringing language learners together, Web 2.0 technologies promise an enormous transformation in language learning. With regard to voice communications specifically, synchronous, peer-to-peer voice-over-IP (P2P VoIP) tools such as Skype, GoogleTalk, and others are an example of a new channel of online interaction that is likely to play an increasingly important role in online community-building and language learning. This chapter analyzes the strengths and weaknesses of the Skype service as a tool for tandem language learning. It presents a variety of ways in which Skype's strengths can be enhanced and its weaknesses overcome by incorporating the exchange into a wider Web 2.0 environment, based on insights we have gained over the course of an ongoing study. In particular, the importance of a task-based approach informed by the principles of tandem learning is emphasized. Preliminary qualitative results are reported of two years of ongoing Skype-based tandem exchanges between Japanese students of English at Tsuda College, Tokyo, and American students of Japanese at San Diego State University. Finally, a prototype is presented for a new dedicated Web 2.0 environment designed to optimize the Skype tandem learning experience and to facilitate further research in the field.

INTRODUCTION

This chapter looks at a particular case of an online language-learning environment where human interactions are central to learning. Specifically, the research presented here investigates ways that online voice tandem exchanges using Skype can be best exploited in a class curriculum, and ways that Web 2.0 technologies can enable a community of learners to support the exchanges. Although not a business application, the environment proposed here is fundamentally conceived of as a service to be used by both students and teachers.

An important aspect of the Web 2.0 phenomenon is the use of web-embedded and integrated non-browser Internet applications to facilitate community-building and direct user participation and interaction. Social Networking Sites (SNSs), online noticeboards, chat rooms, Massively Multiplayer Online Role-Playing Games (MMORPGs) and other interactive environments have the potential to enable students to engage directly with native speakers of their target languages who are located in remote places. As a way of bringing language learners together, Web 2.0 technologies would indeed appear to promise an enormous transformation in language learning. To the extent that this promise is based upon communicative interaction between language learners and native speakers, past work in tandem language learning is likely to see a resurgence in significance when considered in Web 2.0 contexts, from SNS sites like *Facebook* to MMORPGs like *SecondLife*. Numerous educators and researchers have noted the potential of tandem interaction in online environments as a language learning tool (Calvert 1992; Brammerts et al. 1989, 1990, 1991; Esch 1996; Little, et al. 1999). In this new era of online accessibility to user-created content and interaction, the question of how best to exploit learner-native speaker interaction for educational purposes becomes more pertinent than ever.

It has always been an uncontroversial assumption that one of the most effective ways of improving second language communication skills is through actual linguistic communication with a native speaker of the target language. In the past, however, access to native speakers has always been limited, and highly dependent on geographical considerations and on which language, exactly, the target language was. The Internet and the World Wide Web provided the foundations upon which a major transformation would occur, and the rise of the Web 2.0 paradigm of user-created content and interaction, and the widespread use of web-embedded peer-to-peer technologies such as text chat and Internet telephone clients have continued to revolutionize accessibility to native speakers of languages spoken in distant places. Perhaps most importantly, Web 2.0 technologies have enabled a wide variety of communicative channels to be brought together to interact with each other and organized in such a way as to be useful in a focused curriculum.

Skype, the free Internet telephone service, is an excellent example of the kinds of Internet technologies that have emerged to foster communication between distantly separated users. Skype's slogan "the whole world can talk for free" neatly sums up the core service, and the potential benefits to language learners of unrestricted, global conversation, completely free of charge, are self-evident. Nevertheless, technology itself is always a means to an end, and the actual application of these newly available technologies to the challenge of language learning is fraught with pitfalls and challenges. The mere existence of services such as Skype is not enough to benefit language learners in an organized, structured way. For this, thought must be given to how to incorporate the use of Internet voice communication into an educational framework and give students the support they need to make the most of the opportunities that services such as Skype present. Web 2.0 technologies provide the "glue" that enables such a service to be put to its optimal educational

use. This chapter looks at a number of ways that Web 2.0 technologies can be brought to bear in supporting Skype-based tandem exchanges and helping students adhere to established principles of successful tandem learning.

This chapter reports preliminary results and insights derived over the course of the first two years of an ongoing international series of experiments conducted with a view towards optimizing the use of Skype as a language learning tool. The work presented here draws heavily on principles already accepted in the literature on Tandem Language Learning, which provides valuable guidelines on how to proceed with a Skype-based language learning program. A variety of practical challenges in the actual implementation of such a program are discussed. Among these challenges are issues of student motivation, task assignment and organization, and factors affecting the feasibility of assignments, such as international time differences and access to equipment. The work has led to increasing incorporation of Web 2.0 technologies; the first year used only Skype with no particular extended Web 2.0 support. The second year incorporated a supporting Moodle environment to considerable effect and laid the groundwork for the development of a prototype of a Web 2.0 software environment dedicated to optimizing the Skype Tandem learning experience, based upon insights gained over the past two years.

P2P, VOIP, SKYPE, AND LANGUAGE LEARNING

One of the most interesting recent technological developments in terms of opportunities for language learning is the widespread popularization of peer to peer (P2P) based voice over Internet protocol (VOIP) applications. These services enable users to connect directly from their computer to the computers of other users of the same service. In general, the basic functionality of

voice communication between computers is free of charge, although some companies provide extended functionality for a price. There are a variety of similar services available, but perhaps the most well-known among those emphasizing voice communication is Skype. In the last few years Skype has grown to become a very popular service. According to e-Bay's 3rd quarter financial report of 2006, Skype had 136 million total users with approximately 250,000 new users per day for that quarter. Such statistics are of course open to interpretation, but it is well-accepted that Skype is a leading P2P VOIP service and its use has grown quickly and continues to grow.

The main client window of Skype is shown in Figure 1. By selecting a name in the contacts list and clicking on the green call button, the user can initiate a direct voice connection with another Skype user anywhere in the world for free. Both users must have a microphone and speakers or headphones to make use of the service, and both must have the Skype client installed. Paid services are also available which enable users to use Skype to call to ordinary telephones or to receive calls from ordinary telephones.

Figure 1. The Skype client window



Other similar P2P-VOIP services are also available. However, Skype is currently the most widely used and is well-supported on both Windows and Macintosh operating systems, which was an important consideration in this research. Furthermore, although Skype itself is not open source, the application programming interface (API) is open and third party developers are encouraged to integrate Skype functionality in their applications.

Language learners and teachers have also been quick to realize the potential of the medium. There have always been sites on the web providing students and teachers a space for finding tandem partners, (e.g. the former International tandem e-mail Network called E-Tandem, Dave's ESL Café, and so on), and with the arrival of Skype sites to help users find a tandem partner have flourished (e.g. The Mixxer, Skype's Forum "Learn languages and more," etc.) and a search in *Google* will reveal numerous individuals, and an increasing number of language schools offering private classes using Skype. Several Skype-based language exchange projects have been initiated, some with more success than others. For a time, the now defunct Jyve.com provided an SNS style environment where language learners around the world could create profiles, participate in forum discussions, and communicate with each other via Skype.

An important intuition behind this service was that it was necessary to have some kind of community support to enable Skype to fulfill its potential as a language learning tool.

Amongst educators the potential of the use of Skype for tandem exchanges has not gone unnoticed either (Elia 2006; Branzburg 2007). Godwin-Jones (2005) in his description of emerging technologies discussing Skype and podcasting points to their potential saying "Both Skype and podcasting can be considered "disruptive technologies" in that they allow for new and different ways of doing familiar tasks" (p. 9). The potential for Skype to overturn the existing

technology of traditional long-distance telephone communication is clear, and it has a similar effect on traditional approaches to tandem learning. As is the case with many Web 2.0 environments when contrasted with traditional static web environments, the immediacy of the interaction creates an experience that can potentially replace traditional approaches. Skype facilitates tandem exchanges by providing a free tool to communicate using synchronous voice, and it cannot be assumed that tasks employed previously in face-to-face or e-mail exchanges will be appropriate for this new context.

In spite of the interest, the potential of live voice conversation with native speakers has proven difficult to fully exploit. It is likely that this is due in part to differences in how people approach synchronous voice communication as opposed to the more usual modes of communication used in online environments. Regardless of the reasons that Jyve.com eventually went offline, it seems to be the case that SNS-style environments are particularly suited to text-based, asynchronous communication. This diminishes the importance of time differences, and enables users to maintain a higher degree of personal comfort through communicative distance. To be thrust suddenly into live, real-time voice conversation with a complete stranger can be understandably awkward. Another difficulty of unsupervised tandem exchanges is that often students will either end up resorting to using only one language — the strongest L2 — become friends leaving aside the focus on learning, or give up the exchange for lack of topics to talk about. In a real-time voice context these problems are only exacerbated.

THE PRINCIPLES OF TANDEM EXCHANGE

Indeed, the difficulties of using native speakers as language exchange partners has long been the subject of research among those interested

in language pedagogy, and a rich body of work on tandem language learning provides some indications of where to begin when thinking about Skype language exchanges.

Little and Brammerts (1996) postulate that tandem language learning needs to observe two principles in order to be successful:

- The Principle of Learner Autonomy
- The Principle of Reciprocity

The Principle of Learner Autonomy is the actual driving force of a tandem exchange. An autonomous learner is not necessarily a learner working on her own, but a learner who is able to take responsibility and initiative for her own learning (Holec, 1981; Little, 1991). Tandem language learning is seen as an ideal set-up for developing learner autonomy by handing over to the student control over her own learning while at the same time not leaving this student entirely on her own. By pairing up students in tandem language learning exchanges students can share their language learning processes and organizational issues, thus developing learning awareness. They also have first-hand contact with an expert of the language they are learning.

The Principle of Reciprocity means that both members in a tandem exchange need to invest equal effort and time, and thus benefit in a similar way. If one of the partners contributes more and receives less this exchange will certainly be short-lived. It is also important that an equal use of the two languages involved takes place. In an asynchronous written environment for example this means that both learners have to write an equal amount of text in each language in order to make sure that they will both have a chance to read and write in their target language. In a synchronous voice environment the same amount of time should be devoted to each of the two languages. How to achieve this is one of the key issues to investigate.

These two principles are key to the success in sustaining a tandem exchange over the course of time that will guarantee language learning takes place. In the literature of electronic tandem language learning there are guidelines and tips regarding the logistics of these types of exchange (O'Dowd & Ritter 2006) and recommendations for integrating tandem tasks into the course activities (Appel & Mullen 2002; Appel & Gilabert 2002).

SKYPE FOR TANDEM EXCHANGE

This is not the first attempt to use Skype specifically as a tandem exchange tool. Our interest is to investigate the strengths and weaknesses of applying the general-purpose environment of Skype to the specific use of tandem exchange, and to attempt to refine the environment in such a way as to yield a set of tools to enable a more usable and effective resource for language learners. To this end this chapter will briefly look at the benefits and challenges inherent in using Skype for tandem language learning.

Intuitively, the main benefit of using Skype or similar services for tandem language exchange is the possibility of access to native speakers in their home countries who would not otherwise be accessible. In fact, although this is the aspect focused on in this work, it is not the only aspect. Skype is a useful tool to facilitate communication even between people who are not so distant geographically. It has numerous advantages over telephones for the purposes of tandem learning (no cost, multi-modal, conference calls), even when talking with people in the same country or city. As discussed elsewhere in this chapter, this can be potentially very useful in mitigating the issue of time differences, if users can be drawn from a variety of different places. As a software application on the computer, it is possible to integrate its functionality with other software in order to support the tandem exchange. Text chat

functionality, organization of contacts, and other built-in functionality are also potentially useful. Numerous plug-ins are already developed and available for Skype, including whiteboards and other shared desktop functionality, games, audio recording functionality, and many others.

One of the most immediately obvious challenges is closely related to the biggest advantage of Skype: communication takes place between people in faraway places, making scheduling a non-trivial challenge. The case studies described in this paper are typical in this respect; students in San Diego are 17 hours behind students in Tokyo, leading to inevitable scheduling conflicts. This directly impacts the already problematic factor of student motivation. College students such as the ones in our case studies are busy and must be motivated to do assignments. Skype tandem exchanges may require coordinating with other students far away who are working under a different set of constraints, and potentially working at inconvenient times early in the morning or late at night. This degree of inconvenience requires additional motivation to overcome, and so approaches to motivating students to participate have also become an unavoidable aspect of our study.

Another challenge of Skype-based tandem exchange is the comfort factor touched upon previously. Students may be shy or lack confidence in their language ability. A real exchange killer is a lack of appropriate topics to talk about, which leads to awkward silences and an uncomfortable, unproductive exchange. It is absolutely necessary to give students a guide for what to talk about.

Unfortunately, simply providing questions to ask or topics for the students to talk about is not a sufficient solution. Students tend to try to answer rote questions as simply and efficiently as possible, and very little real communication is accomplished by simply asking a series of fixed questions to each other. When topics are given for discussion, another set of difficulties arise. Any language teacher who imagines a student's

reaction upon being told to simply "talk about X" will appreciate why this will not work. Without disagreement, debate, or some other motivating factor for the conversation, discussions are likely to fall flat. However, if topics are contentious then factors of culture, gender and personality may be emphasized. It is beyond the scope of this chapter to enter into a discussion of what influence these factors may have, but it is easy to see that a person's willingness to enter into an argument or debate with an unknown partner may depend on many factors that are not directly related to linguistic ability. Regardless of this, natural communication happens when people have a reason to communicate. Thus it is necessary to support students not only with respect to *what* they talk about, but *why* they talk. And to make sure that in the process of talking, they are not only practicing the language they already know, but also being pushed to learn something new.

Supporting Resources

In addition to the application itself, the use of a desktop-based P2P VoIP environment such as Skype enables students to interact easily with other related environments designed to support the exchange. This chapter also discusses the use of the Virtual Learning Environment Moodle to organize the classes in the second case study, and the use of external websites for tasks.

Although Skype itself is not open source, it has a public Application Programming Interface (API) which makes it possible to develop plug-ins and associated applications independently. This potential to more closely integrate Skype with dedicated supporting resources such as plug-ins and web applications was an early motivation for the creation of the dedicated software environment described below. As mentioned previously, many additional features are available as plug-ins for Skype. This means that real-time interaction is possible and should be considered when planning tasks.

The Importance of Tasks

The issue of motivation arises at several levels when attempting to incorporate a Skype tandem exchange component into a language study curriculum. At the “macro” level, it is literally necessary to get the students in front of the computer and involved in the exchange. At the “micro” level, it is necessary to bear in mind the natural motivations people have for speaking, in order to give each conversation sufficient momentum to be engaging, as mentioned previously. What is needed is to add a goal-oriented aspect to the conversations the students have. For this reason and others discussed in this chapter, an explicit task-based component was introduced to the exchange. It is our belief that this aspect is a key component of the exchange. The software environment described in this paper is designed to optimize and enhance the role played by the task-based aspect of the exchange.

Using explicit tasks of some kind has a number of significant advantages over a freer, non-task-oriented approach, not the least of which is the degree to which the tasks can be used to support the principles of tandem language learning.

Fostering Sustainability with Tasks

As discussed previously one of the challenges in tandem language learning is the logistics of setting up a tandem partnership and in particular making the exchange sustainable for along time. The principles of autonomy and reciprocity outlined above are considered to be fundamental to effective tandem language learning and to securing the continuance of an exchange between tandem partners. In the present work, tasks are used as a framework to support both of these principles in practice.

The first way in which the task-based approach supports learner autonomy is simply that it enables the course instructor to assign discrete, specific assignments that are manageable for the students.

The task nature and instructions should provide scaffolding to the students providing an incentive for them to carry out the tandem exchange. The tasks are created in such a way that their outcome can be turned in by an assigned due date, enabling the instructor to evaluate participation directly. This is not to say that participation should be mandatory. This chapter discusses cases in which participation was mandatory, cases in which it was completely voluntary, and cases in which it was voluntary but with incentives. There are a variety of factors to consider in this decision, but it seems that the case in which participation can be made voluntary with compelling incentives is ideal. In all cases the students need clearly defined assignments to carry out, and in cases where participation is evaluated, instructors need the assignments to evaluate.

On a “micro” level, the focus is on tasks which emphasize authenticity within the conversation. The conversation should be as free as possible within the communicative constraints of the task. The point is not to restrict conversation by artificial constraints, but rather to give the students clear communicative goals and let them exercise their linguistic problem-solving skills by finding their own way to verbally communicate the information necessary to accomplish the goals.

The division of conversation into discrete tasks also serves to support the principle of reciprocity. By assigning an even number of specific tasks with a similar scope, and assigning a specific language for each task, it is possible to ensure at least the tendency that half of the exchange is carried out in the target language of each student. Furthermore, this enforced division appears to carry over into ordinary conversation as well. After doing several exercises, in several cases students seem to have internalized the idea of reciprocity and seem more inclined to alternate between languages (the evidence for this is qualitative and anecdotal, so it is not possible to assert with confidence that it happens regularly).

Tasks in Support of Language Learning

Considerable research has been conducted into task-based language learning (Breen 1989; Long 1985; Prabhu 1987; Skehan 1996; Robinson 2001; Ellis 2003) and it is reasonably uncontroversial that such an approach in language teaching provides ample opportunities for language learning. This can happen through negotiation of meaning. Long (1983) argues that when negotiation of meaning takes place there is opportunity for both modified input and modified output. When communication breaks down, the repair strategies employed will draw the learner's attention to the relevant aspects of language and will facilitate the incorporation of these aspects into his/her interlanguage. This happens because either input is modified to make it comprehensible, or there is a possibility to produce modified output. The concept of modified output is related to the Comprehensible Output hypothesis (Swain 1985; Swain & Lapkin 1995). This hypothesis claims that it is when the learner produces output that there is a chance that s/he will notice the mismatch between what they produced and the appropriate TL form, either through feedback (explicit or implicit) from an interlocutor or from internal feedback.

Less clear is the question of what criteria a task must meet and finding out what type of task will work best for a given setup. Most of the research conducted has been on face-to-face tasks. Long (1989) recommends that tasks should be *two-way* tasks (both interlocutors withhold information to be conveyed in order to complete the task), *closed* tasks (an outcome is required, if there is more than one possible outcome the task is convergent) and *planned* tasks (if planning time is provided there is a higher possibility that new structures will be integrated into the student's interlanguage). An effort has been made to integrate these elements into the design of the tasks.

Long's criteria for task design are intended for face-to-face tasks. Some work has been done on adapting face-to-face tasks to different media

according to these media's capabilities. Some examples are Appel and Gilabert (2002) who look at integrating e-mail tandem tasks into the curriculum in a tertiary level education context, and Knight (2005) who explores how to break up tasks in order to increase turn taking in e-mail tasks. In this case, it is necessary to consider to what extent a Skype conversation differs from a face-to-face situation.

Desirable Qualities in Tandem Tasks

Although this list is not exhaustive, it covers several desirable qualities of tasks for this kind of exchange. The tasks should be as enjoyable for the students as possible and should result in some finished output that can be submitted to the instructor as an assignment. In addition, the following criteria are important for the creation of suitable tasks:

- **Emphasis on communication:** This is in contrast to, for example, emphasis on vocabulary building, or speaking/listening exercise, or any other specific skills that are generally targeted with language study exercises. Students should have information to convey to each other, and a reason to convey it. All listening, pronunciation, vocabulary, and other skills are exercised insofar as they are brought to bear on accomplishing the communicative task.
- **Goal-oriented aspect for both L1 and L2 speakers at all times:** This is as opposed to, for example, having one student quiz or instruct the other student, or assigning simple question-answer tasks in which one student interviews the other in the other's native language. To the extent that it is possible, the task should be engaging to both students at all points, even when students are speaking in their own L1. This can be accomplished by making sure that part of the goal depends upon making oneself understood to the L2 speaker.

- **Maximal exploitation of native-speaker interaction:** This is closely related to both the first and second points above. When designing tasks, it is necessary to keep in mind the difference between the tandem environment and other types of CALL scenarios. In short, exercises that would be possible to do with only a computer interface and without a native speaker such as quizzes are only of interest if they can be recast as truly communicative exercises that engage both the learner and the native speaker.

Some Example Tandem-Oriented Task Types

Here several possibilities for potentially interesting task types are described which fulfill the criteria above. An environment enabling real-time interaction available with Skype-specific plug-ins or general Web 2.0 technologies such as AJAX (Asynchronous Java and XML) and similar web application technologies is assumed. These technologies are not necessary to all of the tasks we describe, but they would be necessary to create an environment in which all possible task types can be easily implemented.

- Task type 1: *Find the Difference*. This task type is the simplest to implement and as such it is the one employed during the second case study described in this chapter. A simple version of the task type can be created using only ordinary HTML web pages. In this task type, each student is shown an image. The images differ in only one respect. The students are required to describe the image that they see to their partner, and to find the difference between the images. After they have recorded their guesses or given up on guessing, they are shown both images. They are required to discuss and identify the places, if any, that their original guesses had differed from the actual difference. A variation of this task type could be made

using short videos. Each student would view a slightly different embedded video that was short enough to view repeatedly. Students would describe to each other the sequence of events in the videos and find the difference between the two videos. This would place more emphasis on using verbs and describing temporal relations.

- Task type 2: *Arranging Objects*. This task type requires a certain amount of real-time interactivity. The L1 student is shown an image representing a set of objects arranged in a particular pattern, for example five coffee mugs arranged in a circle. The L1 student also is shown, in real-time, a window showing the scene visible to the L2 student. In the L2 student's scene, the objects are present (there may be additional objects) but they are not arranged. The L2 student can rotate, scale, and move, copy or delete objects. The L1 student is required to give verbal instructions to the L2 student describing how to imitate the arrangement that the L1 student can see. Since the L1 student sees the L2 student's edits in real-time, the L1 student can guide the L2 student specifically. The arrangement that is ultimately settled at by the L2 student is recorded as an image file, and the students are asked to submit a description of specific ways, if any, that it is different from the target arrangement. As in the case of *Find the Difference* motion graphics could be introduced to add a temporal aspect to the task, although this would require some thought to designing the most intuitive interface.
- Task type 3: *Fill in the Blanks*. This task is different from the others in being explicitly text-based, although it still conforms to the criteria listed above. In this case, the L2 student is presented with a sentence in the target language. The L1 student is shown only blanks where each word should be. The goal is for the L2 student to help the L1 student to guess the sentence in the mini-

mum number of steps. A step can include the L1 student giving the L2 student a single word, or the L2 student guessing a word. A mistaken guess costs a step. The L2 student must use his or her linguistic knowledge to select the most helpful words to show the L1 student. For example, if the sentence is *Elvis Presley and Johnny Cash are notable for being the only two artists enshrined in both the Rock and Roll Hall of Fame and the Country Western Hall of Fame*, the L2 student might decide that giving the L1 student the word “Presley” in the second position in the sentence might help the L1 student guess “Elvis.” The students can communicate verbally in whatever ways they like, provided that the L2 student avoids using key words from the target sentence. The L1 student is free to ask questions about the subject matter of the sentence, about the parts of speech of particular words or grammatical characteristics (tense, aspect) of the sentence, and so on.

These suggestions only scratch the surface, but they are representative of the kinds of goal-oriented, communication-centered tasks that meet the criteria listed above. They vary in how simple they are to implement, but they would all benefit from being implemented in the context of an extensible, dedicated framework. We hope to develop the prototype described in this chapter into such a framework. At present, only the first task type has been implemented in the prototype.

CASE STUDIES

2006 Tsuda College/SDSU SKYPE Tandem Exchange

A Skype tandem exchange was conducted between Tsuda College, Tokyo and San Diego State University during the Fall semester of the 2006

school year. This was intended as a pilot study to discover what the main challenges and pitfalls would be in fully exploiting Skype as a tool for tandem exchange, and to get a sense of what directions to take in terms of developing tools.

Participants from SDSU were all Japanese language majors, and participation in the Skype Tandem exchange was made a requirement by the instructor of the class. Participants from Tsuda College were first year computer science students taking a required English class. Tsuda is a women’s college, so all Japanese participants were female. Tsuda students’ participation was entirely on a voluntary basis. One reason for this was there was a considerable difference in class size. The entire SDSU class was comprised of 14 students, whereas the participating Tsuda class had approximately 60 students. Requiring participation of all 60 students would have necessitated each of the SDSU students to pair with four Tsuda students and to dedicate four times as much time to the exchange, which was not realistic or desirable. Most participants on both sides had studied their target language for approximately 6 years. All participants had at least intermediate skills in their target language, but most had very little actual conversation experience, and they ranged widely in their practical speaking and listening skill levels. TOEIC scores for the Japanese learners ranged from 245 to 770.

Students at both universities were asked to create Skype accounts and email the exchange coordinator with their information. Tsuda College students were coached directly during class on setting up a Skype account, and SDSU students had technical support available to them at the college’s language lab. They were paired by hand by the coordinator in the order that their information was received. An introductory email was sent to both partners with instructions in English and Japanese, and a questionnaire asking a variety of background questions about their, age, sex, mother tongue, familiarity with Skype and similar technologies, and an assessment of their

own L2 listening, speaking, reading skills (on a range from one to five). The mail also included a set of “icebreaker” questions intended to kick-start the exchange and enable the students to introduce themselves to each other and to become comfortable speaking with each other. They were asked to turn in the answers to the questions as a (voluntary) assignment. The questions were:

- Describe your partner’s home town.
- Describe your partners average Tuesday.
- Describe your partner’s hobbies.
- What does your partner like and dislike? Find one thing that you like but your partner dislikes.
- What are your partner’s impressions of your country? Find one impression your partner has of your country that you disagree with.

Students were encouraged to continue the conversation freely. The introductory mail also asked students to respect reciprocity the best that they could, and to put forth an effort to keep the exchange as close to half English and half Japanese as possible. Other than this request, there were no more specific rules given to the students governing their conversations.

Over the course of the exchange period, Tsuda students were reminded regularly to continue with the exchange for the benefit of their own English skills. A final questionnaire was distributed to students who had taken part to ask them their impressions of the exchange. In 7 cases, it was possible to obtain audio recordings of the exchange.

For the duration of the exchange, and in the questionnaires, students repeated complaints of the inconvenience induced by the time difference between Tokyo and San Diego. Tokyo is 17 hours ahead of San Diego, which in practice makes it 7 hours behind on the following day. This made scheduling conversations very difficult for the students. If one of the pair members on either side

was not sufficiently cooperative and proactive, it would be effectively impossible for their partner to participate in the exchange.

A total of 12 pairs spoke at least one time, which was promising, considering that there were only 14 students in all on the SDSU side. A problem arose in sustainability. In all, 9 pairs spoke one time each, 2 pairs spoke 3 times each, and one pair spoke 8 times.

The amount of time individual pairs spent speaking with each other varied. The pair who spoke 8 times spent several hours talking with each other on several occasions. However, the Tsuda student reported that as they became more familiar, the conversation became increasingly dominated by Japanese, and so the language learning benefit to her was not proportionate to the amount of time they spent speaking, or the number of conversations.

The most successful of the pairs were the ones who spoke three times each. These pairs were able to find sufficient common interests that they were able to come up with subjects to talk about on their own.

Students reported that they had enjoyed the opportunity to communicate with native speakers of their target language; however, there were mixed reactions on how much their language skills had benefited from the exchange, and whether it was worth the inconvenience. Students’ primary reason for not continuing to participate was the inconvenience of the time difference; however several students also said that they ran out of things to talk about. This fact was also clear in several of the audio recordings, where awkward silences can frequently be heard while students try to think of what to say.

2007 Tsuda College/SDSU SKYPE Tandem Exchange

A new study is currently nearing completion with the same class of Tsuda College students paired

with a new class of SDSU students. Several new factors have been introduced.

Firstly, a new approach is taken to creating tandem partnerships, which makes heavy use of the Web 2.0 paradigm of online community building. Pairs are no longer fixed and determined in advance, but rather all students are signed up in a special Moodle “class” hosted by SDSU. Moodle was chosen for being the most widely-used open source online course organization tool, which enables instructors and students to easily schedule classes, give and turn in assignments, and share resources. The top page of the Skype Moodle class is shown in Figure 2. On this page, links to the latest task assignments are posted by the instructor, and a list of all participants from both universities can be seen by clicking on the “Participants” link. In the Moodle environment, students were asked to post personal profiles with brief self-introductions, contact information, and approximate times of availability, all written in their L2, as shown in Figure 3. The students were furthermore required to message several potential partners from the participants list and to continue trying to contact partners until they found a responsive partner who was able to

cooperate in arranging a tandem conversation. This also enabled more eager students to have multiple tandem partners, and minimized the degree to which they were restricted by a less enthusiastic partner.

Secondly, while the situation on the SDSU side remains the same (participation in at least one conversation is considered a requirement for the course) the Tsuda students have been given a new motivation to participate. The entire 60 person English class is required to do a weekly, graded assignment as homework which involves viewing an English-language podcast online and answering a series of questions about it. Students who participate in the Skype exchange are given the choice to substitute this assignment for a weekly Skype tandem assignment which involves carrying out four tasks. Participation remains voluntary from week to week, but the students are motivated by the fact that a deadline remains for an assignment regardless of which they choose, and that their participation is credited in some way. Although it is still up to them to arrange the conversation, the freedom they have to find a cooperative partner enables them to do this. Furthermore, once a pair has gotten into a habit of speaking to each other

Figure 2. The top of the Skype Moodle class

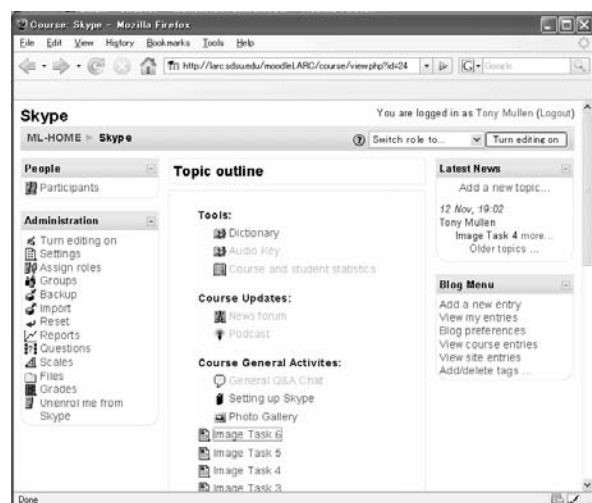
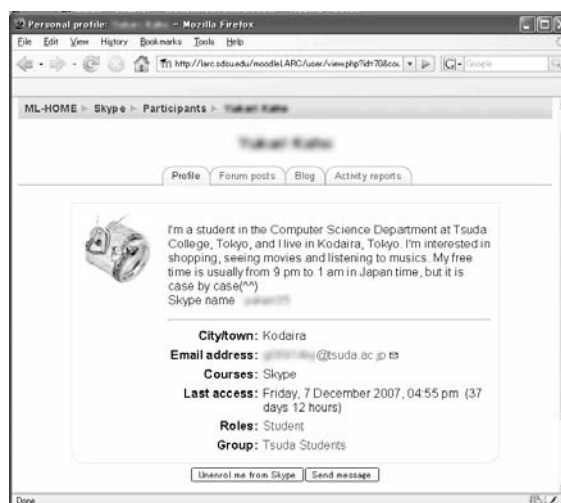


Figure 3. A student profile with contact information



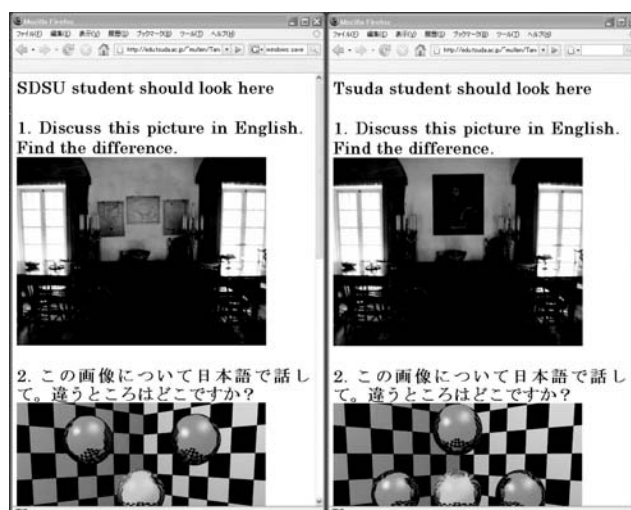
for several weeks running, they begin to have a sense of how to schedule the exchanges in a way that makes sense in both time zones.

Finally, a task-based approach has been introduced. At present the tasks are given in the form of simple, plain HTML web pages, one to be viewed by Tsuda students, and another to be viewed by SDSU students, shown side by side in separate browsers in Figure 4. Each weekly assignment consists of four image tasks, two each to be carried out in English and Japanese. The assignment is to describe, for each image pair, what the students' first guess at the difference was, whether the guess turned out to be correct, and if not, what the correct difference was. For each weekly assignment of four tasks, the students are asked which they thought the most difficult task is and why, and which they thought the least difficult task is and why. The results so far in terms of student engagement and sustainability appear to be dramatic. Already, with the semester still incomplete, the number of total conversations is considerably higher than it was in the 2006 study. More significantly, sustainability has improved hugely, with a solid majority of student participants doing so on a continuous, week-to-week basis.

So far, the questionnaire feedback regarding the task-based approach has been positive. Comments such as "The Skype assignments were fun and [my partner] was fun to talk to, she was interesting, and she seemed to like to do the assignments" and similar comments have been received more frequently in the second year, whereas many of the negative comments received after the first exchange seem not to have been an issue in the second exchange. There were no comments at all about running out of things to talk about or awkward silences in the second exchange. Comments in both exchanges have included complaints about the inconvenience of the time difference, but the comments in response to the second exchange generally took an understanding tone, as in "Since you can't change the difference in time between San Diego and Japan, then I would say that this is pretty much where it needs to be," or gave practical suggestions for dealing with the time differences, such as by setting up a fixed time when all students would be available.

Data for the two exchanges is still being collected, translated, and evaluated. A complete report of the outcomes will be forthcoming when

Figure 4. Static web pages with image tasks



the project has concluded and the results have been properly analyzed.

Although the added flexibility of choosing partners has enabled more students to continue participating, it has also meant that in some cases enthusiastic students have had multiple partners. One SDSU student participating in the current study, for example, has regular communications with three separate Tsuda students. This is to be encouraged; however with the present task setup, it means that the one student must carry out the same exercise three times. Since part of the interest of the image tasks is based upon the students not knowing what their partner is seeing, this obviously diminishes the effect for students who must repeat exercises. This student's willingness to continue with the exchange in spite of this suggests that benefits can be gained anyway, but clearly an optimal situation would involve unseen exercises for all participants.

A DEDICATED WEB 2.0 ENVIRONMENT FOR TASK-BASED SKYPE TANDEM

The simple HTML web pages used in the 2007 exchange are not optimal for a larger scale project. Considerable advantages can be gained by the creation of a dedicated software environment for task-based Skype tandem project. Some desirable features of such an environment are the following:

- Student registration and community-building, with the system keeping track of which students have done which exercise, displaying which learners are online and available to engage in an exchange at any given time, and organizing exercises to enable freedom of self-pairing without the worry that students will have to repeat the same specific exercise over and over.
- Instructor/coordinator tools, enabling instructors to set up exchanges, choose tasks or contribute custom tasks, and communicate with students and monitor students' activities.
- Real-time interactive environment to deepen the potential interactivity of participants. For example, in our prototype a simple written component is added to the image task which enables students to have yet another level of interaction and linguistic reflection.
- Data collection tools including automatic assignment submission and automatic audio recording for research and evaluation.
- Extensibility to include other task types.
- Extensibility to include other language combinations.

The software prototype presented here incorporates many of these features. The focus of its development has been to create a working example of a real-time task environment, and also to demonstrate the possibility of interacting with Skype from within the web-based environment.

The prototype is implemented in Java, JavaScript, and PHP and built upon a MySQL database which contains information on participating students, pairs, and tasks. Once students are registered in the database, they can log in and see a list of all currently logged in participants who are native speakers of their own target language. Figure 5 shows the list that an English native speaker might see upon logging in. In the figure, the list of potential partner students shows their status. The X symbol Skype logo indicates that the user is currently engaged in a tandem conversation. The empty radio button indicates that the user is free to be invited to participate in a tandem conversation.

Once the student has selected a potential partner and clicked on the Start Exercise button, they are given the opportunity to place a Skype call directly from within the web page. In addition to being a simple and straightforward

Figure 5. The partner selection page in the Skype Tandem Project environment



way to initiate the Skype conversation, this also enables the application to access Skype directly (provided the user has Java installed) and starts an automatic audio recording function. Once the students have verified that their Skype connection has gone through without problems, they begin the exercise. The exercises are chosen automatically to be exercises that neither student has done. Tasks alternate in being carried out in English and Japanese.

The L2 speaker is asked to submit the answer that they arrive at together, for verification by the L1 speaker. The L1 sees the answer displayed. The L1 speaker cannot edit this, but can either accept it, or ask the L2 student to resubmit an answer. All of these answers are automatically saved to the database with a timestamp so that they can be later reviewed by the instructor or researcher. In addition to keeping a more accurate record of the students' guesses and corrections, this also adds another level of linguistic reflection. L1 students can correct spelling or grammar and L2 students are given an opportunity to give some further thought to how they will formulate their answer. Once the L1 speaker has accepted the answer, both students are shown both images simultaneously. This is a more straightforward process than having to refer to separate websites,

and it is also easier to compare the two images directly, since they are displayed side by side. At this point also, the submission of the correct answer (if corrections need to be made) is made in the same manner as the previous answer, to be approved by the L1 speaker or modified. At the end of each task, students fill out a brief radio-button questionnaire asking their impressions of the task. After every 2 tasks (to account for the alternating languages) students are given the option to quit the exchange.

Software Development Status and Release Information

The software is currently in pre-alpha stage. The basic functionality has been coded, but bugs remain and it is currently not ready for general deployment. Testing and development is ongoing. Several possibilities are being considered for how to make the functionality available to interested users, including the possibility of releasing the code itself as open source, or the possibility of setting up a centralized web based service. Language teachers, software developers, and researchers who are interested in being involved in this project or using the software are invited to contact the authors.

CONCLUSION AND FUTURE WORK

Our goals in this chapter have been to explore the ways that Skype and similar technologies can be optimally exploited for language learning in an institutional environment. Using Skype to carry out tandem exchanges is an important and well-recognized potential way to enable language students to benefit from communicative interaction with native speakers of their target language, but it is not enough. Further refinement is necessary to avoid the pitfalls of poor sustainability and diminishing student motivation. The principles of autonomy and reciprocity continue to provide useful guides for where to look to make the most of these types of exchanges, and our research has focused on learning what practical steps should be taken to support these principles and make the exchanges lasting and useful experiences for language learners. Web 2.0 technologies have shown themselves to be very helpful in providing the necessary support to make these kinds of exchanges possible to incorporate into a curriculum, by providing a learner community dedicated to supporting the exchanges. Providing a Moodle classroom for students of both target languages to coordinate their communications has helped to increase the sustainability of the exchange and developing a dedicated environment which can access the Skype API directly and provide students with a real-time interactive environment will continue to improve the exchanges. By using the kind of task based-approach outlined in this chapter with the support of Web 2.0 technologies, it becomes a realistic possibility to incorporate a Skype-based tandem exchange into a language course in a meaningful way.

Skype, P2P VOIP, and Web 2.0 are most certainly not the end of the road in terms of real-time, global communication possibilities made accessible by the Internet. The transformation of language learning is underway, but far from over. Video chat, whiteboards and similar shared tools, 3D game environments and other online

interactive spaces have only begun to open up further possibilities and pose similar questions of how to fully exploit them. These questions of how to use each additional feature to optimize the language learning experience are not trivially answered. The work presented in this paper should continue to be relevant in other real-time interactive environments.

The possibilities for what kinds of communicative tasks can be employed are potentially limitless. A great deal of future work remains to be done to explore these possibilities. Most importantly from the standpoint of the work described in this chapter, the data collected over the past two years must be analyzed and interpreted and the software prototype should be developed into a stable, deployable application. Once this is accomplished, it can be made more widely available to instructors and extended and enhanced to include all of the desirable features listed in the previous section. The most notable areas in which it should be extended include advanced task and pair management tools for instructors, broader language support, and a toolkit for instructors and researchers to create new tasks and task types within the framework. In the long term, it would be desirable to see a seamlessly integrated online community of task-based tandem language learners and instructors with task content provided by the users themselves.

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KEY TERMS

Autonomy: In the context of tandem language learning, autonomy refers to the degree to which individual language learners assume responsibility for their own language learning and development. The emphasis placed on autonomy in this context is generally from the point of view of developing strategies to better support and facilitate autonomous learning.

L1: The student's native language.

L2: The student's target language; i.e. the language that the student wishes to learn or improve in.

Peer-to-Peer: A term for network protocols that involve making direct network connections between individual computers as distinct from a client-server model where information passes through a central server and out to separate clients. Current Internet telephone systems such as Skype rely on peer-to-peer protocols.

Reciprocity: In the context of tandem language learning, reciprocity refers to the degree to which both language learners contribute to the other's language learning. In order to be mutually beneficial, an exchange should allow both partners approximately the same level of opportunity to speak and listen in their target language.

Skype: A proprietary service and software application that enables users to make Internet telephone calls to other Skype users anywhere in the world free of charge. The free service allows unlimited speaking between users and may also include live video, but it is limited to connections between users with Skype installed on a computer. For an added fee, Skype users can upgrade to a system which can communicate to and from ordinary telephones.

Tandem Language Exchange: A language-learning exchange between two native speakers of each other's target language. Formal tandem exchanges are distinguished in part by the emphasis placed on the principles of reciprocity and autonomy.

Chapter VII

A Context–Based Approach to Web 2.0 and Language Education

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ABSTRACT

Web 2.0 offers potentially powerful tools for the field of language education. As language teacher tutors exploring Web 2.0 with participants on an MA in Educational Technology and TESOL at the University of Manchester, UK, we see that the potential of Web 2.0 is intimately linked with teachers' perceptions of their teaching contexts. This chapter will describe a "context-based" approach to the exploration of Web 2.0 on a module focusing on the potential role of distributed courseware in language education. It will begin by giving an overall picture of where and how the exploration of Web 2.0 tools fits into the MA program. It will then describe the main aims and aspects of the module and discuss in some detail our context-based approach in relation to participants as well as Web 2.0 in existing literature. The chapter will conclude with two case studies concerning how teachers incorporate Web 2.0 technologies in courseware for their contexts.

INTRODUCTION

This chapter explores the way that participants on a module run as part of an MA in Educational Technology and TESOL learn about, make use of and evaluate Web 2.0 technologies. This module

is a new departure for the course and represents the ongoing need for the MA to refresh itself and to bring new and developing technologies into its domain.

Web 2.0 has its advocates and its detractors; however, it has become a *de facto* part of today's

Internet landscape. The very nature of Web 2.0, its emphasis on such features as collaboration, interactivity and user-generated content, seems to make it an obvious choice for a focus of discussion when it comes to looking at current trends in the use of technology in language education. These trends, as shall be later discussed, reflect a focus on learner centered, collaborative tasks which, in Second Language Acquisition terms, allow channels for authentic language input and output (Chapelle, 1998). However, it is important to realize that for many language teachers Web 2.0 may simply appear to be another technological innovation that will pass them by along with the many others that they have seen during their career, despite the slowly increasing range of references to the uses and benefits of key Web 2.0 technologies (e.g. blogs, podcasts and wikis) in language education.

As people and communities in various parts of the world increasingly embrace Web 2.0, some educational institutions are inevitably responding to those societal trends and trying to harness Web 2.0 in their learning programs. Others, although they are in societies where technology is more normalized (Bax, 2003a) have, for various reasons, not taken those technologies on board. Perhaps now, more than at any other time, language teachers may need to negotiate these changes as they impact, or not, on their institutions, and consider the implications of ever greater technology use for their language teaching. They may be inspired or effectively obliged to engage with the nature of Web 2.0 and analyze its affordances for language education. Other teachers, even if they are aware that it is being used in the wider world may currently see no application for it in language education.

Web 2.0 is described as relatively easy to use and therefore accessible to anybody with access to the Internet. This is in contrast to its Web 1.0 predecessor which is seen to require at least some familiarity with HTML as a minimum. Setting up and contributing to a blog for example may seem

comparatively uncomplicated. However, once a blog has been set up the user may be confronted with concepts and technicalities that may be more difficult to get to grips with, RSS, by way of example. Teachers struggling to understand the concept behind RSS, and the different technologies that support it, are unlikely to be able to stand back and evaluate its uses in language learning terms.

Such issues notwithstanding Web 2.0 tools do appear to offer a lot of what language teachers would want in order to support learners language development: they can potentially distribute the learning and enable students to be in regular touch with a world-wide community of learners; they appear to enable an easier connection to be made between the classroom and the “real” world; they might enable learners to take some control over their learning making use of tools that excite them and which they are using in their everyday lives; they seem to offer engagement in active rather than passive learning, in process as well as product; learners can also potentially engage in discourses that take them beyond the classroom.

On the MA program in Educational Technology and TESOL at the School of Education, University of Manchester, it is important to explore Web 2.0 technologies in language education and help teachers understand generic functions of Web 2.0 in order to facilitate their evaluation of its potential uses. An evaluation of this potential should not, and cannot, be divorced from considerations pertaining to the “ecology” of the teaching environment in which teachers work, or have worked in the past and how that pertains to the wider changes in society. The use of the term “ecology” here signifies all of the rich, interacting elements that create the dynamic of teachers’ teaching contexts including top down societal, curricula and institutional influences and the bottom up influences which may stem from teachers’ knowledge of and enthusiasm for Web 2.0.

In this regard the MA tutors continue to observe that the way teachers “make sense” of Web 2.0

genres, i.e. understand how their various intrinsic operations—a process which is intimately bound up with teachers’ “evaluation” of the potential affordances of such software for their contexts—is mediated by the teachers’ perceptions of the context in which they work, or have worked in the past.

Considerations of context are bound up on the MA program with those of pedagogy, and the “fit” of Web 2.0 genres to pedagogical approaches. We have always worked as teacher-educators on the principle that the use of technology in language education should be firmly underpinned by considerations of pedagogy and appropriate methodology (Holliday, 1994). The functions of the technologies explored on the MA program are therefore considered according to how they can facilitate and possibly enhance pedagogical approaches that respond to the specificities of different contexts and the needs of learners in that context. In other words we adopt a context and pedagogic driven rather than a technology driven model. This central focus on pedagogy as it relates to context and the role that technology can play in contexts has led us to evaluate the affordances of Web 2.0 as they might respond to contextual factors, what we have started to term a “niche” approach to evaluating Web 2.0

The main discussion in this chapter will centre on one of eight component modules that the MA program participants take, entitled “Courseware Development for Distributed and Blended Learning” (CDDBL) and the context-based approach to CDDBL introduced above. This module explores a range of Web 2.0 tools and how they may be exploited both for blending and distributing courseware. The chapter describes the module’s explorations of Web 2.0 and tutors’ evolving thinking about the way to best approach Web 2.0. The changing nature of participants on the module since its inception in 2005 is discussed and two case studies will illustrate ways in which participants have employed or how they envisage employing Web 2.0 in their own contexts.

In what follows the chapter gives the reader an overall view of the MA course and how Web 2.0 is included, describing our current approach to exploring Web 2.0 in CDDBL and discussing aspects of the literature informing the module. It then focuses on two case studies illustrating how former participants on the course evaluated Web 2.0 in relation to their own contexts. The chapter concludes by discussing possible future developments in our context approach to Web 2.0 on CDDBL.

THE MA PROGRAMME

Brief Overview of the Program

The participants on the Master’s program in Educational Technology and TESOL come from different parts of the world including South America, Asia, the Middle East and Western and Eastern Europe and may be either non-native or native speakers of English. They all have at least three years teaching experience. This level of experience is a prerequisite for entry onto the degree as its whole focus is not on our (the tutors) forming and shaping of the participants’ thinking about teaching, but on facilitating the reflective process that will allow the participants, drawing from their teaching experience, to shape their own thinking about their teaching. The participants’ experiences of using technology vary and range from no use to a significant engagement. This obviously affects the extent to which they can reflect on their own practice using technology.

The MA was set up in the 1980s (in those days it was an MEd) to meet the needs of teachers who were becoming interested in using video and computers as part of their language teaching processes. The course has changed considerably over time, but still keeps as its main foundational aim a focus on the pedagogical implications of the uses of technology (see Wildner, 1999). The specific modules that are relevant to technology

and language learning include: Language Learning and Technology, which explores the general uses made of technology in language classrooms to support language skills development; Multimedia in Language Education, which combines an exploration of second language acquisition processes with the design and development of language tasks using Web 1.0 technologies; Teaching and Learning Online, in which we ask the participants to explore and reflect on experiences of online learning. The fourth technology-focused module, Courseware Development for Distributed and Blended Learning (CDDBL), is the one that is described in detail in this chapter. Other modules that students do reflect a more general TESOL diet.

We have both onsite and offsite (distance) participants. The offsite participants study part time as they are generally practicing teachers and via an online virtual learning environment (VLE – currently WebCT). Onsite participants are studying for the most part full-time and are therefore removed from their teaching context, particularly if that context is not in the locality of Manchester or is overseas.

COURSEWARE FOR DISTRIBUTED AND BLENDED LEARNING

The nature of the program we offer means that there is a continual refreshment of the modules and CDDBL is the latest re-working, the first run of this new module taking place in 2005. The aim of the module is to assist in the development of skills that will enable teachers to review and create effective blended and distributed learning materials for their context, with all of the attendant considerations that this involves. While “Multimedia in Language Education” looks at materials design at task level, CDDBL considers the integration of activities at the level of a course or scheme of work.

Early on in the development of CDDBL we took the decision to focus primarily on Web 2.0 tools and their affordances in distributed courseware. We had originally intended to focus solely on Virtual Learning Environments (VLEs) but realized that in doing so we would be missing the opportunity to explore emerging technologies from the perspective of courseware development, technologies that potentially change the way we view that development, both in terms of the greater ease with which courseware might be created by tutors but also in the degree of control that the participants themselves have in the materials design process.

As we designed the first iteration of the module it occurred to us that unlike Web 1.0 technologies, where the extent of interactivity that a learner can engage in is more likely to be determined by the designer/tutor, with Web 2.0 technologies the development of courseware need not be the preserve of the tutor designer, but also of learners. Such differences between Web 1.0 and Web 2.0 technologies are explicitly discussed on CDDBL as are the ways that the two technology types can be effectively combined to suit the specificities of teaching contexts.

The current iteration of CDDBL therefore explores the following Web 2.0 tools: blogs; wikis; social bookmarking; e-portfolio software; and podcasting. It further focuses on two VLE platforms, WebCT and Moodle, an open source VLE which, in response to ongoing feedback from designers/tutors using the software, continues to have new tools incorporated into it, the majority of which are Web 2.0 tools such as blogs.

The assessment procedure for CDDBL requires participants to create sample courseware materials which combine Web 2.0 technologies and which address issues related to language learning in their context. They are currently asked to articulate the thinking behind their courseware through a 30-minute presentation and short executive summary and to discuss the courseware in relation to relevant educational literature.

PERSPECTIVES ON WEB 2.0 IN THE LITERATURE AND CDDBL

There are areas of difference and confluence between perspectives on Web 2.0 in the educational literature and our own perspective on important considerations relating to Web 2.0. in courseware development. We have said that the way participants on CDDBL evaluate the potential of Web 2.0 technologies is intertwined with their perceptions of the contexts in which they teach; this is having an increasing influence on the ongoing development of the module and on our approach to the exploration of Web 2.0 genres.

It is fair to say that the relationship between considerations of context in the educational literature and the nature and potential of Web 2.0 has not, as yet, been extensively explored. Much of the current literature on Web 2.0 in education discusses it from a general perspective, e.g. with regard to the uptake of Web 2.0 in society and particularly among the digital or net generation, and mainly with regard to tertiary education (see Oblinger, 2005; Bryant, 2006). Little of the discussion on Web 2.0 is, as yet, localized. This is not the case with discussion on Web 1.0 technologies, where a number of studies relate to the specificities of different local contexts (see, for example, Zhong & Shen, 2002). In CDDBL we explore with participants the general themes in the literature on Web 2.0; we provide a summary of some of these below.

Those in the field of education who write on Web 2.0 technologies see it as holding significant possibilities for the field. A lot of Web 2.0 discussion is subsumed under the epithet of “social software” which is perhaps both indicative of the cryptic nature of the term Web 2.0 and of the significance of the term “social” in the educational field where it is widely argued, partly based on the ideas of socio-cultural theorists such as Vygotsky (1978), that learning takes place through mediated social interactions. This potential is discussed in relation to the creation of new learning

communities which may offer the “personalised collaborative learning experiences such as those that are already emerging in the world outside the school gates” (Owen et al., 2006, p. 11). Such communities can expand discussion beyond the classroom and provide new ways for students to collaborate within their class and across the world (Bryant, 2006). Wenger (1998) is regularly cited when discussions of the building of communities beyond classrooms is proposed.

As with the discussion in the educational field generally, the term Web 2.0 has not, as yet, been used extensively in the literature on language teaching. The tools associated with the term tend to be subsumed under the umbrella terms of Computer Mediated Communication (CMC) and social networking. Nevertheless the potential of those tools, as articulated in relation to social networking and CMC, is increasingly recognized. They may offer scope for exposure to, and production of, authentic language use in real life intracultural and intercultural Internet contexts (Kern, Ware & Warschauer, 2004). They also offer the learner the chance to use language as it is used on the Internet and be exposed to “emerging genres of language use” (Thorne & Payne, 2005, p. 372). Such opportunities for authentic language output and the concomitant opportunities for “noticing” and “negotiation of meaning” sit comfortably with notions of how SLA takes place (See Chapelle, 1998). Wikis for example, with their text editing features, may provide the learner opportunities to “correct their linguistic output” and “engage in target language interaction whose structure can be modified for negotiation of meaning” (Chapelle, 1998, pp. 23-24). With these opportunities for greater levels of authentic, autonomous language engagement more emphasis will need to be placed by teachers on the development of metacognitive skills among learners, i.e. the skills that learners need to order and develop their own learning. In some ways many Web 2.0 genres have inbuilt features, e.g. the wiki edit facility which can facilitate metacognitive thinking. Web 2.0

therefore, may offer the most genuine medium yet for breaking down the barriers between the classroom and the real world as not only can the learner use English in an authentic medium but that medium also provides the tools which allows learners to focus in an authentic way on how language is used. However, in the same way that Web 2.0 is an extension of Web 1.0 and can be seen to have some of its characteristics, it is not a good idea to view the uses of Web 2.0 technologies as somehow divorced from what has been occurring for many years in the world of Computer Assisted Language Learning. This field has certainly advocated extensive use of a variety of technologies to promote language learning and has made use of a wide variety of tools to do this. It has also drawn heavily on popular theory from a range of contexts to support its practices. What is potentially different is the way that uses are more easily managed by the learners themselves and materials can be more easily learner generated.

In all the above examples the value of the learning that can potentially occur through Web 2.0 is seen in relation to the extent to which it is allied to, driven by and a part of the social, cultural and economic trends that are shaping the world. There is a prevailing discourse of urgency evident in some of the literature relating to technology in education, perhaps most pithily encapsulated in the phrase, “You can’t not do it” (Collis & Moonen, 2001). This discourse sees the world changing at speed, where economies will be driven by a technologically savvy population, where academic institutions will need to gear themselves to offering flexible learning programs through various technologies and where the “digital/net generation” is not only at home with digital technologies but will be increasingly mystified as to why they are not an integral feature of their education (Oblinger, 2005). If the net generation’s thinking and expectations are shaped by their experiences as net citizens and participants then they will bring those expectations into the edu-

cational context where Web 2.0 which is geared around interaction, will really count.

The literature identifies important caveats relating to the uptake of technology, not least the need for pedagogy to drive the way technology is used rather than the contrary. Salaberry, (2001) in his overview of the uses of technology and their impact on language learning during the twentieth century, makes the point that, “new technologies—revolutionary as they may be from a strictly technological point of view—are normally regarded as revolutionary from a pedagogical standpoint as well” (p. 39). Pedagogical approaches rooted in socio-cultural theory which views humans as embedded in learning communities where social activity, collaboration and interaction are prime factors in the learning process, are seen as fortuitously consonant with what Web 2.0 appears to have on offer. However, there is perhaps a tendency in the literature to assume that there is a direct unmediated link between Web 2.0 and socio cultural pedagogical approaches and that the introduction of Web 2.0 automatically engenders greater learner participation and interaction. Web 2.0 tools may be predicated on the user as broadcaster rather than audience, as creator rather than recipient (Horizon Report, 2007) but when such tools are harnessed in educational contexts, the way that the teacher designs and scaffolds activities within these tools has a prime affect on the extent of and ways that students participate. Web 2.0 tools may offer the teacher a malleable medium for moulding learner development but it is the teacher’s understanding of how best to work and craft that medium which may well determine how it works in a language teaching context. The importance of the tutor as designer is stressed to CDDBL participants.

The way that teachers choose to harness Web 2.0 will depend in large part on their teaching context and we are particularly careful on CDDBL that in focusing on the way pedagogy can be enhanced by technology we do not neglect considerations of context. While in the literature

on language education there has been some discussion on the need for a “context approach” i.e. “an approach that places context at the heart of the profession” (Bax, 2003b, p. 278) and on an “ecological perspective” which looks at the dynamic and negotiated relationship between the richness of a teaching context and methodology (Tudor, 2003), a “context approach” tends to be sidelined when it comes to thinking of the triadic relationship between pedagogy, technology and context. In arguing that there are snug and beneficial fits between a technology and a single pedagogical approach, e.g. social constructivism, there is a risk of propounding a one-fits-all pedagogy which is unresponsive to specificities of context. In fact what we would contend is that the inherent flexibility of Web 2.0 can allow for a blended pedagogical approach which can respond to local educational contexts. There is an expanding strand in the literature that argues that technology, as it is harnessed in careful instructional design, can be effectively used in this way (see, for example, Alonso et al., 2005).

THE PARTICIPANT'S CONTEXTS

The importance of a “context approach” on CDDBL is underscored with every new cohort that participates on the module. CDDBL participants come from a multiplicity of teaching contexts around the globe, from South and South East Asia to the Middle East to South and North America to Eastern and Western Europe.


A preponderance of participants on CDDBL comes from low and mid-tech contexts. We describe low, mid and high-tech contexts here both from the perspective of the institution and of the learner (see Figure 1). The extent to which we consider an institution as low, mid or high tech depends on a number of factors; primary among these is the level of computer resources available to learners and teachers in the institution and the level of computer know-how among staff in

the institution. From the learner perspective we describe context as low, mid or high-tech ostensibly according to the level of access they have to computer technology inside or outside of the teaching institution and their familiarity with that technology. While in a low or mid-tech context some teachers do use Web 1.0 technologies such as PowerPoint, it is more uncommon for Web 2.0 technologies to be used although a clutch of participants on the current run of the module are using Web 2.0 largely as resource areas for their learners. As yet we have not had any participants that we consider to be from high-tech contexts. By high-tech contexts we mean contexts where the use of technology has become “normalized,” in the institution, or as part of the learning process (Bax, 2003a) that is to say where the use of technology has become an integral, assumed and unnoticed aspect of the learning process and where learners consider it perfectly natural to engage in language learning, as facilitated by technology, in the institution as well as in their own time outside of the educational environment.

THE IMPACT OF CONTEXT ON EVALUATION OF WEB 2.0 TECHNOLOGIES

We have mentioned the complex and interacting factors that make up the teaching contexts of participants on CDDBL. These will be different for every participant on the module and therefore are best represented on an individual basis (See section entitled Two Case Scenarios). The low, mid and high-tech categories however, provide us with a general starting point for analyzing the way participants on the CDDBL evaluate Web 2.0 technologies. A top down and bottom up perspective on the use of technologies also provide a useful conceptual framework for analyzing this dynamic. By top down is meant societal, curricula and institutional factors that push for the further integration of technologies. Bottom up

Figure 1. High-tech and low-tech context

	High-tech context	
Full access to and integration of technology with extensive know-how as to when and how to use technology. Technology is normalized.		Learners have extensive access to technology, are used to working with technology and presume that technology will be used in the educational context.
		
Little or no access to computers/digital technologies/broad band. Little or no know-how among staff.		Little or no access to computer/digital technologies.
	Low-tech context	

means influences that may derive from teachers who are enthusiastic technology users and may see its potential in language education.

Our observations to date have led us to conclude that such contextual factors and the way participants represent these as “context-in-mind,” in other words their perceptions of context as they see it in their mind’s eye, (Brown, in preparation), have some impact on the way they evaluate the potential of Web. 2.0. We have, over recent months variously described this representation; we have used a “smorgasbord” versus “empty table” metaphor where the smorgasbord represents a participant’s perception of the major potential of Web 2.0 in relation to context and where the empty table is indicative of a context that a participant sees as entirely uncondusive to the use of such technology. Generally, the empty table metaphor applies to the perceptions of participants working in low-tech contexts. There have been perhaps three or four participants on CDDBL out of the fifty or so participants since the inception of the module who have perceived Web 2.0 as a smorgasbord. These participants work in mid-tech contexts and have generally excellent IT skills. They are all to greater or lesser extents bottom

up introducers of Web 2.0 in institutions that are generally receptive to their ideas.

We also characterize the way participants represent their context in terms of “considerations,” “challenges,” and “constraints.” We find that a participant talks in terms of considerations when they can see ways of using Web 2.0 technologies in their context, but where there are issues they feel they need to take into account, e.g. the level of the language learner in order to effectively do that. The word “challenge” we relate to when a participant sees obstacles to the use of Web 2.0, obstacles that they see as surmountable and where they can envisage themselves playing a role in overcoming them. We use the term constraint to signify times when a participant sees their context as hostile to the use of Web 2.0, and where they feel they have no power to alter that situation (once again such a perception of constraints generally, but not exclusively, relates to participants working in low-tech contexts).

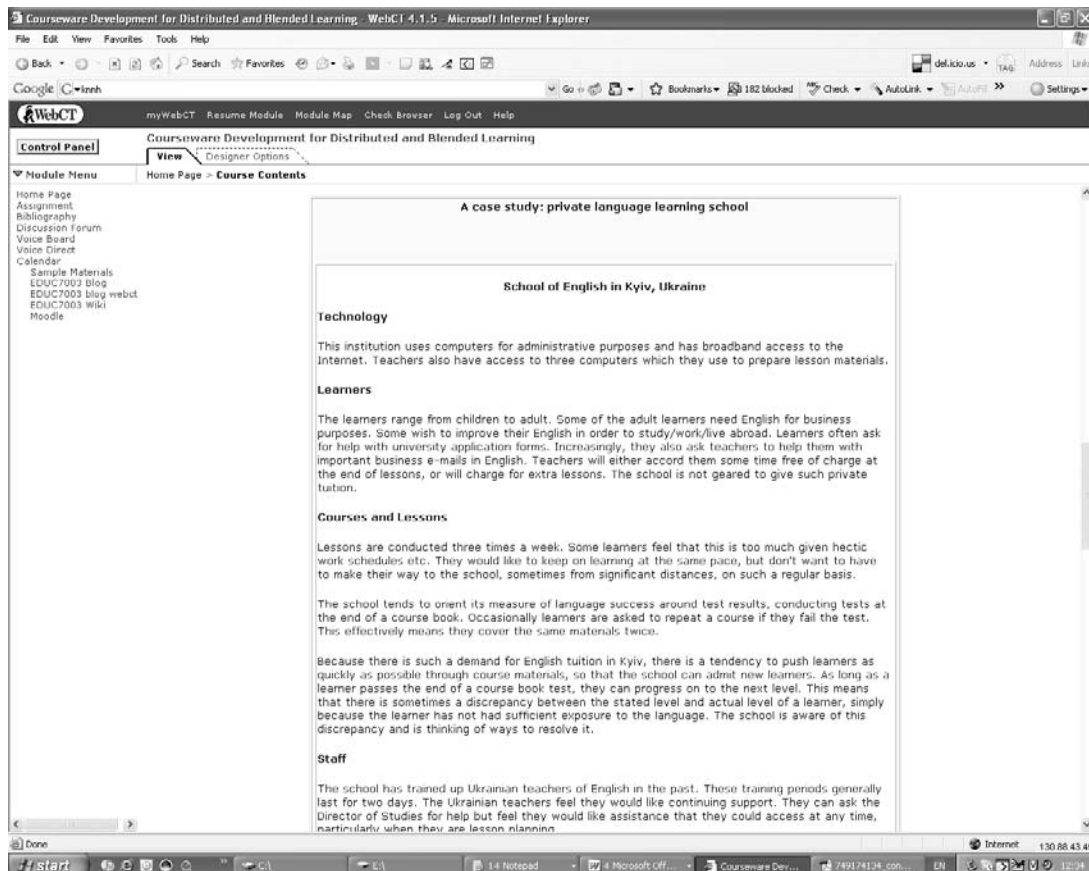
In whichever way we choose to describe participant perceptions of Web 2.0 in relation to context, such perceptions do seem to be the primary factor in how participants relate to and evaluate Web 2.0. In CDDBL therefore, we are

increasingly trying to steer our approach so that participants perceive strong connections between what they are doing on the module and what they will be able to do in context. While discussion of the literature relating to the use of such technology can give the participant a general sense of the possible value of Web 2.0, it does not seem to lead to those moments of recognition and connection when a participant “visualizes” themselves using the technology in a way that will beneficially address issues they have in their context or come to a keen understanding of why a particular Web 2.0 tool is not useful. A decision that a Web 2.0 tool cannot offer useful affordances for a specific context should be an informed decision coming from strong critical engagement with, and analysis of, the tool.

A CLOSER LOOK AT THE “CONTEXT APPROACH” ON CDDBL

We are using different strategies to facilitate the moments of recognition and connection which allow participants to visualize a role for Web 2.0 in their teaching. One of these is a “case study approach.” One facet of this approach is the use of a semi-authentic case scenario centering on a private language school. In this scenario (illustrated in three descriptions: see Figure 2 for the first of these) a number of issues are flagged. CDDBL participants are asked to think about the role Web 2.0 genres may play in addressing these. The issues relate, for example, to the number of face-to-face sessions the learners at the school are

Figure 2. Private language school case scenario



required to attend, which, given their busy lives and the location of the school can prove difficult, and to a pervasive testing system where learners who do not pass the test have to repeat exactly the same course book materials.

Along with the case scenario, we also draw on actual Web 2.0 courseware examples (see Figure 3 for the Web resource page containing these examples) which correspond to specific contexts. Where possible we try to obtain accounts from the courseware developers themselves about the way they have developed the courseware in response to considerations of context. Increasingly we are using courseware examples developed by previous participants on CDDBL and hope to create a bank of exemplars which address various aspects of context. Some previous participants on CDDBL have begun to use courseware conceived on the module in their local contexts and we hope that we will be able to tap into their experiences of this in

order to see how their evaluation of the affordances of Web 2.0 works out in practice. We hope that this will lead to the formation of a “community of practice” (Wenger, 1998) centering on the use of Web 2.0 for language education.

Another approach we are currently exploring to facilitate “moments of recognition and connection” relates to our “niche” evaluation of Web 2.0. Earlier in this chapter we described Web 2.0 as a malleable medium that teachers can harness to suit the needs of their local contexts and it is this inherent flexibility which is at the root of the niche approach. The emphasis in this approach is not on Web 2.0 tools as killer applications that will change the face of language teaching. Instead, we look at the intrinsic functions of Web 2.0 genres to get a better sense of how they may address specific and perhaps seemingly minor issues within various contexts e.g. a lack of time to develop process writing skills in face-to-face language lessons.

Figure 3. Courseware examples



Web 2.0 has a broad and expanding set of functions — that expansion of functions stemming from the loop development of Web 2.0 genres in response to the way users employ or wish to employ those genres. These functions resultantly offer a varied range of affordances for language education. We feel that the range of functions of Web 2.0 is well suited to a blended pedagogical approach.

An Exploration of Blogs

It is perhaps best to illustrate this emerging niche approach to Web 2.0 through a discussion of the functions and affordances of one Web 2.0 tool. We have chosen to focus on blogs to do this partly because the educational literature on blogs is currently more substantial than the literature on other Web 2.0 tools. This literature is beginning to analyze the increasingly varied nature of blog types and blog interactions and flesh out pedagogical approaches that relate to these. In doing so it usefully corresponds to our own emerging thinking around Web 2.0 and we can therefore discuss our approach in close relation to recent literature.

A growing number of articles on blogs in education discuss their role in fostering communicative and collaborative interactions (Belderrain, 2006; Cereirol & Myers, 2006; Efimova & Moor, 2005; Owen et al., 2006; Williams & Jacobs, 2004). Owen et al. (2006) define the interactional aspect of Weblogs as those properties that allow “readers to comment on postings, to post links to other blogs and through using pingback and trackback functions (which essentially constitute referencing systems between comments on different blog sites) to keep track of other blogs referencing their posts” (Owen et al., 2006, p. 41). Efimova and Moore discuss the “distributed” generally “spontaneous” conversational interactions which blogs can engender (2005, p. 1), conversations that are tightly associated with the functions of blogs, namely the “comment” feature, “trackback” function and

RSS aggregator. Efimova and Moor’s research into conversational blogging is particularly useful in its explorations of how specific functions of blogs may relate to the types of interactions that take place through it.

As blogging becomes increasingly popular new tailored blogging environments have been created that respond to and cater for changes in interactional types. Twitter (<http://twitter.com/>) and Jaiku (<http://www.jaiku.com/>) are both mobile blogging environments which support brief and frequent “What I’m doing now” type interactions. Such mobile software applications with their ability to provide for embedded/contextualized interactions may potentially offer “virtual and real-world support for social interactions and collaboration in a real-world context” (de Jong et al., 2008, p. 121). The thinking behind such interactive software applications may be juxtaposed with the thinking behind the “slow blogging” movement. The slow blogging movement has its own manifesto rejecting “immediate” blogging and the “disintegration into the one-liners” (Slow blogging manifesto, online) “what I am doing now” type blogging. It expounds, in contrast, an unhurried, reflective “speaking like it matters” approach to blogging which has its roots in the conception of blogging as a diary space.

We can see from such discussion in the literature that blogging may be used in educational settings for a variety of purposes serving to promote interactions and conversations of various types and reflective thinking that is not predicated on interaction. While blogging may be consonant with pedagogical approaches rooted in socio-cultural theory and therefore predicated on social interactions, it might equally support approaches that are not necessarily intrinsically connected with such interaction, approaches, by way of example, rooted in cognitive theory. On CDDBL we discuss how the various uses that blog environments can be put to and the types of user behavior they can engender can relate to the specificities of CDDBL participants’ teaching

contexts. To this end we are increasingly using terms which reference the specific character and variety of blog spaces such as micro blogs, slow blogs, soap blogs etc.

We also focus on the setting panel in blogs, an aspect of blogs that has been little explored in the educational literature. The settings area of blogs (the areas that provides customization functions) allows the blog owner to disable blog comments and trackback functions which can effectively seal a blog off from interaction. Comments can be approved or rejected by a blog owner before they appear on the blog and the owner can also determine who views their blog and who has a role as an author.

Knowing about these blog properties is important for teachers as they allow for a nuanced methodology in relation to context. Group blogs may be set up by teachers to allow the full range of interactions that blogs can afford, including learner permission to edit the blog. Learners can set up their own blogs and have full control of the permissions on that blog. However a teacher can take a more prominent controlling role of a group blog space, in order to facilitate scaffolded interaction. Such setting functions may prove useful in some contexts.

The participants on CDDBL who work in South Asian and South East Asian locations talk about the “teacher-centered” contexts they work in where the teacher is expected to be the “sage on the stage,” rather than the “ghost in the wings,” a metaphor for a teacher who plays a hands-off facilitory role (see Mazzolini & Maddison, 2003). Such participants, while they see major potential for a more learner-centered approach — which they view particularly as a beneficial means of developing fluency skills in English — council a carefully scaffolded approach which slowly introduces learners to greater autonomous peer-peer interaction (see the case study on Andrew Prosser). The setting affordances of blog environments can support that transition.

TWO CASE STUDIES

This chapter has discussed the reasons why a context-based approach has been adopted, particularly as it regards CDDBL participant perceptions of their teaching context. It has explored the way the context-based approach aims to help teachers critically evaluate Web 2.0 for their contexts by focusing on the flexibility of Web 2.0 and the range of pedagogical approaches it may be associated with. In what follows, ways in which two CDDBL participants have perceived the potential of Web 2.0 for their context are presented and their approach to harnessing the affordances of Web 2.0 tools to address aspects of those contexts explored. The two participants work in two diverse contexts. One of the contexts may be characterized as verging on high-tech and one as mid-tech. Both participants have called on the affordance of Web 2.0 tools in interesting ways to address issues within their context.

Vida Zorko: University of Ljubljana (Offsite Participant on the First Run of CDDBL, 2005)

Vida teaches English for Specific Purposes (ESP) and develops courseware for groups of sociology students studying at the Faculty of Social Sciences at the University of Ljubljana who receive ESP tuition as a part of their degree. Vida felt that a move from a “traditional” lecture-based approach to Problem Based Learning (PBL) (Savin-Baden, 2000) would better serve the students in their learning. She was instrumental in introducing that approach, an approach for the most part approved of in the Sociology Department. This inevitably required a change in ways of working, both on the part of teachers and students, and impacted on the ESP provision. Vida felt that the introduction of a wiki (in this case a pbwiki), which she considered well suited to the social constructivist learning that underpins PBL, could play an instrumental role in facilitating this change. She

combined the use of a wiki, in which students working in small groups solved real-life sociology related problems, with a blog space, which she used to co-ordinate aspects of the blended online and face-to-face learning approach and to offer advice and help when students encountered problems. The students could also access Web 1.0 html pages, which were used for the delivery of language learning resources and activities.

Vida felt that the role of the wiki would prove valuable in:

- Promoting peer-to-peer, teacher-teacher and student-teacher interactions necessary (as Vida sees it) for the successful institution of a problem based teaching approach.
- Increasing motivation by publicly displaying group products.
- Facilitating the sharing of knowledge among students and teachers.
- Empowering students with the authority to construct their own knowledge.
- Enabling teachers to better assess students' progress by monitoring the history of the process.

Vida felt that these potential collaborative affordances link to the following features of the PBwiki:

- An interface which is easy to modify to make it more transparent for users.
- 1-click access to all areas, thus promoting greater sharing of knowledge, making student and tutor contributions easily accessible and allowing tutors to better monitor student progress and to collate reoccurring language problems and deal with them in a face-to-face environment.
- The “whose online” and “edit” function that allow tutors to see who is working in the wiki at a given time, and to respond almost immediately to student contributions. From this perspective Vida characterizes the wiki as “almost a synchronous space.”

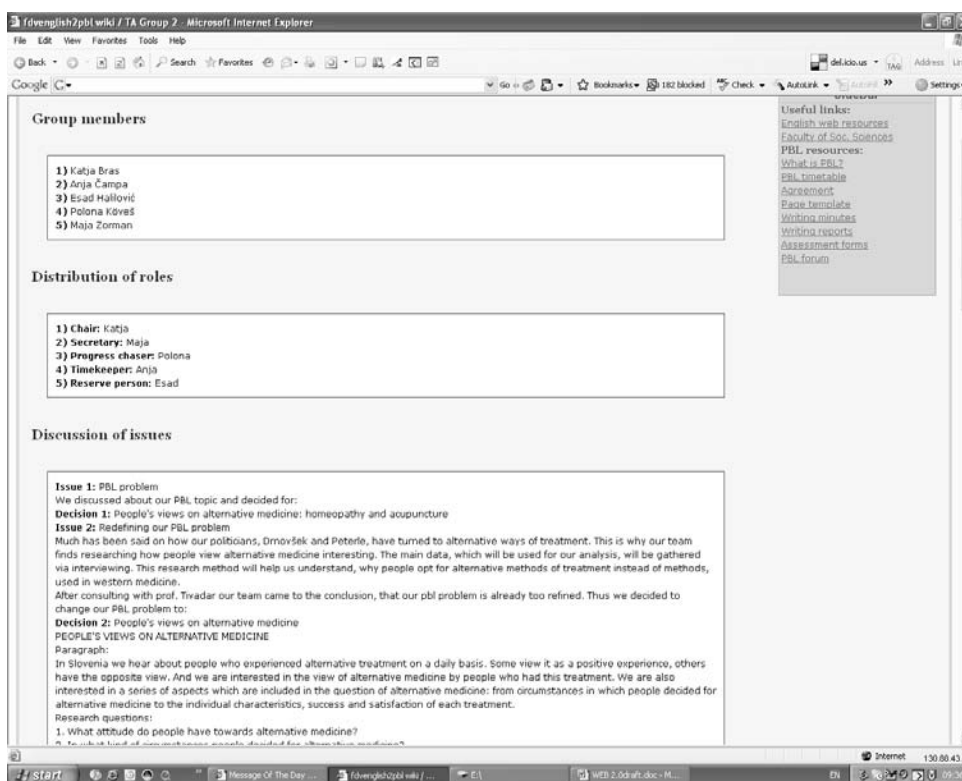
- A comment area that allows for easy dialogue between student and student, and student and tutor.

However, Vida was aware that such functions, in and of themselves, would not bring about the benefits she felt the use of a wiki would introduce. The student wiki pages all adhere to a certain format (though students can adjust that format themselves) that scaffolds the way the students work with each other, as in the example in Figure 4.

In Vida's case the “smorgasbord” metaphor referred to earlier in this chapter is entirely appropriate as she saw, as a participant on CDDBL, an abundance of opportunities offered by Web 2.0 for her context. She looked on wikis as a tool that with careful scaffolding could facilitate the PBL approach that she had instituted and support a sea change in ways of learning in the Sociology Department. The PBL approach adopted by Vida and the Sociology Department is generally perceived, in the literature, as consonant with the nature of Web 2.0. The Sociology Department was, moreover, amenable to Vida's ideas. In these respects Vida's context arguably offered fertile ground for the introduction of Web 2.0 and may have made it easier for Vida to evaluate Web 2.0 and envisage for it a concrete role. Nevertheless, the introduction of Web 2.0 stemmed largely from Vida's bottom up initiatives and efforts to persuade tutors of the value of the wiki. She saw this process as an enjoyable “challenge,” referring back to the three “c” considerations, challenges and constraints framework, rather than as a constraint that would impede the introduction of Web 2.0.

It is perhaps possible that the bottom up influence from Vida, and increasingly her fellow tutors, along with the top down department approval will conspire to normalize Web 2.0 in the faculty, making it the first context we have encountered where this is the case. Early indications through research Vida conducted for her MA dissertation

Figure 4. Example page of Vida's wiki environment



show that the wiki has proved valuable in instigating greater collaborative learning and is fast becoming a “normalized” tool (Bax, 2003a).

Andrew Prosser, Private Language School, Seoul (Offsite Participant on Second Run of CDDBL, 2006)

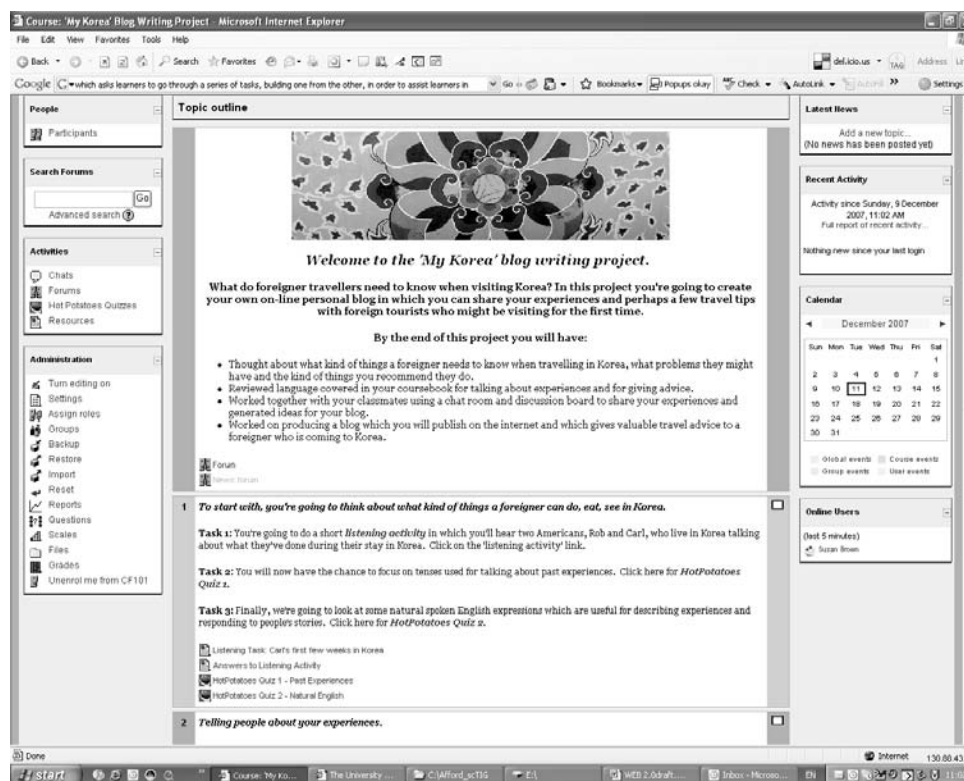
We might contrast Vida’s context with that of Andrew Prosser’s. Andrew’s is a mid-tech context and is in some ways amenable to Web 2.0 use in that his learners all have access to computers and have some familiarity with Web 2.0 as the majority of them enjoy blogging, a popular Web 2.0 tool in Korea.

It would, however, be an exaggeration to say that Andrew saw Web 2.0 in terms of a smorgasbord of opportunity for his context, particularly where Web 2.0 is associated with highly learner-centered, autonomous learning. Andrew described

his context as essentially teacher-centered, where the teacher is viewed as the “sage on the stage” (Mazzolini & Maddison, 2003), “transmitting” knowledge to be memorized by learners. He saw the value of a more learner-centered approach in encouraging greater learner autonomy and learner interactions which would, in turn, have dividends in terms of language development. However, he did not advocate a total shift to a learner-centered approach and argued that nudging learners towards greater autonomy would require a careful structuring of courseware. He had a cautiously optimistic approach to the value of Web 2.0 in such courseware but once again felt that its value would be highly contingent on careful scaffolding.

Andrew harnessed the popularity of blogging in his teaching context by creating courseware with blogs and in Moodle that would lead ultimately to the learners creating their own “tour-

Figure 5. Andrew's Moodle environment



ist guide to Seoul” blogs. He drew, in the initial stages of his courseware, on those affordances of Moodle and blogs that he considered in keeping with an “associative” instructional design approach to courseware design, an instructional design approach which is mainly tutor determined and uses a linear navigational design structure which asks learners to go through a series of tasks in order to assist learners in mastering a specific language structure or skill. To this end he created controlled Web 1.0 practice exercises in Moodle (see Figure 5), and a blog that modeled the way learners may approach their tourist blog. Through this scaffolding process he gradually shifted from a teacher-centered approach, to the more learner-centered blog task that tapped into the learner-centered affordances of blogs.

Andrew’s Web 1.0 and Web 2.0 meld and his perceptions of the potential of Web 2.0 for blend-

ing pedagogies in many ways constitute a “niche” approach to his own context.

CONCLUDING REMARKS: THE FUTURE OF CDBL

In choosing to focus on Vida and Andrew we have illustrated two contexts in which both teachers have envisaged a key role for Web 2.0 and successfully incorporated it into courseware. There is not scope in this chapter to explore case scenarios where CDBL participants have perceived the introduction of Web 2.0 in their contexts entirely in terms of “empty tables” or “constraints” militating against their incorporation. However, as we have discussed earlier a number of participants on CDBL perceive their contexts in these terms and we do not anticipate that this situation will change any time soon. This

said, if Web 2.0 continues to be integrated into the fabric of societies at its current speed then it is likely in the longer term that institutions and the teachers within them will increasingly need to negotiate their use. The issue then will be less one of “empty tables” and “constraints” and more one of how Web 2.0 can best be used. This may well engender the type of bottom up thinking demonstrated by Vida Zorko and the “niche” thinking of Andrew. Teachers may increasingly also need to negotiate top-down decisions about the use of technology and the extent to which the use of technology should be Web 1.0 based and Web 2.0 based. We hope that CDDBL will help participants see clear ways to play a role in, and negotiate these influences.

In the latest 2007 offsite run of CDDBL a small proportion of the participants were already enthusiastically using Web 2.0 in their contexts before the module commenced and are indeed bottom up initiators of its use. They have a strong grasp of the functions of the technologies, even if they have not greatly explored their pedagogical possibilities. By the end of the module all of the participants are actively contemplating using Web 2.0 technologies in their teaching and learning situations. Assignment presentations that we have viewed include: the use of online video to encourage better presentation skills for trainee teachers in Japan; the introduction of blogs to encourage more accurate writing skills in Mexico; the use of Moodle as a delivery platform to supplement in class activity; the use of Ning as a tool to increase participation in e-learning; the use of RSS feeds to support the development of learner autonomy in Japan; the use of blogs as an e-portfolio in primary schools in Greece; the use of Moodle, wikis and instant messaging to introduce a greater language element into cultural visits in the UK.

There will continue to be participants who view Web 2.0 with skepticism largely because they see their context as militating against its use. However, interest in the module grows and

assignment presentations show the inventiveness of the module participants, their increased ability to analyze their contexts, to bring theory to bear and to integrate a variety of Web 2.0 technologies into their teaching. We feel that the context-based, niche approach we are adopting, which we will continue to develop, will help to increase this interest and give our module participants opportunities to use Web 2.0 in ways they feel will enhance their learning context however minor or substantial these modifications may be.

There will continue to be debate and argument about whether Web 2.0 is somehow different and transformative in its very nature. We have argued here that, given its flexibility, which we see as conducive to a bended pedagogical approach, and the possibilities that it offers for breaking down the barriers between the real world and the classroom, it does have a different and possibly transformative potential. We have also argued that the potential for Web 2.0 goes hand-in-hand with the way it is harnessed by tutors/designers to suit local contexts.

It is clear that information/digital technologies are an increasing feature of net migrants’ lives and that for the generations coming through the ability to stay socialized via technologies will be a significant part of their identities. Of course, this landscape will continue to change and the elements on the table will constantly refresh, however, we believe that our particular approach will enable both ourselves and the module participants to deal with these changes in an informed and pedagogically appropriate way.

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KEY TERMS

Context-Based Approach: An approach that encourages teachers to have the confidence to creatively reflect on their teaching practice as it responds to the particularities of their own teaching contexts. Kumaradivelu refers to this as

a “teacher generated theory of practice” (2001, p. 541). This means that the potential of technologies cannot be evaluated in abstract terms but as it is interlinked with contextually appropriate practice.

Ecology (Teaching Environment): The teaching ecology refers to all the rich, interacting elements that create the dynamic of a teacher’s context. These may include top down societal, curricula and institutional elements and bottom up elements such as learner requests to use more technology in the classroom.

High-Tech Contexts: One where the use of technology is integrated into everyday life, so you would expect there to be easy access to the internet, probably these days through wi-fi; for the bulk of the population to carry mobile phones and for technology to feature strongly in the education system.

Low-Tech Contexts: Whilst the middle classes may have access to mobile phones and access to the internet at home, schools may only have traditional computer rooms which may not well be networked. Access to the internet for the general population is via internet cafes in urban areas rather than through wi-fi.

Pbwiki: One of a burgeoning number of wiki environments. The following page provides a useful comparative analysis of different wiki environments: <http://www.wikimatrix.org>.

Trackback/Pingback: Links that allow blog users to reference content on each others’ blogs. For example, say every learner in a class has their own blog and one learner embeds a video file in their blog about a trip they have been on, if other learners comment on the video in their own blogs and use the trackback function, this will automatically show in the blog of the learner who embedded the video. Note that blogger.com does not currently offer the trackback and pingback function

Chapter VIII

The Use of Communities in a Virtual Learning Environment

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ABSTRACT

This case study describes how a project-based approach offers valuable new opportunities for graduate students to equip them with the necessary competencies and skills for bridging the gap from university to company performance in English. The project focused on the development of a Web 2.0 learning community in a virtual learning environment (VLE) using Google. Throughout the project, a group of business and economics students reported to each other and to external experts about their progress. Google was compared to Blackboard, the official university VLE. Google does not score as well as on privacy and structure, but a qualitative results questionnaire revealed that it performs better as a learner-pulled VLE. Our Google community led to (i) intensive interaction in discussion forums in the target language, (ii) confidence building as to spoken and written performance in an international business setting, (iii) meaningful content learning, and (iv) successful project management skills. The strengths of a Google community lie in user-friendliness, interaction, and the application of new technological tools and means.

INTRODUCTION

At the latest Ascent meeting of Siemens, Berlin 2007, the new CEO was introduced as a leader who commands six languages and who had obtained his MBA in Hong Kong. To grow in the company, Siemens' managers have to take up several three-year assignments in a country abroad. Executives of different origins are sent abroad as well as Germany. At present, on the board of eleven, two members are not German. All board members are male. At the meeting, it was declared this situation had to change, as a core goal of management policy is leadership in an intercultural environment. At the same conference, a leadership guru, Dr. Jim A. Crupi, argued that the nature of planning lies in being visionary at "playing the new game" in the footsteps of companies like *Google*. These innovators seize new opportunities. For example, they "reward" their staff when a mistake is made. Their goal is to create fundamental change instead of optimizing performance. How they play is determined by "what could be" and not "by the rules."

Google, the site of the year 2007 in Flanders, is an appealing platform, not only challenging other companies but also students. They "*Google*" the Internet for information. But is this innovative learning within the "new game," or is this rather "the same game" as traditional learning?

In traditional learning, students are considered empty vessels who need to be filled with as much information as possible, which they are then able to reproduce at the right time, at the right place and social context, set by the teacher. Hence, the students plagiarize and "empty" their vessel to replenish it with new information. Companies, however, need people who do not reproduce what they are taught, but who are fast learners in a changing environment of diversity, also across cultures. Communication is a key competence in enabling them to sense what is at stake, relate it to the core goal and act accordingly. How can

students get access to this kind of leadership competence in a communicative perspective?

In a learning environment of Language for Specific Purposes (LSP), non-linguistic graduates need to enhance their opportunities not only to enter the labor market but also to acquire life-long learning skills in their professional lives. It is a concern shared by the *Thematic Network Project in the Area of Languages III*, a Socrates-Erasmus Program in 2006-7. The results of the project clearly show "growing awareness among all stakeholders — university management, students, graduates and employers — of the vital importance for graduate employability of language and intercultural competences and the ability to perform professional tasks and functions in foreign languages" (TNP, 2007, p. 10). Study programs that unite languages and a professional area may provide the necessary linguistic proficiency enabling professionals to function in their specialist area in target language workplaces as well as in the country concerned. The project report continues by stating that:

today it is considered essential for graduates to have generic or transferable skills to enable that they operate effectively in the European and global environments in which they will move, in other words, they need general skills for undertaking professional tasks and interacting in the workplace that are not subject dependent. Communicative spoken and written skills are of major importance and include interaction with and among teams, project management, presentation, negotiation, analysis, synthesis and focused writing as well as the ability to undertake activities via distance technology. (TNP3 Dissemination Document, 2007, p. 11)

In its recommendations, the TNP-3 project for higher education promotes the collaboration of education providers and companies to take up and consider the experiences, needs, and possibilities of both partners. The challenge for a

syllabus designer thus is to formulate meaningful tasks and to go one step further by creating a learning environment in which students fill in their own job description to prepare them to be future leaders who feel confident with English as their target working language. For young alumni, multi-tasking, project management, intercultural communication, and defining their own tasks are the most crucial steps to conquer as a beginner. Are they prepared?

Communication is a multifaceted issue. Educators in general realize the need to advance the quality of education and accept the strong role language plays. As teachers of language of specific purposes, however, we have to bear in mind that language is only a tool because the prerequisite for all communication is interpersonal sensitivity. In a Europe of twenty-seven member states but many more native languages, people need to preserve their national cultures and try to develop intercultural communication skills in their different languages, but obviously in English as the lingua franca. If we do not realize that everyone stresses their own culture in using English, we will not be able to communicate effectively in English. So, we need to become more interculturally skilled and use different languages for different purposes. For example, the staff of Air France, being merged with KLM (The Netherlands), is not motivated to read long non-technical texts in English but wants to use English for meetings; thus, the language strategy of the company should be customized for these different functions. A number of texts will appear in English, French, and Dutch, translated with the help of new technologies. These technologies facilitate automatic translation, networking, podcasting, tagging for keywords, and give us the opportunity to be more flexible and open to a customized and dynamic use of language(s) as a tool. Exploring the opportunities presented by Web 2.0 (Beaudin-Lecours, 2008) should be part of the methodological approach at university to facilitate a customized and oriented attitude in professional life.

At a business meeting of SAVE, a CIO think tank, in Luxembourg, in September 2007, the country manager of *Google* Belgium presented the beta version of new *Google* applications (*Google* Docs) and asked the CIOs present to try out the applications to test their technical impact as well as their user-friendliness and their effect on their own working environment. He showed how *Google* provides access to a number of good tools to enhance electronic communication (*Google* groups, communities, *Google* Docs). Sloganeering, *Google* claims that “good is good enough” for a customized approach. If more is needed, advanced software is necessary. *Google* wants to stimulate online communication and thus stimulates the multiple use of languages, visuals, and the integration of means, aiming at a customized *Google* platform. We found his suggestion for a working environment perfectly applicable in a learning environment and so we reconsidered the syllabus of our course of Business English for Graduate Students of a Master in Business and Economics. In previous seminars (Baten, 2003) and by participating in the Venus project of K.U.Leuven (VENUS, 2007), students had successfully been involved in videoconferencing using *Flashmeeting* and expressed their appreciation for creating new opportunities for learning, using Web 2.0. Both “how” and “what” they learn can be learner driven, also in a university context. The Internet in their daily lives is not a library in which the content is stacked in layers, as are their courses, but indeed a web of hyperlinks to which they contribute their content, in their own way.

Previously, addressing our students in October 2006, Peter Hinssen (CEO *Porthus.com* and founder of *A-cross communications*, and *Neogroup*) claimed that “content is king” in a Web 2.0 environment as it is the customer who writes and creates. The message is customer driven and the medium becomes the message. At the recent conference of the *European Association for Research on Learning and Instruction* (EARLI,

November 2007) on Learning and Instruction for the New Generation, in their respective workshops, Tom Van Weert and Debby Goedknecht claimed the necessity of a new professionalism in lifelong learning, knowledge development, and knowledge sharing in the same words. They showed examples of a project-based approach for learning with engineers and architects (Van Weert, 2007).

University and business indeed meet in this respect. The call for innovation and confidence displayed by Mr. Hinssen and the wide openness of Web 2.0 strongly appeals to students. For seven years now, our university has used *Blackboard* as a learning environment. However, its discussion forums, data exchange, and interaction are not well exploited because the platform is still Web 1.0: it is hierarchically structured, driven by the teacher and not by the learner. The content is for the students' use, but it is not theirs, and neither is the channel nor the message. Announcements are hardly read, knowledge hardly shared. This environment does not seem to incite communication in a professional setting. Should we take the opportunities *Google* offers as a case to test these so-called Web 2.0 characteristics (democratic, non-hierarchical, simple, read/write web)? It is a search, in line with Ohmae's above quoted citation in his book on challenges and opportunities in our borderless world.

So, we challenged the graduating students on the course, "Business English in an International Context," with the following proposal. Can we build and organize our own learning community in *Google* and make it our authentic working environment, exchange views and opinions in English in a discussion forum, publish and evaluate our own training (for improving presentations, meetings, intercultural, and writing skills)? Furthermore, can we take stock of and maintain our individual language portfolios (Baten & De Sweemer, 2006), even after graduation, for use in future job applications and as a tool for language proficiency? Let us find out how the new *Google* applications

and *Google* approach actually function in a business context and report on this by using *Google* and inviting CEOs to our class. Let us manage our own online communication project and learn how to communicate in English in this project. In short, our seminar itself is our community project in which we learn to manage in a VLE.

In this chapter, we will first present the research questions, then elaborate on the procedure and community, and follow up with a report on the results of the conducted qualitative survey. Finally, we will discuss which learning community gained ground with the students and which lessons can be drawn for language learning in a business-university setting.

METHOD

Research Question

The current learning environment faces serious shortcomings in interactive, learner-driven learning. Can we develop an alternative VLE in a *Google* community?

Practical Application and Use of Web 2.0

The project was undertaken by one tutor and a group of 27 master's students of the Faculty of Business and Economics of Catholic University of Leuven (K.U.Leuven, Belgium) in the fall semester of 2007. The K.U.Leuven and its association, of which the Vlerick Business School of Management is ranked 97 worldwide (The Economist, January 28 2008), has about 77,000 students. The Faculty of Business and Economics has about 4,000 students. Language classes are outsourced to the Leuven Language Institute (ILT) providing for obligatory and optional courses. The course in which this project was run is called English IV, DOT 38, an optional and advanced course of Business English (26 contact hours, three study points). The seminar is open to all

graduate students of the faculty, which results in a rich range of majors (e.g., IT, international relations, finance, marketing, accounting etc.) and interests (for studying or work purposes, for remedial or proficiency reasons). All students are (made) acquainted with the Common European Framework of Reference and the European Language Portfolio ELP (a prerequisite) and are aiming at C1/C2 levels. Most of the students only had superficial contact with each other, or did not even know each other prior to the course. One student was a native speaker of Chinese, two were native speakers of French, three were near native speakers of English as they had resided in the US or the UK as a child. All the other ones were native speakers of Dutch, with an average of 8 years of English as a third or second language.

The project consisted of the following core activities for the students:

- Creating a MEDIUM
 - Organizing their own *Google* community for exchange and collaboration.
 - Trying out the beta *Google* applications and approach.
 - Establishing a document repository for group knowledge sharing.
- Conveying CONTENT
 - Training each other in online communication, presentation, meeting, intercultural, and writing skills for business purposes.
 - Documenting and publishing course material (text, audio, video). The creation and sharing of knowledge has to flow bottom-up, including assessment (peer and self-assessment) and reporting (of visitor's performance and own performance).
 - Maintaining individual ELP portfolios (language and intercultural) and making them available for professional use, also after graduation.

- Managing a PROJECT
 - Group based delivery, performance and evaluation.
 - Reporting on project development and content by allying with Google and in face-to-face contacts with CEOs in class.
 - Conducting a survey on the outcome of their own Google learning community and on its comparison with TOLEDO/Blackboard, the current VLE at K.U.Leuven.

The tutor did not want to declare herself project coordinator as she refrained from giving out task descriptions and assignments. She set up a roadmap and a timeline for individual tutorials, group training sessions, class visits by CEOs, and briefing sessions. She worked process-oriented in preparatory meetings with subgroups to stimulate the results, and provided models, tools, and tips for didactics as well as useful content aiming at a quality-driven output in class and online, in a business styled English. The tutor shared her expertise in project management involving in discussion forums but insisted on a bottom up approach, sharing management with ten other students. For example, students themselves welcomed and introduced the CEOs and led the discussions instead of the tutor. Only when too difficult a problem emerged, such as Web space, did she provide the solution. In all other cases, problem solving was in the hands of the students. Whether the objectives formulated in the syllabus and in the individual proposals were met, was tested by means of individual appraisal talks at the end of the course. Students presented their own showcase as it was reflected in their published portfolios and their contribution in the community.

The basic skills and competences students wished to improve were in the realm of writing (business and academic writing), speaking (presentation and argumentation), listening (varieties of English) and reading (for professional and en-

tainment purposes) in an international setting. In fact, all of these had already been dealt with in previous courses. Repeating what has been acquired before but lifting it to a higher level is a basic means of learning. How to apply the competence in practice (integrate) is the challenge. Therefore, the approach of our course was double: learn on an individual basis (and get feedback in tutorials and in class performance) and in a community. For example, to increase presentation skills, students had to start by giving a short plenum introduction to their thesis topic. They had to do so in a large college room (seating over three hundred people) with the other members of class spread over the hall. The purpose was to help them overcome stage fright and speak in a formal, dense way about a topic of their professional concern they were well acquainted with. The presentation was videotaped and added into the community for on-line peer assessment. Students received feedback (by means of presentation review forms selected from the web and a checklist provided by the tutor) from each other and the tutor. They had to write up their individual speaker's profile with a SWOT analysis for their portfolio and tutorial. Some weeks later, during their class performance, another presentation (in team, using *Google Docs*) was given, again recorded and evaluated. In the individual tutoring session, if necessary, personal hints and specific (online) exercises were provided. As such, by repeating the same activity, but in a different context, for different purposes, students acquired insight how they were perceived by others and gained confidence. The authenticity of the tasks played a major role: students were communicating their own experience and ideas, especially with the visiting CEOs and with each other. The Siemens CEO was asked to comment on presentations which were part of a job interview. Students of the intercultural workshop had made recordings of foreign students and Flemish students introducing themselves. They asked him on what basis he would shortlist some of these. They really wanted his opinion. In the subsequent

presentation, he dwelled upon his own career experience in an international context. Thus students could compare their performance and content with his.

These practical exercises were taking place in the middle of the project and strongly contributed to networking among students. Face-to-face interaction and online interaction complemented each other. Workshops in class started to change as well: instead of delivering *ex cathedra* presentations, students learned how to pull the strings of interaction by setting up surveys on the community prior to a workshop, by conceiving and discussing cases and by inviting foreign students to join in. For example, the writing workshop took place in a computer classroom and was originally planned as a webquest (Baten 2007). However, the trainers in charge wanted to go one step further and they set up a learning path with an annotated selection of websites pertaining to the actual purposes and writing problems of students. The participants in the workshop claimed it was one of the best workshops on writing.

Although students could have made more advanced use of Web 2.0 applications like *Del.icio.us* or *Slideshare*, they were not pushed into technology and tools for the sake of it. Those who wanted to further acquaint themselves with the matter indeed did so on an individual basis for their portfolio (e.g. exploring semantic webbing for their vocabulary expansion) and shared the result on the community (Tella, 2004). As mentioned above, the purpose of the tutor was not to impose tasks, but to incite students to explore a new terrain, at their own speed, with their own input as to content and purpose. If Web 2.0 opened a new paradigm for users to take accountability for their content, then this seminar would be the setting to try this out in a student-driven way. In view of becoming more confident in English for business purposes, they were only asked to select their own content and organize it in the community in a way meaningful to them. The *Google* functions would assist them.

Google Docs and discussion groups were presented to the students as Web applications, free, constantly updated, independent of any software or hardware, available in several languages. *Google* Docs is accessible anywhere, anytime and hence interesting to try out when collaborating as a group. Comments made by the students on the beta-version would be taken seriously by *Google* Belgium as the country manager engaged himself to visit class and assign one staff member as part of the community. The latter also gave the necessary confidence to the tutor to start it all up as for her a lot was new as well.

The outcome of the project on the community was 27 personal ELPs, more than two hundred files including reflections and peer assessments, a new ELP for intercultural competences (<http://lolipop-portfolio.eu/>), surveys and project management reports, published training packages and manuals for *Google* applications, audio and video publications of their own work (presentations, workshops, introducing and briefing CEOs), semantic webs on their own target vocabulary and a personalized and intensive discussion forum in English.

Procedure and Inquiry

The project was presented during the first class meeting. Upon approval by the students, the class split up in groups to assume responsibilities for content, design, reporting, evaluation, maintenance of the site, and management of the project. A project management group of ten students was established. It set up the community, invited the other students to become members, and organized the site. This group was a mixture of IT students and others, male and female. Three other groups were responsible for online and face-to-face training (on presentation skills, intercultural competence, and writing skills), exploring *Google* Docs. All groups had to report but one group in particular would report to *Google* and the visiting CEOs and another had to wrap up the findings for this paper. They conducted a satisfaction survey of the

project and the community within the class. As such, the whole class and the tutor were involved in five different stages of project management: brainstorming, forming, setting norms, operating, and wrapping up. The final result was each group's accountability (individually reported on in the language portfolio and in the ensuing final appraisal talk with the tutor).

The project can be subdivided into three major stages. In stage one, the community and presentation groups joined forces to try out *Google*'s version of PowerPoint, embedding multimedia documents to present their first views of the community's interface. Stage two was dedicated to compliance (setting norms) and took place together with training (operation). The third stage pertained to reporting and documenting. Action and evaluation were inherent to every stage in the project, resulting in peer and tutor assessment, not to break down what students had done, but rather to stimulate each other in constructing a learning community. In the end, in the workshops on presentation, intercultural competence and writing, the groups in charge tried to select from the web what was useful and apply it to improve communication skills in a student-friendly and efficient way. Enthusiasm and belief in the project grew as the management group developed a better interface and could publish guidelines for the others to join in. As the training and reporting groups gained appreciation, not only from each other and the tutor, but also from the visiting CEOs, confidence grew and more tools were explored and used.

Stage 1: Brainstorming and Forming the Community

The title of the community was chosen by the students: English IV, taught by Lut Baten—*English4Lut*. The first screen in *Google* presents an overview of all recent elements: new discussion topics, new members, and new pages and files. All these elements were created by students, which

stimulates interaction, reaction, and collaboration. The content was entirely learner-driven, with the tutor at the same level as the students. In addition, the layout of the community was appealing. Automatically, content is linked to members; members can be directly contacted. Communication is supported by the system itself, as there is an option to receive messages in a personal e-mail inbox and then directly respond to individual mails. This approach highlights *Google's* main strengths.

In contrast to the first screen in the *Google* community, the first page in the adopted Blackboard environment, called Toledo at K.U.Leuven, presents an overview of the teacher's latest announcements, which immediately reveals its teacher-driven nature. When comparing the discussion environments, it is striking that *Google* (Figure 1), in contrast to Blackboard, has an interface which is more inviting and more easily accessible with standard graphics, stimulating communication.

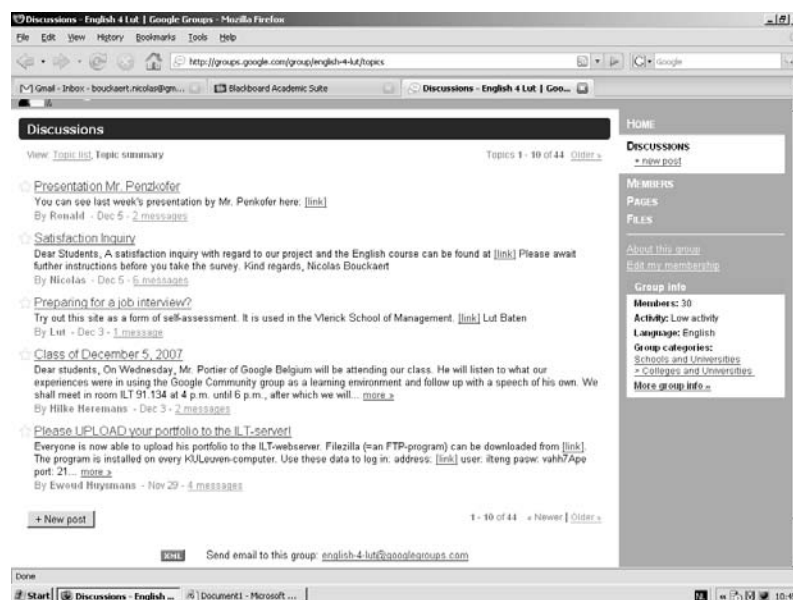
Blackboard's discussion forum (Figure 2), on the other hand, is not easily accessible, shows little activity, and does not appeal to students at all.

The tutor has to organize all groups and manually add all names, which is time consuming and illustrates the top down approach. In *Google*, students are members when officially registered and they organize themselves.

Stage 2: Compliance and Operation

As the project proceeded, training sessions were administered for which the community was used to invite, inform, assess students and share knowledge. It was soon clear, however, that *Google* offered little structure. It is difficult to find the required files and create a convenient arrangement in the pages section. For uploading documents (e.g. streamed presentations) the expertise of the IT members was required. Longer and individual portfolios apparently took up too much space (only 100 Mb for 27 students is not enough), thus shortchanging the students. Privacy also suffered. Students wanted to keep preliminary work within

Figure 1. A discussion board in Google



the subgroup or the personal file, and not share it before it was final. *Google* did not provide the privacy of Toledo. The latter is more tightly structured and has several navigation possibilities. It was reported to *Google* in November that neither of them had a well-developed search function. In response, in the updated version of January 2008, *Google* inserted a search function.

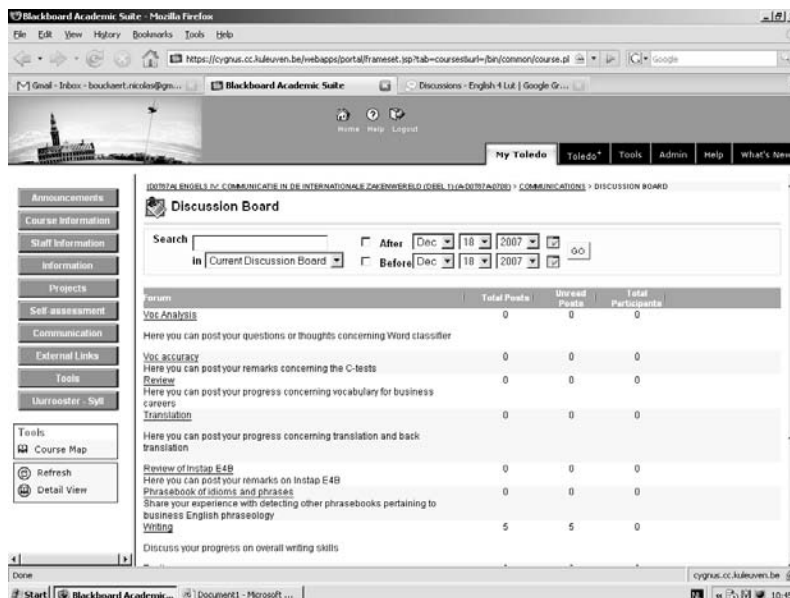
Students used the *Google* platform to publish their materials (see supra) and explore useful tools. For example, the survey group wrote a handout about how to work with *SurveyMonkey* (www.surveymonkey.org) and used the tool to research the quality of the project. The community group published a manual for uploading portfolios and files and individual students spontaneously teamed up by sharing their preparation for GMAT and TOEFL tests. The class group actually applied knowledge sharing to learn from others. The discussion forum was an efficient and vivid means of communication. Online performance reviews contributed strongly in raising the standard of quality for the training as the course evolved.

Stage 3: Reporting and Documenting

The first real life performance of the community took place with the visit of Mr Penzkofer, CEO of Siemens IT Solutions and Services in Belgium. The next real life event was the debriefing of the project reporting group to Mr Portier, *Google* Country Manager of Belgium. The group critically approached the *Google* community device and elaborated upon their work and project management. Then Mr Portier gave his own view and vision for the future and opened their minds as to applications. His inspiring talk gave the necessary motivation for the students to respond to the online qualitative results questionnaire conducted by the paper writing group.

This “satisfaction inquiry,” a qualitative results questionnaire, was set up online to (i) assess the performance of the *Google* project (their opinion of the project), (ii) gain insight to what students considered essential for a well-developed VLE and (iii) compare the potential of the *Google* community with a well-known benchmark, i.e. Toledo-Blackboard. The survey consisted of

Figure 2. A discussion board in Blackboard



statements using a five-point Likert scale. The higher the scale, the higher also in the degree of agreement to the question claimant.

Results

Objective 1: Opinion of the Project

The survey was divided into two parts. Students were first asked to assess the project as a whole, its outcome, the ability to publish material on the community, and the tutor. The second part of the survey pertained to the VLE as a whole. As to the first part, Figure 3 indicates that the project was meaningful (60 per cent chose rating 4.2 indicating that the project was meaningful).

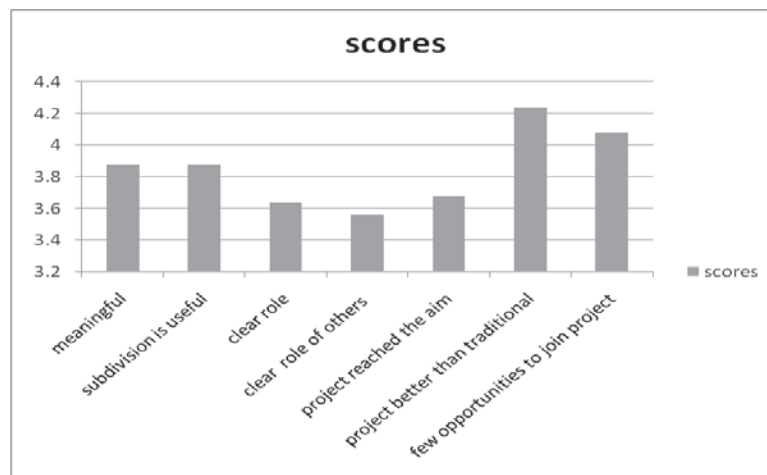
The applied method, of splitting up in groups was likewise appreciated (64 per cent). Students also clearly perceived their role within the groups, even though they were not told what to do or how to proceed (40 per cent at a rating 4). Question 6, “I found the project a better learning method than the traditional teaching method,” and question 7, “We get too few opportunities at the university to participate in projects,” achieved the weighted

average ratings 4.24 and 4.08 respectively, which is significantly high.

As to the outcome of the project, 50 per cent of the students gave a score of 4 to the question whether the project was a good way to improve their English skills. 45.8 per cent also gave a rating of 4 for improving competence as to project management. Students remarked that they had not conducted any project and had not received any seminar on project management throughout their university training. Since young alumni (see above) claim one of the most necessary skills in professional life is project management, university curriculum developers should indeed make an effort to bridge the gap to professional life. Moreover, students also became aware that they were not acquainted with new technology tools (e.g. SurveyMonkey or Google Docs) and that they had not developed an attitude of exploring the opportunities that modern technology offers. Some felt like “computer dinosaurs” at the age of 23, as seen in the lower rates for publishing their materials on the community in Figure 4.

On the whole, students cared much more for the quality of their content than for the method of presenting. In the reporting stage, they referred

Figure 3. Opinion of the project as a whole



Note. The score represents the weighted average on the five-point Likert scale.

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to the latter as a shortcoming and pointed out that this item should be improved in the future.

The community members also assessed the role of the tutor in the VLE, revealing a flexible, intuitive, innovative, creative and persistent profile. Next to that, a high level of collaboration, interpersonal skills for creating opportunities to communicate and share knowledge and experience are required. The average rating here was 4. Being supportive and willing to help was rated highest (62.5 per cent of the students gave rating 5). Being systematic, focused, organized and hardworking varied between 2.83 and 4.17.

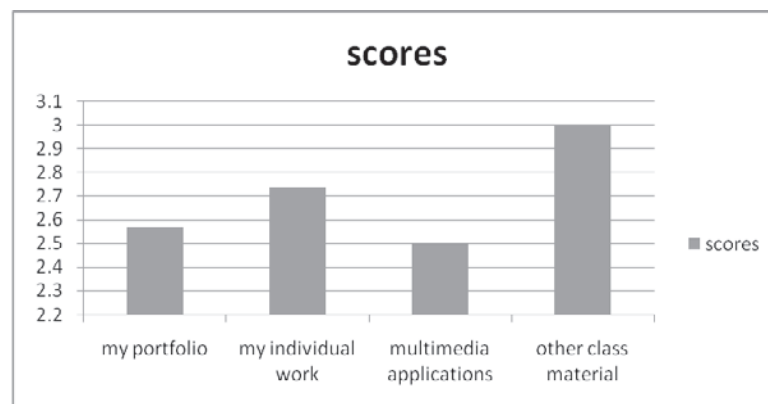
Objective 2: Requirements of a Virtual Learning Environment

The importance of various requirements was also assessed on a five-point Likert scale, which allows the calculation of both a weighted average and the standard deviation for each element. Based on the answers, it was possible to draw up the top five characteristics that English IV students considered essential for a VLE, ranked in order of importance: user-friendliness, the need for a clear and simple structure and easy navigation tools; third, a good and easy way to communicate; finally, integration with other student applications

and support for student-pulled learning complete the top five. Privacy, on the other hand, is considered least important (Table 1).

In conclusion, all characteristics significantly score above average and have consequently been identified as relevant to learning environments. The top five distinguishes itself with a high score. It is striking that the students prioritize those “human aspects” that facilitate their own interaction with and in the learning environment (the top 4) over the elements that actually improve and/or add another dimension of learning (such as elements 5 and 8). The standard deviation reveals that the opinions pertaining to communication, participation and most other elements are aligned. On the other hand, opinions about privacy and the up-and downloading of course materials differ. Some students argued they would only show all their materials when all the others had done so as well. As the community documents are freely accessible, plagiarism is easy. It was therefore decided to make links to a separate Web site on the K.U.Leuven server (www.kuleuven.be/ilt/English4Lut) in which all individual documents could be posted by the students in .pdf format. Thus the Web-space problem for the recorded speeches was also solved. As this site is password protected, a clear warning was given to students

Figure 4. Publishing on Google community



Note. The score represents the weighted average on the five-point Likert scale.

Table 1. Requirements of a learning environment

Rank	Element of a learning environment	Mean	SD
1	User-friendliness	4.65	0.58
2	A clear structure and good navigation tools	4.58	0.77
3	An easy means of communication	4.50	0.51
4	Integration with other student applications	4.45	0.68
5	Supportive to student pulled learning	4.40	0.60
6	Stimulation of participation and interaction	4.26	0.55
7	Uploading and downloading of material	4.14	0.96
8	Supportive to new learning techniques	3.89	0.79
9	Privacy	3.83	1.39

Note. The score represents the weighted average on the five-point Likert scale.

Table 2. Strengths and weaknesses of Google Community

Strengths	Performance	Weaknesses	Performance
An easy means of communication	4.20	Privacy	2.67
Stimulation of participation/interaction	3.95	A clear structure & good navigation	2.67
Uploading and downloading materials	3.80	Integration with other applications	2.70
User-friendliness	3.52	Online publication of e-portfolio	2.86

Note. The score represents the weighted average on the five-point Likert scale.

that an ethical business attitude was expected. They could consult each other's work, but not copy it. In Table 2 the strengths and weaknesses are further laid out on grounds of the answers received.

This site also guarantees all ELPs remain available, also after graduation, a service Toledo does not provide.

Objective 3: Comparison Google Communities vs. Toledo-Blackboard

The potential of our Google community was compared with a well-known benchmark, Toledo-Blackboard. Table 3 shows the preferences for each environment.

The table shows that first, there is a high correlation between a preference for Google communities and Google's main strengths, i.e. aspects of collaboration, communication and interface. Second, there is a high correlation between a preference for Toledo and Google's main weaknesses, i.e. structure and integration. Third, although Google communities have failed to provide a good setting to publish portfolios, it is still preferred over Toledo-Blackboard, in spite of the fact that software was specially designed to publish portfolios in Toledo. This really indicates a perceived gap in the usability offered by Blackboard.

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Table 3. Preferences Google versus Toledo

Google	Google (%)	Toledo	Toledo (%)
An easy means of communication	85	Privacy	66.7
Stimulation of participation/interaction	78.9	Clear structure & good navigation	54.2
Uploading and downloading of materials	65	Integration with applications	50
Supportive to student pulled learning	50		
User-friendliness	47.8		
Supportive to new learning techniques	47.4		
Online publication of an e-portfolio	40		

Note. The score represents the weighted average on the five-point Likert scale.

A majority of the students believe it is worth resuscitating the discussion forum of Toledo-Blackboard. It should be possible to make the discussion forum more easily accessible in a new structure and link it to a chosen e-mail address so users can receive all messages in their inbox as is the case with *Google* communities. However, a large minority takes a black view of the chance that participation and interaction will ever become Toledo's strengths. Toledo's structure is too hard and the concept too teacher-driven to facilitate a vivid student contribution. *Google*, on the other hand, is not interested in putting a lot of effort into anything else than standard applications. Up till now the integration of their software packages has fallen short. Only a few believers among the students look forward to an (considerable) improvement of *Google* communities, although a recent update by *Google* shows substantial improvement in their applications and a call to users to forward suggestions. Most students also believe that our present *Google* community can be improved as a learning environment if perspectives are widened and *Google's* most powerful applications are better combined, e.g. uploading the recorded presentations in YouTube and linking it to the community. However, this

would only mean an incremental improvement to the existing learning environment and as long as integration is not achieved, students fear that their efforts will be hampered. So, while our learning community can be improved by a well-considered use of *Google's* best applications, students are pessimistic about the practical realization. It is an issue that needs follow-up.

All in all, the *Google* community is the preferred platform with regard to seven characteristics of a VLE, whereas Toledo-Blackboard is only preferred on three characteristics. This may be an indication of either the superiority of *Google* communities or of the shortcomings of Toledo-Blackboard. In a comparison of Blackboard vs. Moodle carried out at the Humboldt State University, Bos, Munoz and Van Duzer (2005) reveal similar student satisfaction in favour of Moodle.

DISCUSSION

One of the driving questions at the start of the project was the learner-pulled approach. Although the tutor openly gave the students the choice to either step into the project or to proceed in a more

traditional way of learning, a substantial number of students remained indifferent to the approach (Initially, 47.4 per cent of the students expressed no preference for new learning techniques and 30 per cent were indifferent to student pulled learning). Students at K.U.Leuven are not used to this different learning method. They are either left uninspired by the new style to assess and rate the respective platforms or lack experience/understanding to do so. One might wonder whether this attitude confirms the public opinion with eighteen-year old students that the K.U.Leuven is the most highly regarded and best university in Belgium (Conservative University, 2007) but also the most conservative one.

One might question whether the above reflection on the K.U.Leuven is typical of Flemish cultural heritage, including Flemish work ethics. From our own experience with trainees in exchange abroad, we can say that Flemish trainees usually ask for a more authoritarian approach to training and that their learning style is more curriculum driven than learner need/interest driven. Learning environments like the one we described here, are based on the assumption that the learner firstly has a desire to learn but is secondly able to judge the content of what is to be learned. The learning community represents a totally new learning strategy to students and may conflict with their experiences from school. It incites input from the students and for a learning process in which there is personal feedback and which is personal as well as group oriented. In such learning networks, there is room for experimenting and for improving learning as the network develops. It is not structure that dictates interaction. It is the creativity of the group that creates a functional structure and procedures to achieve results. And in the end, it is about human beings finding each other. Social networking is the main strength of Web 2.0 and cannot be stopped in an educational context (Beaudin-Lecours, 2008) because the content comes from the students themselves.

In passing, the idea of learner driven studying is not so new after all. In the universities of antiquity and even up to relatively modern times learning was entirely student driven and nobody told the student which lectures and seminars to attend, which books to read and how to pursue their studies in any other way. Only at the end did they have an examination and if they failed this they knew that they had not made the right choices. Only over the last 100 years have our universities more and more become knowledge-reproducing factories and current political interference does little to reverse this trend as a result of which graduates are more often not the mature individuals we would hope them to be.

The pilot project revealed the wish for a user-friendly and collaborative learner-driven learning environment. A clear outcome of our project is that both *Google* and Blackboard/Toledo suffer from serious shortcomings making neither an ideal learning environment. Students disapproved of mixing both. There is considerable doubt in the group that Blackboard/Toledo will provide an appropriate discussion forum because of its rigidity and its teacher-driven approach that do not facilitate student contribution. It provides for an administrative structure in which large groups of students (over 400 in many cases) can be reached. But it does not allow this group to be creative within the structure. A learning community is a network sensitive to communication and to creative actors. In our project, we have taken the *Google* community one step further: we have created learning in a network, not just learning in an environment. During his visit, Mr Portier remarked that *Google* had not conceived of such an application, but he applauded it. So, the problem lies in networking. It can be addressed in two ways: either improve on the present tool or search for something better. The latter would mean to either continue the search for a different platform or to improve Toledo or *Google*.

When students were asked whether another project should be set up, combined with a master

proof, to search for different platforms and to compare these to *Google* communities they all claimed it would be very useful, especially to develop software for integrating the different applications in *Google* rather than an integration with Toledo. The development of integrative software for *Google*'s different applications is considered an attractive research topic. As mentioned before, a large majority thinks that integration adds value to a future learning environment. They actually applaud the idea of involving the informatics students in the improvement of the university owned systems. They have valuable experience as "customers" and could add value to the outdated Web 1.0 system and the Web 2.0 opportunities. In that respect, students would also appreciate more openness and go beyond the confines of the university, e.g. in a common VLE with native speakers of English and business life, which confirms the strife of the European Commission.

Google communities with a standard interface offer a user-friendly and easy-to-learn environment, which is very important to widen a project outside the university walls and within an individual's own learning. In our project, *Google Docs* were used as a Web 2.0 platform for conception, editing, presentation and sharing of content. The discussion group function facilitated the acquisition of knowledge in a learning community. It was not our aim to try out as many functions as possible. Adhering to the German proverb "in der Beschränkung, zeigt sich der Meister" [mastery is shown most clearly when restrained], it is more valuable to experience success with an experiment on a smaller scale and consequently build confidence than to create frustration with too wide an experience. It is only a small step for students to explore other Web 2.0 functionalities, and use them as they need them in practice. In the end, students have gradually become the new generation of "digital natives," outgrowing the "digital immigrants" their instructors still are (Prensky, 2001).

CONCLUSION

In this case study, we have described how we conducted a student project in which we set up our own virtual learning community, which would stimulate interactive and learner-pulled learning. Improving English communicative competences in an international business context was our primary goal followed by familiarisation with the means of business communication (Bové, 2007). We tried to contrast *Google* as a new means of building a student driven VLE versus the traditional Toledo / Blackboard approach used in K.U.Leuven. This project showed ease of communication and stimulation of interaction as *Google*'s main strength and as its weaknesses highlighted lack of structure, privacy and integration. With Toledo the strengths were clear structure and ease of navigation but its weaknesses lie in not stimulating interaction and being teacher driven.

Another learning outcome came from using *Google*'s applications in different assignments, such as presentations, workshops, webquests, recorded speech and video, found challenging by most students. As it may be clear from the results above, students confirmed that their English had improved substantially because of the confidence they had built by interacting with each other and with external experts in a business like setting. The authenticity level of the project was high: they managed a real project, with real CEOs and foreign students visiting class; a real briefing took place, and real problems concerning training, interaction, assessment and publication had to be solved. Students actually learned how to manage a project, which is a skill unfortunately lacking in the university curriculum, to our own surprise. They were involved with the contents of the course as it was theirs: the creation and sharing of knowledge flowed bottom-up, not top-down. Content was presented in their own way.

Students also discovered the opportunities modern technology offers for a better output and

a better quality in soliciting, presenting and exchanging information. Thanks to peer and self-assessment, they learned from each other's mistakes and asked for each other's help via the discussion form. Hence, they became aware of how their respondent received their communication, also in an intercultural surrounding, and why it was not optimal in some cases. How they could improve communication themselves became the target of their learning, as reflected in their language portfolios. Students also expressed the need for their tutors to change in their attitudes to a likely learning environment, mentoring in a process and result-orientated way. From the survey, we can conclude that students of the new generation want to communicate "in the new game" provided the human aspect is respected.

The content of our project focused on setting up a learner-driven environment in *Google* and comparing it to the existing Blackboard tool. In short, the strengths of the *Google* environment can be grouped into two clusters — "what" and "how." *Google* communities are an excellent platform to communicate, interact and participate. *Google's* dynamic environment enables student collaboration. It allows and stimulates students to create, share and discuss content themselves. The input comes from the students who are also responsible for managing the environment. The "plug and play" function enables easy and regular communication with other people in a business or academic setting and widens perspectives. Thus the human aspect is well-developed, which is crucial for learning how to tackle interpersonal sensitivity in communication. As such, rather than studying a VLE, learning in a community ("a learning network") should be the focus of a future class.

When studying the weaknesses of *Google* communities, it was hypothesized that privacy would have been a shortcoming. *Google* believes in sharing content all over the Internet. Initially, we had hoped to find a platform that would allow students to transfer and update their individual

language and/or intercultural portfolios after an academic career. Students, however, do not want to share their entire learning process over the net. Some elements, they argue, call for better protection, especially when it comes down to publishing personal language portfolios. Within a community, students need to develop an ethical attitude of respect for each other's work, an attitude they think useful in their professional lives as well.

Another weakness pertains to the standard applications of *Google*. *Google* does not offer integrated packages (combining *Google* Docs with *Google* Communities) as yet. Consequently, necessary software to integrate the desired applications might need to be developed by the users themselves. Nevertheless, *Google* might wish to offer more tools to enable structure and navigation. Communities are chaotic, which hampers learning results if the community does not organize itself. Moreover, there was, unexpectedly, a lack of search functionality inside files; it should be taken for granted that "search" is one of *Google's* hobbyhorses.

In our project we have experienced how ideas do not emerge perfectly formed, but how a team shapes them. One student stated that in his opinion "a lot of things about our educational system are going to change ... I think a lot of people with experience in the business world will confirm that there is a significant gap between the competences of graduating students and the skills that are required in the first years of their careers. The revolution in ICT should give us the opportunity to close that gap. In these few years of my personal educational career, I've experienced that some language teachers of the ILT put the idea of a new way of teaching into practice. I have no explanation for why this is so. Maybe language courses are more appropriate for an alternative way of teaching. I really don't know." Project management was a revelation for the students. So was a learning community of students, tutor and visiting CEOs. They had a real message for each

other. CEOs felt that students of the new generation were skillfully communicating in a Web 2.0 environment and made valuable comments at school. In our case study, students communicated with companies, using languages as a tool, for different functionalities, with modern technology. We hope it may also inspire policy makers who ask for examples of good practice in their search to innovate in higher education.

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KEY TERMS

CEF (or CEFR): Common European Framework of Reference is a taxonomy which provides a basis for the mutual recognition of language qualifications, thus facilitating educational and occupational mobility. It is increasingly used in the reform of national curricula and by international consortia for the comparison of language certificates.

Blackboard Toledo: Blackboard is a Learning Management System (LMS) software partially owned by Microsoft, licensed annually to K.U.Leuven, and in use at K.U.Leuven since 2000.

Intercultural Competence: This term encompasses the acquisition of intercultural understanding and the ability to act in linguistically and culturally complex situations. To that end, in relation to the CEF, a common framework of theory and practice not only for linguistic but also for cultural learning is being developed in 2008, the European Year of Intercultural Dialogue.

ELP (European Language Portfolio): The ELP was developed and piloted by the Language Policy Division of the Council of Europe, Strasbourg, from 1998 until 2000. It was launched on a pan-European level during the European Year of Languages as a tool to support the development of plurilingualism and pluriculturalism. Several versions have been developed and certified, also in electronic format.

Flashmeeting: This term refers to an academic research project aimed at understanding the nature of online events and helping users to meet and work more effectively. Flashmeeting accounts are currently hosted on this server (flashmeeting.open.ac.uk). FM technologies are currently provided freely to members of the European Association of Technology Enhanced Learning. The EATEL FM server is based at the Open University, UK.

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Google Docs: A free web-based word processor and spreadsheet, which allows users to share and collaborate online.

Lolipop (Language On Line Portfolio Project): This is a partnership of twelve Higher Education Institutions throughout Europe, working together to create an on-line interactive version of the European Language Portfolio with enhanced intercultural dimension. The lolipop project is selected for inclusion in the Lifelong Learning Program produced by the European Commission.

LSP: According to Robinson (1991), courses in Language for Specific Purposes are goal-directed and develop from a needs analysis. They have the objective of clearly indicating what learners have to achieve using the English language.

Socrates-Erasmus Program: Erasmus (“European Community Action Scheme for the Mobility of University Students”) is the European Commission’s educational program for Higher Education students, teachers and institutions. It was introduced in 1987 with the aim of increasing student mobility within the European Community, subsequently the European Economic Area countries, and the Candidate Country of Turkey. In 1995 Erasmus was incorporated into the Socrates program which covers education from school and university to life-long learning.

SurveyMonkey: This site offers a web-based interface for creating and publishing custom-made web surveys, and then viewing the results graphically in real time (www.surveymonkey.com).

Chapter IX

Digital Natives, Learner Perceptions and the Use of ICT

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ABSTRACT

Prensky (2001) posited the emergence of a new generation of “digital natives” fluent in the language of cyberspace and familiar with the tools of user-generated content. If correct, the existence of this group would necessitate a thorough reconsideration of pedagogy to meet their radically different learning needs, which dovetail with the nascent Web 2.0 and its communities of users. The study examined in this chapter addressed a series of questions about the implications of digital natives in Japan, and found contemporary users of technology to be in firm control of only a limited number of skills. Learner use and perception of technology appeared to be mediated by several variables: technological proficiency or the lack thereof, tradition, willingness to use technology (WUT), and gender. The research instruments utilized in this chapter were analyzed and found to be psychometrically adequate. It is argued that these categories and scales will provide a useful resource for further attempts to understand the potential of Web 2.0 and the concept of the digital native in other educational traditions and contexts.

INTRODUCTION

In a sequence familiar to millions of readers of Dr. Seuss, a nameless, behatted gentlemen is persuaded over the course of a book to answer that timeless question: Would you eat green eggs

and ham? Sam, a most persistent sort, pursues our nameless hero through thick and thin, finally achieving his goal after a spectacular train crash that leaves the crew and passengers soaking wet. As many 5-year-olds (and, of course, adults) can attest, the green eggs and ham are a smashing

success. Central to this study was a similar question, specifically about learners' use and perceptions of technology in classrooms. Computers have now been a part of many people's lives for a full generation, leading to what Prensky (2001) termed "digital natives" and "digital immigrants." In Prensky's formulation — analogous to what happens in language acquisition — natives grow up immersed in and thereby acquire their first language (L1) and culture (C1), which in Prensky's paradigm are digital language and culture. Those not fortunate enough to have that immersion experience can never completely acquire that L1 and C1, retaining instead a "digital accent" much as geographical immigrants do when learning a second language (L2) and culture (C2).

Moreover, Prensky points to the problems inherent in having non-native instructors in charge of education in the digital language. He suggests that digital-native students are fundamentally different to traditional (i.e., non-digital-native) students and thus require a new pedagogy. As an example, Prensky suggests that digital natives are used to receiving information quickly, multi-tasking, and parallel processing. Immigrants, however, are used to slower information, uni-tasking, and linear processing, and digital-immigrant teachers thus expect students to deal with tasks in a more traditional fashion that does not suit many of them well.

In the sphere of second language learning, this hypothesis appears at least superficially true. Even today, in many pedagogical situations learners and teachers alike fail to utilize technology effectively, if at all, in spite of its immense promise. Web 2.0, for example, moves beyond the static delivery of information or tasks such as publishing in a traditional sense, which is simply the public presentation of one's work. While presenting a work is an important pedagogical step (Bruner, 1986) and underpinned Web 1.0, it pales in comparison to the possibilities offered by Web 2.0. The nascent Internet or Web 1.0 was and remains similar to a textbook in being

an inert object devoid of meaning until acted upon or engaged with, whereas the interaction of a person or people with that book (Web 2.0) yields something far from inert or meaningless. That basic premise, what O'Reilly (2005) termed the creation of a community, finds an appropriate equivalent in L2 acquisition theory in Holliday's (1999) "small cultures," which refer to groups of individuals with shared interests. In O'Reilly's (2005) delightful words, "a conversational mess of overlapping communities" emerges, illustrating the basic, interactive premise of Web 2.0.

Against this tapestry of immense albeit nascent potential, the question persists of how educators are progressing in fulfilling that vast promise. With Internet access, digital natives as students, and beleaguered digital immigrants as instructors, why is technology used sparingly, inefficiently, or ineffectively? Answers may lie with instructors that simply do not speak the language of digital natives as Prensky suggested, or those answers might lie elsewhere. Limited availability of and proficiency with technological media may inhibit tapping the potential of the Internet and its Web 2.0 components. Moreover, recent research suggests that the much-heralded generation of digital natives may in fact be very minimally proficient speakers of this new web language (e.g., Bennett, Maton, & Kervin, in press; Kennedy, Krause, Judd, Churchward & Gray, 2006; Kvavik, 2005; Kvavik, Caruso & Morgan, 2004). In short, contemporary students may lack skills with technology or the propensity toward using it.

This situation stems at least in part from the fact that current understanding falls short of fully explaining how learners (including education students) experience technology, as well as how they perceive it when it is presented to them in pedagogical situations. The current study looks at one pillar of this dynamic, namely, the learner. These learners of English as a Foreign Language (EFL) were in Japan, and replications of this study, both in Japan and abroad, would be prudent steps. Furthermore, the second important pillar of

the educational scenario, the teacher, also bears investigating. With a plethora of educational software and widespread technology available, is technology used well? If not, why not? As Sam might have asked in this context: Would you use technology?

BACKGROUND

Three threads informed this study. The first was an assessment of Prensky's (2001) digital native-immigrant paradigm, namely the issue of whether contemporary students are more able and willing to utilize technology than their forebears. Second, with the wave of the future being mobile and thus "untether[ed] ... from local cabling" (Alexander, 2004, p. 40), it is important to consider how recent technology has affected user perceptions. As Beckers and Schmidt (2001) have observed, it is an ongoing question whether Internet use and the emergence of technologies such as mobile phones will decrease or increase occurrences of computer anxiety. Third, as Rosen and Weil noted in a key (1995) study of computer anxiety, people's lives are so "intricately intertwined with technology" that it is unlikely that the items on their instrument could adequately capture the vast amount of "personal" technology that makes people anxious on a daily basis (p. 58). The rapid pace of technological advances implies that any measure of user perceptions of technology will necessarily be an evolving construct (Dyck, Gee, & Smither, 1997), and as such measures warrant ongoing consideration.

MOORE'S LAW INCARNATE

One trend evident in the technological world is the rapid development of computers. Although never intended as an iron-clad law, Moore's (1965) statement that the number of transistors on a chip doubles approximately every two years

has important implications for this study. While it is true that improved hardware does not necessarily imply a proportionate increase in software performance (Wirth, 1995), this ability to fit more transistors on a chip does allow for increasingly complex devices which integrate many capabilities. The cumulative effect is to enable increasingly sophisticated and diverse machines and applications. It also implies that any measure of student attitude towards technology or computer/technology anxiety must be periodically examined and reformulated due to the speed at which technology in general is changing. Thus it is necessary to update and continue research in this area, in order to stay informed of the changing nature of student responses to technology.

A typical indication of the extent to which technology has advanced can be seen in Rosen and Weil's (1995) article, which noted that over 75% of all Americans and well over half of all Germans, Japanese, and Australians owned telephones. Fast forward to the present, a world where over 2 billion people own mobile telephones. In a related trend, much of the research to date has dealt with computers (which, in the early parlance of the cybersphere, were microcomputers) rather than smaller and more mobile devices that have proliferated in today's world. This is summarized nicely in Wagner's (2005) words:

Although tablets and laptops have provided the means and the methods for demonstrating that learning no longer needs to be classroom or course bound, the anticipated rush toward mobile learning will be sparked by the obvious draw of short, stand-alone programs. Current trends suggest that the following three areas are likely to lead the mobile movement: educational games, language instruction, and performance support and decision support tools. Effective mobile learning programs will require new digital communication skills, new pedagogies, and new practices. (p. 51)

There has never been a device that has spread so rapidly and with so many implications as the mobile phone. A recent report from the International Telecommunications Union (2007) reported that the number of mobile phone subscribers tripled from 2000 to 2005, reaching well over 2 billion in 2005, and it is forecast that this figure will reach 3 billion subscribers in 2008. In Japan, the country where this study was conducted, over 95% of households owned cellular phones in 2005 (Ipsos, 2006). A study by Thornton and Houser (2005) found that 100% of 333 participating Japanese university students had mobile phones that could view standard web pages as well as send and receive standard Internet e-mail. This finding is echoed in the present study, in which 100% of the participants were found to own a mobile phone.

It was therefore a goal of this study to update knowledge in the field to reflect the current situation, and to examine the possibility that the advent of mobile devices has engendered a significant difference in learners' approaches toward and attitudes about computers. Moreover, this study compares learners' use and attitude toward computers and mobile devices (e.g., cell phones).

THE SOFTEST OF SOFTWARE

All of the finest hardware and software, however, amounts to nothing if the user is incapable or unwilling to utilize it. The softest of software — the human element — must be engaged for technology to play a role in learning. Positive user attitudes are essential for the effective implementation of a teaching program using technology (Culpan, 1995). Ancillary to this is the considerable effort that has gone into looking for underlying models that articulate items that can factorize the many variables that are entailed in the complex process of how humans experience computer usage (e.g., Levine & Donitsa-Schmidt, 1998; Thompson, Higgins & Howell, 1994). In the field of second

and foreign language acquisition (SLA and FLA, respectively), a similar trend has occurred with an ongoing search for a workable theory. In SLA and FLA, models of language acquisition include such constructs as attitude, aptitude, experience, competence, confidence, self-efficacy, and autonomy (e.g., MacIntyre, 2007; Yashima, 2002). Furthermore, SLA and FLA areas of research which have relevance to the scope of this inquiry include work accomplished regarding age differences (Long, 1990; Oyama, 1976; Patkowski, 1990), transfer (Odlin, 1989; Schachter, 1974; Sharwood-Smith & Kellerman, 1986), and interaction (Hatch, 1978; Long, 1981; Swain, 1985). Gardner's 1989 work concerning multiple intelligences would also be a consideration for the further exploration of issues examined in this chapter.

As is true in SLA, FLA, and the computer field, the plethora of attempts to measure attitudes toward using computers points toward the difficulty inherent in operationalizing underlying constructs. Rosen and Maguire's (1990) meta-analysis of computerphobia studies examined 81 research reports that utilized 66 different measurement instruments. Any analysis of computer or technology anxiety should look carefully at the instruments and method of analysis used in previous studies, and the current study delves into the workings of the instrument utilized.

THE JAPANESE SITUATION

Given the continuing need to look at learners' perceptions of computer usage, let us turn to the situation in Japan, where this study was conducted. Cell phones are ubiquitous in this context — 57% of junior high school students have cell phones, but the figure jumps to 96% for high school students. Thornton and Houser (2007) found that 100% of their university-student participants had cell phones, and in our own classrooms all 600+ students had cell phones. Moreover, cell phones are not just accoutrements: high school students aver-

age one hour and 48 minutes per day doing mail and browsing the Internet on their cell phone(s). The figure is somewhat lower for junior high school students at just one hour and 15 minutes per day (“Students using cell phones,” 2007).

According to Technorati, an Internet search engine that monitors the blogosphere, 37% of all blog postings in the fourth quarter of 2006 were in Japanese (compared to 36% in English). As much as 40% of that Japanese blogging may be done on mobile phones (Hardin, 2007).

Tsukuba University, where the majority of this research took place, is one of the more competitive Japanese universities to enter. Students come from throughout the Japanese archipelago, and they thus represent a geographic cross-section of highly-motivated Japanese university students. Furthermore, 100% of the students that participated in this study had cell phones, and all had at least rudimentary knowledge of computers. The sample from two private, less competitive universities nearby represents primarily local students, but they exhibited similar skills with mobile technology and computers.

RATIONALE

The aims of this research included looking at students’ proficiency with various technological devices, students’ preference for PCs or mobile devices given the choice of format, and a construct we have labeled willingness to use technology (WUT). In the fields of communication studies, McCroskey et al. (1992) and McCroskey and Richmond (1991) have extensively investigated the notion of “willingness to communicate,” commonly dubbed WTC. This is the notion that people display WTC differently in various contexts, depending on, for example, the nature of the relationship of the listeners and the type of discourse (e.g., a speech vs. casual conversation). The actual matrix involves three groups and four tasks, which result in 12 permutations (e.g., doing

a speech in front of a group of strangers, a group of acquaintances, or a group of friends). This notion has underpinnings in the social construction of meaning (e.g., Gergen, 1999; Schotter, 1993), in which meaning depends on both parties in the interaction. Understood to be the willingness to enter into communication, which is a volitional process (MacIntyre, 2007), it does not necessarily correlate with actually engaging in communication (Elwood, 2007).

Touched on above, the idea of Willingness to Use Technology is simply a person’s willingness to make use of technology when given the choice of a technological medium and a non-technological medium (e.g., using a computer for doing e-mail vs. using a paper and pencil for writing a memo or letter). WUT has a similar matrix structure: two media and ten tasks resulting in 20 possible permutations (e.g., taking a test on paper or by using a computer). The evolution of the Test of English as a Foreign Language (Educational Testing Service, 2007) illustrates this trend as it is now available in a paper form, a computer-based form, and an Internet-based form.

As is true for WTC, various factors influence WUT — such aspects likely include cognitive variables such as personality and anxiety (Heinsen, Glass, & Knight, 1987), and skills-oriented variables like technological proficiency. Earlier research has found support for the role that experience, both objective and subjective, plays in using computers (Igbaria & Chakrabarti, 1990; Igbaria & Iivari, 1995; Levine & Donitsa-Schmidt, 1998; Liaw, 2002a, 2002b; Thompson, Higgins, & Howell, 1994).

RESEARCH QUESTIONS

The nuts and bolts of this study emerged from several very simple questions. First, what do learners think about technology? A second question dealt with how comfortable and proficient students were using different kinds of technology. A third

question examined learners' preferences regarding technology. Finally, questions four and five addressed learners' responses in light of recent statistical advances in questionnaire analysis. The resulting research questions were therefore:

1. According to their own perceptions, how proficient are students at various technological tasks?
2. Are students anxious about or while using technology?
3. Will students indicate a preference for technological media (e.g., computers) vs. non-technological media (e.g., pencils and paper)?
4. How does the WUT construct behave?
5. How do various factors correlate regarding attitudes toward technology, WUT, proficiency, and gender?

METHOD

Participants

301 learners participated in this study, representing eight majors in two general categories, physical sciences ($n = 169$, 56.15%) and humanities ($n = 132$, 43.85%). There were 124 males (49.04%), 125 females (49.80%), and 2 of unknown gender (.80%); the mean age was 18.95 ($SD = .76$).

Instrument

A questionnaire was the basis of the study. Based on the research questions, it evolved into a 53-item questionnaire that was administered by distributing a paper handout and having participants respond at their own pace using Interwrite PRS RF clickers. The so-called clickers are hand-held, mobile devices and are about the size of a standard TV remote control; data entered into a clicker are transmitted instantaneously through a USB hub into the computer. Each class (called a "session")

is then saved as a CSV file that must be transferred into an Excel file. The transfer from a CSV file to Excel took about 20 minutes for each 32-person group, which is considerably faster than inputting data from 32 paper surveys.

The first 10 questions used a 5-point Likert scale and dealt with participants' abilities with a variety of technology tasks. The first task was touch-typing, a skill which few students seem to have been taught. The next four dealt with communication tasks in cyberspace, Internet surfing and doing e-mail by cell phone and computer. The following two questions asked about using Word and Excel, while the next two looked at proficiency downloading audio-visual files and software. Finally, we asked if participants could connect peripheral devices such as speakers and printers.

The second set of questions asked about students' perceived anxiety while doing technology tasks. These included touch-typing, net-surfing, and taking tests. The third set asked how useful technology was in learning certain school subjects: a foreign language, mathematics, science, and the student's native language (in nearly all cases, this was Japanese).

The next three questions dealt with the perceived future use of technology. As these were university students, the queries asked about use for study, use at work, and private use (e.g., surfing the Internet).

The questions that underpin the WUT construct were next. 11 items asked whether respondents would choose traditional means like paper or technology for different tasks. These included the following: writing a memo, taking a test, writing a 5-page report, communicating with your teacher, doing a budget for one's home or club/circle, picking up supplementary material or homework for your class, looking at class material (e.g., looking at paper handouts vs. viewing webpages), doing a presentation (OHP vs. using PowerPoint), dividing a restaurant check or bill, doing regular correspondence (writing a letter vs.

doing e-mail), and communicating with someone (face-to-face vs. Internet or video chatting).

The following section looked at where respondents had acquired knowledge about computer technology. The specific queries dealt with computer knowledge learned at school, cell phone technology learned at school, technology learned from friends, technology learned by oneself, and cell phone technology learned from friends.

Next was preference for cell phones vs. computers for certain tasks. The tasks included taking a test (Item 37), looking up a word in a dictionary (Item 38), viewing a webpage (Item 39), getting information about class cancellations (Item 40), sending a message to your teacher (Item 41), doing a money-related calculation (Item 42), paying a bill (Item 43), exchanging mail with a pen-pal (Item 44), and doing regular e-mail (Item 45).

Items 46-48 elicited further information about how knowledge is shared and the use of ubiquitous educational software. Item 46 inquired about teaching friends or colleagues about computers, while Item 47 asked the same about cell phones. Item 48 looked at the extent that participants had used educational software for learning languages.

Finally, Items 49 and 50 asked about the ease of understanding the survey and using the clickers, respectively. Item 51 was a holistic query about whether students viewed technology as useful in the future, while Items 52 and 53 were demographic (gender and age, respectively).

Pilot Study

As is prudent for a new instrument, the 51-item questionnaire was piloted in June and July, 2007 ($N = 142$). The resultant data were analyzed to check for reliability of the instrument. All items appeared well-behaved with reasonable mean, standard deviation, skewness, and kurtosis. Rasch analysis (WINSTEPS, 2006) was then used to check category function of the 26 Likert-scale items, and all items exhibited adequate fit statis-

tics and well-ordered categories with sufficient separation.

Moreover, two subscales were subjected to Rasch analysis to check for dimensionality and to produce an interval scale for use in subsequent analyses. The computer proficiency subscale (Items 1-10) was analyzed and found to exhibit an adequate fit of the data to the model and unidimensionality through analysis of residuals. Item reliability was .87, and person separation of 2.57 indicated that respondents could be grouped into high and low-proficiency groups, which were used in subsequent analyses.

The second subscale to be analyzed was the WUT subscale. An exploratory factor analysis with varimax rotation (SPSS, 2004) yielded two satisfactory and logical solutions, one with two components and the second with three. Both suggested multi-dimensionality, which was corroborated by a WINSTEPS (2006) analysis of residuals, yielding two distinct dimensions. As such, the WUT measure is the average of the two subscale logit measures.

Main Study

The main study embraced a sample size of 301 university students, of whom 259 attend Tsukuba University, a large, 4-year national university near Tokyo, while 42 were from two nearby private universities. Tsukuba University is a well-known research university and admits students from throughout Japan as well as a small number of foreign students. Data were collected from September to December of 2007. The 11 classes surveyed were of necessity selected by convenience sampling. Data screening indicated that all 51 items exhibited adequate levels of skewness and kurtosis. They were screened with only one case deleted because of missing data. A detailed look for univariate and multivariate outliers surprisingly produced none. Of the 15853 possible responses², 132 values (0.84%) were missing, yet as these appeared randomly distributed, all cases were retained for further analyses.

Table 1. Subscale statistics for main study

Section	Item #s	Scale	Subscale Reliability	Item/Person Reliability	Item Separation
Proficiency	1-10	Likert	.99 (.99)	.99/.86	2.44
Anxiety	11-13	Likert	.99	-	-
Useful subjects	14-17	Likert	.99	-	-
Useful future	18-20, 51	Likert	.56	-	-
WUT	21-31	%	.60 (.62)	.99/.59	1.21
Where learned?	32-36	%	.35	-	-
Taught?	37-39	Likert	.62	-	-
Cell vs. PC	40-48	%	.59 (.61)	.99/.62	1.27
Instrument Q	49-50	Likert	-	-	-
Demographic	52-53	Numeric	-	-	-

Note. Item separation is shown only for the three subscales for which we had hoped to look at groups (i.e., high-proficiency vs. low-proficiency). The parenthetical numbers indicate the revised reliability after the deletion of misfitting items. Subscale reliability is from SPSS, and item reliability is from WINSTEPS.

RESULTS

The descriptive statistics for the main study ($N = 301$) provide a variety of interesting information. Descriptive statistics of items appear in Appendix 2.

Technology Proficiency

The initial section dealt with students' assessment of their own competence with various types of technology. If Prensky's (2001) view that contemporary students are digital natives is correct, then the data should show strong negative skewness with means toward the high end of the scale (recall that a response of 5 indicates excellent proficiency, while the midpoint of the scale is 3). Students rated themselves competent at surfing the Internet by computer (3.60), but surfing by cell phone was rated lower (3.11). Students felt quite competent at e-mail, especially by cell phone (mean = 4.12); e-mail by computer had a mean value of 3.39. The only other point on which students rated themselves competent

was doing word processing (e.g., with Microsoft Word), which had a mean of 3.36.

In the remaining five areas students reported lower competence, with mean values beneath the midpoint. Touch-typing, a skill seldom taught in Japan, was at 2.57. Using a spreadsheet program such as Microsoft Excel was similar with a mean of 2.63. Downloading material from the Internet, installing software, and installing peripheral hardware were areas at which students similarly felt only minimally proficient with mean values of 2.27, 2.41, and 2.42, respectively.

Data were converted to interval data using WINSTEPS. Analysis indicated two groups were again appropriate (person separation = 2.44), that nine of the ten items had adequate fit statistics, and item reliability was satisfactory at .86. Item 2, proficiency using a cell phone for e-mail, was slightly misfitting with an infit measure of 1.58 and an outfit measure of 1.52, but it was retained as these values were only slightly outside the recommended value of 1.5 (Linacre, 2002) and it is of crucial importance to the study. Furthermore, as suggested by an exploratory factor analysis

(SPSS, 2004) and verified by a WINSTEPS principal component analysis of residuals, the ten proficiency items formed a unidimensional scale, meaning the logit scores were used for subsequent analyses.

Comfort Level and Anxiety

A rather surprising finding was that students perceived little anxiety regarding technology. When surfing the Internet, for example, students felt little anxiety, as shown in the mean value of 2.15 (Item 12). Furthermore, even with limited proficiency in touch-typing (Item 1, mean = 2.57), students felt little cause for anxiety (Item 11, mean = 2.43). The final item asked about test-taking, about which students reported being only slightly anxious (Item 13, mean = 3.09). This finding should be viewed with caution, however, for test-taking using technology may be confounding test anxiety with technology anxiety, the latter of which appears to be minimal. This is corroborated by Stricker, Wilder, and Rock (2004), who found that test takers, in the United States as well as in other countries, have already adapted to computer-based testing. The overall picture is that students perceive little anxiety regarding the use of technology.

Perceptions of Technology

Whatever the relative merits and demerits of technology, perhaps more prominent is learner perceptions of technology. Eight items on the survey looked at this point, of which the most interesting were perceptions about the use of technology in specific school subjects. Learners were ambivalent about the use of technology for learning foreign languages (Q14: 3.03) and science (Q16: 2.97). Both responses were very close to the midpoint (3 on the 5-point Likert scale).

On the other hand, learners viewed technology as *not* useful for learning mathematics (Q15: 2.45) or their mother tongue (Japanese for most

of the respondents; Q17: 2.56). However, in a more general sense, learners viewed technology as useful in the future, especially for private use (Q18: 4.28) and work (Q19: 4.04), and to a lesser extent for study (Q20: 3.75). Interestingly, Item 51 asked about how useful learners perceived their technology education received to date would be in the future in a holistic sense, to which the mean was a tepid 3.02, only slightly above the neutral midpoint. This may reflect a somewhat different parsing of the question, which asked about education received rather than the actual skills.

WUT (Willingness to Use Technology)

This section looks at the proposed construct of Willingness to Use Technology (WUT), which is essentially the preference for using technology vs. a non-technology medium (e.g., paper) when both media are available. The descriptive statistics yielded several interesting results regarding whether respondents preferred technological means or non-technological means for a number of tasks. First, non-technological means (e.g., paper) were preferred for taking memos (Q21: 75.35%), taking tests (Q22: 77.17%), and slightly preferred for checking reference material (Q26: 57.44%).

On the other hand, technology was preferred for writing a 5-page report (Q23: 71.24%), contacting teachers (Q24: 69.56%), getting information (Q27: 56.80%), doing presentations (Q28: 77.15%), dividing a restaurant check (Q29: 71.07%), and exchanging email (Q30: 73.79%).

Furthermore, respondents showed only a very slight preference regarding doing a budget for their family or a club, with 52.70% opting for technology over paper (Q25). Even closer to the midpoint was personal communication, with 49.20% (Q31) choosing face-to-face chatting instead of Internet chatting. Interestingly, however, one of the few statistically significant gender differences appeared here: females preferred face-to-face

Table 2. WUT Subscale statistics for main study

Subscale and items	Mean (SD)	Infit	Outfit
<i>Non-technological subscale (α = .37)</i>			
21. Taking a test	75.35 (21.59)	.96	1.15
22. Writing a memo	77.17 (24.01)	1.34	1.79
25. Doing a budget	47.30 (28.35)	.85	.92
26. Checking ref material	57.44 (25.89)	.77	.77
31. Personal communication	49.20 (31.72)	1.27	1.33
<i>Technological subscale (α = .68)</i>			
23. Writing report	28.76 (30.83)	1.22	1.19
24. Contacting teacher	30.44 (30.57)	1.05	1.02
27. Getting information	43.20 (21.70)	.53	.55
28. Doing presentation	22.85 (27.88)	1.14	1.05
29. Dividing check	28.93 (31.76)	1.35	1.35
30. Exchanging e-mail	26.21 (25.56)	.95	.97

Note. Subscale reliability (Cronbach's alpha) is shown in parentheses; the overall WUT reliability was .60. Mean and SD are in the original percentages (not logits) to facilitate understanding.

communication (56.20%), while males preferred Internet chatting (39.74% for face-to-face talk).

As was done with the pilot study data, these data were first examined using an exploratory factor analysis (SPSS, 2004) and then using WINSTEPS (2006). Analysis indicated just one group was appropriate (person separation = 1.11), 10 of the 11 items had adequate fit statistics, and item reliability was satisfactory at .99. Item 22, technology preference while taking a test, had an infit measure of 1.34 but an outfit measure of 1.79, indicating that it was a candidate for deletion. However, in the pilot study Item 22 functioned satisfactorily with infit and outfit values of 1.09 and 1.40, respectively. Moreover, WINSTEPS reported 15 unexpected responses for this item; when these were deleted, the item exhibited nearly ideal fit values of 1.03 and 1.04, respectively, which shows the item in fact functioned adequately. It was thus retained, so the WUT scale was composed of its original 11 items.

In an exploratory factor analysis (SPSS, 2004) that was subsequently corroborated by

WINSTEPS analysis of residuals, the 11 items formed two distinct dimensions. One was oriented toward non-technological media for tasks and included Items 21-22, 25-26, and 31. The second was Items 23-24 and 27-30, which are oriented toward technology and its inherent convenience. The two subscales appear to form ends of a WUT continuum, and as such logit scores were averaged to arrive at an interval-scaled measure for the WUT subscale.

Sources of Knowledge on Technology

Eight items were used to question learners about where they were obtaining knowledge about technology. Of note is that formal education (i.e., schools) provides about half of what students know about computers (Item 32: 46.30%), whereas cell phone knowledge is a minor part (if it exists at all) in the school curriculum (Item 33: 14.59%). Peer learning was also a minor factor, with learners indicating they seldom showed friends about either

computers (Item 37: 2.19 on the 5-point Likert scale) or cell phones (Item 38: 1.91). This was rather surprising as it was expected that students share tips and knowledge about mobile technology, but these data indicated otherwise, and suggest that informal and autonomous learning should be further considered when examining how students are acquiring their technical knowledge.

A final query, Item 39, asked about the use of educational software, which is widely available and touted, at times with qualification (Devitt & Palmer, 1999), as an effective pedagogical tool. In Greenhalgh's (2001) characterization, "Access to the wide range of online options . . . must surely make learning more exciting, effective, and likely to be retained," yet she continues with the caveat that, "This assumption is potentially but by no means inevitably correct" (p. 40). However, students indicated they had used such software little (Item 39: 1.88). Given the availability of educational software, a prudent question would be why it is not used more extensively — which points toward investigating the actual availability of such software and whether teachers do make use of it when it is available.

Preference for Computers or Mobile Technology

This section³ inquired about learners' preference for either computers or cell phones when doing various tasks. The strongest preference (Item 42: 80.81% for computers and the remainder of 19.19% in favor of cell phones) was for viewing homepages via computers, a quite predictable finding given the relative sizes of the respective devices. Learners also favored computers for taking tests (Item 40: 65.65%), consulting an on-line dictionary (Item 41: 58.25%), communicating with a teacher (Item 44: 56.27%), and retrieving information about classes (Item 43: class cancellations; 54.88%).

However, cell phones were the medium of choice for four tasks: calculating each person's

share of a restaurant check (Item 72.95%), paying bills (Item 46: 67.30%), doing e-mail with a pen pal (Item 47: 73.61%), and doing regular e-mail (Item 48: 69.35%). The first two tasks underline the convenience of current cell phones, which function much as calculators and credit cards, whereas the latter two highlight the ubiquity of mail by cell phone.

For this subscale, data were converted to interval data using WINSTEPS. Analysis indicated just one group was appropriate (person separation = 1.27), eight of the nine items had adequate fit statistics, and item reliability was satisfactory at .99. Item 40, technology preference while taking a test, was misfitting with an infit measure of 1.51 and an outfit measure of 1.75, so it was deleted from further analysis. In an exploratory factor analysis (SPSS, 2004) that was subsequently corroborated by WINSTEPS analysis of residuals, the remaining eight items formed two distinct dimensions: Items 41-44 and Items 45-48. In the first component (Items 41-44), respondents showed a preference for using computers or were ambivalent. However, Items 45-48 comprised the second component, in which respondents showed a consistent and strong preference for mobile technology. The two subscales appear to form poles of a technology-medium preference continuum, and as such logit scores were averaged to arrive at an interval-scaled measure for the technology-medium preference subscale.

DIFFERENCES BY GROUP AND TIME

Differences by University Major

A series of t-tests was conducted to check for any differences related to major and specifically to science majors vs. humanities majors. With a total of 51 variables, a false discovery rate correction (FDR; Benjamini & Hochberg, 1995) was conducted to minimize the possibility of Type I

errors. Of the 51 t-tests, two were statistically significant; both dealt with perceived usefulness of technology. Perhaps not surprisingly, science majors felt technology was useful for learning science (3.15 vs. 2.74 for humanities majors). The second significant result, for Item 51, was similar: science majors, when asked about the holistic usefulness of technology in the future, felt technology would be somewhat useful (3.18), while humanities majors believed it would be less so (2.82).

Gender Differences

To check for any gender-related differences, a second series of t-tests was conducted. Of the 51 t-tests, six were statistically significant after an FDR correction. Three (Items 8-10) dealt with technological proficiency: males, although not so proficient, were more so than females at downloading movies and audio files, and installing software and hardware. The next significant difference was in doing a budget for a family or a club; females opted for paper (53.56%), while males preferred technology (60.31%). The strongest result was on Item 31, in which females preferred face-to-face communication (56.20%) to technological communication modes such as Internet chat, while males opted for technological means of communication (39.74% for face-to-face, thus 60.26% in favor of technological means). The final difference was on Item 35, which asked the extent to which respondents learned cell phone technology by themselves. Males indicated that 46.02% was learned alone, while females learned less by themselves (36.80%).

Longitudinal Differences

Differences over time were investigated on the basis of the temporal separation of the pilot study and the main study. The pilot study was conducted in June, early in the Japanese school year, which begins in April. The main study data were

collected from September through November, which is much later in the school year. As such, results from the pilot study and the main study were compared to look for changes over that 3-5 month interval.

A total of nine statistically significant differences emerged using the FDR technique. An interesting one was Item 19, in which autumn respondents indicated a lower although still strong rate of agreement that technology would play an important role in future jobs (4.33 → 4.04, $p < .01$).

Of the 11 WUT items, only Item 25 changed: learners indicated that the preference for doing a budget changed significantly from a strong endorsement early in the school year of using technology (64.06% in the pilot study) to only a slight preference in the main study in the fall (52.70%). Counterintuitive as this seems, it may be that students, many of whom were first-year students and on their own for the first time, had gained some familiarity and appreciation of budgets in general.

Items 32-36, which dealt with where technological knowledge was learned, all showed significant changes. Knowledge acquired at school about both computers and mobile technology increased, as did that knowledge acquired from friends. On the other hand, the amount of cell phone knowledge learned alone decreased. These data point to the increasingly prominent roles played by technology in university environments as well as the increasing role of peers in obtaining technology knowledge. However, peer learning still accounted for a relatively small portion of overall knowledge.

In the main study, learners showed an increased preference for using cell phones to communicate with teachers (Item 44). This may reflect the increased distance from teachers (fewer class meetings than in high school), whereas in high school, learners could meet teachers every day and may have relied on parents for communication with teachers.

Finally, respondents indicated a lower mean on Item 50, which asked about the ease of using clickers for the survey. The presentation of the clicker technology had improved substantially, but the respondents indicated otherwise.

Proficiency-Gender Interaction

As previously mentioned, WINSTEPS was used to separate respondents into two proficiency groups based on a median-split procedure using logit measures (high proficiency mean = 50.78, low proficiency mean = 48.88). A two-by-two factor ANOVA used proficiency and gender as the independent variables and WUT as the dependent variable. Both main effects were non-significant with $F_{\text{gender}}(1, 245) = 2.593, p = .101$ and $F_{\text{proficiency}}(1, 245) = .403, p = .526$. The proficiency-gender action was also nonsignificant with $F(1, 245) = .302, p = .583$. Although these are all non-significant, the gender result ($p = .101$) suggests that further investigation in other contexts might yield results of significance and interest.

DISCUSSION

Of the research questions, the first dealt with Prensky's (2001) conceptualization of inhabitants of the digital world as native or immigrant. Re-

sults of this study suggest that students in general exhibit minimal proficiency with technological devices, with Internet surfing, e-mail, and word processing being the only areas of perceived competence. In such areas as installing either software or hardware, touch-typing, or using spreadsheets, respondents perceived themselves as not so competent. This correlates with recent research showing that contemporary students are not actually becoming digital natives, users in possession of fluent skills in the language of the cybersphere.

The current version of cyberspace, Web 2.0, seems to portend the creation, informally, of interactive cyberspace communities in which users interact with various software and other users. While generally viewed as a boon to education, it may be mediated by proficiency as well as affective variables such as motivation and anxiety, much as is the case in SLA and FLA. However, in the present study users indicated little anxiety concerning technology. This may indicate that users are "native" to the extent that they are accustomed to the presence of technology although they may or may not be proficient with it.

Indicative of that preference for technology vs. non-technological media was the WUT construct. As WINSTEPS revealed, the 11-item instrument performed well, and it yielded a bifurcate construct that can be conceptualized

Table 1. Gender by Proficiency ANOVA Results for WUT

Source	SS	df	MS	F	p	Power
<i>Main effects</i>						
Gender	.126	1	.126	2.593	.109	.361
Proficiency	.020	1	.020	.403	.526	.097
<i>Interaction</i>						
Gen x Prof	.015	1	.015	.302	.583	.085
Residual	11.881	245				
Total	619864.885	249				

Note. Computed using $\alpha = .05$. $R \text{ squared} = .013$ ($\text{adjusted } R \text{ squared} = .001$).

along a continuum anchored by preference for technology and preference for non-technology. On the technology half of the continuum were such activities as writing a 5-page report, doing presentations, and communicating with peers or teachers. On the other side were checking reference material and taking memos and tests. Near the midpoint were doing a budget and real-time communication (face-to-face and Internet chat). These divisions reflect the convenience of technology (using Word and PowerPoint, for example) and the hold that traditional media still exercise (e.g., taking “paper tests”). These findings also likely reflect the onset and subsequent familiarity with new tools: much as the authors used hand calculators instead of slide rules in their secondary education, contemporary students use PowerPoint instead of overhead projectors.

An ancillary finding was that there was little correlation between computer proficiency and willingness to use technology, which echoes Garland and Noyes’ (2004) finding that computer experience is a poor predictor of computer attitudes.

As noted above, cell phones are a nearly ubiquitous personal item in Japan. The sheer number of functions of these mobile devices is, in accordance with Moore’s Law, increasing dramatically. Against this reality, respondents offered their choice of mobile phones vs. computers for several tasks: for viewing webpages, for example, computers with their much larger screens were the clear winner. The same thinking was likely true in the stated preference for using computers for taking tests, consulting online dictionaries, and corresponding about classes. On the other hand, the untethered and universal status of cell phones likely contributed to their being favored for handling money and doing e-mail.

IMPLICATIONS

One unexpected finding was that peer learning seemed to play only a minor albeit increasing

role in acquiring knowledge about technology. As such, relying on peer learning may be somewhat risky.

Our respondents viewed technology as useful in their future, but it was perceived as only moderately useful in specific subject areas. The science majors naturally saw technology as being of use both currently in their major and in the future (Item 51). For non-science majors, however, technology received lower marks, which points to the need for care in contriving tasks.

Limitations

Tsukuba University, where the majority of this research took place, is one of the more competitive Japanese universities to enter. As such it might be argued that this study is based on a sample not representative of the wider student population in Japan. Nevertheless, results from the sample at other universities, although limited in size, were consistent with the results from Tsukuba University. The instrument performed well psychometrically, yet these should be replicated in other contexts.

CONCLUSION

Results from this study affirmed previous research in this area, while adding several noteworthy findings that support an emerging body of studies (Bennett, Maton & Kervin, in press; Kennedy, Krause, Judd, Churchward & Gray, 2006; Kvavik, 2005; Kvavik, Caruso & Morgan, 2004). Use of the term “Digital Native” should not be used as a blanket term for an entire generation. The Digital Native-Digital Immigrant paradigm is a prescient insight, and it is most useful for interpreting many aspects of the emerging Web 2.0 world. However, the population in this study is—if digital natives—generally in firm control of only a limited number of skills in the digital language. Nevertheless, respondents did not

indicate much anxiety about technology, suggesting that it has become firmly situated in their everyday reality.

Findings from this study also indicate that research from SLA and FLA education and research environments can play a leading role in situating research and providing the discourse framework for further discussion regarding those who are comfortable and proficient using technology (read Digital Natives), and the rest of the population (read Digital Immigrants). Areas that bear special consideration include previous SLA work in the fields of age differences (Long, 1990; Oyama, 1976; Patkowski, 1990), transfer (Odlin, 1989; Schachter, 1974; Sharwood-Smith & Kellerman, 1986), and interaction (Hatch, 1978; Long, 1981; Swain, 1985); as well as work concerning multiple intelligences (Gardner, 1989).

Web 2.0 offers considerable promise to support and perhaps enable the much-anticipated revolution in education, but it is subject to mediating variables. While anxiety appears to be playing a minor role with contemporary students, technological proficiency or the lack thereof may reduce the efficacy of technology in the classroom or outside it in the increasingly untethered cyberworld. Tradition continues to play a role as some learners exhibit preferences for non-technological media (witness the number of morning newspapers on public transportation). The promise of Web 2.0 is particularly evident in the domain of educational game software, which tantalizes yet remains underutilized, at least in the environment that this study considers. Mobile technology also remains a virtually untapped area of great potential for innovative use, and it merits further implementation in education based on the findings detailed above (see also Thornton & Houser, 2002, 2003, 2005; Thornton, Houser, Nakata, Kluge & Nishio, 2003). Finally, informal learning and autonomous learning and their implications for education should be further considered. Given the above findings and research to date, the concept of a Digital Native, and its implications for education in general, with

specific reference to EFL learners in Japan, is therefore a work in progress that requires further investigation and documentation.

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KEY TERMS

Computer Anxiety: Feelings of frustration or unease related to the use of computers

Digital Technology: Entails the use of devices that enable access to cyberspace, the use of digital audio/video and information communications technology (ICT).

Digital Native: Is a person who is growing up, or has grown up with digital technology.

Digital Immigrant: Is an individual who grew up without digital technology and adopted it later.

Mobile Learning (m-learning): The use of devices that are small enough to fit comfortably in a pocket or purse for educational purposes

Technology Preference: Indicates a user's preferred device or medium, given a range of choices

Technological Experience: Indicates the extent of a user's self-reported experience using technology

WUT: Refers to Willingness to Use Technology. A person's willingness to make use of technology when given the choice of a technological medium or a non-technological medium

ENDNOTES

¹ Due to a clerical oversight, demographic questions were omitted from 50 surveys,

resulting in the demographic data representing a sample of $n = 251$.

² The same clerical oversight resulted in the total number of possible responses being slightly lower than planned.

³ In three cases a substantial amount of data was missing, which reflects a slightly smaller sample size ($n = 298$).

APPENDIX 1

This survey is for research purposes, and all information you provide will be held in strict confidence. Thank your for your kind assistance!

A. How well can you do the following activities?

(1 = Not at all, 2 = A little, 3 = Enough so I have no problems, 4 = Well, 5 = Extremely well.)

- | | |
|--|-------------------|
| 1) Touch-typing | 1 – 2 – 3 – 4 – 5 |
| 2) Net-surfing using a cell phone | 1 – 2 – 3 – 4 – 5 |
| 3) Net-surfing using a computer | 1 – 2 – 3 – 4 – 5 |
| 4) E-mail using a cell phone | 1 – 2 – 3 – 4 – 5 |
| 5) E-mail using a computer (PC) | 1 – 2 – 3 – 4 – 5 |
| 6) Writing a report on a computer (e.g., Microsoft Word) | 1 – 2 – 3 – 4 – 5 |
| 7) Using a spreadsheet on a computer (e.g., Microsoft Excel) | 1 – 2 – 3 – 4 – 5 |
| 8) Downloading movies and music | 1 – 2 – 3 – 4 – 5 |
| 9) Downloading new software | 1 – 2 – 3 – 4 – 5 |
| 10) Connecting peripheral devices (speakers, printer, etc.) | 1 – 2 – 3 – 4 – 5 |

B. When doing the following activities, how much anxiety do you experience?

(1 = None at all, 2 = A little, 3 = Some anxiety, 4 = Much anxiety, 5 = Very, very much anxiety)

- | | |
|--------------------------------------|-------------------|
| 11) When touch-typing (blind-typing) | 1 – 2 – 3 – 4 – 5 |
| 12) When net-surfing | 1 – 2 – 3 – 4 – 5 |
| 13) When taking tests | 1 – 2 – 3 – 4 – 5 |

C. How useful is technology like cell phones and computers for learning the following subjects?

(1 = Not at all, 2 = A little, 3 = Somewhat useful, 4 = Quite useful, 5 = Extremely useful)

- | | |
|-----------------------------------|-------------------|
| 14) Learning a foreign language | 1 – 2 – 3 – 4 – 5 |
| 15) Learning math | 1 – 2 – 3 – 4 – 5 |
| 16) Learning science | 1 – 2 – 3 – 4 – 5 |
| 17) Learning your native language | 1 – 2 – 3 – 4 – 5 |

D. In the future, how much do you think you will use technology for the following?

(1 = Not at all, 2 = A little, 3 = Some, 4 = Quite a bit, 5 = Constantly)

- | | |
|---|-------------------|
| 18) For private use (e.g., net-surfing) | 1 – 2 – 3 – 4 – 5 |
| 19) For work | 1 – 2 – 3 – 4 – 5 |
| 20) For study | 1 – 2 – 3 – 4 – 5 |

E. Given the choice of paper or technology for the following tasks, which would you choose? (An answer of “20%” shows that you would choose paper 20% of the time.)

- | | |
|---|------------|
| 21) Writing a memo | Paper ___% |
| 22) Taking a test | Paper ___% |
| 23) Writing a 5-page report | Paper ___% |
| 24) Communicating with your teacher | Paper ___% |
| 25) Doing a budget for your home or club/circle | Paper ___% |
| 26) Picking up supplementary material for your class | Paper ___% |
| 27) Looking at class material | Paper ___% |
| 28) Doing a presentation (OHP vs. using PowerPoint) | Paper ___% |
| 29) Dividing a restaurant check / bill | Paper ___% |
| 30) Doing regular correspondence (writing a letter vs. doing e-mail) | Paper ___% |
| 31) Communicating with someone (face-to-face vs. Internet/video chatting) | Paper ___% |

Digital Natives, Learner Perceptions and the Use of ICT

F. Please indicate a percentage for the following questions.

- 32) How much have you learned about computer technology at school?
(other than cell phones) _____ %
- 33) How much have you learned about cell phone technology at school? _____ %
- 34) How much have you learned about technology from friends? _____ %
- 35) How much have you learned about technology by yourself? _____ %
- 36) How much have you learned cell phone technology from friends? _____ %

G. Please indicate the extent to which you do or have done the following activities.

(1 = Not at all, 2 = A little, 3 = Some, 4 = Quite a bit, and 5 = Very much / always)

- 37) How much do you teach friends (or colleagues) about computers? 1 – 2 – 3 – 4 – 5
- 38) How much do you teach friends (or colleagues) about cell phones? 1 – 2 – 3 – 4 – 5
- 39) How much have you learned or used educational software for learning languages? 1 – 2 – 3 – 4 – 5

H. Given the choice of a computer (PC) or a cell phone for the following activities, how much would you choose to use a computer? (An answer of 20% indicates you would choose a computer 20% of the time.)

- 40) Taking a test _____ % PC
- 41) Looking up a word in a dictionary _____ % PC
- 42) Viewing a webpage _____ % PC
- 43) Getting information about class cancellations _____ % PC
- 44) Sending a message to your teacher _____ % PC
- 45) Doing a money-related calculation _____ % PC
- 46) Paying a bill _____ % PC
- 47) Exchanging mail with a pen-pal _____ % PC
- 48) Doing regular e-mail _____ % PC

H. Was this survey easy to understand?

(1 = Not at all, 2 = A little, 3 = Just OK, 4 = Understandable, 5 = Very understandable)

- 49) 1 – 2 – 3 – 4 – 5

I. Were the clickers used in this survey easy to use?

(1 = Not at all, 2 = A little, 3 = Just OK, 4 = Easy to use, 5 = Extremely easy to use)

- 50) 1 – 2 – 3 – 4 – 5

J. Of the education you have had about technology, do you think it could play a role in future activities?

(1 = Absolutely not, 2 = I doubt it, 3 = A little, 4 = Yes, 5 = Absolutely!)

- 51) 1 – 2 – 3 – 4 – 5

K. Demographic information

52) _____ Gender (female = 1, male = 2)

53) _____ Age

APPENDIX 2

Descriptive statistics for questionnaire items

Item	Mean	SD	Skew	Kurtosis	Item Description
<i>Proficiency at...</i>					
1	2.56	1.18	0.33	-0.63	Touch-typing
2	3.10	1.14	-0.03	-0.50	Internet surfing by cell phone
3	3.58	1.02	-0.21	-0.46	Internet surfing by computer
4	4.13	0.86	-0.46	-0.95	E-mail by cell phone
5	3.39	1.02	0.06	-0.59	E-mail by computer
6	3.36	0.88	0.15	-0.07	Writing report on a computer
7	2.63	0.87	0.29	0.09	Using computer spreadsheet
8	2.26	1.13	0.78	-0.11	Downloading movies and music
9	2.40	1.21	0.59	-0.51	Downloading new software
10	2.41	1.17	0.56	-0.48	Connecting peripheral devices
<i>Anxiety</i>					
11	2.45	1.29	0.58	-0.68	Typing
12	2.15	1.05	0.96	0.72	Internet surfing
13	3.08	1.25	0.04	-1.05	Test-taking while using tech
<i>Useful for...</i>					
14	3.02	1.03	0.17	-0.43	Learning a foreign language
15	2.48	1.15	0.52	-0.50	Learning math
16	3.00	1.11	0.02	-0.62	Learning science
17	2.54	1.05	0.39	-0.27	Learning native language
<i>In future will use for...</i>					
18	4.25	0.96	-1.34	1.51	Private use
19	4.04	1.11	-1.17	0.75	Work
20	3.79	1.00	-0.47	-0.53	Study
<i>(WUT) Prefer paper (%) for...</i>					
21	75.94	21.57	-1.00	0.44	Writing a memo
22	76.89	24.45	-1.44	1.60	Taking a test
23	29.98	31.10	0.95	-0.29	Writing a 5-page report
24	31.57	30.74	0.90	-0.42	Communicating with your teacher
25	47.23	28.40	0.06	-0.89	Doing a budget
26	56.87	26.50	-0.47	-0.37	Picking up extra material
27	42.82	22.10	0.05	-0.25	Looking at class material
28	23.68	27.92	1.42	1.08	Doing presentation (OHP vs. PowerPoint)
29	29.36	32.00	0.98	-0.29	Dividing a restaurant check / bill
30	26.51	26.02	1.11	0.53	Doing regular correspondence
31	49.44	31.32	-0.09	-1.21	Face-to-face communication

continued on the following page

Digital Natives, Learner Perceptions and the Use of ICT

Appendix 2. (continued)

					<i>Extent that you...</i>
32	46.64	25.06	0.16	-0.66	learned computer tech at school?
33	14.52	19.27	1.77	3.04	learned cell phone tech at school?
34	32.76	21.57	0.55	-0.26	learned tech from friends?
35	42.43	25.80	0.14	-0.96	learned about technology by yourself?
36	31.90	23.58	0.60	-0.44	learned cell phone technology from friends?
					<i>Extent that you...</i>
37	2.19	1.08	0.58	-0.50	teach friends about computers
38	1.91	0.97	0.99	0.70	teach friends about cell phones
39	1.90	0.99	1.00	0.54	learned or used ed. software for learning languages
					<i>Prefer PC to cell phone for...</i>
40	65.88	33.86	-0.67	-0.95	Taking a test
41	58.55	29.18	-0.23	-0.98	Using a dictionary
42	80.61	22.23	-1.57	2.40	Viewing a webpage
43	54.03	30.90	-0.05	-1.09	Getting info about class cancellations
44	56.34	28.48	-0.20	-0.83	Sending a message to your teacher
45	26.98	26.57	0.99	0.20	Doing a money-related calculation
46	32.90	30.24	0.64	-0.61	Paying a bill
47	27.02	27.76	1.25	0.69	Exchanging mail with a pen-pal
48	30.84	29.03	0.92	-0.29	Doing regular e-mail
49	2.53	1.06	0.48	-0.11	Survey easy to understand
50	3.02	1.33	-0.09	-1.12	Clickers easy to use
51	3.06	0.97	0.16	-0.25	Tech play role in future

Section II

**The Read/Write Web and
Second Language Learning**

Chapter X

Social Networking Behind Student Lines in Japan

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ABSTRACT

In a cross-cultural educational context of TEFL in Japan, the author sought to enhance the integrative motivation of students toward the target language community through a supplementary online dimension. The social networking site (SNS), Mixi, was selected because it is familiar to most college students in Japan. The Mixi Japanese language interface is illustrated in this chapter, describing functions possibly applicable to education. A YouTube video that introduces Mixi in English, made in authentic collaboration with students, is also referenced as a representative CALL 2.0 classroom activity. More importantly, joining Mixi presented an opportunity to go behind the lines into student territory. Teachers and students, whether foreign or Japanese, customarily maintain their social distance in terms of separate affiliations. Social networking with Japanese students further involves issues of online technological proficiency, biliteracy, and the necessity of an invitation. The author negotiated with three 2007-08 classes on networking through Mixi, with varying outcomes extending beyond the classroom and the school year. Metaphors of lines and perspectives including “technoscapes” (Appadurai, 1990) are proposed to interpret the results, but Japanese socioculture may be most salient to account for the particulars. Student attitudes are probed as to a possible ambivalence in valuing their free expression in Mixi versus the integrative motivation of social involvement with a teacher. One prediction was that results would differ as to whether or not a teacher was welcome in a student community depending on how students were approached for an invitation. Social networking is proposed as a Web 2.0 educational approach that is authentic, collaborative, and immersive in cutting through power hierarchies and positively blurring the distinction between the classroom and the real life of students and teachers, which nowadays includes a virtual dimension.

INTRODUCTION

This chapter introduces Mixi, a social networking site (SNS) in the purview of most college students in Japan. More importantly, the chapter aims to describe and analyze what happened when a teacher went behind the lines into student territory in order to enhance their integrative motivation toward learning EFL. Metaphors of lines, which do not map predictably across cultures, are employed as a framework for understanding cross-cultural pedagogical issues particular to social networking with students. Among the metaphors employed are reading between the lines, reading and going behind the lines, crossing lines and, as delineated aggregations, territory, maps, and landscapes. Extending the latter perspectivity to technology in Web 2.0, Appadurai's "technoscapes" are considered for possible theoretical support in analyzing students' views of social networking. The methodological approach is to apply an understanding of the languages, cultures and technologies involved, not to generalize about populations but to discern particulars and variations that might be linked to pedagogical interventions. Drawing from socio-cultural theory, social constructivism, and the concept of integrative motivation, even one student in a clarified context can provide significant data for understanding complex technology-enhanced L2 learning across non-cognate cultures.

EFL UPTAKE AND TECHNOLOGY USE AMONG STUDENTS IN JAPAN

Briefly with regard to the subjects of this study, the EFL situation in Japan is problematical in a number of dimensions. While nearly everyone studies English for at least six years in secondary school, and children's English is increasingly popular among parents, the Japanese language predominates outside of classes, which do not meet often enough or provide enough listening input and speaking practice. English serves as a test subject

for gatekeepers to rank students academically, affecting their future willy-nilly, whether they ever need English or not, so in compulsory EFL classes some students naturally regard the work as an imposition. A disincentive tied to a mutually exclusive sense of cultural identity is that a student who speaks a foreign language fluently may be singled out from her peer group as different or crossing over in affiliation, which threatens the vulnerable young person living in a social world with exclusion. Educational officialdom is more concerned with maintaining Japaneseness than encouraging goals of bilingualism and biculturalism, so there is a pervasive ambivalence about English. Thus motivation tends to be extrinsic or instrumental rather than intrinsic or integrative. Yet teachers are expected to motivate students, so they either read their lines perfunctorily or go to great lengths including innovations in CALL (Computer-Assisted Language Learning).

The technological background of students is that of an advanced nation, but ubiquitous use of Internet-capable mobile phones with cameras and ever more functions has somewhat stunted the computer skills of students beyond what is necessary or convenient for school work. Despite a shortage of IT workers, computer-related courses are relatively less popular in Japan than in many other countries, which heightens the challenge of teachers to innovate while starting from where the students are in computer proficiency. As this chapter will show, however, social networking is very popular among young people and works to converge computers and mobile phones as they access the same platform.

The subjects of this study are female students, who tend to be shy with computers compared to males, as a sort of believed self-stereotype. Osaka Jogakuin College (OJC) has a women's 2-year and 4-year program where everyone majors in English. Unlike the general situation described above, the students have chosen EFL, so intrinsic motives can be activated. The college encourages women's empowerment, so a teacher can promote

technological empowerment. The integrated content-based curriculum, recognized as “Good Practice” by the Education Ministry, has the effect of integrating the faculty as well, Japanese and non-Japanese, full-time and part-time. Like most other private colleges in an ageing society, OJC is not difficult to enter, but students have to work hard and therefore tend to achieve remarkable growth in English proficiency. More classes are taught in English by native speakers than at most colleges in Japan. In this institutional culture, teaching is emphasized more than research and each student is valued as an individual.

HYPOTHESES AND PURPOSES OF THIS CHAPTER

The author sought to join the social networking site Mixi in order to go behind the lines into student territory for educational and research purposes. It was hypothesized that voluntarily entering students’ virtual communities and friendship networks could help overturn some inhibiting barriers that Japanese students assume in relation to a teacher. Transformative learning experiences might be facilitated in students provided an expanded and more approachable teacher-student relationship is initiated on the simulated level playing field afforded by a social networking site. Particularly in the case of a teacher representing the target culture, social networking is hypothesized to have considerable potential to create a supplementary learning environment enhancing students’ integrative motivation to communicate with the L2 target community.

However, in three 2007-2008 classes where most students already belonged to Mixi, results varied in negotiating involvement in this extra social or personal dimension. Thus one purpose of this chapter is to interpret reasons for those particular outcomes, ostensibly within the same culture, hypothesizing that whether a teacher was welcome in a student community or not could de-

pend on precisely how students were approached for the necessary invitation, and in terms of their sociocultural norms. Another reason to join Mixi friendship networks and topical communities was to confirm the hypothesis that more interaction, feedback and collaboration with students beyond the classroom could be realized. An essential purpose of this chapter is therefore to report on what became possible that had hitherto been difficult or piecemeal at best, and to describe what educational potential was realized after receiving an invitation to join Mixi.

THEORETICAL FRAMEWORKS AND METHODOLOGICAL CONSIDERATIONS

Various aspects of Web 2.0 for language learning are defined in complementary ways in this volume. To this author Web 2.0 is imprecise shorthand for a second generation of Web-based technologies that tend to be free, easy to use and to share content, influenced by and therefore reflecting users’ collective needs, desires and intelligence. The technologies ascribed to Web 2.0 can be as diverse as mobile phones and 3D virtual worlds, raising the question whether they are related or merely contemporaneous. However, mobile phone Internet content is largely Web-based. As an example, mobile phone home pages can be made and simulated on the Web with Winksite, a free site characteristic of Web 2.0. 3D worlds still have a Web interface, with Second Life SLURLs utilizing Web browsers to open the 3D program at a certain in-world location. Earlier Web-based technologies called Web 1.0 after the fact, such as Web directories or pages or links, tended to be less up-to-date and interactive. For the purposes of this chapter, many Web 2.0 technologies can be applied to education, alluded to in terms such as CALL 2.0, because students in a computer lab can readily sign up for a Web service, including mobile m-learning or 3D sites, and engage in

activities that are authentic, collaborative, and immersive. Social networking is characteristic of Web 2.0 and combines many Web 2.0 technologies into a platform that serves as a virtual gathering place. Individual Web 2.0 sites are also useful in activities such as making videos, podcasting student performances, or various means of distance communication (Lee & McLoughlin, 2007; McLoughlin & Lee, 2007). When browsing becomes three-dimensional and activities are native to 3D virtual worlds, then Web 3.0 can be said to have arrived.

Much has been written about social networking sites (SNS) for educational purposes generally (Boyd & Ellison, 2007), and social software as characteristic of Web 2.0 technology (McLoughlin & Lee, 2007). While hybrid or blended media, offline and online, are not entirely new pedagogically, SNS can be regarded as integrated platforms containing communication tools such as blogs, and Web 2.0 functions that students can use much more easily and authentically than they could with Web 1.0 learning management systems (LMS).

For the scope and purposes of this chapter, a general knowledge of SNS is assumed, and comparisons are drawn when discussing the limitations of Mixi functionality. Compared to Facebook, the U.S.-based counterpart to Mixi, little has been published in English about a site with an exclusively Japanese language interface yet experienced by about ten million users. Mixi functions such as blogs are simple to use, and most functions are accessible by mobile phone as well as computer, bringing the technology within the purview of nearly all young people in Japan. Of possible relevance to cross-cultural TEFL situations with high technology but questionable intrinsic motivation, this chapter aims to lift the veils of language and culture while suggesting an approach to foster integrative motivation in students toward the international community using English.

Alm (2006) shows how Web 2.0 activities can be motivating for L2 learning in the case of

German in Australia. She mentions that the “phenomenon of social networking shows the strength of the need for relatedness” (p. 32), a component of motivating learning environments along with a sense of competency and autonomy. However, it remains to be investigated whether “self”-centered models such as self-determination theory are as overarching in non-Western cultures such as East Asia. This issue can be revisited after describing the group dynamics of Japanese students deciding about Mixi relationships. Japanese culture includes a strain of rigid conservatism, but the situational relativism of time, place and occasion also informs a repertoire of roles or social gears, and a fluid identity may more readily allow for transformation.

Transformative Learning and Motivational Transformation

The limitations of the seminal theory of “transformative learning” (Mezirow, 1991, pp. 90-91, 167) have been discussed by McCarty (2006). For the purposes of this chapter, learning is understood as transformative when not the content so much as the whole frame of reference of the transaction is expanded to the benefit of the learner’s worldview. It is in that sense that transformative learning is hypothesized to become possible through supplementary online technologies, in this case because of the expanded teacher-student relationship afforded by social networking sites (SNS).

Theoretical support for motivation as discussed in this chapter is found in social constructivism and in the psychology of language learning, where individual and social factors are balanced:

[E]ach individual is motivated differently. People make their own sense of the various external influences that surround them in ways that are personal to them ... However, an individual’s motivation is also subject to social and contextual influences. These will include the whole culture and context and the social situation, as well as significant other

people and the individual's interactions with these people. (Williams & Burden, 1997, p. 120)

Whether or not the teacher is a significant other to the student may correlate with possibilities for transformative learning. Motivation has often been studied in terms of personal attitudes, and despite Gardner's clarifications about dynamism, personality tests in this genre may tend to reify attributes into personality traits that mitigate against change. Lamb (2007) makes similar arguments in the context of EFL in Indonesian schools. Motivation declines on average over the years, and a student may be typecast with the attribute of "unmotivated," yet the main cause of the decline, teaching methods, can also be the source of positive change. If the pedagogy is changed, student motivation is also subject to transformation.

Integrative motivation is also employed in this chapter as subject to change, referring to integrative motives for learning, a learner's sense of integrativeness, and as an orientation, which Dörnyei defines as "a positive disposition toward the L2 group and the desire to interact with and even become similar to valued members of that community" (2001, p. 16). An orientation exists at a certain moment in the changing flow of a person's life. Integrative motivation is thus regarded not as a fixed attribute but as possibly enhanced, with a view to the potential for transformative learning experiences to bring about motivational transformation.

Treating Students as Subjects, not Objects

From a fundamental perspective, treating students as unique individual subjects, not as objects, in research as well as teaching, has methodological support in sociocultural theory (Swain, 2000; Kramsch, 2000; Pavlenko & Lantolf, 2000; van Lier, 2000). Students' contextual and developmental particulars can be of more value for teaching

and research than abstract generalizations about populations. To deal even in terms of cultural identities can be constraining, as it may reinforce loyalties that are akin to branding. Social roles may be observed instead, while recognizing individual agency, creativity and self-reformation processes (Roebuck, 2000) as inherent in learners. Thus the interpretation of descriptive and contextual data on even one student can be of interest for research.

Treating students as subjects, not as objects, is evidently practiced in the Osaka Jogakuin College (OJC) curriculum. Classes with one student enrolled have not been canceled outright, and a Computer Communication class with one student enrolled in 2007-2008 will nevertheless be offered again the following year. The educational philosophy of OJC, a women's college where all students major in English, treats each student as "a unique individual of immeasurable worth" (Swenson & Cornwell, 2007, p. 109). Whether due primarily to institutional culture, selection by the student, or treatment by the teacher, an individual student will be seen to make a difference in this research.

Metaphors of Lines, Social Spaces and Perspectives

This chapter attempts to illustrate complex social phenomena with scaffolding metaphors of lines, territories, and perspectives thereupon. In cross-cultural education there are social lines that can be crossed, others that cannot, and further lines that are negotiable with a proper introduction, suitable preparation or pedagogical intervention. In another sense, a teacher may read between the lines of words, behavior or unexpected inaction by students. An observer with second culture literacy might also read *behind* the lines of normative texts, individual behavior, or group dynamics in that culture. But in cross-cultural education the affiliations and socially bounded spaces of the teacher and students differ both

culturally and hierarchically within the institution. Yet *going* behind student lines strategically for TEFL in a communicative space such as Mixi is hypothesized to foster integrative motivation, insofar as relationships formed are authentic and collaborative. The territory for teacher-student interaction can be expanded into the virtual with this technology, provided both sides access the SNS for voluntary communication.

Default Lines of Human Relationships

Lines in this metaphorical sense first represent boundaries between affiliations that constrain behavior according to the unwritten social contract of a given culture or subculture. Generally it is safer not to cross these lines but to move within the acceptable paths formed by these boundaries, staying on the side of one's affiliation. These lines are generally heeded as warning signs not to go out of bounds and risk punishment by daring to be different from the prescribed social norm. These default lines are supported by taken-for-granted assumptions about the roles different types of people should play, in this case particularly the social distance or power relationship between teacher and student. Social-constructivist approaches may not transplant smoothly into non-Western classrooms where teachers are expected to be authorities, although Japanese education includes both instructivism and constructivism, depending on whether the objective is academic achievement or social adjustment (McCarty, 2007).

In any case the practitioner needs to know where the invisible lines are drawn in order to estimate the dangers and benefits of a creative intervention. In intercultural communication the invisible signposts or routes to accomplish goals do not readily map onto one other. In a contrasting culture, for instance a native English speaker teaching in Asia, social action can be like navigating a minefield with invisible tripwires. To change default patterns of relationships across

cultures thus requires intercultural sensitivity and thoroughgoing negotiations.

Reading Between the Lines in Teaching Across Cultures

Reading between the lines can mean reading the meaning of others' actions or omissions, interpreting the nuances of spoken or written language in a certain cultural context, and discerning implications or motives thereof. The teacher should notice changes in the atmosphere of classes or transformations in the attitude of individual students, accepting it all as feedback on the task or sought objective. Knowledge of the students' native language and cultural literacy about the community beyond the classroom can help in contextualizing observed phenomena, in communicating with the various stakeholders involved in education, and in regarding students as subjects rather than as undifferentiated surfaces that could become psychological screens for unprofessional projection. Knowledge of where students are coming from can help in assessing where they can possibly go, including what social lines they might be inhibited from crossing.

Between and Behind the Lines of Language Policies

Where the lines refer to language policies, "reading between and behind the lines" can turn the focus to the local context and the agency of practitioners, opening up "spaces for transformative pedagogical interventions" (Ramanathan & Morgan, 2007, p. 448). Taking policies not as fixed entities but as engagements subject to interpretation, it is in these "spaces between the lines" of policies "that practitioner agency emerges" (p. 451).

There are also lines of group affiliation between national policy makers and local practitioners, particularly teachers who are on the front lines with students. So the notion of reading behind the lines can point to a deep and empowering

understanding of the rationale behind policies, in order for instance to mitigate the effects of political ideologies. In this context, not just to read but to go behind the lines would imply trying to work through channels in the given hierarchy by taking administrative responsibilities or trying to convince governmental authorities to reform policies in response to local needs.

GOING BEHIND STUDENT LINES WITH MIXI

The teacher would be going into student territory by social networking through Mixi, which is popular among students and other denizens of youth culture, since basic exchanges like blog entries and personal messages are available to the mobile phones ubiquitous in Japan as well as to networked computers. As Mixi tends to be a peer medium, with relatively new technologies, a teacher must cross some technological and social lines in order to join. Japanese teachers generally represent different affiliations in terms of age, status, lifestyle, power, and social distance from students, with little in common volitionally, while not many teachers keep up with computer technologies beyond their utilitarian needs. With most foreign teachers there is the further barrier of having to navigate the Japanese language interface of Mixi.

The need for an invitation from an existing member to join Mixi subtly reinforces a social psychology of in-groups and out-groups, pronounced *uchi* and *soto* in Japanese. The latter Chinese character is used in the word for foreigner, literally meaning outside person. Yet even within the culture, anyone outside of a student's peer group would have to negotiate for an invitation, if only because such action would not occur to a student without some prompting. If a teacher expressed a willingness to stay in touch after classes ended, it would probably be a pleasant surprise to students. After a person of interest

is known in student circles as a Mixi user, then requests to become a friend or to join a thematic community tend to ensue. This agglutinative process of friend-of-a-friend expansion of individuals' social networks through commonalities not only matches traditional social patterns in Japanese culture but is furthermore enhanced by the affordances of SNS like Mixi.

Yet in a social context where actual teacher-student friendships are not the norm, to do more than is necessary as a faculty member involves crossing some default social lines. Thus a new teacher-student relationship, not incompatible with the institutional culture, must be negotiated in order to bear positive results. A new relationship can be supported by pedagogical consistency in where the lines are redrawn, and reinforced by classroom activities that:

- Promote agency and investment, such as by asking students if they would like to do an activity or offering choices for them to decide.
- Are immersive, not just in a technical sense such as entering a virtual learning environment or 3D virtual world, but any tasks, projects or activities that are interesting and absorbing enough so that students lose a sense of time and other classroom parameters. With content-based real-world activities, voluntary immersion in the target language might also be a part of students' experience of flow.
- Are authentic and involve teacher-student collaboration, such as the YouTube video made about Mixi for an international conference in Japan in 2008 (Thomas, in preparation). Discussing actual global issues with students, assisting in their portfolio products or performances, while de-emphasizing grading and the like, can help cut through power hierarchies and positively blur the distinction between the classroom and the real life of students.

- Could result in polished student performances that merit being published later as student-generated content, for example made available online for other EFL learners or for those interested in Japan (Sener, 2007; Lee & McLoughlin, 2007). When students' work is posted online in some form such as a podcast, they gain a motivating sense of addressivity in their English performance, addressing a global audience as content-creating members of the target language community. When their efforts receive responses or recognition abroad, it palpably reinforces their integrative motivation to become bilingual and to join that larger world.

TECHNOSCAPES BEHIND STUDENT LINES

With regard to reading the technological landscapes behind student lines from their standpoint, Appadurai's concept of "technoscapes" (1990) may contribute to a theoretical framework calling attention to the technological schemata of students or how they are viewing experiences mediated by information and communication technologies (ICT):

The new global cultural economy has to be understood as a complex, overlapping, disjunctive order ... [A]n elementary framework for exploring such disjunctures is to look at the relationship between five dimensions of global cultural flow which can be termed: (a) ethnoscapes; (b) mediascapes; (c) technoscapes; (d) finanscapes; and (e) ideoscapes. I use terms with the common suffix scape to indicate first of all that these are not objectively given relations which look the same from every angle of vision, but rather that they are deeply perspectival constructs, inflected very much by the historical, linguistic and political situatedness of different sorts of actors ... Indeed, the individual

actor is the last locus of this perspectival set of landscapes, for these landscapes are eventually navigated by agents who both experience and constitute larger formations, in part by their own sense of what these landscapes offer. These landscapes thus are the building blocks of what, extending Benedict Anderson, I would like to call "imagined worlds," that is, the multiple worlds which are constituted by the historically situated imaginations of persons and groups spread around the globe. (Appadurai, 1990, para. 4)

The disciplinary context of the author's formulation is the anthropology of globalization, and he comes from India, which, unlike contemporary Japan, has a large diaspora that takes on a collective transnational role such as he describes. A global level of generality can only be painted in broad strokes:

By "technoscape" I mean the global configuration, also ever so fluid, of technology, and of the fact that technology, both high and low, both mechanical and informational, now moves at high speeds across various kinds of previously impervious boundaries. Many countries now are the roots of multinational enterprise ... The odd distribution of technologies, and thus the peculiarities of these technoscapes, are increasingly driven not by obvious economies of scale, of political control, or of market rationality, but of increasingly complex relationships between money flows, political possibilities and the availability of both low and highly-skilled labor. (Appadurai, 1990, para. 7)

The metaphor of landscapes captures in part the perspectivity of the individual Japanese student in a CALL laboratory functioning in English as an International Language (EIL), clearly in the midst of global cultural flows. Yet the definition of technoscapes in the original source could not have anticipated the particulars of current ICT applications to education represented by Web 2.0

activities, m-learning, and rapidly approaching Web 3.0, where activities will be native to 3D virtual worlds such as Second Life. Nevertheless, Appadurai perceived the trend to accelerating technological changes now reaching the intercultural networked classroom, which can be seen as disjunctive or disruptive, hybrid or ambivalent, or in a more positive light as follows:

it is wrong to assume that the electronic media are the opium of the masses ... [T]he consumption of the mass media throughout the world often provokes resistance, irony, selectivity, and, in general, agency. (Appadurai, 1996, p. 7)

However true, for this chapter's analysis a global generalization cannot be assumed to hold for Japan without examining the particulars of the local situation. But nuances in the global perspective that resonate in the case of TEFL in Japan may support Appadurai's theory while shedding light on this study:

[A]s group pasts are becoming increasingly parts of museums, exhibits, and collections, both in national and transnational spectacles, culture becomes less what Pierre Bourdieu would have called a habitus (a tacit realm of reproducible practices and dispositions) and more an arena for conscious choice, justification, and representation, the latter often to multiple and spatially dislocated audiences. (Appadurai, 1996, p. 44)

While critical thinking is essential toward all media, global forces such as advertising on television and other mainstream media are far more insidious and liable to overwhelm the unwary with a false sense of agency than the Web as utilized in higher education. The point in the above quotation about the uses of culture is relevant to the content selected for student homepages and e-portfolio products. Students can imagine correctly that there are Websurfers in other countries interested in Japanese culture, so introducing highlights of

their home region provides an educational service that justifies publishing in the global medium of the open Web. When a self-introduction is contextualized by demonstrating the student's cultural background, expectations or communicative conditions are met, and Websurfers are more likely to respond to the product. Teachers in different countries can mutually announce student-generated content, delivering an audience and making the imagined involvement real. As an example, a Computer Communication class activity characteristic of Web 2.0 was to make a narrated slide show with Voicethread, and a student introduced the UNESCO-designated World Heritage Site in her home region. Even though technical obstacles arose and overtime work was needed for its completion, a voice comment posted to the show by an EFL educator in Europe was palpably motivating to the student.

MIXED RESULTS CROSSING STUDENT LINES

To join Mixi in the first place requires an invitation, and it may be pointless at best to try social networking with students in Mixi if the teacher is unable to acquire an invitation from one of their cohort. However, in one class it turned out to be a complex issue to find a student to be the one to implement the invitation among others in the class and, after joining Mixi, to form a topical Mixi community in another class, suggesting that there were invisible lines to cross.

Three 2007-08 classes were negotiated openly, with varying results. To examine why, basic characteristics of each class are next described, starting with the first class approached. Analyzing reasons for the different outcomes, one factor considered is to what extent the class subjects were actually related to social networking. Reading behind the lines, results are interpreted in terms of Japanese cultural values and group dynamics as well as spatial metaphors including technoscapes.

Mixi presents a different situation from mobile phones, which could extend the learning infrastructure informally because of their ubiquitous use among students, or iPods, which all OJC students receive and are thereby an extension of the campus network. While the majority of the OJC students in the classes discussed below already belonged to Mixi, not all did, so there could have been lines dividing the students or cleavages among their technoscapes. They were certainly not monolithic classes but held their own disjunctures, discernible in their various actions and inhibitions. This complexity compounded the challenge of forming new relationships with students above and beyond the class subject matter, but recognizing individual differences along with group dynamics may help explain the diverse outcomes.

A Bridge Too Far in a Bilingual Education Class

A Bilingual Education class at the 4-year college met four hours a week for one semester, with a total of 13 students in their third or fourth year. The class was thematically unrelated to social networking, but with e-mail available, blog links to class-related documents recommended, and lectures of the previous year's course available online, which is termed coursecasting.

The author brought up the subject of Mixi to the class as a whole and asked for an invitation. Attention seemed to turn to one student who had been especially responsive to the teacher in class discussions, otherwise seemingly popular and well-adjusted like many others in her cohort. She agreed, perhaps too quickly in Japanese terms to fully negotiate the issue with her group. Some time later the author asked her again and she agreed, yet she never sent the invitation. One can surmise that she may have had second thoughts about being perceived by her peers as being too much of a teacher's pet. There is a line of affiliation dividing teacher and students that the latter

may find safer not to appear to their peer group as having crossed. In general education at many other schools in Japan, students may not speak English in class as fluently as they can for fear of being seen as different from their peers or crossing over in a mutually exclusive sense of cultural allegiance. So this particular student had already crossed some cultural lines, encouraged by OJC course content to embrace bilingualism and biculturalism, yet still finding the invitation to her teacher to join Mixi a bridge too far.

Hierarchical Lines Hard to Cross on Both Sides of the Teacher

To place this issue in a broader perspective, during the same academic year, the author considered trying to start social networking with a Japanese administrator who students had said was active in Mixi. Both the author and administrator were bilingual and on cordial terms in committee work and so forth. Yet this idea evoked inhibitions in the author, evoking a teacher-administrator social boundary difficult to cross, whether Japanese society's reputedly rigid hierarchy truly constituted an obstacle or not. In any case, as a result the author could empathize with any corresponding student embarrassment or hesitancy to cross default student-teacher lines.

Inconclusive Negotiations on a Discussion Class Mixi Community

During the semester after the Bilingual Education class, a year-long Discussion class was in its second semester, meeting three hours a week, with 26 first-year junior college students. The subject of topic discussion was thematically unrelated to SNS, but with e-mail available and Web references recommended. Through OJC faculty-created content-based materials (Swenson & Cornwell, 2007), students had become able to discuss global issues in English to some extent. Some welcomed or sought extra speaking opportunities, again

with little connection to SNS. Two students who had won a campus English dialogue contest were excited to record it later as a podcast which, along with their original script, was uploaded for other EFL learners to read while listening, so there was a seed thought in the class about reaching a global audience through the Internet.

In class discussions particularly with a group of four, different from the above-mentioned two, it was agreed that the students would form a Mixi community for this class to stay in touch. It would include the author, who offered technical help if needed, though the Mixi interface is in Japanese. Such a community would be an affordance well-suited to the peer culture and to the situation where their closely-knit class and teacher would be scattered the following year. Yet negotiations proceeded inconclusively. At one point, one of the four, who had palpably worked hard in the second semester to become relatively fluent in English speaking like the other three, mentioned that she did not belong to Mixi yet. Thus it was probably the consideration of the students already in Mixi, not wishing to make any of their peers feel left out, that inhibited them from forming a Mixi community for their class. They may either form a community later or regret not having done so, but they maintained the Japanese cultural value of sacrificing their own wishes rather than risking the appearance of excluding any peers, which they would not wish to happen to themselves. Rather than possibly splitting along fault lines in their technoscapes, they maintained the unity of their peer group.

A Computer Communication Class Fits the Task

In the same second semester, there was a one-semester Computer Communication class that met two hours a week in a computer lab, open to junior college students. The previous years of this class had been enjoyable, but it offered only one credit as a hands-on practicum. This time

only one second-year student enrolled, although during three of the 13 two-hour sessions, three other students participated, motivated by intrinsic interest.

For a diminutive Japanese student, being the only student in a class tends to be stressful. She might miss the usual peer solidarity or consider how the teacher views the situation. Online communicative activities simulating distance education with other students in the class were precluded. Mixi was not a formal part of the syllabus or inserted into planned class activities, but Computer Communication was thematically related to social networking. The class subject thus fitted the task. Having one student also made the request for an invitation easier for her to accept, because she was not placed in the position of representing her classmates by extending the invitation.

After several weeks, with rapport established, the Computer Communication student readily invited the author into Mixi. She was a regular user, and the complex group dynamics in other classes alluded to above did not hold in this situation. But the Mixi friend connection with her teacher was by no means kept secret, as friends of hers soon sent friendship requests from within Mixi, some later introducing themselves to the author through this established commonality. As the circle widened, the inference could be drawn that, if there was a student-teacher boundary or social line that was to be crossed, a number of students gladly crossed it after being convinced that it was permissible, or that they were welcome on the other side, responding to the encouragement of integrative motivation as hypothesized in this chapter.

SOCIAL NETWORKING BEHIND STUDENT LINES

Outcomes in the three classes show the importance of the local or immediate context from the

vantage point of Asian students. Approaching a group of students for an invitation is evidently more complex, despite or because of the fact that only an individual can issue the invitation. The group may contain greater aggregate desire for relatedness with the teacher, yet the individual extending an invitation becomes a representative or leader, so she needs assurance of representing an unequivocal group consensus lest she become singled out. Establishing new relationships is the hardest part, but it seems quite possible for a teacher to approach a class successfully to network, as evidenced by the invitations the author has been receiving since breaking the ice by becoming a Mixi member.

The small class was conducive to authentic, collaborative activities such as making the YouTube video about Mixi for the Wireless Ready 2008 conference presentation (Thomas, in preparation). The student operated a digital video camera for the first time after learning some techniques. She zoomed in on scenery outside the college window toward Osaka Castle, then focused on the author's introduction of the video. In the main segment,

the enrolled student focused the camera on the computer screen while the author browsed his Mixi site, explaining basic functions in the Japanese language interface.

Another student and Mixi user was also present during the filming, and while there was no objection to the idea of inviting Japanese or foreign teachers into their social networks, a sense of ambivalence did emerge. While they themselves had nothing in particular to hide from teachers in their blogs, photos, and other Mixi contents, they could imagine more free-wheeling thoughts and images that some students would prefer only their peers to view. The thought of restraining their free expression because of a wider audience soon occurred to the students, so the opportunity to cross such a social line, or to let others behind one's own lines, is liable to be regarded with ambivalence. All this discussion in English came out before, during and after the filming of the Mixi video in one two-hour class session, so the collaborative authenticity of the activity may have encouraged students to speak out frankly.

Figure 1. Introducing the top of a Mixi member's profile page



SOCIAL NETWORKING WITH MIXI FUNCTIONS

Figures 1-3 introduce the main functions of Mixi that may be of interest for educational purposes. Some limitations of Mixi functions will then be discussed, and comparisons with other social

software drawn, particularly with Ning, a more versatile SNS with an English interface that can be used for group collaboration, virtual organizations, academic events, or in lieu of a learning management system. One can enter contents in any language, so with some orientation it may be

Figure 2. Introducing the middle of a Mixi member's profile page

A Mixi user's site – middle of the profile page

The screenshot shows a user profile for a member from Osaka University. The page is divided into several sections:

- Header:** User name, school (大阪女学院大学・粒大), and a self-introduction paragraph.
- Navigation:** Links for 'Home', 'Blog', and 'Album'.
- Friends:** A grid of nine small profile pictures of friends.
- Interests:** A section titled '好きなホームページ' (Favorite Home Pages) with links to 'My Mixi' and 'Online Education Forum'.
- Blog:** A list of recent blog entries with dates and titles.
- Right Sidebar:** A menu of navigation options like 'Home', 'Blog', 'Album', etc.

Annotations:

- Profile (cont'd):** Points to the self-introduction text.
- One's recent blog entries:** Points to the list of recent blog posts.
- General & specific help:** Points to the right sidebar menu.

Text below the screenshot:

Above: change one's default photo or image among three available free; first nine friends, usually not the real photos of female students

Figure 3. Introducing the bottom of a Mixi member's profile page

A Mixi user's site - bottom of the profile page

The screenshot shows the bottom section of the user profile:

- Communities:** A grid of three community icons: 'Worldwide Kids English (133)', '大阪女学院大学/粒大 (656)', and 'せかいを☆えいごで☆たのしもう (71)'.
- Album:** A section titled '最新のアルバム' (Latest Album) showing a photo album cover.
- Introduction:** A section titled 'マイミクからの紹介文' (Introduction from My Mixi) containing a testimonial from the user's son.

Annotations:

- One's photo album; upload up to 10 free:** Points to the album section.
- Testimonials from "My Mixi" friends, first specifying their relation to this user, in this case the author's son saying he is glad to be half Japanese thanks to his dad:** Points to the testimonial text.

Text below the screenshot:

One's communities, with a relatively large proportion of OJC 2- & 4-year college students evidently using Mixi

The last function of introductions by others reflects Japanese culture, where self-image depends to a great degree on acceptance by others, and connections or introductions are important in certifying one's worth.

possible to use Mixi without reading Japanese by clicking intuitively.

In addition to the above information, if one clicks on links to specific areas such as one's photo album or blog entries, it will be seen that friends can leave messages, often showing appreciation of the content or turning the thread into a dialogue with other users. While the profile page illustrated above is useful for getting started and for indicating how one's site will look to visitors, the user actually adds more content from the top page, which is reached by clicking the link at the extreme left of the lower tool bar for navigating the user's own site. While the top page is largely similar to the profile page, the big difference is that, rather than centering on one's own content such as the personal profile, it features RSS-style syndicated content from blogs, photo albums, and videos of one's friends and topical communities. It also prominently features a search function for various groupings of Mixi content and people. Thus one's Mixi homepage is more outward-looking or socially oriented, while visitors see the profile that the user ordinarily does not need to see.

The top page also includes some widgets such as a weather report for one's region identifiable from the profile bio-data. One's most recent blog entries and photo album are displayed as links with their date of posting shown. There are further links to write a new blog message or a review of a book, event or product, to work on one's photo album, or to upload videos. Clicking on the video link, one is prompted to search for a file on local disk drives or from a mobile phone.

Albeit with a much smaller interface, most of the Mixi functions of browsing, sending and receiving data can be managed from Japanese mobile phones. Widespread use of the mobile mode is simply a result of what users have at hand. Insofar as a networked computer is available, along with a digital or video camera, more powerful content can be created and uploaded more efficiently. However, for simple text functions such

as blogging and personal messages, users can do without a networked computer. Moreover, using the Internet on top of the frequent short messaging that Japanese young people enjoy can quickly become prohibitively expensive.

One of the more intriguing and time-consuming affordances of Mixi is the tracking of visitors to one's site. Users can follow links to sites of people who have visited their site, thereby gaining access to the friends of those visitors, and so forth. Their circle can be widened agglutinatively in this manner, but they soon leave the safe ground of certified friends of friends for a world of strangers.

A more integrated approach to uploading media by computer to Mixi is to append files to blog posts along with a text message. After writing the title of a blog post, above the text area are icons to click on to add videos or photos already uploaded to one's Mixi site, or one can make links to embed videos hosted at YouTube, but not other video repositories, by simply specifying the YouTube URL of the video. Another icon is for emoticons, and many Japanese-style pictographs, some animated, are available to enliven blog posts and other messages. These are used extensively by Japanese young people, along with other emoticons created by typing combinations of English letters, symbols, and Japanese characters. Some of the latter are quite elaborate and may not be understandable without background cultural knowledge of gestures such as bowing deeply. Two more icons are a simple paint function for graffiti and Google maps, a vital function for people needing to meet in a land where few streets have names.

It will be found that functions such as writing in HTML code or sharing various media by embedding code are lacking in Mixi, as of this writing, compared to blogging software like Movable Type or a versatile SNS such as Ning. In the latter but not in Mixi, one can select a design template for one's site. More importantly, Mixi limits the amount of media a site can hold,

whereas most kinds of media and widgets can be freely uploaded or embedded in a Movable Type blog or Ning SNS.

AFFORDANCES OF SOCIAL NETWORKING WITH STUDENTS

In the context of TEFL in Japan, a key question is what the teacher was able to do with or for students that had not been possible systematically before joining Mixi. These considerations may be applicable to online technologies in Web 2.0 and beyond that can serve as platforms for sustained teacher-student communication outside of limited classroom hours.

Starting with the long view, joining Mixi friendship networks and communities is not only for the sake of students. After a semester or eventually, students move on, and teachers may wish to know milestones in the life of former students, such as their future use of English for intercultural communication. It was hypothesized in this chapter that voluntary supplementary online involvement with students could create a learning environment transformative in terms of their integrative motivation toward L2 learning and a bilingual identity. With SNS involvement now outlasting the face-to-face semesters, longitudinal observation has become possible to gather evidence toward testing such hypotheses. At the very least, after sharing time and mutual effort toward class goals, both teacher and student may wish to keep in touch rather than having arbitrary schedules turn a human relationship into a temporary juxtaposition. Teachers can now find out more about the long-term results of their teaching in their students' actual lives. Conversely, students can continue to draw motivation from messages to them or milestones in the teacher's life and research posted to Mixi.

So far the greater part of one semester has transpired and its aftermath continues with the teacher networking with some students and

Mixi communities of the college and beyond. The teacher has posted content to his site in English and Japanese, so as not to set up a bar to participation but rather to nurture a bilingual environment. The photo album and blog posts including videos and other media have included both family milestones and demonstrations of Web 2.0 educational technology. Most of those entries have drawn comments from students and others, often in English. The entries have thus opened up new spaces for authentic English communication in a largely foreign language environment. While a comment or message may be simple, possibly to avoid errors, the very act of using English for an authentic purpose may be significant to the student as a communicator in a social world of broadening scope.

On the level of one-to-one communication through e-mail and Mixi messaging, the author has responded to friendship requests and private messages, with the Mixi affordance that a student can be reached the next time she logs on without having to know her contact information. It may be preferable not to know such personal information in terms of administrative imperatives, for protection of the teacher as well as the students, and for trust and assurance of the teacher's motives. As compared to a blog comment visible to peers, a private message from a Japanese student is not likely to be decided upon lightly, which means that there is probably a strong personal investment in the message. Replying to such messages is therefore important, reinforcing the human bond with that person, and possibly representing a teachable moment or opportunity to enhance a student's integrative motivation to communicate with the L2 target community.

On a broader social level, as soon as the teacher was invited into Mixi, word traveled among students, and it became a lively topic in campus conversations. Establishing a commonality in the usually partitioned teacher-student relationship was a shift that resonated with Japanese socio-culture, while the crossing of lines shook up the

default social system in a sense, allowing for new movement. Some former students rekindled an active relationship with the teacher through Mixi. Some friends of the student who had provided the invitation approached the teacher in hallways or at his office, introducing themselves as the teacher's friend in Mixi with a certain nickname. The teacher could also invite former students to stay in touch as Mixi friends when seeing them in the hallways or at their graduation party.

Proactively, the author published his Mixi nickname in campus publications to welcome students to visit his site, as the nickname suffices for a search in Mixi. This kind of identifier signals online technology use while encouraging friendly communication on equal terms. SNS nicknames could be seen as another contact point to include in a 21st Century calling card (*meishi* in Japanese) along with e-mail and messaging addresses, homepage URLs, and graphic images such as QR codes that mobile phone cameras can read like bar codes to access one's mobile phone Website. When the teacher utilizes technologies that students use, the generational barrier is crossed. Furthermore, if the teacher utilizes cutting-edge technologies that students would like to learn, the motivational excitement of curiosity or a sense of challenge can be kindled. If the teacher can do it, perhaps she can, and the teacher becomes a model of technological empowerment as well as of bilingualism.

FURTHER DISCUSSION OF FINDINGS AND HYPOTHESES

The potential affordances of social networking with students, through Mixi in this case for EFL educational purposes, have been shown to run deep in terms of personal engagement, which in turn is linked to motivational factors enhancing possibilities for transformative learning.

Having considered the technical limitations of Mixi compared to other SNS such as Ning, the

main reason one would choose Mixi is because it is currently a gathering place for millions of Japanese people. Social networking sites are not sought for solitary self-expression, or even for the latest technology, but rather to connect for social communication where the largest number of potential online acquaintances can be contacted.

Compared to other Web 2.0 technologies, Mixi has been readily indigenized to enhance pre-existing Japanese social communication patterns. Its popularization thus reflects its usability for individuals in pursuing their own desires or social aims.

Unlike nascent technologies such as 3D virtual worlds, which will be attractive to students as powerful graphics computing becomes available to them, Mixi is already a part of Japanese student technoscapes. Not to the ubiquitous extent of mobile phones, but some familiarity with Mixi among college students can be assumed when bringing up the topic of supplementary online teacher-student communication.

As to whether a foreign teacher could smoothly go behind student lines through Mixi, the need for an invitation from an individual activated complex Japanese group dynamics in approaching a class openly as a whole. After the teacher was invited into Mixi in a one-to-one situation the group approach could not be further tested, but it should be quite possible for a teacher to successfully negotiate with a group of students for an invitation, provided the existing sociocultural contours of Japanese group dynamics are respected. At the time of the Discussion class with first year students the teacher was a Mixi member and welcome in the proposed class Mixi community, but the problem was that not all the *students* were members.

As to the desirability of social networking with students in terms of educational principles, Dörnyei (2001, pp. 31-39) finds it quite appropriate in creating basic conditions for motivation to develop personal relationships with students. After the teacher became a Mixi member the

unprecedented approaches from students showed that there was an intrinsic demand for such relationships through social networking. It was as if pent-up demand for more personal communication with a foreign teacher was released, perhaps as a proxy or safe halfway house, as it were, for students' intrinsic motivation toward communication with the target language community.

If one were to investigate whether a foreign teacher is welcome or not in student social networks, the complexity has been evidenced by the differences displayed by students when alone with the teacher versus the particular social and technological compatibilities of a certain peer group. The author would predict that surveying students as to whether they would like to invite a foreign teacher into their SNS or not would produce different results depending on precisely how the students were approached. If such a question were circulated by a Japanese student, for example, in Japanese regarding teachers in general, a different set of considerations might be activated than if their foreign teacher surveyed students directly in writing or in person in English. All sorts of variations could result, with variables including individual student motives and their calculus of trust, risk and other attitudes toward a certain teacher. Rather than arriving at a generalization about a presumptively monocultural population, the answer would be more like a question of just what factors in what weighting could cause such variations. Ultimately the question may be rather how the cross-cultural educator can employ technology to create conditions that work in this cultural context to foster bilingual development.

This chapter has alluded to breaking down the artificial distinction between real life and virtual life. What resulted from joining Mixi was not just the supplementation of classroom communication with an online dimension but also a washing back of virtual relationships into so-called real life.

This chapter has also alluded to the metaphor of agglutination, a characteristic of rice that

has been ascribed to the Japanese language in JSL and JFL studies (Minami, 2007, p. x). The pattern described in this chapter, where friends of a friend took Mixi linkage as sufficient commonality to boldly introduce themselves, could similarly represent an agglutinative social pattern in Japanese culture.

Educators may have reasons not to cross certain lines or to maintain their authoritative distance from students, in order to meet local expectations or for class management. The supplemental online dimension explored in this chapter is entirely voluntary and soon goes beyond the framework of a certain class into the wider world of human relationships. In the context of that larger frontier, social networking has been shown to provide a way that is congruent with Japanese culture for a cross-cultural educator to go behind student lines and expand the scope for EFL motivation and positive learning experiences beyond the classroom.

CONCLUSION

A number of hypotheses were proposed in connection with going behind student lines with Mixi in the context of TEFL in Japan. Then the findings from actual negotiations and interactions with students were described and interpreted on sociocultural and technological levels. The main functions of the Mixi social software were illustrated, with the Japanese interface explained in English. How the affordances of Mixi were actually utilized by the teacher and students was also detailed. Moreover, Mixi functionality was found to fit and thereby enhance social communication patterns already established in Japanese culture.

The hypotheses and findings raised a number of questions that call for deeper examination. It was shown how results varied in different classes, acknowledging individual differences in intrinsic motivation and so forth. But if social gear-shifting,

time-place-occasion sensitivity, and group dynamics are considered as cultural characteristics, Japanese values provided sufficient explanations for student decisions, belying a cultural consistency in the ostensibly varying outcomes.

Another question was whether or not metaphors of lines, social spaces and perspectives served as suitable scaffolding for understanding the cross-cultural educational issues involved. Such metaphors as invisible lines, crossing boundary lines, hierarchical lines, and social territories proved useful at the very least by forefronting sociocultural norms and expectations that most often go unstated, while what is taken for granted differs between interlocutors in cross-cultural encounters. Extending the metaphors consistently, particularly reading or going behind the lines, seemed to bolster the explanatory framework. But “technoscapes” did not seem so salient to map individual and group perspectives on technology in this case. “Global flows” lack precision to account for the particular context in Japan. While the notion of landscapes could serve to place the focus on perspectives, student perspectivity was already acknowledged in treating them as unique subjects.

Another question is whether or not social networking with students, as hypothesized, actually enhances their L2 motivation. It could not be confirmed longitudinally, and yet communication is continuing autonomously through Mixi where it would have otherwise ended with the semester class or graduation. Science tends to be tone-deaf in gauging the significance of what is normally observed as palpable excitement, and which in education is believed to be a sign of positive if not optimal motivation.

It can be reasoned in many ways from the results that motivation was enhanced. If a supplementary educational opportunity is offered in a purely voluntary online environment, for students to go out of their way and engage with it represents a movement that must have a motive or motivation corresponding to the opportunity. If a student

was already intrinsically motivated, for it to be reinforced as opposed to being neglected outside of class also represents a relative enhancement of their L2 motivation. As another example, students previously unrelated to the teacher agglutinated to the social networking involving English once the wall was breached by one student. A commonality can provide an opening for new relationships in Japanese socioculture when a formal introduction or group connection is not available. When students introduced themselves to the foreign teacher of their own volition in writing or in person, such a movement out of familiar circles reflected their motivation. If they felt welcome in such a new relationship involving English, then it stands to reason, since people cannot remain the same, that their integrative motivation was enhanced.

Nevertheless, myriad issues in social networking and other technologies applied to education call for further research. But one-size-fits-all theories and multiple-choice grids cannot be prescribed as global standards to all local contexts. This chapter attempted to acknowledge the variegated particulars in one sociocultural context, and meanings emerged bottom-up from the details and patterns observed in the Japanese social repertoire. In the motivation literature, self-determination theory figures prominently, but it remains to be shown just how well the map fits the actual terrain in non-Western educational situations including instructivist institutional cultures. Alm (2006) cites self-determination theory in finding Web 2.0 activities motivating in an Australian context. But even aside from student views of the technology itself, it remains to be shown whether individualistic theories could most accurately account for both success stories in EFL education and trends toward declining motivation in East and Southeast Asia (Lamb, 2008). In any case, further study is warranted to avoid overgeneralizations.

This chapter, while recognizing individual agency, often traced student decisions to group dynamics in Japanese socioculture. In this balance, “self”-centered theories may be less salient

than socially grounded explanations, particularly with respect to SNS. Sociocultural and social-constructivist theories and methodologies, perhaps combined with local or indigenous knowledge of the educational context, may shed new light on motivational transformation. A fluid concept of self as continually created, often in social situations including education, may be more suitable to a Japanese style repertoire of shifting gears or roles, while also allowing for identity transformation free of typecasting. For as identity changes, particularly as EFL learning experiences open up new avenues for bilingual and bicultural development, motives and motivations constitutive of the individual also transform.

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Coursecasting Bilingual Education: (<http://odeo.com/channel/93074>)

Facebook SNS: (<http://www.facebook.com>)

Mixi SNS: (<http://mixi.jp>). For an invitation needed to join Mixi, e-mail: (waoe@mail.goo.ne.jp)

Movable Type: (<http://www.movabletype.com>); in Japanese: (<http://www.sixapart.co.jp/movabletype>). An example of a blog utilizing this social software: (<http://commune.wilmina.ac.jp/weblog/waoe>)

Ning SNS: (<http://www.ning.com>). WAOE 2.0 (example Ning site): (<http://mywaoe.ning.com>)

Second Life: (<http://secondlife.com>)

Voicethread: (<http://www.voicethread.com>)

Winksite: (<http://winksite.com>)

YouTube: (<http://www.youtube.com>). Video filmed in the Computer Communication class as a Web 2.0 activity: "Social Networking in Japanese Student Territory with Mixi": (<http://www.youtube.com/watch?v=RXBwr6gMrrM>)

KEY TERMS

Integrative Motivation: A type of motivation that is particularly relevant to learning foreign languages, it refers to a learner's intrinsic orientation or desire to communicate with, be more like, or to join the L2 (second or foreign language) user community. Developed chiefly by R. C. Gardner, the concept has been refined by Z. Dörnyei and others, moving away from fixed attitudes toward the possibility of transformation as hypothesized in this chapter.

Mixi: The most popular SNS in Japan with users estimated at over ten million, possibly over a tenth of the whole population, predominantly students and young adults. Most of its functions are accessible from the mobile phones ubiquitous in Japan. In this chapter Mixi provides a supplementary online dimension for a teacher to motivate EFL students and continue the human relationship after classes end.

Second Life: Sometimes referred to as simply SL, Second Life is a 3D virtual reality developed by the Linden Lab in California, USA, that was launched in 2003. It became more prominent in late 2006 as a number of global corporations and educational institutions opened buildings there. Based on a free downloadable client, Second Life estimates that up to 18 million accounts have been registered there as of early 2008.

SNS: Social networking site or sites, sometimes social networking service or services. To users it is an online gathering place for enhancing relationships and making new acquaintances by sharing words and media about oneself and one's world. Successful SNS companies provide mostly free services and gain revenues through advertisements rotating on users' Web pages. Functionality differs according to technology and culture, but common functions are profiles, blogging, photos and short videos, with messaging and RSS-style notifications of new entries by a user's friends and topical communities.

Socioculture: The combination of social factors, some of which may be incidental to contemporary institutions, with cultural factors that are deeply ingrained and passed across generations, strongly coloring people's identity and communication style. The resultant combination affects people's tendencies to affiliations that can be related to languages, and this chapter utilizes metaphors of lines to symbolize existing sociocultural borders that may constrain cross-cultural communication along with other patterns of behavior.

Technoscapes: A type of global cultural flow in A. Appadurai's anthropology of globalization. It foregrounds the various perspectives people have on technologies, and this "perspectivity" can be useful in considering the varying background knowledge of students in CALL (computer-assisted language learning) classes. Globalization generally affects such students in Japan, but this chapter finds that knowing the specific cultural background of students is essential to interpreting their use of social networking technology.

TEFL: Teaching English as a Foreign Language (EFL). Teaching English where another language is predominant in the environment. Therefore, English input or practice in a country like Japan often depends on classes that do not meet often or long enough to match the results of an ESL environment where, by contrast with EFL, English pervades the environment outside of class as well.

Chapter XI

Blogging for Self-Determination with L2 Learner Journals

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ABSTRACT

This chapter discusses the use of blogs for foreign and second language (L2) learning. It first outlines the suitability of blogs for language education and shows the value of blogging beyond technical features. Blogging has been described as a social activity (Nardi, Schiano & Gumbrecht, 2004), which puts the writer in a central position. It will be argued that this centrality of the writer needs to be maintained in an educational context. The shift from teacher to learner orientation is seen as a significant change in language education. With reference to self-determination theory (Deci & Ryan, 2002) the pedagogical principles that support L2 learner autonomy in a Web 2.0 learning environment will be discussed. Using blogs as L2 learner journals, it will be shown that Web 2.0 informs and supports language learning environments which foster L2 learner autonomy. The study indicates that blog-based reflective writing increases the learners' sense of autonomy and that it has a positive impact on L2 learners' perception of language awareness and development.

INTRODUCTION

Web 2.0 has great promise to inform new ways of language learning. The emergence of a social web, which allows L2 learners to become active participants in a learner community, opens new opportunities and presents new challenges for language education.

The role of technology in language learning dates back to the beginning of the twentieth century. The ability to hear the native voice through recorded media (radio, film, tape) and to expose language learners to the real thing was seen as revolutionary then, but it was also threatening to those teachers who saw their role as providers of information (Cuban, 1986). Today, podcasts and video-sharing applications have not only

multiplied the offerings of resources for language learners, these technologies have also provided the potential to change educational practices. While students in the past relied on their teachers to supply learning materials, they are now able to access these resources on their own. L2 learners are able to immerse themselves in the target language by listening to their favorite podcast, by reading and placing comments on a blog of their choice or by uploading their own L2 videos on a video-sharing website (Alm, 2007b, 2007c). The Web 2.0 defining “architecture of participation” (O’Reilly, 2005, Akamai vs. BitTorrent, para. 3) allows L2 learners in principle to contribute to and to become part of a learning community that they themselves help to shape. Web 2.0 has the potential to transform established learning routines, to change the roles of teachers and learners and to enable language learners to become more involved in the learning process. This chapter discusses how the use of Web 2.0 can lead to these transformations in the L2 language classroom.

New technologies always represent an opportunity to re-evaluate current educational practices. The technology itself might well trigger new teaching approaches and open new pathways of learning, leading to new research agendas. Warschauer (2000) has shown that the parallel development of the three main educational theories (behaviorism, cognitivism and constructivism) and computer development could also be applied to the language learning context. In the last 30 years computer applications have increasingly supported language learning approaches. The advent of the Internet, however, has changed the role of technology in education. The ubiquitous use of the Internet by the population at large and its suitability for communication impacts on educational needs and shapes educational practices. Warschauer (2000) observed: “It is no longer just a matter of using e-mail and the Internet to help teach English, as I wrote in my first book five years ago, but also of teaching English to help people learn to write and use the Internet” (New Contexts, para. 3).

The impact of technology on learning is increasingly recognized and has possibly found its most fervent advocate in George Siemens. Siemens (2004) sees an unparalleled impact of technology on our lives, on the way we communicate with others and on the way we learn. Claiming that “technology is altering (rewiring) our brains” (Introduction, para. 4), Siemens believes that traditional learning theories have outlived their usefulness. His own theory of connectivism integrates “principles explored by chaos, network, and complexity and self-organization theories” (Connectivism, para. 24).

While Siemens advocates a break from conventional learning approaches, Levy (2007) calls for continuity. He argues that existing theoretical, pedagogical and curriculum frameworks should be considered when researching emergent CALL: “It is vital to make links with existing CALL practice using prior research studies associated with the language skills or areas, and relevant theories of learning and acquisition” (p. 188).

Learner autonomy is a crucial part of successful L2 learning and Web 2.0 supports the creation of learning environments that foster autonomous L2 learning. Research in this area can be based on established theoretical frameworks in Second Language Acquisition (Holec, 1981; Benson, 2001) or be informed by neighboring disciplines such as activity theory (Blin, 2004) or self-determination theory (Alm, 2007a) and lead to new insights in L2 teaching and learning.

The appeal of Web 2.0 resides in its interactive infrastructure and in its user involvement. The rapid uptake of Web 2.0 technologies is a clear indication of its suitability for the sharing of information, for networking and collaboration. No longer dependant on webmasters and ICT specialists, users are able to participate in and to become part of their chosen online community. This user-focused nature of Web 2.0 is of particular interest in an educational context. The general users of Web 2.0 applications, be it in MySpace, YouTube or Blogger, are in charge

of their environment. They are able to customize the appearance, the content and the degree of interactivity of their applications. Learners in educational settings generally do not have these choices. On the contrary, they have set learning conditions to which they need to adhere and teachers which they depend on. Ironically, not only learners complain about restrictive learning conditions, teachers themselves complain about learner reluctance to take charge of their own learning (Little, 2007). When it comes to learning, autonomy seems to be a skill that does not develop naturally but that needs to be supported by the learning environment.

The aim of this chapter is to discuss the pedagogical principles that support L2 learner autonomy in a Web 2.0 learning environment. The discussion is based on self-determination theory (Deci & Ryan, 2002), which has relevance for all areas of Web 2.0 learning (Alm, 2006), but will be applied here to L2 blogging.

The first part of the chapter introduces the reader to technical aspects of blogging and shows how these have informed the use of blogs in language learning. It will then turn to authentic blogging practices and reflect on the motivation of ordinary bloggers (Nardi, Schiano & Gumbrecht, 2004; Nardi, Schiano, Gumbrecht & Swartz, 2004). With the use of self-determination theory it will be shown that blogging supports the human needs of autonomy, competence and relatedness. It will be argued that L2 blogging should equally support these needs and that they need to be built into the task design.

The second part of the chapter discusses a study in which blogs were used as L2 learner journals. The use of journals relates to an existing practice in L2 learning (Bailey, 1991), which has been claimed to foster learner autonomy (Little, 2007). Journals are considered as an authentic use of blogging (blogs as online journals) and they add a valuable dimension to traditional learner diaries. They allow language learners to write in a social context and to make use of other Internet-based target language resources. The study documents

learner perceptions of L2 blogging. The majority of participants had little Web 2.0 experience and their comments illustrate how novice users of L2 blogs have adopted, used and benefited from the new learning tool.

Finally, some ideas will be suggested for further research on the use of language journals in language learning.

BLOGS

Blogs are web-based online logbooks (web logs). Multiple providers (e.g. Blogger, WordPress, LiveJournal) offer free and easy to use blog services, allowing everybody who has access to the Internet to create and contribute to blogs and to become part of the interconnected online community of blogs, also referred to as the blogosphere. The structure of a blog was initially defined by three elements: a title, text and links. The writer of the blog, the blogger, submits posts to his or her blog, which appear in reverse chronological order. This structure has now been extended and it is possible for readers to leave comments on blogs. Blogging has been labeled push button publishing, as no knowledge of a programming language is needed to publish a webpage. The blog software resembles a word processing program; it has text formatting options and may also include a spell-check. The text can be stored as a draft and can be edited or deleted after it has been published. Multimedia elements can be added through links or directly embedded in the text. Some providers support multimedia formats and enable audioblogging (via recorded MP3 recording or mobile phone), photoblogging or videoblogging. Blog readers can access other blogs through their own blogrolls (a list of links to selected blogs) or they can subscribe to other blogs using an RSS feed which allows them to monitor blog activities. Blogs can be set up for one or for multiple contributors at three levels of privacy: a public blog is listed by the user's blog service and is easily found on the Internet; an unlisted blog is still public but cannot be found

without knowing its URL; a password-protected blog is only available to designated readers and contributors. The owners also have the option of regulating comments, which can be allowed for anonymous or registered users, or which can be denied.

Blogs have the potential to address the needs of language learners at a number of different levels. The multi-medial nature of blogs exposes language learners to reading, writing, listening and speaking: text-based blogs supply learners with reading resources, audio-blogs with listening material, while photo-blogs and video-blogs provide additional insights into cultural aspects of the target language country. L2 learners have the option of responding to these blogs by leaving comments, or they can create their own blog in any chosen format.

BLOGGING PRACTICES IN THE L2 CLASSROOM

The versatile and dynamic structure of blogs lends itself to a number of applications in the

L2 classroom. Characteristically one of the first publications on L2 blogging (Campbell, 2003) established categories for language learning blogs based on their technical structure, namely the class blog, the tutor blog and the learner blog. These categories have found widespread acceptance and are taken up in a more recent publication by Dudeney and Hockly (2007), who also provide sample activities for each category. Table 1 is an amalgamated list with suggestions from Campbell (1) and Dudeney and Hockly (2).

The suggested blog-based activities illustrate the versatility of blogs but the nature of the listed tasks also indicates that these applications reinforce traditional teaching practices instead of exploring new approaches to learning. While these activities use blogs it might be questioned if they involve actual blogging. Richardson (2006) does not consider uses such as posting assignments, journaling without linking, and linking posts without comment as proper blogging activities. To qualify, the blogger needs to make use of the multiple dimensions of blog options, which would ideally include, according to Richardson, “extended analysis and synthesis over a longer

Figure 1. Writing a post on a blog



period of time that builds on previous posts, links, and comments” (p. 32). Richardson’s categorization highlights the point that blogging can be more than the use of a versatile tool, and that the concept of blogging is associated with a new genre of writing. Blogging could be described as one of the first discursive forms on the Internet

and that educational blogging (or edublogging) should be informed by practices that define the activity. In a similar vein, Ducate and Lomicka (2005) remind us that “it is important to think back to the various real-life uses of blogs” (p. 413). The authors divide the use of blogs in language learning into two categories: the reading and the

Figure 2. Users choosing a preferred language on Blogger



Table 1. Blog applications in the L2 classroom according to Campbell (2003) and Dudeney & Hockly (2007)

Tutor blog	Class blog	Learner blog
Provides daily reading practice to learners (1) Reading / listening material (2)	Facilitates project-based learning (1) and class projects (2)	Journals for writing practice (1) Extra writing practice on class topics (2)
Promotes exploration of English websites (1)	Free-form bulletin board (1)	Free form template for personal expression (1)
Encourages online verbal exchange by use of comments (1)	Virtual space for international classroom exchange (1)	Posts on class reading (1)
Provides class or syllabus information (1) Set homework (2)	Reactions to a film, article, class topic, current affairs (2)	Regular comments on current affairs (2)
Resource of links for self study (1)	Things learners like / don't like doing in class (2)	Personal and family information (incl. photos) (2)
Provide summary of class work (2)		A photoblog on learners', country, last holiday, town (2)
Question and answer (e.g. about grammar, class work) (2)		Research and present information on a topic (2)
Exam / Study tips (2)		Publication of links (1)

writing of blogs. Again, examples are given to provide ideas for reading and writing activities, for native and target language use. The suggestions for writing activities are relatively mainstream but the reading of native language blogs clearly initiates (and prepares) language learners for real-life uses of blogs.

BLOGGING PRACTICES IN THE REAL WORLD

Nardi, Schiano, and Gumbrecht's (2004) ethnographic study of ordinary bloggers showed that the majority of blogs are single-authored and that most bloggers (70%) described their blogs as personal journals (p. 222). People blog to document their lives, (e.g. through a public journal, a photo album or a travelogue), to comment on a special interest and to express opinions, thoughts and feelings ("blog as catharsis"), or because it helps them to write / type as they think ("blog as muse") (Nardi, Schiano, Gumbrecht & Swartz, 2004, p. 43-45).

Blogging is related to traditional diary writing. The new format might have given the old genre new impetus, but it has also transformed it by adding the public dimension. Nardi, Schiano & Gumbrecht (2004) compare online journals with traditional diaries, which share the expression of personal thoughts, opinions and feelings. Unlike diaries, blogs are "highly selective" (p. 223), because they are written with an audience in mind. The writer's awareness of readers affects the content of the blog and actual responses from readers (in the form of comments) might influence the content of further postings. Interestingly, the blogs analyzed in Nardi's study were not characterized by high interactivity between blogger and commenter or by a high readership. This might be explained by the structure of the blog. While the author's posts appear on the main page, comments must be opened to be viewed. Described as "rhetorically subservient to the main post"

(p. 227), the comment feature might attract less attention than anticipated by bloggers. Instead of leaving comments on a blog, readers often communicate their feedback through other channels, such as "face to face or instant messaging" (p. 228). Whatever format feedback takes, bloggers are encouraged to write more if they realize that others are reading their posts.

Nardi, Schiano and Gumbrecht continue to make some interesting observations on blogging as a social activity. They found that a considerable percentage of bloggers (20%) did not start blogging out of their own initiative, but "in response to a direct social request" (p. 224). This is not only a significant point of difference with traditional diary writing. It highlights the social aspect of blogging. Friends use blogs to reinforce existing social structures. Even some of those bloggers who initiated their own blogs wrote for an established social network and felt that "the larger world of Internet readers would not be interested in their blog." Others aimed to reach beyond their known audience and hoped that "new readers would discover their blog." They explained that "the occasional email from a stranger who responded to the blog was often satisfying and motivating" (p. 228).

The study indicates that people blog not only for different reasons but that they also aim for different levels of social engagement. While some blog to reinforce existing social networks others reach out for new communities. The level of social interactivity might vary, but the principle remains the same: blogging emanates from individuals who are influenced in their writing by an audience.

This social dimension of blogging is of particular interest for the L2 learning context. Social aspects of language learning have received increased attention in the last decade, and were already supported by early CMC applications (email, chatting, MOO). Writing for and interacting with an authentic audience was not only seen as valuable practice to improve accuracy

and fluency but also as a source of motivation, fostering a sense of agency in the language learner (Warschauer, 2000). Blogging takes the opportunities for social interaction a step further and reinforces the central position of the writer. As Bloch (2007) points out, “blogging seems to have reinstated the centrality of the author as the primary creator of the text” (p. 129).

If it can be assumed that the centrality of the writer is one of the defining principles of blogging, it will come to no surprise that attempts to use blogs in educational contexts where students have a contributory role do not work. Nardi, Schiano, Gumbrecht and Swartz (2004) provide an example of a class blog, which “failed to generate a sense of community among the students. The professor and teaching assistants made most of the comments, the students almost none. The students were either not moved to comment or decided not to, given the lack of a course requirement” (p. 45).

While blogs are normally initiated by people who decide to blog for personal reasons, an educational blog is always the result of a teacher-initiated request. This seems to go against the grain of real-life blogging, which is described by Laurson and Pieler (2007) as “self regulation at its very best” (para. 2). Downes explains in relation to edublogging, “if we have to convince people to blog, to in some way grade them or mark them, then in so doing we lose what is essential to blogging” (as cited in Ward, 2004, p. 10). While educational blogs need in some way to be integrated into the curriculum, it is crucial that learners develop a sense of ownership for their blogs. They need to feel in charge of their writing and of the social connections they initiate. A pedagogy of L2 blogging has the potential to re-open the learner autonomy agenda and to shed new light on the conditions that inform autonomous learning. The next section applies self-determination theory to understand how the principles that inform real-life blogging can be applied to L2 blogging.

BLOGGING IN THE CONTEXT OF SELF-DETERMINATION THEORY

The self-determination theory of motivation (SDT), developed in the 1980s by Edward Deci and Richard Ryan, provides interesting insights into human motivation. The theory has found application in many areas of human behavior (Deci & Ryan, 2002) including education (Reeve, 2002), language learning (Noels, 2001) and CALL (Alm, 2006, 2007a). The theory assumes that all humans have basic psychological needs and that the level of support for these needs in their social environment regulates how self-determined they feel about their actions. The three basic human needs are autonomy, competence and relatedness.

Autonomy

A feeling of autonomy emerges not only if a person is enabled to act out of personal interest but also if a person endorses a requested action (Deci & Ryan, 2002). For example one would assume that bloggers feel autonomous about blogging because most blogs are self-initiated and the content is solely determined by the writer. The 20% of bloggers from Nardi, Schiano, and Gumbrecht’s (2004) study who started blogging as a result of a social request could also feel autonomous about their blogging practice, providing blogging fulfilled a perceived need. The example of a learning community, however, seems to indicate that the need for learner autonomy was not met in the blogging assignment.

In the language learning context, blogging should support this need for autonomy. This can be achieved by supplying a rationale for the writing activity, by providing stimulating topics for reflection and by allowing for personal choices in topic selection. The reflective nature of blogging suggests its use for reflection and self-evaluation on language learning in order to raise the learner’s awareness of L2 usage and proficiency. Such an approach supports learner autonomy and encour-

ages L2 learners to become more involved and to take charge of their own learning (Little, 2007).

Competence

Just as autonomy does not describe a physical state (which might be better described as independence), competence does not refer to factual competence, but to a subjective experience of competence within a social context. Deci and Ryan (2002) argue that “the need for competence leads people to seek challenges that are optimal for their capacities” (p. 7). While blogging might not appear as an optimal challenge at first sight, it might well provide support for this need. An optimal challenge implies that a task should not be too easy or too hard. Setting up a blog might be considered too easy and account for the abundance (and the abandonment) of blogs. On the positive side it is not considered too hard to discourage people. It is an easy step to become part of the community of bloggers. More importantly, however, the blogger is free to choose the content, the design and the level of engagement of their blog. In response to readership expectations, the blogger might be encouraged to provide more blog posts and to reply to comments.

The learner’s need for competence is supported if they can work at a level of optimal challenge. Blogging should enable the L2 learner to consolidate and expand writing skills. While blogging is not bound by any structural constraints in its natural context, the language learner might need to be scaffolded to feel competent and to reach their optimal challenge. Clear guidelines prepare learners for the writing task and informative feedback (possibly through comments) should provide them with suggestions for improvement. An archive of past blog entries supplies the learner with a valuable resource to analyze L2 development and competence.

Relatedness

This third need emphasizes the importance of social integration and our relationships to others: “Relatedness refers to feeling connected to others, to caring for and being cared for by those others, to having a sense of belongingness both with other individuals and with one’s community” (Deci & Ryan, 2002, p. 8). Our interactions with others and their response to our actions reflect on our feeling of competence and on our perception of social integration. For this reason communication plays a crucial role in fulfilling the need for relatedness. Our need to seek opportunities to interact with others and to form relationships might explain the popularity of Web 2.0, which has also been labeled the social web. Blogging can be perceived as a useful tool to support existing social networks and possibly to establish new ones.

Blogs have the potential to support a person’s need for relatedness as they allow the blogger to create a personal space in a social network in which they can express issues that are important to them. In the L2 context, this structure could be used to foster interactions at different levels, in the first instance between learner and teacher, and then between learners or even between learners and native speakers of the target language. The written interaction (be it with known or anonymous readers and commenters) will encourage the L2 learner to express new concepts in the target language. In Vygotskian (1978) terms, blogs could be described as a language learner’s zone of proximal development (ZPD), which allows learners to reach a higher proficiency level through interaction with more capable writers of the target language. In the case of blogging, the interlocutor can represent the actual reader or the reader in mind. It has been suggested that L2 learners apply themselves more readily if they write for an authentic (although unknown) audience. It could also be suggested that this type of self-reflective writing raises the L2 awareness

of the writer, leading to a more conscious use of language.

Blogging may empower language learners by supporting their need for autonomy, competence and relatedness. The following study on L2 blogging will illustrate how novice users of blogs have reacted to blogging in a German language course and how they have developed a stronger sense of L2 autonomy.

THE STUDY: BLOGS AS REFLECTIVE L2 LEARNER JOURNALS

Background

Web 2.0 applications are widely used in New Zealand and some tertiary institutions are starting to introduce their own wiki, blog and podcasting services. More established, however, are learning management systems (LMS) such as Blackboard or WebCT, which are used by most departments for their ICT requirements. Language departments rely mainly on LMS, although individual teachers have started incorporating Web 2.0 tools in their teaching. There are, however, no publications available on Web 2.0 based language instruction. None of the students participating in this study had previous experience with Web 2.0 in language learning. As these students came from all parts of New Zealand this could be taken as an indication that these technologies are not yet available in secondary schools in New Zealand.

Participants and Procedure

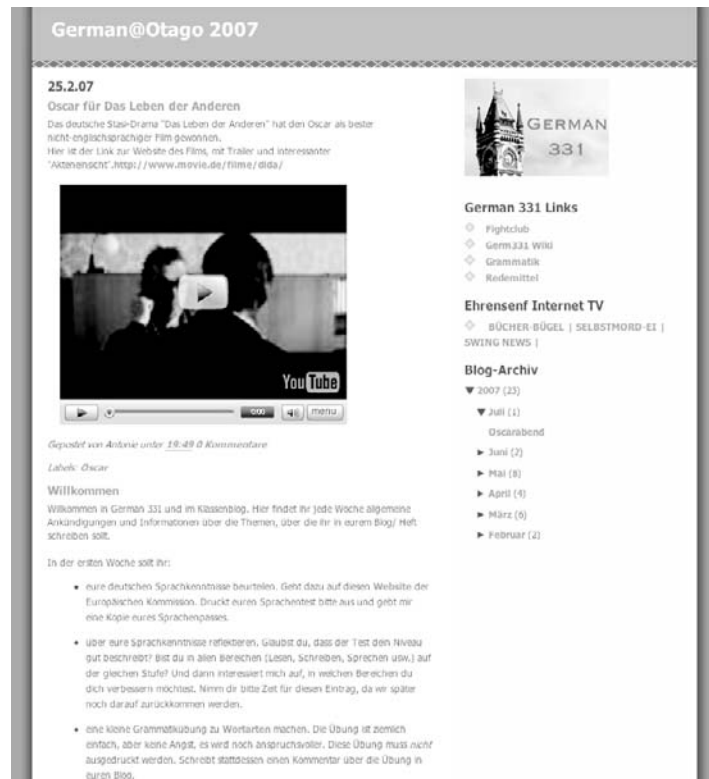
In an intermediate German language course at a New Zealand University, 20 students kept a reflective journal for a period of 12 weeks. They were encouraged to use a blog, but were also given the option of writing in an exercise book instead. The students met three times a week for class and could access all course materials on the class wiki.

For the weekly blog assignments students could refer to the class wiki and the tutor blog, which contained detailed information and guidelines on each topic. The three-part structure for the assignments remained the same throughout the period. The first part involved the discussion of a weekly topic on current affairs. The website *polylog* provided videocasts on controversial topics in German society. For the second part students had to complete an online German grammar exercise and to reflect on their conceptual understanding of the exercise. For the third part, students chose a podcast and reported on its content and/or their understanding of it. Podcasts were introduced as a topic in the fourth week and students were given a list of 10 podcasts to choose from. For their first and last assignments learners were asked to reflect on their German language skills. With the help of a self-assessment grid from the European Language Passport, they analyzed their skills (averaging B1-B2) and identified goals for L2 improvement. In their last blog entry, they compared their first with their penultimate entry and commented on the development of their language. All entries were written in the target language except the last one where learners were given the choice of writing in German or in English.

Data Collection

At the end of the term, 16 students agreed to supply their blog entries and to complete a questionnaire for this study. In their last post, learners reflected on their learning development. These comments were coded for recurrent themes and analyzed for the following discussion. Representative quotations were chosen from the survey and from blog entries and were included in the discussion to reflect characteristic views. German comments have been translated by the author. The English comments are reprinted as in the original and have not been corrected. A copy of the questionnaire can be found in the Appendix.

Figure 3. The Tutor Blog



DISCUSSION OF RESULTS

Blog Choices

Students were encouraged to use a blog for their learner journal. They were made aware of the privacy settings and then given the choice between writing in a private or public blog or alternatively in an exercise book. Offering these choices revealed interesting insights into learners' resistance to entering the blogosphere. Two students rejected the blog option because they did not have easy access to a networked computer and because they felt that writing by hand suited their learning style better. Both liked the idea of having all their work in a book for further reference, perhaps not realizing that a blog would provide the same feature. The majority of students embraced the blog option for practical reasons: "Easy to access,

easy to edit and to hand-in, easy for [teacher] to mark! Mark and comments can be given to you more quickly." 50% of those learners chose to set up a private blog to which only the teacher had access, the other half choosing the default public setting.

Of those who kept their blog private, some expressed concerns about privacy issues on the Internet: "I have always been a bit cautious how open I am about sharing information about myself on the Internet. I often create accounts on websites using fake names, if I won't be using them often, or for too long. Since there was a private option, I chose this." Others were not prepared to share their work with their peers or expose it to native speakers, possibly out of fear of criticism from "strangers reading and commenting on my attempts to write in German." A private blog was perceived as a safer learning environment where

Figure 4. Polylog, the video and discussion portal used in the course (<http://www.polylog.tv/>)



“others cannot see what you have written.” They were not interested in feedback from foreigners; “it was also good just to get feedback from people you knew.” Some also felt that their blogs would not be interesting to the public.

The other half of the class opted to have public (although not listed) blogs and expressed an interest in getting feedback from other learners, friends and possibly even native speakers. These students were not worried about disclosing personal information and did not mind others reading their posts. They liked the idea of sharing their ideas with classmates: “If others wanted ideas they could perhaps look at mine ... or just wanted experience in reading German on the topic they were studying.” The blog was also seen as a medium in which to exchange ideas on learning tools, such as the use of podcasts, and to supply and receive feedback.

Receiving feedback from native speakers was high on the list: “If a native speaker had read my blog it would have been interesting to read any comments they left.” But only one student man-

aged to establish this contact, “my old exchange partner would often read over it this made it quite interesting to speak with him on issues.” Others tried to reach native speakers and did not succeed: “I did give a friend of mine (who is German) the address to my blog to look at it. Being private I am not sure whether he could not see it, or only not reply to it.”

Choices within a task, in this case the format for the learning journal, support the learner’s sense of autonomy. They were able to make a decision that they believed most appropriate for their learning needs. Some students expressed clear reservations with regard to sharing their journal with other people and needed time to accept the idea. They only chose the public setting if they could see an advantage in it for their learning. Feedback and interaction within the learner community and possibly even with the target language country community was perceived as a possible benefit. However, they also experienced some difficulty establishing these contacts.

Figure 5. A learner blog elicits outside comments

Friday, April 20, 2007

Alcohol

Diese Woche, haben wir von Alkohol geredet. Als ich gehoert habe dass Alkohol so ein Riesen Problem in Deutschland geworden ist, dachte ich dass Deutschland keine Sozialprobleme wie Neuseeland haben koennte. Durch meine Erfahrungen in Deutschland fand ich dass Deutsche bewusste sind oder mehr kontrolliert wenn sie Alkohol trinken. Die Argument im Moment ist das den Konsum von Alkohol soll fuer Minderjaerige illegal gemacht werden. Meine Meinung nach ist das obwohl ein neues Gesetz ueber Alkohol es schwieriger machen werde fuer 16 und 17jaerige Alkohol zu kaufen, ich glaube dass Jugendliche immer noch ein Weg finden wurde, mit Bier zu fieren. Auf der andere Seite ich glaube auch dass wenn Jugendliche Alkohol mit ihren Eltern erfahren, und lernen bewusst zu sein, schaltet es aus Probleme in die Zukunft.

Ich habe auch eine neue Sendung (die Sendung mit der Maus) gehoert, ueber Kartoffelchips. Es erklart wie sie gemacht wird, von Anfang wenn die Kartoffeln in die Fabrik transportiert wird, und abgewaschen werden. Man lernte dass sie wie chips aussehen, weil sie so viel Wasser enthaelt und zusammen mit dem Fett(wenn sie gekocht werden) es reagiert, und so sehen sie gekrueumt aus. Ich habe auch ausgefunden dass die Kartoffelscheiben in eine grossen Trommel gewuerzt werden. Das konnte ich nte vorher sich vorstellen.

Diese Woche als ich die Liste des Vokabular sah, dachte ich dass ich noch viel mehr Vokabeln zu lernen habe. Ich glaube dass im Moment ist es meine Schwaeche punkt, und dass ich es verbessern muss.

Posted by [\[Name\]](#) at 7:26 PM

2 comments:

Anonymous said...

Hi [\[Name\]](#), hier kommt der alte Politiklehrer [\[Name\]](#) auch mal zu einem Blog-Kommentar:

Ich finde heute Deinen Blog und bin ganz begeistert von Deinem guten Deutsch!!

Was ist mit Alkohol bei Jugendlichen in Deutschland los - fragst Du Dich?

Das ist ein soziales Problem von Eltern oder nur Vater oder Mutter, die für ihren Lebensstandard viel arbeiten müssen und damit nicht viel Zeit (weil "Zeit ist Geld"...) für ihre Kinder (meistens nur 1 Kind!!) haben. Wer erzieht die Kinder statt der Eltern? Alles andere, wie WUW, Internet-PC, IV, gute und schlechte Freunde...und dann gibt es bei Jungens immer wieder die alte Frage: wer ist der Stärkste?

Keiner will Schwach sein oder VERLIERER (auch nicht im Arbeitsleben - Kampf um das GELD).

Dann muss auch Alkohol so lange getrunken werden wie es geht, um der letzte zu sein, der ins Koma fällt. Manchmal gibt ist "Flat-Rate" saufen im Pub, d.h. einmal bezahlen und dann so viel saufen wie es geht. Folgen: siehe oben.

Weiter so !!!!!!!!

[April 22, 2007 11:49 PM](#)

Antonie said...

Hey, es ist ja klasse, dass sich hier noch eine Stimme aus Deutschland gemeldet hat. Das Alkoholproblem scheint also wirklich ziemlich aktuell in Deutschland zu sein. Ich stimme mit euch beiden überein und denke, dass das Problem und die Lösung im Elternhaus liegen.

Vokabeln sind immer wichtig. Es ist auch eine gute Idee, sie im Zusammenhang zu lernen, also mit ihren Präpositionen oder in bestimmten Kollokationen und Redewendungen.

Es wäre auch ganz klasse, wenn du das Rechtschreibprogramm benutzen würdest...

[April 23, 2007 9:55 PM](#)

L2 Blogger Autonomy

The learner journal was an integral part of the course. Learners reflected weekly on all elements of the course, the topic of the week, a grammar unit and a chosen podcast. The advantage of the blog (over a paper-based learner journal) was that all the course material that learners needed for their entry could be accessed online and be linked to the blogs. What looked like a blog (a text discussing links) was, however, not the result of a learner-initiated activity (as blogging would be).

Researchers might take some comfort in Nardi's finding that real-life blogs are in some cases initiated by requests from others. SDT also assumes that, "one can quite autonomously enact values and behaviours that others have requested

or forwarded, provided that one congruently endorses them" (Deci & Ryan, 2002, p. 7). If the student understands the rationale behind an activity and attributes a personal value to it, they will be motivated and self-determined in their actions. If this understanding is missing, and they feel forced to comply, their actions become nonself-determined. Most student motivation will fall in-between these two forms, and SDT accordingly describes a continuum between self-determination and nonself-determination.

Students were asked if they blogged regularly (at least once a week) as the completion of the task could be seen as an indication of the value they attributed to the activity. The majority of students claimed to have written on a weekly basis, 12 regular, 1 mostly regular, 2 irregular, 1

very irregular. The reasons they supplied suggest different degrees of self-determination.

One student saw blogging as an important part of their learning experience. It seemed personally relevant to him as he would write “often straight after a lecture whilst I was still thinking in German.” Another example shows that the learner enjoyed writing, as “it was good having regular set work.” The following example suggests some compliance. Although seeing the rationale, she also pointed out that it is part of a course requirement: “Because it helped my writing skills and because it contributed to our final grade.” Another student admitted apologetically that she had more important things to do, “Other things took priority plus laziness.” One student quite tellingly entitled his blog “Because I have to,” indicating nonself-determination for L2 blogging.

Student comments indicate that most learners willingly engaged in the blogging activity. While it was still perceived as a course requirement, most students developed a sense of autonomy within the task. The following reflection shows that the withdrawal of teacher control allowed learners to take charge of their learning: “It was easy not to do it [the blog assignment] and not receive any punishment. I think that if you made yourself do it every week then you got a lot more out of it.”

Autonomy Support Through Structure

In real-life, the structure and the content of a blog is entirely of the blogger’s making. They decide what they write about, how often and how much. In an educational context, however, the learner might need to be scaffolded to be optimally challenged. Clear guidelines help learners to organize their ideas and to structure their writing. Structural support was given via the class wiki on which all class-related information could be found: relevant links to a list of video and audio podcasts, vocabulary lists, grammar exercises and a dictionary. The tutor blog outlined the structure

and gave suggestions regarding blog entries. Students could leave comments on the tutor blog for clarification and advice. The structure for each entry remained the same for the entire period (as outlined above). Every few weeks learners were prompted to reflect on their progress.

Students commented that they liked having a similar structure each week (theme, grammar, podcast) and to know what to expect, as one student explained: “I found it became easier to write on the weekly topics after a while, simply because I knew what sort of response I should give about them.” The regular structure and the suggestions available on the tutor blog also helped them in the composition of text. It “made it easier to structure my blog entry”, and “the more specific questions made it easier ... to direct the paragraph.” The suggestions and questions raised in the tutor blog “gave us more to think about and we could take them and give our own opinion on the topics.”

The topic of the week was perceived by most as the easiest part of the writing assignment as they were provided with two sides of a controversial topic, which they could discuss. The structure helped them organize and to come up with ideas to write about: “It was relatively easy to write on the topics because there were clear sides for and against.” Many learners also highlighted the importance of interest, “I found it easier to write in my blog when the topics were interesting” and conversely: “If the topic was dull it was harder to write on.” When learners expressed personal interest in a topic they had more to say and they wrote more extensively.

Providing choices encouraged learners to feel in charge of their learning and to engage in topics of personal interest. Choice was provided in the selection of a podcast. Each week learners were required to listen to a podcast. Some discovered a favorite and listened to the same podcast for the whole semester: “Because I followed the same series or storyline in my podcast all semester, this also became easier.” For those who did not develop an interest in a podcast it was more dif-

difficult to write, as they needed more guidance: “I often found it hard to just write ‘something’ about the podcast.”

The comments highlight the importance of guided structure, which allows learners to develop their skills and to eventually be guided by their own ideas. Interest plays an important role in autonomous writing as it encourages learners to express their own views.

Autonomy Support Through Feedback

The “comment” feature was used by the teacher to give learners personal and informative feedback on their writing. This was positively received by most students as it “helped to identify problems,” “clarified issues” and helped them to “monitor progress.” Some liked the extra practice of reading the personal responses in German. The received feedback supported the learners’ feeling of competence and encouraged them in their writing.

Some students used the blog as an outlet for difficulties they experienced in class, which also provided relevant feedback for the teacher. Some chose to address the teacher personally in the second person, others adhered to a more authentic diary style and used the (also more distant) third person to refer to the teacher. The issues addressed could be discussed in the blog and sometimes led to ongoing discussions about the student’s progress. The increased learner-teacher interaction was identified as a benefit by many students.

As blog entries needed to be graded, learners received a detailed assessment sheet, evaluating blog entries on content, style and accuracy. This formal assessment of the blog was administered outside the blog (technically it could have been given to students via comments) in an attempt to keep the blog sphere assessment free. While some students appreciated the itemized breakdown of their grade, others did not see any value in this feedback as it only provided them with a grade “not real feedback, just a number.”

Grades certainly remain important for every student, however, and it seems that the focus on the learning process was seen as more important than the final evaluation. The grade simply gave them an indication of how well they had done and was not perceived as feedback that supported them in the ongoing learning process.

L2 Awareness

Learners identified three areas that helped them to become more aware of their use of the L2 through blogging:

1. The software: the word processors students commonly use do not have a spell-check for the L2, Blogger does. Learners used the spell-check before publishing their posts. Some students saved their text as a draft version and revised it several times. Others published several shorter texts. One student commented: “I found the spell check very useful and the fact that I would do a draft before posting my blog made me more aware of mistakes.”
2. The learner blog enabled each student to have individual access to the teacher. The increased personal attention assured that learners received more feedback. One student believed he became more aware of his language skills “because there was more contact between teacher and student. In a big class it’s not always easy to get feedback but with the blog there was always some.”
3. Self-reflection was perceived as most valuable. While nobody explicitly mentioned the value of the grammar exercise, a number of students admitted that they only completed the exercises because they had to write on them: “*Ich machte die grammatischen Übungen jede Woche, weil ich die Grammatik in meinem Blog diskutieren musste.*” [I did the grammar exercises every week, because I had to discuss the grammar in my

blog]. Without that incentive the grammar element might have received less attention. Learners stressed the value of having to think and write about their grammatical understanding and possible difficulties: “I did find it good to reflect on the grammar exercises.” Another student wrote about the value of writing on the podcasts: “I found it was also good for me to write about the podcast in the blog because it meant that I could check that I really understood what had happened in the podcast, plus it gave me the opportunity to use vocab that I had just learnt in the podcast as well.”

Learners felt in general that they were more aware “of what skills I was lacking and what I needed to work on,” “of the mistakes I commonly make,” and “of fixing the mistakes I was making in my writing.” They also made a conscious effort to “expand my vocabulary,” and to experiment with new structures, “when you wanted to say something different you had to learn something new.”

Perceived Progress in L2 Writing

All learners observed improvements in some aspect of L2 use (e.g. syntax, vocabulary, writing fluency) and most indicated that they felt more confident in writing as a consequence of the weekly writing practice. In their final entry learners reflected in more detail on their perceived progress by comparing their first and their last post. One student wrote:

I read through my first blog entry. I don't think i did too bad considering it was the first, although i didn't write much. I think after writing in a blog every week for the semester has really improved my writing skills and i feel that when i write my blog i have a lot more to write and it flows a lot more than before. Writing the blogs now doesn't seem to take as long either; i find myself writing

more in less time than it took to write a small paragraph at the start of the semester ... I think after studying 331 my writing has greatly improved, due to the blog.

Most students made similar observations. Early blog entries were shorter, took longer to write, and learners evaluated their language as more basic in structure. Some found the differences in their language production less noticeable as they could not track them down to a specific grammatical issue. Other students expressed amusement about their early blogs and the basic nature of their language (which they believed had improved since), describing them as “lustig” or “komisch” [funny]. One student observed: “*Wenn ich zurück meine früheren Blogs anschaue, kann ich einige von meine Fehler leichter sehen, aber ich bin nicht sicher, ob ich nur verschiedene Fehler jetzt mache!*” [When I look back to my earlier blogs I can see some of my mistakes more easily, although I am not sure if I only make different mistakes now]. He continued: “*Ich erinnere mich an den Blog und wie schwierig er war zu schreiben. Die Sätze war sehr kurz und einfach. Das Schreiben dieses Blogs dauerte etwa 3 Stunden aber jetzt kann ich einen Blog in weniger als eine Stunde schreiben.*” [I remember this blog [entry] and how difficult it was to write. The sentences were short and simple. It took me about 3 hours to write but now I can write it in less than an hour.] A few students wrote these comments in German although they had been given the option of writing in English, indicating that they felt comfortable writing in the L2.

With practice, most learners observed that writing became easier, “production is faster and more spontaneous” as one student wrote. Others elaborated, “there are a few structures and words that I no longer have to look up,” and “I was using a greater range of structures the further on in the semester it was, and also that the vocabulary that I was using had more variety in it.”

Some could not quite express how or why they had improved: “it came easier in my head.” To this learner acquisition of a structure came almost as a surprise: “This year a lot of things like the passive for example, just started to make sense when they didnt before, there was no reason for it, just one day i was looking over it and bang ‘ohh i get it now’ .”

The most frequently raised issue was that of increased confidence and the positive implications of using German in general and writing in particular, “I felt more confident with it, and I could see that my writing improved as a result.” Increased confidence had a positive impact on language production, learners were more likely to try and use new forms and they tended to rely less on support (e.g. dictionaries). Interestingly, some students also felt less pressured to produce perfect sentences. As learners become more autonomous, writing seems to become a more natural exercise: “*Ich muss jetzt nicht so viel denken bevor ich etwas schreibe, und ich muss auch nicht so viel versuchen komplizierte Sätze zu schreiben.*” [I don’t have to think as much any more before I write something and I also don’t have to try to write complicated sentences.] Confidence was singled out as the most important contributor to language learning: “I think that when your writing improves your speaking does too ... but the key thing here is that you have to have the confidence to speak, and not worry about getting it wrong.”

While the majority of students related better writing skills to the writing exercise itself, some others commented on the positive impact of listening on writing, or of writing on speaking. One student wrote “Writing a blog every week and listening to podcasts was very helpful in improving my writing” and another student commented: “writing is good for speaking.”

The progress these L2 learners noted could simply be put down to the writing practice and it could be argued that a traditional paper-based learner journal would have yielded similar results. Bloggng, however, allowed them to create their

personal learning space. They were able to customize the design of their blogs, they reflected on their personal learning needs and raised problems. The increased degree of ownership is indicated by one student’s comment who felt entitled to make up his own German words. It was his blog after all. He wrote: “*Darf ich meine eigene Deutschworte erfinden?? Ich sage ja, warum nicht. Es ist mein Blog ne??*” [Am I allowed to invent my own German words?? I say yes, why not. It is my blog, isn’t it?]

The study shows that learners attributed their improved language skills to the bloggng activity. As the student quoted above said, “my writing has greatly improved, due to the blog.” Through increased exposure to the target language material a learner-centered learning environment was created. This involved not only texts but also audio and video, the convenient connect-edness of all learning materials (“I could have all my screens up at once, dictionary, my blog, class blog and the wiki page”) and the increased interaction between learner and teacher. The students were thus enabled to feel in charge of their learning. The autonomy they experienced as learners positively reflected on their perceived L2 proficiency gain.

FUTURE TRENDS

This chapter has described the use of blogs in the tradition of learner journals. While multimedia elements were included through linking, the task itself was limited to written text production. The use of audio would expand opportunities for L2 learners to practice speaking and listening. Podcasts share author centeredness with blogs, which suggests that spoken language could similarly be used as a means of reflection. Further research should investigate how other media can be used with L2 bloggng to enhance language learning.

The interconnectedness of the blog structure might appear to be the most appealing aspect of blogging. However, as this study has shown, it is not always easy to establish contact with others and even within the classroom, the interaction with classmates is usually based on teacher-initiation, as the examples in Ward (2004) and Pinkman (2005) show. Some learners from the course discussed here were reluctant to engage in a structure that would have enabled an online learning community. In retrospect (when they completed the survey at the end of the course) some learners envisaged a more collaborative use of their blogs through sharing information and exchanging opinions. These students have now reached a degree of autonomy, which enables non-teacher initiated interactions between learners. It would be fruitful to further investigate how learner-imitated communication can be achieved in the L2 classroom.

Little (2007) calls for more research “on the relation between learner autonomy, the process of language learning and the development of proficiency in the target language” (p. 15). While this study has not analyzed the actual L2 proficiency development but rather discussed learner perceptions of their language skills, it has been shown that L2 blogging can lead to a greater sense of autonomy and that “reflective intervention” (Bruner cited in Little, 2007, p. 20) has led to improved L2 awareness. Little encourages the use of learner journals for metalinguistic reflection in the target language. He sees reflection as a way to develop the capacity for inner speech (thinking in the L2), which according to sociocultural theory is fundamental for language development. Blogging has been described as an activity, which allows people to support their thinking, and for this reason it lends itself to L2 journal writing. It also adds a social dimension, as Nardi, Schiano and Gumbrecht (2004, p. 227) explains: “the consciousness of the audience clearly introduce[s] the social into an individual’s thought process.” A sociocultural study on the use of L2 blogging

as an avenue to support (socially mediated) L2 inner speech would open up a fascinating line of research.

Finally, I would like to suggest the use of L2 blogging for learner counselling. The recent interest in learner counselling (Mehlhorn & Kleppin, 2006; Rubin, 2007) reflects an increased awareness of the need for L2 learner autonomy. The task of counselors does not revolve around teaching, but in guiding the L2 learner toward taking charge of their own learning. Self-evaluation is regularly used as a starting point (as in this study). An L2 learner blog would help the counselor to further guide the learner, whether used as a platform for interaction or solely as an archive of the L2 learners’ self-reflection.

CONCLUSION

It has been argued in this chapter that blogs should not be used to reinstate teacher-controlled teaching practices but rather to inspire new uses that support L2 learner autonomy. With reference to self-determination theory it was suggested that blogging appeals to people because it addresses their needs for autonomy, competence and relatedness. It was shown how the underlying conditions that support these needs can be applied to L2 blogging. The pedagogical challenge consists in the creation of learning environments that enable language learners to develop a sense of responsibility for ownership of their learning.

It was proposed that the use of blogs as learner journals could assist this process. The study showed that blogs add valuable new dimensions to paper-based learner journals, such as online connections to the target language country (in this example via the use of audio and video podcasts) and new avenues for feedback. The survey indicated that participants in this study gained confidence in L2 use, but also gained confidence in blogging. The majority of participants had no previous experience of Web 2.0 in language

learning and needed to adjust to the new learning environment. The study shows that learners who developed a rationale for L2 blogging observed increased confidence and improvement of L2 proficiency. While they have not been able to explore the full potential of blogging yet (Richardson, 2004), the activity has transformed their approach to language learning and prepared them to engage in more interconnected blogging. The recommended research agenda shows that the journey has just begun and that Web 2.0 yields new approaches to explore L2 autonomy.

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KEY TERMS

Blog Host: The third-party entity that hosts and maintains the server software used by bloggers. The software provides the basic publishing mechanisms for websites, and additional capabilities such as RSS feeds, search engines and aggregation.

Blogroll: A list of links to other sites and blogs provided by the author. It generally contains sites that reflect the same genre or interest group providing additional context for the blog.

Edublog: An Edublog is a blog with an educational purpose. It can be authored by a learner, teacher, researcher or an administrator. While any blog software can be used for educational blogs, some hosts have specialized in the creation of dedicated edublog services (e.g. WordPress's edublogs.org).

European Language Portfolio: The European Language Portfolio is a document which allows language learners to record their language learning and cultural experiences. It consists of the Language Passport (an overview of the

learner's language proficiency as defined by the reference levels from the Common European Framework), the Language Biography (information on linguistic and cultural experiences gained inside and outside formal educational contexts) and the Dossier (materials supplied by the learners to illustrate achievements and experiences in language learning).

Learner Journal: Learner journals or diaries document the learning process of individual learners. Recorded by the learner, they provide teachers and/or researchers with insights into various aspects of learner development as well as enhancing the learner's awareness of their own learning.

RSS Feed: RSS feeds enable blog readers to subscribe to blogs or web pages. The server software publishes the changed or new pages via RSS (Really Simple Syndication), which are picked up by the subscriber's RSS reader. The aggregated posts are displayed in a single interface pane for the subscriber, without the need to visit each of the websites individually.

Self-Determination Theory: Self-determination theory (SDT) is a theory of motivation. It is based on the assumption that human motivation is dependent on the fulfilment of three basic needs: autonomy, competence and relatedness. The theory claims that people who feel supported in these needs by their social environment display a higher degree of self-determination in their actions.

APPENDIX

The Use of Blogs in Language Learning

Blog

1. What kind of journal did you choose (please circle)?
 - a. A private blog (restricted access)
 - b. A public blog (open access)
 - c. A paper journal (homework book)
 - d. other (a mix of blog and book or email)

2. Why did you use this format? (e.g. Why did you prefer to write in a private instead of a public blog?)

3. What do you think were the advantages of the format of your “blog”? (e.g. Why was it better to write in a public blog?)

Feedback

4. If your blog was public, did you receive comments from people outside the class? If yes, where they relevant to you?

5. How relevant were the teacher’s comments to you?

6. How helpful was the yellow marking sheet?

7. Journal writing

Please comment about the value of journal writing for language learning.

- a. Did you write on a regular (weekly) basis? If not, why?
- b. Did the guidelines on the Germ331 blog help you to achieve the objective of writing 300 words on the three topics?
- c. How easy or difficult was it to write on the three topics? Did it change over time or from week to week? Did it get easier?
- d. Did blogging help you to become more aware of your language skills?
- e. Do you feel that your German improved as a result of it?

Chapter XII

Using Mobile Technology and Podcasts to Teach Soft Skills

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ABSTRACT

Training ESL students in soft skills and employability skills with the help of Web 2.0 technologies is the current trend in Indian educational institutions. Students, who aspire to grow to greater heights in the corporate world, have understood the importance of learning soft skills such as verbal and non-verbal communication as well as employability skills such as interpersonal, problem solving and organizational skills to secure placements in leading companies. To meet these demands, teachers are required to play the role of facilitators of learning, and use innovative training methods. They no longer depend totally on textual materials but use advanced technological tools to supplement their teaching. The curriculum is designed to accommodate these innovations. Thus one finds more and more teachers using Web 2.0 technologies like podcasts, mobile phones, Wikis, blogs and Skype. Research studies conducted on the use of these Web 2.0 technology tools have shown the possibility of creating a virtual classroom and promoting students' participatory learning in a more effective manner.

INTRODUCTION

With the growing competition in the industrial field, most of the leading companies in India expect their employees to be well trained in management skills like marketing, leadership, decision making, persuasion and negotiation skills. More and more youngsters get trained in the above-mentioned skills before and after their entry

into the corporate world. In most of the Indian educational institutions, training is offered at the collegiate level itself and it is now mandatory for every engineering student to master soft skills and employability skills to get selected in campus interviews. They are normally conducted in the final year of study by leading industrial houses. One has to be proficient in soft skills, i.e. verbal and non-verbal communication, to transact with

local and overseas customers and to procure new business for the company. Needless to say, these skills refer to students' use of appropriate business vocabulary and expressions. The acquisition of these skills paves the way for using different employability skills like interpersonal and analytical skills, interview and discussion skills and etiquettes. When one masters these employability skills, students may easily learn managerial skills.

What are employability skills? Saterfiel (1995) quotes Lankard (1990) to define the term "employability skills," as those skills used to "describe the preparation or foundational skills upon which a person must build job-specific skills (i.e., those that are unique to specific jobs). Among these foundational skills are those which relate to communication, personal and interpersonal relationships, problem solving, and management of organizational processes" (para. 2). We can also include interview and discussion skills in the above list. It is obvious that these employability skills could be mastered only if students possess soft skills. Nieragden (2000) defines soft skills in his article, "The Soft Skills of Business English," as "those personal values and interpersonal skills that determine a person's ability to fit into a particular structure, such as a project team, a rock group, or a company. The skills include personality traits like emotional maturity, eagerness to learn, and willingness to share and embrace new ideas" (para. 2). Students have to be taught these soft skills separately in order to make them use employability skills. These form part of management training given in educational institutions.

Web 2.0 technologies can be very helpful in providing effective management training. What is meant by Web 2.0 technology? Miller (2005) quotes O'Reilly to define Web 2.0 technology: "Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a

continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an 'architecture of participation,' and going beyond the page metaphor of Web 1.0 to deliver rich user experiences" (Miller, 2005, para. 5).

How does Web 2.0 technology enhance management and language learning? Any training proves effective only when it provides authentic inputs and creates an opportunity for the trainer to make use of what is learnt. In that way Web 2.0 technology tools like podcasts and mobile phones offer resources for effective listening and at the same time provide a platform for using those tools for practicing aural and oral skills. Miller (2005) in his article on "Web 2.0: Building a new library" specifies various functions of Web 2.0 technology as the one that "permits the building of virtual applications," being "participative" and that it "works for the user" (Paul's principles of Web. 2.0, n.p.). Many researchers have shown the use of blogs, Skype, wikis, podcasts and mobile phones — the Web 2.0 technology tools that promote participatory learning and contribute to a higher level of job performance later. With the growing interest among students to listen to audio files in MP3 players and using mobile phones for listening to songs, training them in using podcasts and mobile phones for learning employability skills, with the equal focus on teaching business vocabulary and expressions is a relatively easy task for trainers. While podcasts offer plenty of scope for listening to business English expressions and vocabulary in audio format, mobile phones have a provision to record one's own voice and listen to it, thereby monitoring one's language delivery. One can create a podcast and then upload the audio files recorded in the mobile phones. In other words, it creates a platform for users to receive input from the web and at the same time, facilitates participation in using the software.

Similarly, mobile phones enable one to listen to audio files at one's own pace and time. It could be used to supplement training sessions. Kineo (2007) speaks about mobile learning as one that offers performance support to a course offering. The content could be provided through the mobile to promote easy access.

Given this context, this chapter discusses a research study conducted by the author on the use of podcasts and mobile phones to develop soft skills and employability skills. It attempts to show how management training and language teaching can compliment each other.

DEVELOPING SOFT SKILLS AND EMPLOYABILITY SKILLS

Training students in developing these skills is the biggest challenge that teachers and trainers have ever faced. First, students who undergo training in soft and employability skills are most often graduates in different disciplines. They would have studied only what is termed "General English" but have had little exposure to Business English. So when these students are trained in soft and employability skills, they are first given exposure to the corporate context in order to learn Business English vocabulary and expressions. Only then are they given opportunities to use what has been learnt.

Second, teachers of English are most often ignorant of the corporate world and its expectations. They should seek the help of domain subject experts to know the functions of different commercial and industrial organizations and the terminologies they use.

Third, teachers have to prepare themselves to accept the major shift from being a teacher to a trainer. As trainers, they have to bring the corporate world to the classroom through various devices. In order to do this, an authentic corporate scenario has to be created in the classroom through the use of case lets or case studies. This

necessitates the integration of soft skills with the domain subjects.

Fourth, there is a growing need for teachers to use technology in the classroom. They have to be familiar with the available technological tools to train students in employability and soft skills.

Fifth, teachers need to concentrate on the process of student learning and facilitate it by using appropriate strategies. Finally, with the training focusing mainly on developing speaking and listening skills among students they are to be given adequate exposure to the use of Business English vocabulary and expressions in the real world.

Any training schedule has to be systematic and should lead ultimately to life-long learning. Training students in listening and speaking should first focus on making them learn appropriate strategies. Chamot, in her guide on "Developing Autonomy in Language Learners" (2006), states: "Students who think and work strategically are more motivated to learn and have a higher sense of self-efficacy or confidence in their own learning ability" (p. 1). Students have to consciously control their learning process by using appropriate strategies. To Chamot (2006) effective listeners: "(1). Monitor their comprehension by continually asking themselves if what they were hearing made sense; (2). Relate new information to their prior knowledge by recalling relevant personal experiences or things they had studied; and (3). Make inferences about unknown words or information" (p. 2). It is believed that effective listening provides input for practicing speaking skills. How could students be trained in listening skills? According to Chamot (2006) in a student-centered approach, the students have to focus on the resources they already have and it can be achieved by using strategies like "(a). Use what you know, (b). Use your imagination, (c). Use your organizational skills, and (d). Use a variety of resources" (p. 7). We can say that they have to use these metacognitive strategies to learn all the four skills and it is possible to practice their knowledge of strategies even while using Web 2.0 technological tools in the learning process.

WEB 2 TECHNOLOGIES

Podcasts

Technology is so advanced that it provides new tools like Skype, wikis, podcasts and mobiles, which could be exploited as teaching and learning tools. Fry (2007) in a recent video interview stated that Web 2.0 offers “genuine interactivity if you like, simply because people can upload as well as download” (para. 1). Though there are many tools available, podcasting is a popular tool that could be used by ESL/EFL teachers.

What is a podcast? The Oxford English Dictionary (2005) defines a podcast as “a digital recording of a radio broadcast or similar programme, made available on the Internet for downloading to a personal audio player” (“Podcast” is the Word of the Year, para. 1). According to Kaplan-Leiserson (2005) podcasts are “digital audio programs that can be subscribed to and downloaded by listeners via RSS (Really Simple Syndication), can be accessed on a variety of digital audio devices, including a desktop computer” (para. 3). When audio content is delivered to a media player, it is referred to as podcasting. The merit of podcasting lies in the fact that one can listen at one’s own convenience, at any place, any time and at one’s own pace. When they are downloaded using Apple iTunes podcasts can be played directly within the program. We can use the computer for listening to a podcast. One can even create a podcast with the help of podomatic, a company that creates specialized tools that offer provision for creating, sharing and listening to audio and video podcasts. All that one needs to do is to create a log in ID with a password to create a podcast.

Beare (2005) feels that, “Podcasting is especially interesting for English learners as it provides a means for students to get access to ‘authentic’ listening sources about almost any subject that may interest them. Teachers can take advantage of podcasts as a basis for listening comprehension exercises, as a means of generating conversation

based on students’ reaction to podcasts, and as a way of providing each and every student diverse listening materials” (para. 2). It is a tool that enhances mastery of listening skills and students could be encouraged to use appropriate strategies. It also serves as a resource provider when it presents business vocabulary and expressions through authentic corporate scenarios and dialogues that go along with them. Thus podcasts could be used to supplement classroom teaching by uploading audio files and encouraging students to listen to them.

The authentic information provided by Business English podcasts helps students relate it to the corporate scenario created in the classroom and also comprehend expressions used in podcasts. Needless to mention, the audio files (in podcasts) should be dialogues that offer Business English vocabulary and expressions. Students, in their attempt to understand the content of podcasts, are made to use the listening strategies such as “use what they know,” “use their imagination” and “use various resources.” They normally try to organize points in a particular order (one of the strategies mentioned above) as they listen and proceed in their learning process. This is possible because one can listen to podcasts at one’s own pace and listen to a file again and again. Thus it is evident that podcasts offer scope for using appropriate strategies.

Using Podcasts to Teach Soft Skills

As mentioned earlier, podcasts mainly serve the purpose of teaching and learning business vocabulary and expressions that students could make use of in their real life scenario. Soft skill training involves students in authentic situations in which they need to use verbal and non-verbal communication to exhibit their negotiation and interpersonal skills. Teachers have to provide these different kinds of inputs relating to the skills and podcasts serve that purpose. There are Business English podcasts available on the Web that give

exposure to vocabulary and expressions used in business transactions. A few example sites include, (<http://lkey.podomatic.com/>), (<http://www.englishpod.com/>) and (<http://businessenglishpod.com/>).

These podcasts deal with various business scenarios that one would normally come across in daily business encounters. Students could be asked to listen and make a note of the expressions used in them. Since teachers discuss different types of business transactions in their classes, students find it easy to relate them to what they listen to. Thus it paves the way for using appropriate strategies as mentioned earlier. When a similar situation is presented in business communication classes students are able to use the expressions and vocabulary learnt from the podcasts they have listened to. This way listening and speaking skills could be integrated within a traditional classroom context.

There are a number of websites for teaching business English through podcasts. For example, a study guide is provided by the Business English Pod (<http://www.businessenglishpod.com/>), alongside free weekly MP3 lessons for intermediate and advanced Business English learners. Each Business English podcast lesson deals with a particular skill like meetings, presentations, telephoning, negotiating, socializing, travel and conversation. Podcasts also focus on language functions such as clarifying, disagreeing, questioning, expressing opinions and persuasion.

Moreover, a growing number of research studies have been conducted on using podcasts and mobile technology for teaching various subjects. The case study “The ‘Double Life’ of an iPod” conducted by Edirisingha (2006) in the University of Leicester, highlights the use of advanced technology for teaching Electrical Engineering. He states that podcasting supported organizational learning and helped to stimulate interest in the subject. This was done with 30 second and third year campus-based students who studied an online module, using the Blackboard VLE. To supple-

ment his online teaching, Edirisingha organized his weekly learning activities and motivated students to learn by providing weekly podcasts. The podcasts updated information and guidance on the weekly activities. Further, he used Salmon’s (2000, 2002) 5-stage scaffolding model to design structured online group activities and provided summaries and further guidance to students. Edirisingha motivated students by incorporating relevant new items and a fun item such as a joke into the podcasts. A feedback questionnaire was used to find out the impact of podcasts on their learning. Students felt that podcasts helped them with many of the affective and organizational aspects of learning. They could find themselves as independent and effective online learners. As these examples indicate, there is no reason why Web 2.0 technological tools cannot be used to promote soft skills as well as employability skills too.

Creating Podcasts

One can create podcasts and upload audio files with ease. The process is very simple and useful to trainers. To begin with, for preparing audio files, one has to record conversations or discussions with a help of a microphone and save them as audio files in a folder. Then one has to access an appropriate website such as Podomatic (www.podomatic.com) that offers a facility for creating a podcast for free. The homepage of Podomatic, for instance, displays links such as “my profile,” “add friends,” “region,” “my media” and “photo.” One can upload a personal profile with the first link. Friends can be invited to listen to one’s podcast by adding their email ID in the second link. The third link “region” shows countries to which other users belong. One can upload audio files from your computer in the link “my media.” A photograph of the person who created the podcast can also be uploaded in the link “photo.” These links help other users get in touch with the podcast provider. One has to merely log in with the password and username, access the podcast

created and then upload the audio. The uploaded audio file can be heard by clicking on the “my podcast” option.

Mobile Phones

With the help of a good mobile phone, users may send SMS text-messages, take pictures, record conversations and have Internet access. In practice, studies indicate that students use the device more for sending instant messages, talking with friends and listening to music. In addition, it can now be used as a communication or educational tool. Kineo (2007) defines mobile learning as “the ability to learn independently of place and time, facilitated by a range of mobile devices” (p. 3). The device offers scope for recording speeches, saving them as audio files and listening to them any time and anywhere. The software provided helps one to download, transfer data, convert data formats and finally upload new data. Mobile phones offer the provision to transfer any information from one device to another or to a computer system through SMS, MMS or data cable. While ordinary texts could be sent through SMS, audio files could be sent through MMS. For MMS, users must establish a viable connection via service providers. However, the compatibility of audio format between mobile phones is often an issue. One possible solution to this problem is to transfer files between a mobile and a computer. The software that comes with most mobiles offers either a USB or Bluetooth connection that enables the transfer of images and audio files from mobiles to computers and vice versa. With regard to converting data formats, users have to install conversion software in the computer and convert the audio file from one format to another. For example, the audio files stored in a mobile are normally either in Wave or AMR format. If users want to listen to transferred audio files on a computer (i.e. from mobile phone to the computer), they have to change the format for playing it in Media Player or Winamp.

As discussed earlier, mobile phones are an advanced technological tool that can be used by every one for varied purposes. During recent years the concept of mobile or mLearning has come into vogue. Quinn (2000) states that “mLearning is the intersection of mobile computing and elearning: accessible resources wherever you are, strong search capabilities, rich interaction, powerful support for effective learning, and performance-based assessment elearning independent of location in time or space” (para. 8). Talking about the characteristics of mobile learning, Kineo (2007) points out that it is potentially ubiquitous because of its wider network coverage. It also challenges students’ concentration and retention capacity, supplements classroom instruction by providing lot of input and finally paves the way for collaborative learning as there is an SMS facility for students to communicate with each other. According to Lan, Sung and Chang (2007), mobile phones provide “rich, real time, collaborative and conversational experiences” (para. 6) to students.

Using Mobile Phones to Teach Employability Skills

Using the mobile phone as a teaching and learning tool should interest language teachers. We are aware that students use it mainly to interact and send messages to their friends and others. They need to be motivated to use it as a learning tool and that could be done by integrating it with classroom teaching through varied activities. Naismith et al. (2004) in their article on “Mobile Technologies and Learning” point out that, “learners are encouraged to be active constructors of knowledge, with mobile devices now embedding them in a realistic context at the same time as offering access to supporting tools” (p. 2). Needless to say, students’ active participation helps them in applying what they already know and to learn new concepts. This reminds us of the importance

of constructivism in the context of mobile learning and Web 2.0, which advocates the concept of learners actively constructing knowledge from their own learning experiences. Martin Del Otero (2006) integrated the use of mobile phones into his teaching practice by exposing students to real life communication. He used his mobile once a week to talk to a native speaker or an English teacher in the next classroom and then made his students interact with him in the classroom. Subsequently, he annotated relevant or troublesome vocabulary on the chalkboard for students' easier understanding or clarification. There are many projects conducted involving the use of mobile phones. Ramos (2008) undertook a project entitled, "Mobile Technology Initiatives for Non-Formal Distance Education," which tested the feasibility and acceptability of using Short Messages System (SMS) technologies for providing non-formal distance learning. The motivational level of the users was also studied. Interestingly, in two other projects conducted by universities in Japan, "Learning on the move" and "eBusiness on the Move," mobile phones were used to support and deliver learning materials. According to Houser, Thornton and Kluge (2002) in the former project, foreign vocabulary was emailed as daily lessons to students, and in the latter, short textual course content, quizzes, and reminders were sent using the web to students' mobile phones.

Thus these studies have proved the possibility of using basic facilities in mobile phones to support teaching and learning. A research study conducted recently in a management institution on training students in employability skills by using mobile phones has shown further possibilities for these devices. The advantage of using mobiles is that students can listen to the recorded dialogues or discussions any time they wish to and as many times as they want. Chinnery (2006, para. 13) quotes Norbrook and Scott (2003) as saying that "portability and immediacy" are the main factors motivating mobile language learning. Training

students for employability includes preparing them for interview and discussion skills. Trainers can make this training process more effective by integrating the use of mobile phones into the training session. In other words, one can use the recording facility available in mobiles to reinforce important aspects of employability skills, such as using appropriate vocabulary, questioning skills and the use of linguistic skills. All that soft skills trainers have to do is to function more as facilitators of learning than as mere transmitters of knowledge.

The Process Involved

Trainers have to learn how mobile phones can be used as a training tool. As mentioned earlier, the employability skills training program focuses mainly on encouraging students to practice conversational and questioning skills that form part of interviews. Their performance is monitored periodically and feedback is given to make them understand the errors committed in their dialogues. Trainers can record the dialogues delivered by students in mobiles and they can be encouraged to listen to the recordings. However, when the trainer decides to record the dialogues on her mobile, she can save them as audio files and transfer the files from mobile to the computer with the help of USB drive or via Bluetooth. Then, the audio format (which is normally stored either in Wave or AMR format) has to be converted into an MP3 format with the help of software such as Allok AMR to MP3 converter, because the format in which the audio files are stored in a mobile phone may not be compatible with other devices. Once the conversion process is completed, the files can then be transferred to a CD for the students to access without any difficulty. Thus mobile phones, as Web 2.0 technological tools, can serve as training and learning tools.

AN ACTION RESEARCH PROJECT

Use of Podcasts as Resources and Tools

An action research project using podcasts for training purposes was recently conducted involving tertiary level students at one of the most highly regarded management training institutions in India. The students involved in the study were doing their first year in management studies. Since they had done their undergraduate education in different disciplines, they only had knowledge of general English. They had to be given adequate exposure to Business English through instructions in domain subjects and their related caselets. With regard to their use of Business English vocabulary, they were not successful in real life situations although the syllabus provided tasks relating to the corporate scenario. Moreover the periodic assessment of their communication skills in the class reflected students' lack of knowledge of aural-oral skills and the ability to hold satisfactory business conversations. Thus it was evident that they had to be given adequate practice in speaking and listening skills particularly in using business vocabulary in real life situations. With the advent of Web 2.0 technology, the researcher found out that technological tools like podcasts could help to train students in listening skills apart from providing authentic resources of Business English vocabulary, expressions and collocations. It was also believed that this input would enhance their interpersonal, negotiation and marketing skills. Hence the need to administer an action research project over a six-month period corresponding to one semester. The main aim of this research study was to train students in soft skills with the help of one of the Web 2.0 technological tools identified above, namely podcasts. The other objectives of the first part of the study were to:

- Use Business English podcasts as resources and teach Business English vocabulary and expressions.

- Train students to use expressions and vocabulary in appropriate situations in the classroom.
- Train students in listening skills with the help of podcasts.
- Record dialogues relating to business transactions and encourage students to listen to them.
- Help them create podcasts with the help of Podomatic and upload the audio files saved on their computers.

The study was conducted in three stages.

First Stage

Students were first asked to actively listen to ESL/EFL podcasts for developing listening skills and to become acquainted with podcasts. They were then instructed to do related activities, including making notes of the idioms and expressions used in general conversations and also to give a summary of what they had listened to. In order to do this, they were asked to log on to various ESL/EFL podcasts such as:

1. **ELT Podcast** (www.eltpodcast.com): This site is the home of several podcasts for learners and teachers of English as a Second or Foreign Language.
2. **Breaking News** (<http://breakingnewsenglish.com>): This site offers free lessons based on podcasts produced by Sean Banville concerning items related to daily news topics.

Students were engaged in the above activities for almost one month. By the end of this period, it was clear that they had acquired knowledge of a range of phrases such as “online version,” “run-away success,” “huge money spinner,” “detention without trial.” They had also acquired the basic knowledge of introducing themselves and talking about their duties or jobs to official contacts. These tasks developed students' confidence to

the extent that they were able to communicate efficiently with others.

Afterwards, students were asked to listen to the Business English podcasts and do a few related activities such as making a note of the business expressions used in this field for negotiating a deal, selling a product and opening a business. They were also asked to take notes of the text of the podcasts. The following sites were made use of:

1. **Business English Podcast** (www.lkey.podomatic.com), in which users can find free MP3 Business English podcast training lessons that give exposure to Business English used in the workplace.
2. **English Listening Skills and Activities-Effective Listening Practice** (www.esl.about.com/od/englishlistening), where students can use the popular podcast entitled, “ESL Podcast336 — Going out of Business,” as well as a range of other business materials.
3. **Business English Pod** (<http://businessenglishpod.com/>), a web site that offers business English for professionals.

The objective of giving these tasks was to make students use the knowledge acquired in the real life situations created in the classroom. Students did these activities regularly (three times per week) and by the end of the first month, it was found that they had acquired a range of new Business English vocabulary and expressions such as, “Could you please check the schedule and tell me?” “How can I help you to sort out the problem?” “What benefits do you offer?” “What duties do you assign?” etc. They became aware of various situations in which one would hold business conversations. To list a few, “Meetings: Finishing Up and Action Points,” “Travel: Checking In to a Hotel,” “Airport Check-in and Making Polite Requests,” “Handling a Difficult Customer,” “Negotiating a Deal” and “Persuading a Customer to buy a Product.”

Following this students were asked to reflect on their learning process and convey how they comprehend new expressions in Business English. From the students’ feedback it was found that the initial exposure given in the domain subjects and the training given in the soft skills led them to achieve a good level of comprehension. Thus it was evident that they had used the appropriate listening strategies such as, “Using what they know” and “Using their imagination” to comprehend the scenario provided before doing the task. They could even recall and point out the expressions which they had learnt from the podcasts they had listened to.

Second Stage

The mastery of a skill depends upon the hands-on experience that students get within the classroom and the ability of trainers to create real life scenarios. Moreover, the focus was on making students use Business English expressions thereby developing their proficiency in holding business conversations. Students at this stage were encouraged to use the expressions learnt from podcasts to exhibit their selling and negotiation skills as well as those skills related to making business introductions. They used their organizational skills to form appropriate dialogues and performed them before the class. Finally, students had to submit the written script of the conversations prior to the researcher uploading them into podcasts.

Third Stage

Preparing students for lifelong learning is the ultimate aim of this study and at this stage in the process, the recording and uploading of the audio files was a meaningful and interesting experience for students. McCarty (2005) in his article, “Spoken Internet to Go: Popularization through Podcasting,” refers to the growing popularity of podcasting due to the, “Greater ease of publishing individual voices that brought a democratized

social dimension to the web” (para. 4). Podcasting is easy as there are sites such as Podomatic (www.podomatic.com) and Odeo (www.odeo.com) that provide facilities for registering and creating podcasts for free. In this stage of the study a podcast was created with a username and password. Once this was done, a few dialogues prepared by the students were uploaded to the podcast. This was done in the main page, by clicking on the “browse” button to search for the audio file and finally uploading it by accessing the link “my media.” At the end of this stage an evaluation was done to find out the students’ ability to use Business expressions in real life situations by assigning them a few tasks.

Use of Mobile Phones

While the first part of the research study focused upon enhancing the knowledge of soft skills through Business English podcasts and later creating a podcast to upload students’ dialogues into it, the next part aimed at using mobile phones to record students’ mock interviews conducted in the class and enhancing their employability skills. It is worthwhile to discuss the reasons for conducting mock interviews and recording them in mobile phones.

Researchers are aware that students doing management studies do their course with the aim of securing a job in leading companies at the end. As companies give importance to students’ communication and interview skills, the focus is more on training them in soft and employability skills. The curriculum is designed so that students attend at least five mock interviews in a semester and the aim is to give exposure and prepare them in interview skills. However, the feedback on the campus interviews organized by the management institution (where the study was conducted) repeatedly identified students’ lack of knowledge of employability skills. Consequently, trainers had to take extra efforts, first to make

students aware of their shortcomings and then to train them accordingly.

The project was designed so that the researcher used the mobile phone as a tool to create awareness for students about their performance with respect to communication skills, questioning ability and answering appropriately to questions asked. It was done with the following objectives uppermost in mind:

- To train students in interview skills that form part of employability skills
- To assess their performance
- To train students in transferring audio files with the help of a blue tooth connection to their computer
- To provide practical experience in converting between audio formats and copying them onto CDs
- To train students in uploading audio files into podcasts

As mentioned earlier, students were trained in employability skills with the greater emphasis on interview skills. In order to make the training sessions more focused and effective, students were trained as to how to face an interview, the way to conduct themselves before the interviewer, and how to exhibit the level of confidence with more focus on verbal and non-verbal communication. They were also shown a few video recorded interviews. Then they were instructed to discuss and prepare questions and answers for interviews. The interviews were then done in the class and were recorded on a few mobile phones.

Students can listen to an audio file recorded on a mobile by replaying it. And it can be sent as an MMS to other students’ mobiles for them to listen to. As mentioned earlier, however, when the problem of compatibility arises, the only option is to transfer the audio files from the mobile phone to a computer or laptop and then convert them to MP3 format for easy access. Thus it was decided to install software such as Bluetooth or

a USB data cable in order to transfer the files effectively. The Bluetooth was installed and the audio files were then transferred to laptops in the following way:

1. The message option was selected on the mobile.
2. The audio file that had to be transferred was then selected.
3. In the “send” option, “send through blue tooth” was chosen.
4. The mobile was then taken closer to the laptop, approximately within a distance of 1 millimeter.
5. The audio files were transferred in less than one minute and the files were saved on the desktop of the computer.

It is worthwhile to mention that free software for using a USB data cable or data transfer is often packaged with mobile phones. After installing the data cable software, the files are transferred quickly. The procedure is very simple and is discussed by Leonardo (2006) in his practical article, “How to transfer cell phone pictures to a computer.”

Once the audio files were transferred, the next task was to convert the audio file to the correct format. The recorded file was in AMR format and had to be converted into MP3 format. The files had to be converted for two reasons:

1. Students could not access the multi-media messages (MMS) sent to them as their mobiles were not compatible with the format used. Moreover, not all students were prepared to subscribe to the multi-media messaging facility as it was not frequently used. Even such tasks as exchanging ring tones, for example, was done with the infrared facility given in mobiles and so there was no necessity to pay for the MMS facility.
2. The researcher wanted to upload the audio file in MP3 format into the podcast created earlier.

The researcher downloaded the software, Allok MP3 to AMR Converter (“How to Convert MP3 to AMR,” 2006) and installed it on the computer for transferring data and converting the audio file format. It must be mentioned here that the software supports a wide range of formats (WAV, MP3, OGG, WMA, AC3, AMR, 3GP, MP2, RM, RMVB, RAM, VCD, VOB, AVI, MPEG, WMV, ASF). Once the files were added, the “out format” i.e. the format output target (MP3), was selected. Following this, the “open” option was clicked to select the folder in order to save the work. Finally, the clicking on the “convert” button converted the AMR file to an MP3 format. The message “Mission accomplished” appeared after this step and confirmed the completion of the conversion process. In this way the audio files were converted within a matter of seconds. The audio files were then copied onto a CD and distributed to students later.

The researcher assessed students’ performance in interviews and discovered marked improvement in their communication skills. Students too were asked to listen and evaluate their performance themselves.

OUTCOMES OF THE STUDY

As a result of this process, students learned a lot of new expressions from authentic situations provided by the podcasts and it helped them to apply their knowledge in the real life situation created by the researcher in the classroom. The exposure given to soft skills such as selling, negotiation and persuasion through the use of the podcasts helped students learn the corporate scenario better than traditional forms of classroom instruction. Recording their dialogues promoted new levels of confidence and made students perform with less inhibition. Overall students appreciated the idea of uploading the dialogues using the podcast format as they could be accessed by a much wider audience.

Moreover, the training became more focused as a result of using mobile phones. The fact that the interviews were recorded made the students concentrate more on their communication skills. They could easily assess their own performance by themselves by listening to the recordings. As Kineo (2007) has pointed, mobile phones facilitate collaborative learning, students could involve themselves in groups to check their performance, identify their mistakes and learn how to improve on their interview skills. Besides this, the researcher could also keep track of students' performance by playing the recorded interviews repeatedly and providing students with feedback. It should be pointed out that this study helped students to learn to use the instrument for learning rather than listening to music and sending SMS — two typical pastimes of students using mobile devices.

The study, on the whole, had the following limitations:

1. Students were unaware of using this Web 2.0 technology. They had to be given an orientation about how to create a podcast and upload the dialogue.
2. Students were diffident about using the Business English expressions they had learned in their dialogues. They had to be assisted now and then in their usage of appropriate words and expressions.
3. Recording too many interviews (of every single student) was not possible because of the limited size of the memory on the mobile phones. Only one interview done by every student was recorded.
4. The researcher had to depend on the use of her personal laptop for transferring and converting files as the language lab could not be used for this purpose.
5. Students had to be motivated to respond to the process of recording their interviews and to perform without any inhibition.

IMPLICATIONS OF THE STUDY FOR FUTURE RESEARCH

The two studies mentioned above have shown the possibility of creating podcasts without any difficulty, recording dialogues performed by students in class and uploading them into a podcast format for distribution. Similarly, with regard to the use of mobile phones, trainers educated themselves to use the wide range of supplementary features available. This helped them to focus more on training students in verbal skills and kinesics. For example, video shoots of interviews done in class can be transferred to the PC with the help of the USB data cable. The transferred files may be copied to a CD and distributed to students. By doing this, students will get a clearer idea of their performance, particularly the use of kinesics while taking part in an interview process.

CONCLUSION

With the growing trend of students entering the corporate world and the growing need for training them to face the corporate demands, the role of teachers becomes more challenging. Their job is to train students for securing good placements in leading companies. Moreover, in the case of ESL students, there is a need to expose them to authentic situations where Business English vocabulary is used. Research studies, some of which have been quoted earlier, have proved the feasibility of such training with the help of Web 2.0 technologies, particularly podcasts and mobile phones. They provide ample evidence to prove this:

- Web 2.0 technological tools such as podcasts and mobile phones offer scope for learning both soft and interview skills.
- Web 2.0 technological tools enhance students' level of confidence to face interviews and meet the corporate demands.

Using Mobile Technology and Podcasts to Teach Soft Skills

- Podcasts provide authentic resources relating to soft skills such as communication skills, selling, negotiation and persuasive skills to list a few.
- Students can create podcasts and share their views through audio files, which could be done by recording, saving and uploading dialogues.
- One can use the basic facility of recording one's speech in a mobile phone and transfer the data to other mobiles or computers.
- While most of the advanced versions of mobile phones have either USB data cables or Bluetooth for transferring data, the Web offers software such as "Allok MP3 to AMR converter" for converting formats of audio files.

Thus it is quite evident that teachers have to update their knowledge of technological tools in order to meet the challenges of training students for employment. It is suggested that teachers involve themselves in action research to try out different Web 2.0 technological tools to enhance students' language learning skills and train them to be autonomous learners. Though the concept of autonomous learning is nothing new, not much research (using Web 2.0 technologies) has been done in this field. Needless to say, training students in the effective use of Web 2.0 technology prepares them for life long learning.

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KEY TERMS

Employability Skills: These are skills that help a candidate to gain employment and progress in the organization that s/he joins.

Interpersonal Skills: This term refers to the cordial relationship maintained by two people.

iTunes: This is a popular media player provided by Apple that runs on Windows and Macintosh. It is a type of aggregator that can be used to collect podcasts and vodcasts as well as purchase audio and video content from the iTunes Music Store.

MMS: Multimedia Messaging Service as opposed to SMS allows users to send multimedia messages between mobile devices. Multimedia content thus includes video, audio, images and rich text.

Problem-Solving Skills: In the corporate scenario, problem-solving skills refer to handling challenging situations efficiently.

SMS Messaging: SMS or Short Messaging Service allows users of mobile phones to send messages between devices. The number of messages sent has grown considerably in recent years with billions of messages being sent around the globe at peak seasonal times such as holidays, Christmas and international events.

Soft Skills: These skills refer to the cluster of personal traits, social graces, personal habits, friendliness, and optimism that characterise people to varying degrees. Soft skills complement hard skills, which are the technical requirements of a job.

Chapter XIII

Social Networking Sites and Critical Language Learning

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ABSTRACT

This chapter looks at the potential use of Social Networking Sites (SNSs) for educators and second language learners. It views SNSs broadly through the lens of Critical Language Learning (CLL) and looks at specific issues of identity formation, student empowerment, learner autonomy, and critical literacy as they relate to the use of SNSs. This chapter also reports the results of an initial project to make use of the MySpace social networking site for Japanese learners of English. It is hoped that this chapter will raise awareness of some of the complex issues surrounding the use of SNSs by language learners and that it will lead to further research and consideration of these issues.

INTRODUCTION

As technological innovations of all kinds push our society forward at ever increasing speeds, the basic nature of social interaction is being transformed. Social networks are now being formed in ways that no one would have imagined 50 years ago. Currently at the heart of this phenomenon is the massive rise in popularity of Social Networking Sites (SNSs) like MySpace, Mixi, Facebook and others; sites designed specifically for the purpose of developing and sustaining interconnectivity amongst users. Though English may currently

be the language favored by the majority of users of SNSs, it certainly does not have a monopoly on this trend. The SNS Mixi, for example, which functions exclusively in Japanese, currently has over 11 million registered users. Indeed, according to recent global trends in blog posting, the Japanese language has actually surpassed English in regards to the number of blog posts per language, with Japanese now generating 37% of the total contribution to the blogosphere (Sertan, 2007; Sifry, 2007). The global ubiquity of SNSs means that second language learners can easily find themselves in contact with native speakers

anywhere in the world. Clearly the popularity of the sites, combined with the opportunities for meaningful interaction that they present, potentially make them a powerful platform for second language acquisition, and, in fact, research into how best to take advantage of this opportunity is beginning (Godwin-Jones, 2006; O'Hanlon, 2007; Murray, 2005).

There are complex questions to be considered however; questions that relate specifically to changes in the meaning of identity and the forms of social interaction that occur online. How, for example, can the complexities of second language identity formation be interwoven into one's online identity formation? Or, what new types of literacies are required for decoding and interpreting information in multi-modal, peer to peer environments like SNSs? (Dieu, Campbell, & Ammann, 2006). Could we also consider an analysis from a constructivist perspective? Social constructivism, particularly as it relates to education, places primary importance on the need for mediation and social interaction in the development of meaning (Pasfield-Neofitou, 2007; Vygotsky, 1978). Web 2.0 technologies are, after all, primarily about the construction of meaning through interaction between and amongst users. Some research recently has looked to constructivism and in particular Vygotskian social constructivism as a way to interpret and assess some of the potential benefits of the type of peer editing and collaboration that can take place on wikis and SNSs (Lavin & Claro, 2005). This chapter will attempt to lay a framework for a discussion of these questions and others by looking at SNSs and other associated Web 2.0 technologies from a Critical Language Learning (CLL) perspective and by considering a recent case study looking specifically at the use of the MySpace SNS to facilitate the acquisition of English amongst Japanese university students. Specifically, this case study had three primary objectives:

1. To assess Japanese students' interest level and motivation regarding the use of SNSs to improve their English skills.
2. To consider the use of the MySpace SNS through the framework of the issues of identity formation, learner autonomy, critical literacy, and student empowerment (Pennycook, 1997).
3. To map out potential difficulties and opportunities for further research into the potential use of SNSs for English learners in Japan.

This case study and its associated research relating to CLL and the potential applications for SNSs in the second language classroom is one of the first of its kind, particularly in a specifically Japanese context. It is hoped, however, that this chapter will lead to further discussions and considerations of the relationship between the changing nature of social interaction in the age of the Internet, and the potential opportunities and challenges that these changes present to the second language learner.

SOCIAL NETWORKING SITES AND CALL

Social networking itself is not a new phenomenon. Indeed, our innate need for social interaction has always drawn people together to form real-world social networks where members sought to build and maintain a sense of community through interconnectedness with others. Though CMC (Computer Mediated Communication) has existed in various forms for most of the last 50 years, it is only recently, as the Internet has begun to work its way further into the lives of individuals all around the world, that CMC has become both immediate and global (Lam, 2004). The massive rise in the popularity of SNSs should come as no surprise when we consider two main factors. First, SNSs have become wonderfully efficient at what they propose to do, namely to allow users to share

information and interact with one another in a dynamic and multi-modal environment. Secondly the social networking phenomenon fills an essential niche in a modern society that is increasingly finding itself lacking in face-to-face interaction. Some decry this development and the decline in social and interpersonal skills they perceive to be associated with it. However it is equally possible to perceive a future where new technologies empower and enable people to interact with others in meaningful new ways and also allow people to create and shape identities for themselves that would otherwise be impossible.

Whether or not one is optimistic about the future potential of SNSs to transform society, we cannot deny their current popularity. Indeed statistics now show well over 250 million unique visitors to various SNSs around the globe, with interest in certain sites like Facebook up 270% from June of 2006 through to June of 2007 (Comscore, 2007). It should come as no surprise then, that forward thinking teachers and educators across the globe have for several years been involved in considering how to take advantage of both the popularity of SNSs themselves, and the various Web 2.0 applications associated with them (Lantolf, 2000; Murray, 2005; Cummings, 2007). In order to best understand how Web 2.0 technologies may be applied for educational and, specifically, for language education purposes, we should first look at where these technologies fit into the development of Computer Assisted Language Learning (CALL) itself. Some writers (Warschauer, 1999; Warschauer & Healey, 1998; Trotman as cited in Davey, 2005) see CALL as having progressed through three main phases of development: behaviourist, communicative and integrative, with each of them representing higher phases of technical and innovative complexity (Davey, 2005).

CALL itself, in a broad sense, owes much to the growth of the Internet, particularly as a reference tool for both students and educators, but it is specifically in the area of CMC where some of the

most significant recent changes are taking place (Hata, 2003; Cummings, 2007). Educators are continuing to look for new opportunities and ways to take advantage of technological innovations associated with CMC. Wikis, blogs, synchronous and asynchronous chat, SNSs, these are just a few examples of potentially beneficial tools for the language learning process that teachers are beginning to turn to in their attempts to blend student interest, technological innovation, and quality pedagogy (Hata, 2003; Lavin & Claro 2005; Murray, 2005). Aside from the technological advances associated with CALL in its present form, we are also seeing a pedagogical shift towards a more socio-cognitive view of how CALL can and should take place (Davey, 2005). Though the technological and pedagogical advances have not necessarily developed simultaneously, it is important to note that they have also not developed in isolation from one-another. In fact, it is not difficult to see that current interactional and social constructivist notions of L2 learning and acquisition may fit nicely with what the Internet can presently offer language learners (El-Hindi, 1999). While the possibilities offered by the Internet to both the teacher and student are only beginning to be explored, it could be argued that the Internet, combined with other multimedia and peer-to-peer technology, has already become a fundamental tool for many in both groups.

WEB 2.0

The concept of Web 2.0, which has become a popular buzzword in the fields of CALL and educational technology since 2004 (O'Reilly, 2005), does not in and of itself represent any significant singular technological innovation. Rather, it has come to be understood in a broad sense to refer to a new series of applications all designed to take advantage of the Internet's potential to allow individuals to participate in new ways in the online experience. According to a recent report

by the OECD, the Internet is based on a principle of participation in which collaboration and customization are important factors (OECD, 2007). As an entire new generation is now growing up without questioning the ubiquity of the Internet, individuals are making use of new technologies to share and communicate with one another through user-created content.

The explosive growth in the popularity of blogging is one clear example of the way in which individuals and end-users have sought to take control of the creative process online and generate content of their own. Blogging has, in a very short period of time, become a truly global phenomenon. As noted earlier, recent statistics show that Japanese has now surpassed English in terms of overall blog entries, with other languages like Italian and Farsi showing dramatic increases (Sifry, 2007). Wikis are another area where the users themselves are creating and constantly updating content. Wikipedia, the original online wiki/encyclopedia is among the most visited sites in the world (Comscore, 2007) and its content is almost wholly user-generated and edited. As users across the world are becoming more comfortable and confident with these technologies, either in first or second languages, it is becoming increasingly possible to consider the educational opportunities associated with them.

SOCIAL NETWORKING

As CMC has gone global, so too has the social networking phenomenon. On sites like MySpace, Facebook and Mixi, millions of users are currently online, sharing photos and information, chatting, blogging, editing friend lists and generally creating and recreating their online identities both through the content they generate and the connections they make with others.

In Japan, the popularity of social networking has tended to center around Mixi. The site, which launched in 2004, has a registered user base of

over 10 million people, virtually all of whom are Japanese as there exists no international version. In a review of Mixi, Serkan (2007) wrote that the primary appeal of Mixi seems to be in the simplicity of the interface. Features of the site, including blogging, photo and music sharing, and the establishment and maintenance of friend lists, are essentially equivalent to those of other SNSs like MySpace. Kageyama, however, noted that Mixi has been highly successful in Japan partly because it has a less “me-oriented” focus (Kageyama, 2007) than other SNSs like MySpace. Mixi has successfully found a way to capitalize on Japan’s strong emphasis on group relationships, making friend networks the primary focus of the service, whereas MySpace, particularly in the US version, has focused more on making the individual creator of the site the center of attention. This subtle difference in the two sites may go far in determining the future success of the Japanese version of MySpace.


As mentioned, the functionality of both MySpace and Mixi are similar, although MySpace provides a particularly effective blog management tool, allowing users to easily subscribe to the blogs of friends and see instant updates to friends’ blogs. Figure 1 shows the blog management interface for MySpace.

Whether it is MySpace, Mixi, or one of the other SNSs being used, they all contain certain similarities. Two key features of SNSs are the ways in which they facilitate user interaction, including, chat, blogging, messaging, file-sharing and other interactive services, and the ways that they allow users to build peer groups based on the recommendations of others.

It is not difficult to realize why some educators have begun to consider the possibilities and educational implications for wikis, blogs, SNSs and other applications often associated with Web 2.0. From the educational perspective, and particularly with regards to second language learning and acquisition, there are a number of ways in which to frame the potential benefits of these types of technologies:

Figure 1. MySpace blog management screen

Andy



	Today	Week	Total
Posts	0	0	16
Comments	0	0	20
Views	2	7	1700
Kudos	0	0	5

My Controls

Post New Blog

View Blog

Customize Blog

Blog Safe Mode

Latest Updates			[help]	
Name	Subject	Time Updated		
NEW! » KUMI	long time no see!!!!	13 Aug 07	4:43A	
NEW! » KUMI	price less	18 Jul 07	10:23P	
NEW! » Erika	COMING SOON	05 Jul 07	8:19P	
» nana	MAC's strategy!!!!!!	04 Jul 07	10:22P	
» Yuki	mega!!	04 Jul 07	10:13P	
» Mai	Acceseion	04 Jul 07	10:05P	
» satoshi	I will come back my home.	04 Jul 07	9:13P	
» asami	hot!!!!!!	04 Jul 07	8:19P	
» tomoki	My TOEIC score	04 Jul 07	7:56P	
» Erika	Minoji	04 Jul 07	9:32A	
» Erika	Bitthday Party	03 Jul 07	9:24A	
» KUZE	today	03 Jul 07	9:17A	
» Yuki	color	02 Jul 07	10:33P	
» Erika	Busy Days	02 Jul 07	9:16A	
» Yuuki	FSP	02 Jul 07	6:53A	
» Shu	Part time job	01 Jul 07	10:50P	
» TADASHI	Drink a lot !!	01 Jul 07	7:45P	
» satoshi	I was sad to see my TOEIC score	01 Jul 07	7:41P	
» yuichi	Happy	01 Jul 07	7:36P	
» Erika	My Weekend	01 Jul 07	11:21A	

1. **Learner motivation:** As O’Hanlon (2007) suggests, the high usage patterns of social networking sites by American teenagers indicates their popular appeal. Much research has been done to suggest that learner motivation is a key feature in the process of language acquisition (Gardner & Lambert, 1972) and being able to capitalize on a phenomenon that has already captured the attention of millions of people all across the world has great potential. Though educators must guard against the adoption of technology purely for technology’s sake, a further look at the potential possibilities offered by Web 2.0 applications may demonstrate real value for second language learners.
2. **Collaborative learning environments:** Wikis in particular offer a uniquely collaborative online environment where individuals or groups of users can interact with and respond to information generated by others.

Even face-to-face collaboration between and amongst language learners, which until just recently was restricted solely to the classroom environment, can now take place in real time with learners spread all across the globe via synchronous video chat.

3. **Social constructivist approaches to education:** Some research recently has looked to constructivism and in particular Vygotskian social constructivism as a way to interpret and assess the potential benefits of the type of peer editing and collaboration that can take place on wikis and SNSs (Lavin & Claro, 2005). Research along these lines seems promising, as there would appear to be a natural link between Vygotskian social constructivism and collaborative learning online. Vygotsky believed that knowledge was a social construct that individuals uniquely create as they interact with their environment and with others (Pasfield-

Neofitou, 2007; Vygotsky, 1978). If we see the Internet itself as our environment, then clearly much of our knowledge of the world can be understood to be mediated through our interaction with that environment and the individuals we encounter within it.

4. **Critical Language Learning (CLL):** CLL is a broad term that can be used to bring together a variety of concepts including, but not limited to, student empowerment, identity formation, learner autonomy and critical literacy. Although some research has begun to look at how CLL can be seen as relating to the current phase of CALL and the various Web 2.0 applications discussed (Godwin-Jones, 2003; Hawisher, 2000; Pasfield-Neofitou, 2007), little consideration has been given to the language learners' use of SNSs from a CLL perspective. Thus, as mentioned earlier, this chapter will attempt to fill this gap by looking in detail at certain elements of CLL and how those elements can be complemented by student use of SNSs. This chapter will also consider in some detail the results of initial research which looked at two groups of Japanese EFL learners and their first foray into the use of SNSs for the purpose of language learning and acquisition. A brief description of the student groups and the tasks they took part in is included below.

PARTICIPANTS

27 students, 14 female and 13 male, from two separate courses spent one academic semester (14 weeks) experimenting with the use of the MySpace SNS both inside and outside of the classroom. These were second and third year Japanese students at a private university in Japan. The groups were of mixed English proficiency, ranging from high beginner (TOEIC score 300) to upper intermediate (TOEIC score 670) and

their experience with SNSs, either in English or Japanese was very limited. Just one of the 27 students reported maintaining a regular page prior to beginning the project and 16 students in total reported being aware of SNSs in general, either in English or Japanese.

Aside from overall English proficiency, computer literacy skills were also varied among the two groups. Based on self-assessment data by the students collected prior to beginning the project, only 6 reported being either "good" or "very good" with their computers, whereas 7 students reported their computer skills to be "very poor." This information was supported by continuous observation of the students throughout the process, indicating that as many as one-third of the students struggled significantly with data entry procedures, particularly regarding the filling in of forms online (Appendix A).

RESEARCH OBJECTIVES AND QUESTIONS

As there has been relatively little research to date regarding the use of SNSs in the second language classroom, the objectives of this case study were primarily exploratory. Firstly, it was hoped that this study would show whether or not Japanese university students of English were interested in and motivated by the prospect of using MySpace as a platform for the learning and acquisition of English. It was also hoped that the issues of learner autonomy, identity formation, student empowerment and critical literacy could be viewed discreetly based on data and feedback from the project. Finally, in the interest of laying the groundwork for further research, this project hoped to identify both potential difficulties and opportunities in the use of SNSs in second language contexts. The specific research questions identified for this case study were as follows:

1. Can the MySpace SNS function effectively as a platform for second language learning and acquisition by Japanese university students?
2. How would their use of MySpace throughout the semester impact and relate to the issues of learner autonomy, identity formation, student empowerment and critical literacy in the two groups?
3. What factors seem to impact the students' interest, or lack thereof, in the process of using MySpace for second language learning?

METHOD

The two groups of students were selected based on availability. The students were pre-enrolled, by the university, and the MySpace project was a clearly defined component of their syllabus for the duration of the semester. Prior to beginning the project, data was collected in the form of a questionnaire to assess students' awareness of and interest in SNSs, their level of motivation to use MySpace as a tool for learning English, and their general perception of their own computer proficiency (Appendix A).

During the first two weeks of the project, students were directed, through formal classroom instruction, how to sign up for and log into MySpace. Basic explanations were also provided regarding the nature of SNSs in general and the various SNSs available, both in English and Japanese, and discussions were encouraged relating to how the use of SNSs could potentially improve the English skills of Japanese students. Weeks 3-6 were spent on basic page management skills, including how to customize pages and backgrounds, enter basic personal information in the profile section, and manage and maintain friend lists. Once all students had well established pages on MySpace, the remaining 6-7 weeks of the semester were given over to two particular

tasks. First, the blogging feature of MySpace was introduced, and students were taught how to create a blog, update their blog, and comment on the blogs of other students. Second, using Audacity software, students learned how to record their own audio and upload audio files to their MySpace pages. The two groups of students, who had not previously had any interaction with one another, were made to interact through the use of the asynchronous email and blog commenting features of MySpace.

Regular blogging was a course requirement, and the content of the blog entries was both teacher directed and student generated. Students were also required to write regular comments on the blogs of others. The uploading of student created audio files was also a requirement, though the students were allowed to choose the content and topic of the files.

To conclude the project, a final questionnaire was completed by the students during the final week and informal interviews were conducted with the majority of the participants (Appendix B).

In general, initial student interest in the project was high, with 25 of 27 students reporting that they were either "interested" or "very interested" in the prospect of using MySpace for second language learning (Appendix A). During final interviews conducted at the end of the project, student feedback was slightly more mixed though overall responses were still highly positive. 19 of the 27 students reported that they "enjoyed" or "really enjoyed" using the SNS while 5 students reported that they had "not enjoyed" the experience as a whole (Appendix B).

The remainder of this chapter will be given over to a specific look at each of the four components of CLL mentioned earlier, learner autonomy, identity formation, empowerment, and critical and e-literacy, and a discussion of how each of these issues were touched on during the 14 week MySpace project.

CRITICAL LANGUAGE LEARNING

Norton (2004) explains that, “advocates of critical approaches to second language teaching are interested in the relationships between language learning and social change. From this perspective, language is not simply a means of expression or communication; rather it is a practice that constructs and is constructed by, the ways language learners understand themselves, their social surroundings, their histories, and their possibilities for the future” (p. 1). As the above quote makes clear, our use of language impacts more than merely our communicative ability. How we choose to use a language, and the degree of proficiency that we have with it, shapes who we are and who we are able to become in that language. From this perspective, CLL is concerned with learner empowerment and the degree to which limited proficiency users of a language will be able to shape, control and define their futures. CLL also considers a learner’s identity in a second language and how that identity is able to develop, grow and change. Autonomy, and the degree of autonomy available to limited proficiency users of a language is also an important concern. Ultimately, CLL can be seen as a lens through which to examine issues of power, control, and autonomy in language learning.

There would seem to exist a somewhat natural link between the CLL perspective and some of the types of Web 2.0 technologies mentioned earlier in this chapter. A blog, for example, can give a second language student a clear form of autonomy from the traditional classroom writing environment, freeing them to choose topics of their own interest and write in a less structured and controlled environment. This could be said of journal/diary type writing also, something that second language writing teachers have advocated for many years, however, blogs have the added advantage of being relatively public and open to the suggestions and comments of peers. And what about the use of student generated content

in wikis? Clearly empowering students to create content of their own promotes autonomy by de-emphasizing the role of the teacher in the language acquisition process. So it would seem that a connection is not hard to make between CLL and Web 2.0 concepts like user-generated content and the participatory and interactive nature of some of these new applications.

IDENTITY FORMATION

Web 2.0 technologies are changing the way individuals create themselves online and the way they are perceived by others. SNSs allow users a platform on which they can create, shape, and re-create their own identities. Through photos, blog entries, videos, musical selections, and friend lists, users are able to share their personalities and interests in an almost immediate fashion. Cummings (2007) sees this new type of identity formation as a dramatic change in people’s willingness to share personal information; he writes, “we are starting to construct our identities, both anonymous and real, within the realms of Web 2.0 environments ... at no other time in democracy have we chosen to expose ourselves to people we have never met, and will never meet” (p. 2). Some find this willingness to share unsettling, others may consider it a revolution.

For second language users, the issues of identity formation and the presentation of self online can be complex but sometimes liberating. Warschauer (2000) found, in a project looking at the use of the Hawaiian language, that online interaction freed students up to not only make more use of the Hawaiian language, but also to explore and further develop their Hawaiian identities. In a review of the Warschauer study and several others, Murray (2005) points out that second language users involved with CMC often develop both global and local identities to deal with the differing social and linguistic environments with which they are confronted.

A fair amount of research has been done in the field of SLA regarding the relationship between identity formation and language learning. In particular, researchers have considered how language use and proficiency in second language can contribute to, enhance, or hinder the development of a sense of self and unique identity in the new language (Belz, 2003; Hawisher, 2000; Norton, 2000). Belz notes also that some recent research has begun to consider the role of language play in second language learning, and she reports a study in which students studying German were “able to occupy third spaces from which they could both play with and reflect on multiple linguistic identities” (2002, p. 28).

It is not difficult to view the use of SNSs as a form of language play and indeed the enormous popularity of sites like Facebook, MySpace and Mixi demonstrates clearly that many millions of people around the world are already involved. Pasfield-Neofitou (2007) argued that, “online identity is largely constructed through one’s textual behaviours, so it is important for learners to manipulate the language effectively” (p. 148), however, it would seem that, within the multi-modal, peer-to-peer environments of current SNSs, this focus on text may be becoming less and less necessary. Users determine how they are perceived by others not merely through text and chat alone, but through their photos, music, videos, and shared friend lists.

For Japanese students in particular, it has been noted that second language identity formation may facilitate the development of a sense of ownership of the target language, something that has been a struggle for English language education in Japan. For example, Ha (2005) pointed out that English education in Japan has, up until now, had less to do with mastery of the language and the understanding of English as a tool for global communication than with the Japanization of English.

One significant aspect of the MySpace project was the possibility to witness and visually record the students’ personalities taking shape on their

pages. Because, as noted earlier, MySpace pages are almost infinitely customizable, all manner of characteristics can be displayed. Aside from color schemes, backgrounds and photos that quickly overwhelmed the pages, students also discovered the use of “theme music” that would begin to play as soon their pages were opened. Blog topics formed another component of the sense of self that came through in the students’ pages, with topics demonstrating not just student interests, but also their day-to-day routines, political tendencies, and all manner of other things. In the post-project questionnaire students were asked to consider what aspect of the project they most enjoyed and it would seem clear that the ability to decorate, modify, or otherwise customize pages was one of the primary elements that students enjoyed about the project.

Other student feedback also seemed to indicate that the multi-modal nature of SNSs was significant in relationship to the mixed ability levels of the students. Those students with a greater proficiency in English were more able to manipulate the primarily text-based aspects of the project, including the blog entries and personal profiles, whereas students with less proficiency were not left out as they were able to express themselves through the photos, audio and video files, and backgrounds that they chose. In a follow-up blog posting, one student wrote that she “*liked to see the other peoples’ pages. It helped me know them more.*” The use of MySpace seemed to allow mixed ability groups to gain insights into the characters and personalities of other students in a way that would not otherwise happen in a traditional classroom environment.

COLLABORATION AND STUDENT EMPOWERMENT

SNSs tend to be, by their very nature, collaborative and collaboration between and amongst language learners is of central significance in

Table 1. What part of the MySpace project did you enjoy the most?

Response	Number of students	Percentage
A. Writing my own blog	6	22%
D. Commenting on other blogs	3	11%
B. Putting pictures on my page	8	29%
E. Putting music on my page	5	19%
C. Recording audio	0	0%
F. Looking at other MySpace pages	5	19%

both constructivist and critical approaches to language acquisition and learning. When assessing the value of wikis from a social constructivist viewpoint, Lavin and Claro (2005) note that, “whereas in a discussion forum, it is easy to talk about something but not manipulate it directly, a wiki is suited to actually construct something (e.g. a knowledge base) collaboratively” (p. 10). Here again we see a distinction between earlier forms of CMC, that were primarily text based, and more current forms, like wikis and SNSs, that allow for a multiple modes of expression. Lavin and Claro were speaking of wikis and their usefulness as a platform for students to collaborate to create something. SNSs on the other hand focus more clearly on the identities of the users themselves and on collaboration between them as opposed to the collaborative creation of some kind of final product, as in the case of wikis.

Allowing for and encouraging student collaboration helps to empower students in two primary ways. First it de-emphasizes the role of the teacher and helps make clear to the students that learning can take place in a variety of contexts (Lam, 2004). Second, collaborative activities build a sense of community and purpose for students. SNSs for example allow users to easily identify and share common interests with other users. Groups of second language learners who are united through common difficulties with the language are empowered when they collaborate with others and realize that they are not alone in their frustrations. Regarding the participatory and collaborative nature of blogging, Godwin-Jones

(2003) points out that, “blog entries are normally followed by a comment button, allowing readers to write a reaction, which is then logged and linked, along with all other comments, into the original text. While most blogs are created and managed by individuals, group blogs are also possible. Blogs are easily linked and cross-linked, to create larger on-line communities” (p. 13). Group blogging, or topically themed blogging targeted towards groups (e.g. communities of students) has great potential for second language learners and SNSs offer a functional platform for this type of work as all major SNSs sites allow for personal blogging, linking and sharing of blogs, and commenting on the blogs of others.

During the MySpace project the clearest example of the benefits of collaboration came through in the level of peer support that developed both face-to-face in the classroom itself and on the MySpace pages. Differing levels of computer literacy were a major factor here, meaning that certain tasks were relatively easy for some students and much more difficult for others. Peer support was the obvious solution to this issue, and it developed spontaneously in both class groups. This type of collaboration was significant in that it allowed students themselves to temporarily take on the role of educator, thus de-emphasizing the role of the formal classroom instructor and at the same time encouraging and empowering the students. It is also significant that the face-to-face interaction and learner support that took place in the classroom seemed to naturally occur in the target language of English. This form of

Table 2. What part of students' English improved the most during the project?

Response	Number of students	Percentage
Reading	7	26%
Writing	10	37%
Speaking	5	19%
Listening	3	8%
None	2	7%

peer-to-peer support may partially explain the fact that 5 of the 27 students surveyed felt that their spoken English improved more significantly during the project than either their reading, writing or listening.

The shared sense of community was strong in both classes, the idea that they were involved in a project together, and that they were faced with similar difficulties along the way helped bind them together. In an interesting twist, difficulties that students faced with the project, for example how to properly upload their audio files, often led to social networking opportunities, with students sometimes using their MySpace pages to interact with one another to work through difficulties.

Relating to collaboration in general, one underdeveloped component of the project was the lack of involvement of a fixed group or groups of native speakers of English with whom the students could interact. The primary purpose of the project was simply the exposure of students to the concept of social networking and an introduction to page management, blogging, and the uploading and importing of content to pages. Although throughout the course of the semester many students did interact with native speakers of English, this was a by-product of the social networking project, not an expressed goal. Looking through student comments and feedback however, it is clear that one of the components of the project that generated significant interest was the potential that SNSs offered to bring them into contact with native speakers of English. A summary of several students' explicit comments

regarding this aspect of the project is included in Table 3.

From data like this, it was possible to define what a potential next step in a project of this nature could be. Namely, the introduction of a system whereby students are encouraged in some manner to interact with native speakers of English through the tools available on MySpace. The simplest way to do this would be to partner with another group of language learners (in this case native speakers of English learning Japanese) and set up a series of collaborative and interactive assignments. The drawback to this approach however would be the reduction in learner autonomy that would result from instructors directing and controlling the social networking process in this way.

LEARNER AUTONOMY

Learner autonomy, though linked in various ways to learner empowerment, is a slightly different issue. Raising learner awareness of their own role in the complex processes of language learning and acquisition is of central importance in the development of learner autonomy. Autonomy is also an integral part of what Web 2.0 technologies are coming to represent. That is, autonomy from the top-down, media and corporate driven content that dominates so much of 21st century culture. Web 2.0 is partly about allowing individuals the freedom to create and express themselves online, to author their own content, and to share that content with others in efficient and meaningful ways.

Table 3. Comments regarding the use of MySpace for international communication

1. *It is my first time to use blog. It can communicate with people of all over the world.*
2. *We can make a lot of friends all over the world and our life will be much fun so I liked using My Space and I want use it from now on.*
3. *And using my space communicate with other countries people, and people who are learning English tell me how to write good English. Native English help me when I contact with foreign friends. Especially sending Email...*
4. *I liked using Myspace this semester because it can contact with many countries people, so I can enjoy it!! I can understand everyone's hobbies, and favorite music, so I thought we could know more each other.*

For language learners, authoring and sharing content of their own can be an exercise in the building of autonomy and independence. It can also be motivating. Hata (2003) points out that greater learner autonomy leads to both increased motivation and greater achievement. Davey (2005) also notes that “these tools [blogs] and facilities that allow the learners to become creators rather than passive recipients of material, again demonstrate the task-based nature of the Internet, which can easily be adapted to provide student-centered and communicative style tasks” (p. 212). The movement from recipient to creator can then be seen as an essential step in the development of learner autonomy and SNSs allow for this movement in a number of ways. The degree to which pages can be customized by users allows autonomy with regards to the page creation. Individuals are also free to create content designed specifically for their page (user profiles for example) and to import content from other sources. The degree of autonomy is so great in fact that the end result is most often a wholly unique and original expression of self online. When making use of SNSs for second language learners, the role of the classroom instructor may also be redefined and importantly, the learners’ perception of the teacher’s role may be reformulated also. Learner autonomy is related to the degree of independence that learners perceive that they have from the traditional

classroom centered and teacher centered models. With SNSs, where learners are connected to one another through shared friend lists, the teacher may become simply another face on the list. This promotes a natural redistribution of the power relationship and puts the student and their page at the center of the learning equation.

Autonomy in computer mediated learning contexts is not without some difficulties however, and the primary concern is the degree of teacher support that is required to help students through the process. Murray (2005) points out that teachers often need to direct students through the websites and applications that they use in order to mediate level appropriacy and this type of teacher mediation contradicts the goal of learner autonomy – in conclusion he argues that teaching using technology needs to be carefully scaffolded. That is, not initially autonomous but building towards autonomy. In the case of SNSs for example, teachers may need to assist students in the process of setting up the pages and learning how to use the various features. This does not necessarily detract from the ultimate goal of learner autonomy however, because this type of teaching enables students to move towards a larger goal of beginning to author content of their own.

During the MySpace project, Murray’s (2005) criticism of the potential for learner autonomy

Table 4. Comments regarding blogging and the use of audio files

<p>1. <i>I liked using My Space because I could practice writing English. I made own my blog for the first time so I was very excited. I also could read English because most of people used in English so I was so happy to read them.</i></p> <p>2. <i>I like using MySpace this semester. Because I could know how to write blogs.</i></p> <p>3. <i>I liked using MySpace this semester because ... First it was fun to write to blog, make sounds file and put it on my website.</i></p> <p>4. <i>... it was fun to write about the topics and add comment to other persons.</i></p> <p>5. <i>And then, we can debate some topic by my space that we can communicate with another tutorial people, another person and my Tutorial member. It means that people checked my topic and me idea. It leads to growth of the knowledge by changing an opinion.</i></p>
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in a computer mediated learning environment proved accurate. Since students were, at each step in the process, essentially dealing with issues that were entirely foreign to them, a high level of teacher involvement and direction was to be expected. This, combined with the language difficulties inherent in such an undertaking in a second language, meant that the instructor's level of control over the project had to be relatively high, particularly in the beginning. Students were not completely free for example, to set up pages as they liked because their ability to do so was mediated by the need for instruction in how to go about this.

This is not to say that autonomy was a failure in the project. In fact, particularly in regards to the authoring and sharing of personal content, many students seemed to enjoy the semi-autonomous nature of the work. Table 4 provides a brief review of some students' comments on blogging, and the uploading and sharing of audio files.

Some of these reflective comments demonstrate a strong learner awareness of the processes of language learning and acquisition. Evidence of this type of thinking is significant in that it is indicative of both a level of individual autonomy in the learner, and a type of critical awareness of their own role in the learning process.

CRITICAL READING, LITERACY, AND CRITICAL E-LITERACY

Many terms have been used to attempt to describe the new skill set required to make efficient use of all of the materials, tools, and resources available online. Digital literacy, web literacy, silicon literacy, information literacy – these are just a few of the terms in common use (Murray, 2005). One of the simplest and most effective of these may be electronic literacy, but even here, definitions are difficult. Godwin-Jones (2006) sees complexity in defining the term due to the increasingly rapid pace of technological change in society. He writes, “electronic literacy today is a moving target. How and why we read and write online are evolving at the fast pace of Internet time” (p. 8). There is also the question of critical literacy to consider, one's ability to sort through and effectively analyze information is mediated not only by decoding abilities within the language, but also by the ability to critically reflect on the content: “Web browsing and reading must be supplemented by abilities in sorting, navigation, and critical thinking. Integration of other media into texts complicates further the notion of literacy” (Godwin-Jones, p. 8).

A good deal of research over the previous 15 years has looked at how both computer mediated language instruction and general Internet use can enhance and develop critical literacy skills (Warschauer, 1997; Davey, 2005). Critical literacy must be carefully considered in reference to Web 2.0 technologies in general, and the use of SNSs in particular because literacy itself has an inherent socio-cultural component (Murray, 2005). Belz, in a study of telcollaboration between American students of German and German students of English noted in her recommendations that the study could have been enhanced had the students participated in “guided cultural sensitization on social patterns of communication” (Belz, 2002, p. 76). She went on to suggest that “more time could have been spent on critical comparisons of the two partner institutions as represented by their official websites. Students [could have been] guided in the development of their critical cultural awareness of both self and other” (p. 76). Her comments suggest that relatively less difficulty was encountered with literacy as it pertains to the decoding of text itself, whereas greater difficulties arose relating to critical awareness and the social nature of literacy.

As mentioned earlier, several of the students involved in the MySpace project demonstrated a level of critical reflection in their interviews and comments at the end of the project, mostly relating to a meta-awareness of the type of positive impact that SNSs could potentially have on their own language learning. Comments, for example, like, “*I liked using my space in this semester, because I think my space helped my writing skills and communication skills, or, it leads to growth of the knowledge by changing an opinion,*” show that some participants were able to critically reflect on the learning opportunities that the use of MySpace presented to them.

Another factor to look at is that of electronic literacy in general and the impact it had on the project. With specific respect to the issues faced in this project, it may be helpful to look at both

computer literacy (the ability to use the computer efficiently, cutting and pasting of information for example, or saving, storing and managing data) and online literacy (related to the ability to source information online and to sort relevant and irrelevant material).

Within both groups it quickly became evident that computer literacy skills varied widely between students. This was less of a problem that might have been imagined however, and, as noted earlier, it led to quality peer-to-peer teaching opportunities for more computer savvy students. It was an issue that was not lost on students however, and several student comments were related to it.

1. *I liked using my space in this semester because when I using my computer I think the class is faster than other class. I think using computer in class is enjoyable for students. So I think using my space in this semester is good thing for students.*
2. *We used PC that we can understand that how to use this site and PC, and we can know some good PC system and site for me.*

The second comment in particular speaks to the issue of the development of computer literacy skills and how this can benefit students.

Online literacy was another issue and here the difficulties were often language specific. As Godwin-Jones (2005) noted, web-surfing skills are critical in nature in that they require individuals to sort data based on relevance and to quickly skim through and analyze that data. Most participants in this project took a great deal of time when they were asked to source information (through Google search for example) and they were very often unable to discern relevant and irrelevant content. This fact led to an increased need for teacher-directed activities and, therefore, a decrease in learner autonomy. Though it is true that intermediate level users of a language can be taught certain techniques to enhance their

efficiency online, the overwhelming amount of linguistic input makes this a problematic issue.

CONCLUSION AND FUTURE RESEARCH

Little research has as yet been done relating the use of SNSs to second language learning and acquisition, particularly in the context of the Japanese classroom (Dias, 2000). Hopefully this preliminary study has been able to lay the groundwork for future research in this area. Overall, MySpace appears to be a functional tool for use by English language learners in Japan. Japanese users of SNSs seem to prefer Mixi, either for ease of use issues or socio-cultural appropriateness, however, as there exists no English language version of this site, MySpace, with its multilingual interface and global appeal, is a viable alternative. Regarding the aspects of CLL mentioned in this chapter, particularly as they relate to Japanese learners and their use of SNSs, there would seem to be many interesting research opportunities available. It is clear for example, that a strong element of learner collaboration and support developed during this project. The work was empowering for the students in that they were freed up somewhat to express themselves in new and different ways. Further research in these areas could prove meaningful.

As this was a primarily exploratory study, it was limited in a number of ways. Firstly, the study made no attempt to measure student progress or change relating to their own sense of autonomy, empowerment or identity. Future research could look specifically, for example, at how students perceived their own degree of autonomy in the language learning process before and after a project of this type. Secondly, this study simply explored students' use of the MySpace SNS. It did not provide a comparison or control group, something that could help determine the effectiveness of the project. Also, this work with MySpace only very briefly touched on the possibility of the

use of mobile phones for blogging and posting information to MySpace pages. Young people in Japan are often more comfortable interacting with a mobile phone than a personal computer, indeed entire novels are often composed solely on mobile phones in Japan. An analysis of the possibility of mobile phone use for MySpace would also be interesting and meaningful in the Japanese context. Lastly, as mentioned earlier, many of the participants in this project were excited by the prospect of interacting with native speakers of English. The addition of a fixed group of students to a project of this nature, possibly native speakers of English studying Japanese, would greatly enhance student interest and the potential for more meaningful language interaction.

Finally before concluding this chapter, I would like to look to the future, or more accurately, to the present, to consider briefly some current trends in CALL research, their potential relationship with CLL, and possible research opportunities they may present. One interesting area of development is coming from online gaming. Some recent research has begun to look at online gaming, and in particular the use of MMORPGs (Massively Multiplayer Online Role-Playing Games) in relationship to second language acquisition. This is interesting in how well it fits with the current focus on activities that are learner-centered, communicative, and collaborative. Bryant (2006) explains that MMORPGs are, "online role-playing games where players move, act and communicate with other players in an Internet-based virtual three-dimensional environment ... players group together online to achieve certain goals and thereby progress through the game. Communication plays a central role in the game. Audio and video are embedded throughout the environment, and it is also necessary to communicate with other players in the game through audio messengers or text chat programs" (p. 1). Clearly this type of learning environment could be potentially motivating to language students (Toyoda & Harrison, 2002). It also demonstrates numerous similarities to

the use of SNSs for language learning and has a strong connection to CLL. In particular it would seem that issues of learner autonomy and identity formation in the MMORPG context would be interesting to explore.

Another relatively new concept is the development of SNSs specifically for language learners. According to a recent *Japan Times* article, this is exactly what is being developed by Yang Yang Xi at Kyoto University. This project, currently called Lang-8, is designed to facilitate interaction between native speakers and language learners in a variety of languages. The article reports that the site, “allows people to write daily diaries on whatever topics they choose and in any language they want. These diaries are then edited by their friends on Lang-8, who are native in the particular language in which the diary is written” (Manlove, 2007, para 3).

This project is particularly interesting in that it addresses what was one of the key areas of student interest regarding the use of SNSs for language learning; the ability to interact with native speakers of the target language. It will be interesting to see how this project progresses and if it proves a success with language learners.

Finally a brief mention of the relatively recent phenomenon of “tagging” or “social tagging” online. In his 2006 discussion of emerging technologies, Godwin-Jones talks about the growth of tagging online and its potential to help users sift through the enormous amount of information available to them online. Tagging, or shared tagging, is essentially a bookmarking process that allows individuals to personally assign key words or phrases to information they find on the web. This allows for easy retrieval later on, as they are stored much as bookmarks are stored in your browser, and they are social in that tags that are ascribed to webpages or pieces of information can be accessed and referenced by others when made public. As Godwin-Jones points out, it is not possible to tag a website without the ability to critically analyze its contents.

This tagging concept is potentially of interest to second language learners online because, as many students involved in this project discovered, accessing and assessing information found online can be a great challenge. This idea also relates specifically to at least two of the aspects of CLL mentioned earlier. It is empowering in its reliance on social collaboration and peer support, and the act of creating tags requires critical and reflective reading skills. Clearly, interesting research is yet to be done in this area of social tagging by and for second language learners.

In conclusion, it would seem that viewing the use of SNSs for second language learners in Japan through the lens of CLL offers some interesting insights into various aspects of computer mediated language learning. Critical literacy, learner autonomy, student empowerment and identity formation are important components of the language learning and acquisition process and an analysis of the use of SNSs for language learning would only be partially complete without considering the relevance of these issues.

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KEY TERMS

Autonomy: For second language learners, autonomy has to do with the degree of independence that learners have from traditional teacher fronted classroom approaches and their ability to advance and progress as independent learners.

Critical Language Learning (CLL): CLL is a broad term for an approach that focuses on the social implications of second language learning. This approach is characterized by an interest in issues like student empowerment, identity formation, critical literacy and learner autonomy.

E-Literacy: E-literacy has been defined in a variety of ways but it generally relates to the skill set required to make efficient use of all of the materials, tools, and resources that are available online.

Empowerment: Within the context of critical language learning, student empowerment is concerned with providing students with access to the tools that they need to become independent and autonomous learners.

Identity Formation: In the second language learning context, identity formation refers to the development of one's unique identity in the target language. Identity formation can also relate to the

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development of on-line identity through social networking sites like MySpace.

MySpace: MySpace is one of many social networking sites currently in popular use. In June of 2007, MySpace was the most visited social networking site in the world with over 114 million users.

TOEIC: The Test of English for International Communication (TOEIC) is a highly regarded English language testing system that is especially prominent in Asia and taken by almost 5 million people throughout the world each year. The test consists of a listening and reading component, to which a speaking element has recently been added.

APPENDIX A

Questionnaire A

This semester we are going to use the MySpace social networking site to improve English skills. Please answer these questions before we begin. Circle the best answer for each question.

1. Are you familiar with social networking sites like MySpace, Mixi, or Facebook?

Yes No

2. Have you ever used a social networking site (MySpace, Mixi, Facebook, etc.) in English?

Yes No

3. Have you ever used a social networking site (MySpace, Mixi, Facebook) in Japanese?

Yes No

4. Do you have your own profile on a social networking site?

Yes No

5. Do you think using social networking sites in English could help you improve your English?

Yes No

6. What do you think about your skill in using a computer?

Very good Good Not so good Poor Very poor

7. What do you think about your typing on a computer in English?

Very fast Fast OK Slow Very slow

8. How interested are you in using social networking sites to help you improve your English?

Very interested Interested A little interested Not interested

APPENDIX B

Questionnaire B

The semester of using MySpace has finished and I would like to know how you felt about the project. Please answer the following questions honestly. Circle the best answer for each question.

1. How did you feel about using MySpace this semester?

Really enjoyed Enjoyed OK Did not enjoy

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2. Do you think you will continue to use MySpace in English in the future?

Definitely Maybe Probably not No

3. Do you think your English improved through using MySpace?

Yes No Not sure

4. What part of your English improved the most?

Reading Writing Speaking Listening None

5. Would you recommend MySpace to your friends as a way to learn English?

Yes No Not sure

6. What part of the project did you enjoy the most?

- A. Writing my own blog B. Commenting on other blogs
- C. Putting pictures on my page D. Putting music on my page
- E. Recording audio F. Looking at other MySpace pages

7. What part of the project did you enjoy the least?

- A. Writing my own blog B. Commenting on other blogs
- C. Putting pictures on my page C. Putting music on my page
- E. Recording audio F. Looking at other MySpace pages

APPENDIX C

Comments taken from students' MySpace blogs in response to the question, "Did you like or not like using MySpace this semester? Please explain."

1. I liked using My Space because I could practice writing English. I made own my blog for the first time so I was very excited. I also could read English because most of people used in English so I was so happy to read them. I think My Space was a good place to practice writing and reading English so the students should use My Space. People can get opportunity very easily and we need only PC. If you want to practice English, you should register now. We can make a lot of friends all over the world and our life will be much fun so I liked using My Space and I want use it from now on.

2. I liked using my space in this semester because when I using my computer I think the class is faster than other class. I think using computer in class is enjoyable for students. So I think using my space in this semester is good thing for students.

3. I'm sorry. I don't like using my space because I don't like writing blogs. I think writing blog is not fun. I want to spend time to debate. Debate is very difficult, but it's enjoyable and helpful. And also, I need time to write graduation essay in class. other tutorial class students write essay in class.
4. I like using MySpace this semester because it made me enjoyed. It is my first time to use blog. It can communicate with people of all over the world. I want to use blog from now.
5. I liked using Myspace this semester because it can contact with many countries people, so I can enjoy it!! I can understand everyone's hobbies, and favorite music, so I thought we could know more each other. Another point is we can get ability of writing skills. For example, "Tobacco is illegal or legal" is title, and we should think and write own ideas quickly. Therefore it was very important for me to think about many things quickly. To use Myspace is very useful.
6. I didn't like using Myspace this semester because it was hard to use it. I couldn't understand how to use it. Therefore, this way takes extra time to me. In addition, we cannot do this without PC, so we had to bring PC every week. PC is very heavy so it was very hard. Sssss
7. I like using MySpace this semester. Because I could know how to write blogs. And this is little interesting for me. But I fell regret that I can't use all tools.
8. I think that I liked using my space in this semester, because I think my space helped my writing skills and communication skills. And using my space communicate with other countries people, and people who are learning English tell me how to write good English. Native English help me when I contact with foreign friends. Especially sending Email or letter. In addition, using my space give me chance to write English diary, so I'd like to keep writhing English using my space.
9. I like using My Space this semester because I am enjoyed this semester. We used PC that we can understand that how to use this site and PC, and we can know some good PC system and site for me. And then, we can debate some topic by my space that we can communicate with another Tutorial people, another person and my Tutorial member. It means that people checked my topic and me idea. It leads to growth of the knowledge by changing an opinion.
So, it is very good, using my space for us.
10. I liked using MySpace this semester because...First it was fun to write to blog, make sounds file and put it on my website. Second it was interesting to talking about topics in each groups and represent it. And also it was fun to write about the topics and add comment to other persons.

Chapter XIV

Producing Cell Phone Video Diaries

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ABSTRACT

This chapter reports on an ongoing project conducted at Tohoku University in Sendai, Japan. A mixed group of seven advanced EFL learners produced weekly cell phone video diaries that were then delivered online via blip.tv. Participants completed this task as an independent learning project. Using the video recording feature of their cell phones, participants produced videos between 15 and 30 seconds long. As a piece of preliminary research, the aim was not to gather evidence about the linguistic gains that such technology affords, but rather to assess whether or not such a learning approach was feasible and suitable for students. The findings revealed that while the majority of the students found merit in this project, some had reservations. The outcome of this project demonstrates how Web 2.0 is redefining the Internet as a platform for individual content delivery, especially in terms of audio and visual productions.

INTRODUCTION

The literature on cell phone education is developing quickly. While some assert that cell phones can be integrated in the Computer Assisted Language Learning (CALL) classroom (Levy & Kennedy, 2005; Thornton & Houser, 2005), others argue that technological limitations render such a teaching method inappropriate for the enhancement of language learning development (Wang

& Higgins, 2006). Given this ambivalence, the aim of this chapter is to assess the feasibility of integrating cell phone video recording devices in the language learning classroom and to evaluate students' opinions about such a project and learning approach. Since this is an ongoing project, the objective of this specific research is not to assess students' linguistic development gains, but rather to explore and document the teaching approach and the learning outcome from this project.

The significance of this type of research provides invaluable reflections on the meaning of the term Web 2.0 and its influence in the English as a Foreign Language (EFL) classroom. O'Reilly (2005) defines Web 2.0 as a transformation from a corporate structure to a subscriber platform, whereby services are provided for the emancipation of free knowledge delivery. Such a transformation allows anyone with access to the Internet free services which empower them to deliver content in either a text, audio or audio-visual format. It empowers subscribers to share and exchange opinions, to link and comment on Internet searches, and thus reshapes how individuals interpret information. Grossman (2006) defines Web 2.0 as "a massive social experiment" (p. 23). That is to say, Web 2.0 is a convolution between subscribers who are willing to interact independently online to develop projects voluntarily, not for the benefit of the greater good, but for the simple joy of network socializing with other subscribers who share a common interest. In this way, Web 2.0 is defined by the horizons of the user's imagination. The implication for teachers is that students no longer need to be passive consumers of third party productions. Language learners are now able to create audio-visual files of authentic speaking materials and access them directly from sites such as youtube.com or blip.tv. These can then be downloaded on personal portable devices and utilized as resources in order to improve the pronunciation of a target language of interest to students (Gromik, 2007a). Compared to computers, handhelds and cell phones are compact, light and filled with a wide variety of features such as text, audio listening, photo and video recording. The presence of cell phone technology and usage is growing, for example in Japan the ratio of cell phone subscribers is 84 per 100 people (Economist Intelligent Unit, 2008, p. 120). Based on this context, this chapter demonstrates how to combine cell phones with Web 2.0 technology to develop student-centered, project-based activities.

The chapter begins with a review of the literature to explain the rationale for investigating cell phone video recording by Japanese EFL learners. The second section positions the research within sociocultural theory. The third section describes the participants as well as the project. This section evidences the in-class experimentation to ensure that students could undertake this project independently, and reports on the observations gathered from students' cell phone video productions. The fourth section details students' feedback collected via the end of term examination. Since this project is ongoing, the discussion section attempts to elucidate the findings in the hope of improving future research.

LITERATURE REVIEW

Cell phone-based education is still in its infancy (Levy & Kennedy, 2005; Thornton & Houser, 2005) compared to research on Personal Digital Assistants (PDAs) (Corlett, Sharples, Bull & Chan, 2005; Facer, Joiner, Stanton, Reid, Hull & Kirk, 2004; Klopfer, Yoon & Rivas, 2004; Lai & Wu, 2006; Ramsden, 2005; Trinder, Magill & Roy, 2005), wireless handheld devices (Zurita & Nussbaum, 2004) and the use of handheld technology to explore music composition (Polishook, 2005). Nonetheless, some of the findings reveal similarities. For example, Thornton and Houser (2005) comment that preparing videos of idioms (vidioms) for delivery on cell phones in Japan was time demanding. Moreover, Levy and Kennedy (2005) concur that "preparing the mobile phone message did take some time, about four hours a week in fact" (p. 79), and Lai and Wu (2006) observe that developing educational audio-visual resources suitable for PDA devices for nursing undergraduates required much preparation.

In the second part of their research, Thornton and Houser (2005) explain that students were encouraged to view vidioms on either a "video capable mobile phone or a PDA" (p. 224). The

overall response from the participants was positive; comments indicated that not only was it helpful to learn but the videos were also fun to watch. Research by Trinder et al. (2005) also reports that students enjoyed the possibility of studying anywhere, in this case on the bus (p. 97) (see also Lai & Wu, 2006). In contrast, the negative aspects perceived by students concerned the technological constraints, such as poor audio quality, small screen and slow download time (Corlett et al., 2005; Thornton & Houser, 2005, p. 226). Polishook (2005) reports on the possibility of composing music via the use of PDAs. Two of his participants indicated that attaching connecting equipment required to compose music “did not seem productive or intellectually challenging” (p. 137). Polishook therefore concludes that such equipment should be utilized to engage students “to think critically about how to work creatively” (p. 137). Most of the literature reviewed places students in the consumer seat, either using the technology to learn English (Thornton & Houser, 2005), Italian (Levy & Kennedy, 2005) or access course documents (Corlett et al., 2005; Ramsden, 2005; Trinder et al., 2005). What becomes apparent from a review of literature concerning the use of handheld devices such as cell phones is that these resources are mainly used as knowledge distributing devices through which students undertake controlled experiments (see Lin, 2007; Vavoula, Sharples, Lonsdale, Rudman & Meek, 2007). While evaluating the benefits of EFL student movie production Gromik (2006) argues that technology is now capable of redefining the role of students from mere consumers to producers. Research by Lai and Wu (2006) as well as Polishook (2005), for example, confirms that students can use the technology to produce and share their own productions. The aim of this chapter therefore is to:

1. Assess the feasibility of integrating a cell phone video recording device in the language learning classroom.

2. Appraise the technological constraints and affordances of cell phone-based video productions.
3. Evaluate students’ opinions about such a project and learning approach.

The hypothesis is that by the end of this learning activity, participants will have interacted with the technology to complete a multi-modal, project-based autonomous activity (Barr, Leakey & Ranchoux, 2005).

THEORETICAL FRAMEWORK

Sociocultural theory as defined by Vygotsky identifies two forms of stimulus to create knowledge development, amongst others. The first refers to the mediational effect of cultural artifacts. By interacting with their environment individuals can design and shape new forms of artifacts, thinking or concepts (Warschauer, 2005). The second refers to the Zone of Proximal Development (ZPD). Through interactions with peers, individuals can develop more mature reflective or problem solving abilities (Vygotsky, 1978).

To engage learners to participate and collaborate through the mediation of artifacts or tools, to stimulate a zone in which learners can interact to solve problems and investigate options, it is hypothesized that a student centered, project-based activity would be most preferable. Such an approach would position the teacher in the role of facilitator and the student in the role of problem solver empowered to reflect upon avenues for developing their own interpretation of the activity (Barr et al., 2005, p. 57; see also Tam, 2000).

The aim of the cell phone video diary project is to provide a task and environment where students could independently experiment with the tool, explore new forms of self-expression, share their productions and collaborate with their peers to either improve the content of their productions

or resolve technical problems which may arise. Consequently the term is divided into periods of in-class and outside-class task-based work. During the first three weeks, the in-class activities focus on empowering students to become independent users of their cell phone video recording device and subscribers of blip.tv, the website where their cell phone videos are stored. Thereafter only a few lessons provide in-class guidance in the development of the project.

THE COURSE AND THE PARTICIPANTS

The Advanced Communicative Language course is conducted in the university CALL laboratory that consists of thirty Windows XP computers. This is a ninety-minute elective course which meets once a week for an average of fifteen classes per term. Seven students (M=5; F=2) from various departments, in this case from the Education (four students) and Economics (three students) departments participated in this project.

The course is classified as advanced since participating students must either have a Test of English for International Communication (TOEIC) score of 600 or above, or have experience living in an English speaking country. In this particular class, one female was Romanian with a TOEIC score over 600, and the other had a TOEIC score of 600 points. Out of the five male participants, two had lived and studied at an American university, and the remaining three students had TOEIC scores above 600. Also apart from the international student, all of the Japanese students had seven years of schooling in the target language.

There are two objectives for this course. The first objective is not to expose students to the finite aspects of grammatical accuracy, but rather to consolidate their prior knowledge base of the target language through communicative, project-based activities. The second objective is

to deliver a project-based learning environment which exposes students to life-long learning skills applicable to their future career aspirations. Structuring a project which would encourage students to extend their computer and communicative skills addressed these two objectives.

THE PROJECT

At the beginning of the project students are provided with a term outline which describes potential weekly topics that students could focus on to create their cell phone videos. The objective of this first class is to provide a discussion opportunity for students to agree or offer more suitable topics than those proposed by the teacher. For example, it is common for Japanese students to belong to an on-campus club, so that is a topic often addressed. However not all students belong to a club, as some prefer to get a part-time job or concentrate on their studies. Therefore, students generally explain that they do not belong to an on-campus club and offer other topics that they could target for their cell phone video productions. After discussing this matter, students and the teacher make an agreement on the new theme and write it down on the term outline of weekly topics to include as part of the diary.

The second part of the project requires that students upload their weekly cell phone videos online. Moreover, they have to include a brief description about the video commenting on what motivated them to interpret the theme as they did. For example while one student might focus on riding a bicycle to school, another might investigate taking the bus into the city. A brief description allows the audience to understand the realization concept governing the video production (see Figure 1).

Once all weekly themes are agreed upon, a trial experiment is conducted in class. This experiment exposes students to the concept of making cell phone video diaries, storing them online and writ-

ing brief descriptions of them. The video storing website for this project is blip.tv.

CELL PHONE TECHNOLOGY

Current cell phone technology development in Japan allows cell phone subscribers access to a wide range of cell phone devices. Such devices usually have music, photo, video and text features readily installed.

Early experiments with the cell phone video recording feature revealed that the maximum recording time was thirty seconds. Considering such technological constraints it was anticipated that a video diary would be most suitable as a project based activity. These experiments also revealed that cell phones compress their videos in different formats, for example .3gp, .amc, .afs, or .mov. However the majority of cell phones compress their videos into .3gp files, a format designed by Apple Macintosh and equivalent to MPEG4 that can easily be opened with either Quick Time (QT) or Windows Media Player (WMP). Also a few cell phones compress their videos into Windows Movie formats. The other formats function erratically. For example, .afs is a Sharp video format not recognized by either QT or WMP. Moreover the .amc format has technical limitations preventing it from playing the audio file attached with the video; thus the video might play without any sound. Solutions for these technical occurrences to this date have not been found.

BLIP.tv

Blip.tv is a free video storing site established in New York. This website is user friendly and does not require an extensive knowledge of web design. Students need an email account to email their cell phone video for online management. They also need to create an account at blip.tv to upload and manage their video blog account.

Therefore students do not have to know a lot about the intricate details of web presentation to complete the overall project. Blip.tv stores and organizes uploaded videos into a basic blog (Gromik, 2007).

As can be seen in Figure 1, students need to include information such as a title for their movie, or a description of their site and their movie.

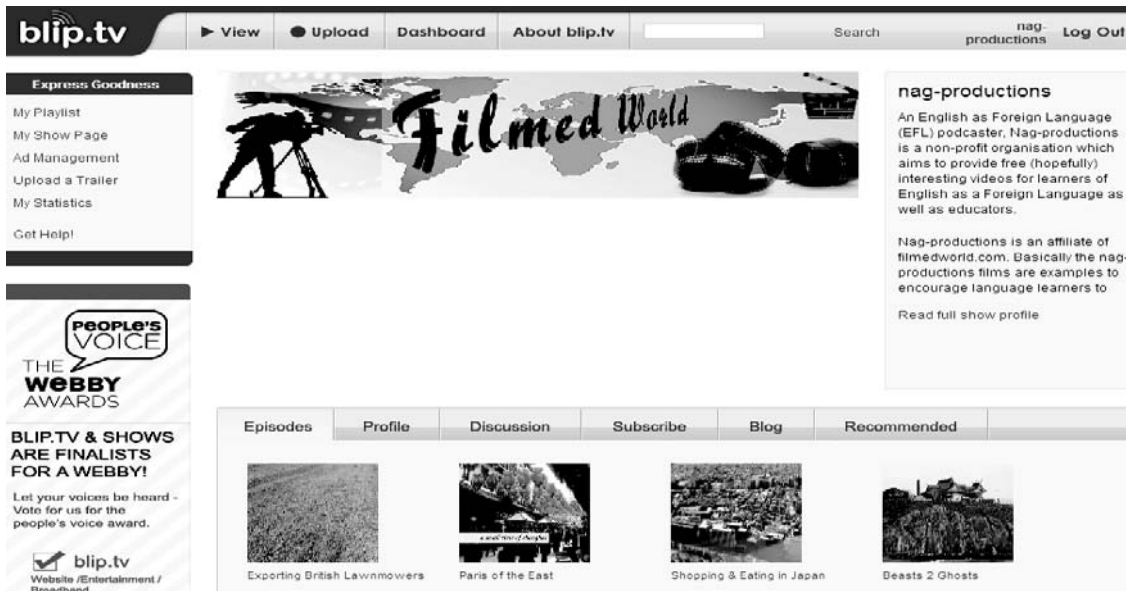
IN-CLASS EXPERIMENT

The first in-class topic encouraged students to provide a visual self-introduction as well as an explanation of their project. Once students completed their personal presentation, the second phase of the class guided students through the process of uploading their cell phone video diaries on blip.tv. After completing this part of the project, the teacher explained the benefits of providing a brief description of the video available online, so that the audience can understand the purpose of the video.

According to sociocultural theory, learning development is mediated by the features that the tool provides (Berge & Fjuk, 2006). Therefore in order to evaluate whether or not students would take the initiative to investigate the services provided by blip.tv, the teacher did not explain how to organize information such as “web show details” or “personal information.” The objective was to observe whether or not students could begin to reflect on the examples provided and from then on manipulate the tool to create their own interpretation of the activity to be completed. Thus, a lesson that evaluates both students’ cell phone video diary productions as well as their video blog presentation was scheduled. This lesson is discussed later in this paper.

By the end of the first lesson, students were able to use the video recording function of their cell phones. They were able to send their movies to their email account, save the video on their computer and upload the video on their blip.tv ac-

Figure 1. An overview of blip.tv



count. By the end of the first in-class experiment, all students had a video with a brief description available online for public viewing. No other lesson concerning the process of creating a cell phone video and delivering such content online was provided. Students experimented on their own or through the group to meet the requirement of the weekly project objectives.

ZONE OF PROXIMAL DEVELOPMENT SESSIONS

It would be feasible for students to complete all of their cell phone video diaries in one week. However to prevent students from selecting such a strategy, and to ensure that the task was achieved regularly, the following lessons were set as guideposts to provide students with the opportunity to discuss any challenges experienced during the completion of the project.

Since technical problems can be frustrating, allocating guidepost lessons allowed the teacher to discuss with students how certain challenges

could be addressed. The guideposts are described below:

Week 2: Confirm that students remember the process of creating and uploading a video on their blip.tv account. Collect the URL of every video blog and email them to the group.

Week 4: Share ideas about cell phone video production.

Week 6: Evaluate students' use of the target language in the cell phone video diaries. Investigate video blog presentation; i.e. Web show personal details on display.

Week 10: Evaluate students' use of the target language in their diaries. Investigate structure of the videos.

Week 14: Ensure that all the video themes are addressed. Investigate video blog presentations.

The objectives of the lessons in weeks 2 and 4 provided students with the reassurance that the project was achievable and to provide an oppor-

tunity for students to express their concerns with any aspects of the project. All the video blog URLs were collected and sent to students so that they could visit and view their peers' productions.

Between weeks 6, 10 and 14, there were no in-class discussions concerning cell phone video diary production. Instead lessons targeting other projects were addressed. For example, the course also required students to deliver a ten-minute speech with an electronic presentation. Therefore some class time was dedicated to researching and discussing appropriate content as well as organizing and structuring the outline of the speech.

The role of the teacher was to observe whether or not students could complete their video diaries without weekly assistance. For example, the teacher regularly checked the progress of the students, to note if any task remained incomplete. This information was then utilized and shared with the students during the specifically allocated guidepost lessons. The teacher's observations were used as discussion platforms to

engage students to express their opinions about the structure and presentation of certain video diary blogs. Below are some of the observations gathered from these weekly encounters.

WEEK 6 OBSERVATIONS

The aim of the week 6 lesson was to provide students with basic achievable tasks that would enhance the description of the content of their video blogs. Between week 4 and week 6, students completed all their cell phone diaries on schedule. However, the presentation of their video blogs did not indicate the purpose or audience the blog targeted. Pinkman (2005) comments that blogs allow subscribers to leave comments about the blog and that some comments may be offensive to novice EFL bloggers. Therefore to avoid such unfortunate experiences, the teacher demonstrated how some blogs outline the purpose of their content. One student in the classroom did

Figure 2. A student's blip.tv blog

The screenshot shows a web browser displaying a video blog on blip.tv. The main content is a video player with a play button in the center, showing a dark, blurry image of a Mukkuri instrument. Below the video player, there is a table of contents with the following items:

- HOW TO USE MUKKURI
- WARRING D. HIT INSTRUMENT FROM AMU,
- BASEBALL CLUB AT P
- I BELONG TO A BASEBALL CLUB IN GERMANY
- TAKE ME OUT TO THE
- THE ASSIGNMENT FOR THE CLASS IS THE VIDEO
- MUTTON BARBECUE
- THE OTHER DAY, I WENT TO A RESTAURANT BY
- CRAB COOKING II
- THE OTHER DAY, I TRIED TO COOK A DISH, PASTA
- MY FAVORITE PIE II
- THE THEATRE GIVES THE THEATRE IS THE FAVORITE
- INTRODUCTION OF MY
- TODAY, I'LL INTRODUCE MY FAVORITE COFFEE IN
- INTRODUCTION OF MY

Below the video player, there is a section titled "Currently Watching:" with the title "How to use Mukkuri." and a short paragraph of text. To the right, there is a section titled "About this show:" with the title "Life as Stream ~Film. ver~" and a short paragraph of text.

provide some information in his profile to explain that the blog was part of a course requirement (see Figure 2).

As can be seen from Figure 2, this student's blog includes an explanation of what the blog is about as well as its purpose. It also includes a description of the content on the video. All the videos are catalogued for the viewer to access at their convenience.

The next issue targeted in the cell phone video diary production was the use of the cell phone itself. One student had a very clear video available on his blog. The teacher encouraged students to consider the reasons for such a clear video quality. The students pointed out that the cell phone was not moving and that this might have been the reason for the film's high pixel quality.

Finally the teacher showed another cell phone video produced by a class member and directed the students to consider pronunciation — another aspect of high quality video production. After viewing the video, students noticed that in this particular video, the student was speaking slowly and clearly so that every word was audible. The students then discussed how they could improve their pronunciation and delivery to improve the audio aspect of their cell phone video diary productions.

WEEK 10 OBSERVATIONS

Some of the issues raised in the week 10 lesson concerned spelling errors in the blogs, as well as pronunciation difficulties. In order to highlight some of the errors, the first part of the class had two activities. First, students read the comments written on a blog of their choice and then corrected any of the errors they could find. Second, students were directed to listen to the video produced by one of their peers and to write down verbatim what was said in the video. After writing down the speech they had to correct the errors. Both of these documents were then provided to the owner

of the video blog who had to take into consideration the feedback provided by his or her peers.

In the next phase of the lesson, the teacher pointed out that only a few students had actually added a personal description on their blogs. Students were invited to view some of the video blogs that displayed the necessary information. Students observed that such information was very useful for viewers.

The objective of the final phase of the lesson was to provide students with the opportunity to discuss certain aspects of video blogging. When uploading a video on blip.tv, owners of the videos had the opportunity to classify their videos using various genres (education, travel, or business). The default option, on the other hand, would not categorize the videos into a selected genre. Since the teacher noticed that students did not categorize their videos as either educational or entertainment, he inquired as to what motivated the students to keep their videos in the default category. Unanimously students explained that they wanted to preserve the safety of their identity. Consequently, part of the discussion that followed examined a number of strategies to preserve users' privacy when using video.

WEEK 14 OBSERVATIONS

This was the last week before the examination period and the objective was to summarize and finalize the cell phone video diary production process. By the end of this session two students out of seven did not have all of their cell phone video productions on their blog. These two students also did not have any information regarding the purpose of their blogs or about their personal details. The other five students had all the necessary content available on their blog. The remainder of this lesson was spent viewing some of the video diaries produced and encouraging the students to speak about the motivation behind their best productions.

Weeks 6, 10 and 14 revealed that students were willing to take on the responsibility to create and deliver cell phone video diaries. The feedback gathered during these sessions revealed some of the technical challenges that students experienced and eventually resolved on their own.

According to sociocultural theory, the Zone of Proximal Development is most beneficial when students have the opportunity to see and experiment with a tool to achieve a similar result accomplished by one of their peers (Lantolf & Thorne, 2006). The guidepost lessons revealed that students gained a lot of knowledge when lessons provided them with the opportunity to discuss certain challenges that they wanted addressed.

FEEDBACK FROM EXAMINATION

Since the aim of the final examination was to gather as much information as possible about the students' opinions about their experiences with producing cell phone video diaries, the final examination was emailed to the students one week prior to the last day of the term. One participant out of seven did not return the final examination to the teacher. Three students completed the examination within two days. The other three students returned their examination on the due date.

The examination consisted of 18 items. While some of the items were closed questions, others were open questions that enticed students to provide as much detailed information as possible.

Closed Answers

First it was important to gain the students' consent in order to use their answers as part of this research project. All six students who completed the examination gave their consent.

While four students enjoyed making cell phone video diaries and their blogs, two participants did not. Five students responded that they would not invest in a cell phone with more advanced

audio-visual recording features. This seems to concur with the findings of Corlett et al. (2005) who explain that since their subjects had to return the learning device they did not feel compelled to invest in better technology. The students preferred to use basic hardware that provides necessary functions at no extra cost.

All the students reported that they viewed their peers' videos. They agreed that viewing peer-produced videos assisted them in understanding and creating more interesting cell phone videos. The consensus concerning the delivery of cell phone videos "live" over the Internet was split in half. While fifty percent of the students expressed that it motivated them to improve their English abilities, the other fifty percent did not think that it motivated them at all.

In relation to new vocabulary acquisition through the creation of cell phone video productions, three students commented that they learned some new words relevant to the themes. The other three students commented that they had the necessary vocabulary to express their opinion confidently. Finally, all the participants enjoyed the class and all of them agreed that the objectives of the course and the project made them think more critically about cell phone video production.

Open Answers

The course description stated that the objective of the Advanced English course was to produce mini documentaries, an in-class presentation, and weekly cell phone video diaries. Three students had completed the Advanced English course the previous semester. They decided to participate in the course for a second semester because a) the course was interesting, b) the course was led by a native speaker, thus requiring a higher English comprehension ability, and c) one of the students will be an English teacher in Tokyo and he wanted to maximize his film production skills so that he could carry this skill to his future place of em-

ployment. For the other three students it was the first time to participate in this course. One student joined the class because it was recommended by a previous student. The other two students wanted to experiment with filming and learn to use English beyond their normal engagement with reading and writing activities.

Part of the Zone of Proximal Development requires that the learner identify some aspect of learning that needs to be developed. Through assistance he or she can then visualize, experiment and explore options that lead to more mature knowledge (Vygotsky, 1978). The respondents evaluated whether or not the course met their goals. All students provided positive responses. While for some experimenting with video productions revealed that the task was not as complicated as it appeared, for others it was about discovering the extent of their computer skills as well as their determination to complete the task to a self-defined satisfactory level. In terms of the context of Web 2.0, this translates into producer satisfaction. How this satisfaction is met is still a matter for debate and will continue as long as more and more students of varied languages begin to express their opinion over the Internet channel (Johnson, 2006).

According to Vygotsky (1978), interaction and collaboration between and amongst members is vital to stimulate learning development maturity. Therefore during the lessons attempts were made to remove the focus on the teacher and to position the group at the center of every discussion. All students agreed that such an approach stimulated authentic communication. While one student commented that “this class had many field works and I think that is why we could behave naturally, which made us to know more about each other,” another student reported that the small class size had an effect on the quality of discussion; “we all had to talk, because being silent would be strange.”

Regarding what students did not like about creating cell phone video diaries, three students

found that the recording time limited their ability to express their opinion succinctly. One student commented that he produced interesting videos because they would be accessible to the general public. One student enjoyed making cell phone video diaries.

Social artifacts or tools (in this case, the cell phone), mediate, or entice users (in this case, students) to react, respond and/or reflect upon how to utilize such a tool in a manner that is personally enriching. During the whole project students had the freedom to interpret a theme as they wished. To collect evidence concerning this issue, students selected their favorite self-produced video to describe what motivated them to produce such a video. Below are their comments.

Student 1: You [the teacher] made it very clear that you want spontaneous videos and not something rehearsed, so I just did what you said. I stated my opinion in front of the class [through the video] about these types of roads that for me are an exotic thing and probably for my peers are common parts of life.

Student 2: The image was so mysterious. I sat in the backseat and turned around to look at backward. I found some lights in the bus are reflected in a window and overlapped with cars running behind the bus.

Student 3: I was supposed to introduce my hobby, but I couldn't since my hobby was the things like traveling and watching movies. For this reason, I just explained that in the film. Having thought it would be just boring, I used the panda to make the picture more interesting.

Student 4: First thing I tried to think was keeping privacy. I really wanted to take a film of whole scenery of this restaurant, but it was difficult when I tried not to take someone's face. Second, I wanted to broadcast the atmosphere of the restaurant and the situation on the hot plate, to show viewers

Producing Cell Phone Video Diaries

that the dish is appetizing. So, I tried to keep focus on the hot plate and made zoom up to the dish on the plate. But, this style is so boring to watch, and it is difficult to understand how nice the dish was, because of small bit of my camera quality. If possible, I should take a film of a man who is eating some with chopsticks actively, keeping privacy in some way possible. It must have been exciting and nice to show how nice the dish is in the small frame.

Student 5: As you can see my video has poor quality technically. They spoiled my interest to make video with this.

Student 6: I was reluctant to think about the details of the settings. I just wanted to make the videos for the project that is all.

Two students did not connect with the activity. One student commented that the technological limitations affected his production. The other was interested in completing only the basic requirements of the course.

The feedback provided by the other four students reveals that they took the trouble to think about the purpose and structure of the outcome of their cell phone videos. By participating in their social environment and manipulating the technology they were stimulated to extract the best possible angle of the situation they were experiencing at the very moment of production.

The aim of the activity was to engage students to use the technology and to express their opinion. Part of the evaluation of the cell phone video diaries project was to investigate whether or not students could speak spontaneously. All students responded that they spoke spontaneously while making their videos. As one student explained:

I thought which script would be better to tell viewers the situation and how nice the dish was. And I tried to practice some patterns of scripts in my head to see if it is possible to say in brief time of filming. After that I tried to remember the pattern by heart and I start to take film.

One of the projects students had to complete was a five-minute film. Four questions focusing on this project were included in the final assessment questionnaire. These are not directly related to the production of cell phone video diaries and will be mentioned only briefly here.

Producing a five-minute film requires more planning and on-the-spot-thinking than producing short cell phone videos. The first question encouraged students to explain what they learned about themselves through the activity. The second question concerned what they learned about and through their partner during the pair work film production. All of the students' films were uploaded for delivery over the Internet. The third question inquired into the students' opinion about the future of broadcasting. The final question queried whether or not students would use cell phone or video production in their future careers.

Concerning the last question, one student compared past and present filmmaking techniques and how technology has rendered the whole process a lot more accessible to a wider group of people. Another student commented that he hopes to teach his students to produce cell phone videos, since he already knows that they will all own such devices. One student compared PowerPoint presentations and film production, suggesting that very soon video production will become a more efficient way of delivering content to inform the audience about a particular service or product. Two students were not sure if they will have the opportunity to create videos in their future careers.

The evidence gathered from the final assessment questionnaire reveals that to some extent students did benefit from creating cell phone video diaries. Whether or not uploading them over the Internet was influential is debatable for further research. Nonetheless the structure of the project caused one student to critically assess the effect that technology offered to both viewers and producers:

In the past movies were used as propaganda. Now we can make movie freely and broadcasting on the Internet, we can transmit it [film] toward the rest of the world from home. If there are documentary movies, we could know reality better.

Such authentic independent reflection concurs with opinions by Ellis, Betsy and McLane (2006) who explain that the early Soviet film productions were created to communicate the ideals of the ruling party (p. 27).

The feedback documented in this chapter revealed that students benefited from independently creating weekly cell phone-based video diaries in terms of speaking, creativity, and as the quote above reveals, also in terms of forming opinions about the definition of Internet video broadcasting. Poniewozik and Tumulty (2006) explain that while budget-constrained news media corporations can only provide a selected view of the world, individuals can now afford to integrate their experience with local realities. Such experiences prepare students for participation in Web 2.0, an environment “made up of ordinary people: hobbyist, diarist armchair pundits, people adding their voice to the Web’s great evolving conversation for the sheer love of it” (Johnson, 2006, p. 49).

DISCUSSION

According to sociocultural theory, the objective is to maintain and nurture the participants’ identities during the development of projects. Through the completion of a student defined project, the continuous involvement in the task and the cooperation in developing a common understanding of the project creates a social environment from which students can examine new or different interpretations of the project (Van Huizen, Van Oers & Wubbles, 2005).

In the example discussed here, the teacher conceptualized and suggested the cell phone

video diaries project to the students. Through discussion students expressed their interpretation of the project and established new themes that would be more interesting to them. This format engaged students to communicate and begin the journey into cell phone video production as a group. Nonetheless, as the project evolved, evidence reveals that participants reassessed the project and reinterpreted it to meet their individual needs and abilities.

Throughout the project, evidence indicated that students interacted with their peers to scaffold the completion of their project based on their abilities. Hence by viewing peers’ productions, they were in a position to evaluate who amongst their peers would be able to assist them with a certain goal. The feedback collected via the final examination revealed that students were satisfied with the project and their progress, but that they also experienced certain technical challenges that at times they could not resolve. One of the most problematic technical challenges was the preset video recording time. While some cell phones allowed up to 30 seconds of recording capability, others only allowed 15 seconds. Nevertheless, while a preset time could be a constraint for students to really express their opinion, it might be a motivating factor to incite them to improve their control of the target language, by using speech speed patterns effectively, for example.

Another aspect concerning recording time indicated that students did not become conscious about developing strategies to control the recording time. Most of the clips produced showed videos stopping in mid-sentences. This indicates that students were not able to match their speech pattern with the content they wanted to express during the recording time. This is an area of research that requires further investigation since the ability to become mentally aware of time is an achievable task that can be learned. These students were not aware that they could arrange their speech in such a way as to finish expressing their opinion before the recording ended. Hence

what is the actual process for matching speech and time allocation?

Finally, ownership over the project and the cell phone video productions, and the regularity of creating weekly productions established a self-monitoring routine. By the end of the term this approach made the students aware of the social implications that such technological advances offer as a platform to language learning, content delivery and the creation of social as well as cultural forms of expression.

CONCLUSION

The implications of Web 2.0 are yet to be defined, but it does now provide a user-based platform for all to use. While teachers utilize handheld devices as content delivery tools, Web 2.0 is empowering subscribers to become content producers. Andreessen in an interview with Friedman (2005) explains, “today the most profound thing to me is the fact that a fourteen-year-old in Romania or Bangalore or the Soviet Union or Vietnam has all the information, all the tools, all the software easily available to apply knowledge however they want” (p. 76). This is the new reality and educators will need to tip the balance between teacher-centered lessons and student-centered activities more in favor of student do-it-yourself project management.

As a preliminary investigation into the feasibility of using the cell phone video recording function to engage learners to speak spontaneously about a self-selected topic, the aim of this project was to investigate whether or not students see a benefit in using cell phone videos to express their opinions in the target language outside of class time. The findings of this study reveal that the use of cell phone technology can be used effectively in the language classroom and students can perceive some benefits at both the social and technical level. While obvious technological development would improve project outcomes,

this study exemplified that given the technical constraints, students were able to successfully produce weekly cell phone video diaries. The findings do provide enough positive evidence to encourage educators and learners to further investigate the affordances that cell phone technology combined with Web 2.0 technology can bring to the language classroom.

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KEY TERMS

Authentic Communicative Learning: The opportunity for a learner to express his/her opinion in a safe environment in which mistakes are allowed in order to place focus on the personal expression of content. Thus enhancing the learner's opportunity to share and contribute to the development of peers' knowledge and experiences.

Blip.tv: This refers to free video site which allows users to upload video from podcasts or blogs to share with others. As opposed to networked and scheduled television, Blip.tv promotes a highly diverse range of videos from professionals and amateurs on demand.

Cell Phone-Based Education: Technologies which engage learners to explore their surroundings in order to report and record text/audio/visual information based on their observations. Such technology could enhance learning by encouraging learners to become critical reflectors of their environment and the subjects they study.

Cell Phone Technology: Compact portable devices which include texting and voice telecommunication, provide access to music, television, and video, and allow photo, audio and video recording features. Also it includes the opportunities to download software or access educational resources provided on SD memory cards.

Student-Centered Learning: A working environment in which learners collaborate, experiment, discuss, and create knowledge based on interaction and discussion within a group. Learners organize themselves and define the roles which they are willing to play within that working environment.

Video-Based Education: The use of audio-visual recording technology that enables learners to explore and expand their knowledge while at the same time expressing their opinion in the target language.

Zone of Proximal Development: Deriving from the work of Lev Vygotsky describing the cognitive development of children, the ZPD refers to the area between what a child (or learner) can potentially achieve with and without external guidance from adults or peers.

Chapter XV

The Use of Weblogs in Language Education

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ABSTRACT

This chapter explores in how far Web 2.0, Weblogs in particular, has changed foreign language learning. It argues that Weblogs, along with Web 2.0, have created new genres for which users need new forms of literacy. A qualitative study on the relationship between the online audience of Web 2.0 and learners' writing processes is presented and the findings are discussed. The study supports the assumption that learners are aware of the social interaction taking place through weblogs and that this awareness of audience influences the writing process. The author's intention is to point out that Web 2.0 has created new communities of language practice and that foreign language learning is happening in these discourse communities through social interaction. The challenge in foreign language education is to integrate these communities of practice into the foreign language classroom.

INTRODUCTION

From the very beginning, the Internet was a community that offered many possibilities for networking, linking people worldwide and for publishing information for the online community. In recent years the term "social software" has come to describe a new phenomenon within the online world. The social software application that has gained the most attention in recent years are weblogs. Originally, weblogs were

mainly created to link together pages on the Web that the weblog author considered interesting or noteworthy. These lists of links included the weblog author's comments on the content of the linked websites. A community of weblog-owners networked around a certain topic, linking and exchanging information. One famous example was the weblog of Stanford college students Filo and Yang, who created a link-catalogue in 1994 that eventually developed into the Internet portal Yahoo! (Möller, 2005).

In the early days of weblogs, the users needed knowledge in programming and had to host blogs on their own servers. Since the introduction of blog-hosters in 1999, weblogs have become more accessible and easier to start for every user on the net: publishing a post on a weblog nowadays is as easy as writing an e-mail. As a result, since 1999 the number of weblogs on the Internet has increased dramatically. In April 2007, Technorati tracked 70 Million weblogs worldwide and estimated that 120,000 new blogs were being created each day (“The State of the Live Web”, 2007). Although the numbers only show 15,5 Million active weblogs, the blogosphere is constantly growing. Blogs have challenged traditional journalism through fast and multi-perspective coverage of news which was not possible before. Already by the end of 2004, weblogs were so popular that the Merriam-Webster dictionary chose it as its “Word of the Year for 2004” (Richardson, 2006). Weblogs are only one tool in the growing Web 2.0 family which has changed the way people communicate and network. In how far do these changes affect education and foreign language learning? This chapter discusses this topic in relation to weblogs as Web 2.0 tools. The basic question will be whether weblogs transform learning in the foreign language writing classroom.

WEB 2.0 AND THE TRANSFORMATION OF LANGUAGE LEARNING

O’Reilly (2005) sees, among others, two key features that distinguish Web 2.0 from Web 1.0: the platform-based usage of the Internet and harnessing collective intelligence of Internet users. The Web is the platform on which users work collaboratively and on which they store and exchange data. Rather than installing and using software on the PC, services are used online to create blogs, documents and wikis. These features can be seen as the basic principle of all social software devices which link users for collaboration

and social interaction. However, the phenomenon of collaborative projects, like Wikipedia, and the rapid growth of the blogosphere, to name only two, is not only a consequence of new Web 2.0 technology. As Alby (2007) points out, these phenomena go hand in hand with faster Internet connections via broadband and flat rates that are affordable for the masses.

How far, then, has Web 2.0 transformed language learning? Warschauer (2004) describes three stages of CALL which have emerged since the 1970s and have represented the development of technology, on the one hand, and the formation of language acquisition approaches, on the other hand. The first stage, structural CALL, uses drill and practice activities focussing on correct language use. Structural CALL followed an audio-lingual approach to language learning, and the technology was mainframe computers. The 1980s and 1990s were marked by the upcoming communicative approach to language learning. At the same time, the introduction of PCs offered the technology for computer-assisted communicative exercises. The third stage, which Warschauer (2004) calls integrative CALL, has a socio-cognitive approach to language teaching and uses computers for authentic discourse. In this last stage, the computer functions as a tool that connects learners for interaction. In earlier stages of CALL, computers were seen as a tool to support the language learning process. Integrative CALL is different, because it doesn’t only use technology to create space for isolated language learning activities, but it uses technology that is made for communication. With Web 2.0 this shift in CALL becomes even more obvious. Communication in the virtual world has become more than simply using a different tool to transfer the same information as with more traditional tools. Web 2.0 has created new genres, new identities, and users need new forms of literacy to interpret information. Therefore, as Warschauer (2004) points out, new teaching methods are required. Shetzer and Warschauer (2000) define electronic literacy as a threefold competence of communication, con-

struction and research. These three aspects are still applicable for Web 2.0 tools, but they are more combined, for example, in blogs, which are simultaneously used for communication, construction and research. Bloggers construct content, are part of a discourse community, and blogs serve as an important source of information.

The approach of multiliteracies, in development by the London Group since 1996, takes the idea of electronic literacy one step further, by including intercultural communicative competence as an essential goal of electronic literacy. This concept sees hypertext as a nonlinear, multimodal environment, where information is “variously coded in animation, symbols, print text, photos, movie clips, or three-dimensional and manoeuvrable graphics” (Luke, 2000, p. 72). These hypertexts are embedded in local cultural diversifications which must be understood by the reader for successful communication. In Web 2.0, which networks people from all over the world, intercultural communicative competence as an integral part of multiliteracies is of great importance. Consequently, foreign language learners must be prepared for these multimodal environments, as speaking the language without understanding the multimodal contexts in which it is embedded, is not sufficient for global communication.

The nationwide longterm-study, JIM, regularly collects data about recreational and media behaviour of young people from 12 to 19 years of age in Germany. In 2007, almost every household in Germany had computer and Internet access, and 67% of teenagers had their own computer; almost every teenager was using computers. The daily use of the Internet increased from 51% in 2004 to 77% in 2007. One third of the participants state that they contribute actively and regularly to some kind of interaction on Web 2.0 (Abfaltrer, 2007). These figures emphasize that young people in Germany are already regularly participating in online communication in Web 2.0. These young people are part of global social networking and need corresponding literacy to communicate suc-

cessfully. Therefore, technology need not assist language learning foremost, but with Web 2.0, technology created new communities in which learners can practice and for which they must be prepared. This requires more than language learning as a linguistic skill, but language learning in the sense of multiliteracies.

THE POTENTIAL OF WEBLOGS FOR THE CLASSROOM

Weblogs are a good example for what is meant by multiliteracies in the context of Web 2.0. Readers of blogs need more than the ability to understand the language in order to really make sense of the content of many blog posts. They also need the skill of understanding the related discourse with other blogs or linked references to truly comprehend the context of the texts. Furthermore, the competence of understanding the writer’s cultural context is important. However, many of these aspects are also true for other literary texts — what, then, has changed? The difference is that Web 2.0 is a Read/Write Web, and the reader can easily interact with the writer or can also become an author. Blog readers can write comments or react by posting responses. They become part of a discourse community and interact in a complex multimodal setting. Using weblogs in the language classroom does not simply mean having a nice tool with which to practice writing, but rather is an opportunity to prepare students for communities of practice connected to the use of weblogs or other Web 2.0 tools in real life.

Weblogs have been used in many classrooms in different ways, and a variety of classifications can be found as to how weblogs can help in acquiring a language. Campbell (2003) mentions *tutor blog*, *learner blog*, and the *class blog* as different approaches for using weblogs in the foreign language classroom. Whereas Campbell’s classification distinguishes the writers and their purpose for using a weblog, Richardson (2006)

analyses the use of weblogs in the classroom in terms of pedagogy. According to Richardson, weblogs are used in schools for a wide range of purposes: a weblog can be put to use as a *class portal*, an *online filing cabinet*, an *e-portfolio*, a *collaborative space*, for *knowledge management and articulation* and as a *school website*.

Richardson points out that one key feature that distinguishes weblogs and the Read/Write Web from more traditional media is that of the potential audience. Here we can see a significant shift compared to traditional media because collaboration with an audience is not bound to the classroom anymore. By means of weblogs, the classroom can be extended to dimensions previously not possible. Ward (2004) points out different benefits of using weblogs in the writing classroom. A genuine audience is one important aspect that can motivate students in the writing process. He quotes Kitzmann (2003), who writes that “the [online] audience is not only anticipated but expected, and thus influences and structures the very manner in which the writer articulates, composes, and distributes the self-document” (p. 1). Thus, the audience encourages writers to present and express themselves.

Furthermore, weblogs not only provide the audience and therefore change the way learners see their products, but they also change the way content is being constructed. Weblogs often belong to a network of writers functioning as a collaborative blog, in which the authors edit each other’s texts. Consequently, texts refer and react to other authors, which means that new content is constructed through collaboration. These new ways of constructing content demand of the learners new literacies, as discussed above. Some of the basic criteria of these multiliteracies is that writing is embedded in an interactive dialogue between the writer and the audience: “The differences between blogging in this manner and writing as we traditionally think of it are clear: Writing stops; blogging continues. Writing is inside; blogging is outside. Writing is monologue;

blogging is conversation. Writing is thesis; blogging is synthesis” (Richardson, 2006, p. 31). The contradiction between writing and blogging, which the author points out, might lead one to the conclusion that blogging is not even writing. In the following sections it will be argued that blogging should not be seen as a contradiction to writing, but rather as a certain form of writing, namely writing as social interaction.

Wrede (2003) puts the aspect of discourse in weblogs this way: “[W]eblogs are usually a form of writing in public and with the intention to offer opportunities for communication. A weblog is a constant invitation for conversation – directly and indirectly” (p. 2). In fact, a weblog writer often has a number of different audiences simultaneously: the group of people the writer is collaborating with, the audience the product is presented to, and the wider audience of the Internet. Each audience cannot only just read the text, but write a comment or even an article. Thus, discourse can happen on different levels and can reach a degree of authenticity which would not be achieved without extending the classroom through online networking of that kind.

As we have seen, weblogs can be used in the foreign language classroom for interactive language learning following a sociocultural paradigm. However, the major change weblogs have brought for language teaching goes beyond that. Weblogs have, in company with other Web 2.0 tools, created new genres and new communities of practice which demand new literacies. Therefore, they have not just added some methods to foreign language teaching, but they have transformed the goals by creating new contexts of communication.

TEACHING WRITING WITH WEBLOGS

New communities of practice with new genres demand specific ways of teaching and learning

literacies which help the learner to interact in these contexts. With weblogs in particular, new communities of discourse writing have emerged and the question is what kind of approach for teaching writing could support learners in acquiring the respective literacies.

As Hyland (2002) points out, three different approaches to researching and teaching writing can be identified. The first approach can be described to see texts as autonomous objects, referring to structuralism. The focus in this approach is on the correct arrangement of elements, and the idea of language learning is based on “an autonomous mechanism which depends neither on particular writers or readers, but on setting out ideas using correct forms” (Hyland, 2002, p. 6).

The second approach focuses on the writer and the process of creating texts. Learning writing is a process which can be encouraged by providing writers “with the space to make their own meanings through an encouraging, positive, and cooperative environment with minimal interference” (Hyland, 2002, p.23). Since weblogs provide this open space for writer-oriented creativity, they can be used in language learning for such writing processes. However, more traditional media, such as paper journals, can provide this space also, thus it is not this aspect of weblogs which makes them an exclusive and new tool for teaching the writing process.

It is because weblogs fulfill the requirements of the third approach which traditional media cannot easily satisfy, to provide a tool for writing as social interaction, that they can be considered novel and unique. This third model considers that a writer always has a certain purpose and audience in mind when writing a text. Either the audience is directly addressed through the text (e.g. in a letter) or the audience is invoked, meaning that it is meant to read a certain text although it is not addressed directly (e.g. a novel). A text is always about sharing or negotiating meaning with an audience; if there were no audience, there would be no reason to write a text. The writer is

influenced by the addressed or invoked audience, which means that there is an interaction between the writer and the reader. Even though this interaction might not be too obvious in many cases, it is an important factor by which the writing process is influenced.

Connected to the notion of audience is the idea of social construction. The writer is a member of a community, and writing is understood as discourse in this certain community. The way we think and communicate is seen as “language constructs generated by knowledge communities and used by them to maintain coherence” (Hyland, 2002, p. 41). Thus, each part of writing happens in a context of a social community, aiming to construct meaning within this community. Writers “position themselves and their ideas in relation to other ideas and texts in their communities and this helps them both to legitimate their membership and establish their individual identities through discourse” (Hyland, 2002, p. 41). This social interaction characterizes the writing processes in weblogs, as described above. The audience for weblog writers is obvious and the blogging community a real, existing community. Therefore, compared to other writing tools traditionally used in class, weblogs have the potential to extend the audience beyond the classroom and to create new writing communities.

Grabe and Kaplan point out that “audience is essential to the creation of text and the generation of meaning” (Grabe & Kaplan, 1996, p. 207). They mention five parameters by which the writer of a text is influenced with regard to the reader: the number of persons who are expected to read the text, the extent to which readers are known or unknown, the difference of status, shared background knowledge and shared knowledge of the topic at hand. Through these aspects, the identity of the discourse community is defined and the patterns of discourse established. It is very likely that, for instance, the discourse between students in a project at university will differ from pupils at a primary school who work on a project.

However, within these communities shared patterns of communication help to communicate and negotiate meaning.

Hedge (2000) sees the matter of audience as an important aspect to foster good writing. Real-life audience for her is a precondition for developing real-life writing tasks. In the context of the task-based language learning classroom these real-life writing tasks are of great importance, since they promote meaningful communication.

Teaching writing as interaction in a discourse community can be one way of implementing the sociocultural approach to the foreign language classroom. Swain (2000) mentions that research suggests that comprehensible input alone cannot provide opportunities for language acquisition. Moreover, the role of interaction with its components of input and output in collaborative dialogue constitute language learning.

Lantolf (2000) points out that the central concept of sociocultural theory is the *mediation* of higher forms of mental activity. In second language learning this mediation takes place with others through social interaction, with oneself through private speech, or by means of artefacts like tasks and technology. Sociocultural theorists do not draw a clear distinction between “use” of a second language and “knowledge” of a second language, as in their view use creates knowledge (Ellis, 2003). A central means of mediation is verbal interaction by creating situations in which novices can negotiate meaning and thus participate in their own learning. The expert can function as providing support in order to help the learners reach the next level or understand a certain language structure they need for interaction. This scaffolding is important for reaching the next potential level of development, which Vygotsky (1978) called “the zone of proximal development.”

Teaching and learning writing using a socio-cultural approach means providing learners with opportunities to engage in collaborative discourse communities with the goal of social interaction.

The assumption is that weblogs provide such environments for second or foreign language learners. Moreover, the blogosphere is an authentic community of social interaction through discourse writing. Bonk and King (1998) developed a collaborative writing taxonomy for such electronic writing environments and attempt to describe how electronic writing tools could be used in the context of a sociocultural approach. However, Bonk and King (1998) note that in terms of research, many questions remain unexplored. One of these questions is, “How do different interaction structures and collaboration formats impact student writing?” (Bonk & King, 1998, p. 6). The assumption is that weblogs inherit a purpose for interaction and therefore the impact on student writing should be one that supports connective writing. Some of the findings of the following qualitative study, researching the influence of the online audience on the students’ writing process, imply that the collaboration format of weblogs does influence students’ writing.

A STUDY ON THE INFLUENCE OF AUDIENCE ON WRITING IN WEBLOGS

Research Design

The study consists of 29 single cases that had the same task to accomplish: writing a reading journal. These single cases were compared to each other with the focus on differences between the writers of weblogs and the ones with paper reading journals. Since different single cases were compared in different sections, the research can be seen as a comparative study (Flick, 2003).

The study explores how an online audience influences students in their writing of a reading journal. The assumption is that a real online audience in the context of a discourse community has certain effects on students’ writing. Therefore, in terms of meaningful communication, the outcome

of weblog reading journals written for an immediate audience in a discourse community should differ from reading journals written on paper for an abstract audience. The expected outcome of the study was to find out in how far students realize the interactive character of the Web 2.0 and whether this changes their writing in terms of connective writing. The research questions of this study are as follows:

- To what extent do weblogs support meaningful writing?
- What differences are there in students' writing between weblogs and paper journals?
- To what extent does the online audience of a discourse community influence students in their writing of a reading journal?

The participants consisted of 29 students of a grade 9 secondary girl's school in Germany who had English as a foreign language in their fifth year. According to the Common European Framework the goal set by the state curriculum for this grade is to reach level A2 which means they should be basic users of English as a foreign language on a way stage level (Council of Europe, 2001). The test scores on a class level showed that most students met the criteria of A2, some students are slightly beneath A2 and few even scored B1 (independent user on a threshold level). The students could choose whether they wanted to write a paper journal or create a weblog on the Internet. 10 students decided to write a weblog and 19 students wrote a paper journal. It was for the first time that the students did a reading journal. None of the students had worked with a weblog before.

The participants were assigned the task of writing a reading journal about the book *If You Come Softly* by Jacqueline Woodson. The reading process was supported in class with pre- while- and post-reading tasks. They were instructed to write their thoughts and impressions about the chapters they had read by using texts, photos,

drawings, articles or poems. Each student had to write at least one post about each chapter during a period of six weeks. The students could choose what they wanted to write about and how they wanted to comment on issues they considered relevant. The blogging software used for the project was developer-hosted blogs on blogger.com. The advantage of blogger.com is that creating a blog is easy and free, without downloading software and hosting by the user. Furthermore, password protected communities can be established. But there are other providers offering similar features, like wordpress.com.

DATA COLLECTION AND ANALYSIS

The data consisted of the students' reading journals (weblogs and on paper), two questionnaires, and a guided interview. The first questionnaire was done before the students started to write their reading journals; the second questionnaire and subsequent interviews, after they had finished their journals. The data was analysed using Glaser's (1998) grounded theory.

First Questionnaire

In the first questionnaire the type of questions was mostly open, following the qualitative paradigm. In response to the question regarding the students' underlying motivation for choosing either a weblog on the one hand or a pen-and-paper journal on the other, three different categories emerged: (a) Personal preferences, (b) Computer Issues and (c) Audience.

Category (a) summarizes students' general statement, e.g. "I decided to work with a weblog because I have never done it before." Categories (b) and (c) stand for two single topics that appeared in most answers. Either students saw their decisions in the context of computer issues (e.g. "I decided not to work with a weblog because we don't have Internet access at home") or in the context of the

Figure 1. Screenshot of a student's weblog



audience connected to weblogs (e.g. “I didn’t choose weblogs because I don’t want to publish anything” or “I chose the weblog because I like the idea that everyone could read my texts”). Of particular interest for the research project is category (c), because it reveals that many students were aware of the potential online audience, regardless of whether they considered the audience as motivating or threatening. Another remarkable fact is that in the answers none of the students associated pen and paper journals with an audience. In general, the findings of the first questionnaire suggest that the students had a general awareness of audience that they associated with weblogs but not with paper journals.

Reading Journals

The data analysis of the reading journals referred to the first research question. The main concern when analysing the data of the reading journal was to identify any differences between the texts

written in weblogs and the ones written on paper. Through the open coding process, following the *grounded theory*, the reading journal texts were analysed to find distinctive features. The findings suggest that in general the students’ texts can be classified in three different categories:

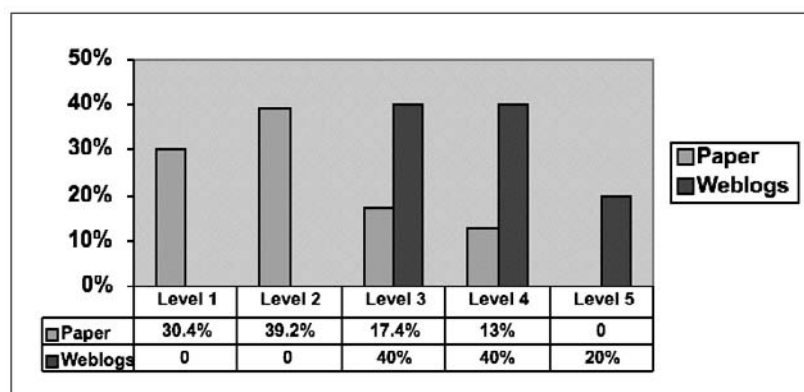
Category 1: Summaries of the Chapters

This category represents students who only wrote summaries of each chapter. The main goal of the writer is to summarize the most important things that happened in the story or the respective chapter.

Category 2: Summaries of the Chapters with Added Opinion

This category represents students who wrote summaries of each chapter and added their personal opinion to the summary. The main goal of the

Figure 2. Findings of reading journal analysis



writer is to summarize the most important things that happened and then to add the personal opinion. The amount of text devoted to the expression of personal opinion is in relation to the amount devoted to summaries much smaller.

Category 3: Personal Comment with Summary Included

Students who wrote personal comments on each chapter fall into this category. These comments consist of utterances of personal opinion and feelings. They can contain summaries of the chapters as well, but in the light of the personal perception of the writer.

Using the above categories, the data was analysed a second time with the intention of developing a concept which could help describe the distinctive features in a more detailed way. In particular, the issue of writing from a personal perspective versus writing summaries should be at the centre of the analysis. For that purpose descriptors were developed which describe the differences between the students' reading journals more precisely.

In the last phase of the coding process each reading journal was classified into one of the described levels. Figure 2 summarizes the findings.

The numbers show the percentage of each comparison group for every level. The findings show that the difference between paper journal students and weblog students is significant. The students with weblogs all reached at least levels 3 to 5. On the other hand, only 30 percent of the students with paper reading journals reached these levels. Additionally, none of the paper reading journal students reached level 5 and only 13 percent reached level 4. However, 60 percent of the students with weblogs were in levels 4 and 5.

For clarification, it has to be added that these figures do not indicate anything about the accuracy of the students' texts. Nevertheless, the summaries show clearly identifiable trends with regard to content; students who wrote weblogs expressed to a much higher degree their own opinion, attitudes and personal thoughts, as defined in the descriptor. The language of the "weblog students" was not necessarily better in terms of language accuracy. However, it was more personal than the language of the students with paper journals. One can say that the students with weblogs talked more about themselves, they wanted to communicate a message. To find out why they wanted to communicate on a more personal level, we will have to look at the data collected in the second questionnaire and the interviews.

The Use of Weblogs in Language Education

Table 1. Levels of student interaction

Level 1	<p>Writes only short summaries of the readings. No personal reflections or expression of attitudes, no utterance of opinion.</p> <p>Example: Selina (paper journal): Chapter 10 Jeremiah remembers his childhood and his father's new girlfriend Lois Ann. It makes him sad, especially that her parents could hurt each other. Jeremiah is thinking about Ellie, he showed his feelings. And he thinks about his life and it makes him sad, because so much happened.</p>
Level 2	<p>Writes mainly summaries of the readings with some personal reflections. In relation to the summaries the personal reflections is very brief and lacks expression of attitudes. Personal opinion is expressed, but only in short, isolated sentences.</p> <p>Example: Theresa (paper journal): Chapter 10 Loneliness is in the air. Jeremiah is sitting in his mother's room looking at pictures of her and his Dad. Thinking about how it was in the past when the family was still together. Now his parents are separated, because his dad left them. He went to another woman. Lois Ann. If my parents were separated a world would crash down for me. Jeremiah is also thinking about Ellie. He's thinking about going to kiss her. Soon. It's sweet to read this, but how does he know if Ellie likes kissing him? I think he'll find out ...</p>
Level 3	<p>Writes summaries of the readings and personal reflections. The amount of personal utterances is significant but still less than the summaries. Attitudes and personal opinion are mentioned frequently and sometimes in detail.</p> <p>Example: Lisa B. (paper journal): Chapter 10 This chapter is about Jeremiah. Jeremiah explains how he felt when he saw his dad with his new wife Lois Ann. He always saw the picture from his mother when she married his father. He thought back at the marriage and that his parents thought their love will be forever. Jeremiah said that he sometimes want a brother or a sister. He also thought about Elisha and her smile. Jeremiah looked at the house and noticed how empty it was and that the house echoed when he was speaking. I know that it is hard when your dad or mama had an new wife or husband but you must except it whatever happens, but not every person will except it because it's hard. I think Jeremiah is in this situation but I also think he except it, because he loves his daddy deep in his heart what ever happens.</p>
Level 4	<p>The amount of summary compared to the amount of personal reflections is about equal. Attitudes and personal thoughts are expressed frequently and in detail. Personal opinion is expressed by developing arguments consisting of several sentences.</p> <p>Alena (weblog): Chapter 10 This Chapter is very hard. There are a lots of feelings I can't really discribe just understand. Jeremiah is in his mothers room, there are photos and he look at them. There are old photos but the most important photo is the picture with his mum in a wedding dress. He cry, he imagine whats happend wrong. What happend when he was little and can't understand. A long time ago the father left his mum but Jeremiah couldn't understand he was just 12 or 13, he smiled because he couldn't understand that it will be a hard time. But now he understand all what's happened. I think he hate Ann Lois, I think he hate his father too. But did Jeremiah hate him really? I think he want to hate him but he can't, he left his mother but not himself. There is a thing, a little thing which nobody see. On the next day his parents would be 17 years married. I think he tought at this and how it could be when his parents where together now. I think when two people separate each other, they haven't got a future because when the love goes the love can't come again. Jeremiah dream, he dream that his parents will be together one day, without Ann Lois. But maybe there is a light :) I call the light Ellie, maybe she can show him the way in the happyness. I think he love Ellie really, he has longing at her because he want to tell her all what's happened and makes him sad.</p>

continued on following page

Second Questionnaire

The students completed the second questionnaire after they had written their reading journals. They

were asked about their experiences with writing the journals and in particular their motivation and what kind of audience they had in mind while writing.

Table 1. (continued)

Level 5	<p>The amount of summary compared to the amount of personal reflections is at least equal. The summaries are written in the context of a personal perspective. Attitudes and personal opinion are expressed frequently and in detail. The personal opinion is expressed by developing arguments including several sentences.</p> <p>Maria (weblog): Chapter 10 It's a very sad chapter and I ... I don't know ... I was shocked. I stared for a few minutes at the last word and thought nothing. I still don't know what I should think. Oh yes ... I should describe what made me so shocked. It was because of Jeremiah. He was in his mother's room and looked at the pictures which stood on her dresser. There was a picture from his mother in a wedding dress and she smiled and looked happy. Very happy. When he looked at this picture he thought about the relationship between his mom and his dad. They were nearly seventeen years undivorced. It was a long time but they only had one child – Jeremiah. He felt very lonely but he wouldn't like a sister or a brother. "He wanted more than that – someone deep. Somebody who could know him -know all of him- the crazy things he dreamed on stormy nights, when he woke with tears in his eyes and pulled the covers tight around him" (p. 100). Then he thought about Ellie. Ellie was there in his head and didn't go away. I think they need each other. Both need someone who's there for the other person and who knows all about the other person. And if it's only for a short time. (now I think so because the book isn't very long and we are at chapter X already and not much happened. Oh ... I deviate from the description. Yes. He thought about Ellie and how much he needs her. It was a depressing situation: the empty house, his oppressive situation with his mom and his dad, his pain about all the discrimination. It was too much and at the end he cried. The sweet part in this chapter: "I'm going to kiss you soon, Jeremiah had found himself thinking. I don't know when or where or how, but soon I'm going to kiss you" (p. 101). I love this part because it's so sweet and...I don't know an other word for this sentence. But I liked the part that I put in my thoughts (the other blue sentence), too.</p>
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The analysis of the second questionnaire reveals, among other things, two important categories related to the relationship between the writing process and the potential audience.

The first category (A) refers to the kind of audience writers had in mind, whereas the second category (B) is concerned with the influence the audience had on the writers. Each category has been divided into three subcategories that can be described as follows. A table displaying the students' answers and a brief analysis of the answers follows the description of each category.

Category A (Kind of audience)

- **A1 The teacher:** Students who mentioned that they were aware of the teacher as audience.
- **A2 The teacher, fellow students and friends:** Students who mentioned that they were aware of the teacher, fellow students and friends as potential readers.

- **A3 The online community:** Students who mentioned that they were aware of the online community as potential readers.

The figures in Table 2 show a clear difference between the students who wrote paper journals and those with weblogs. The ones who wrote paper journals had either only the teacher, or the teacher and classmates, or friends in mind while writing. The students with weblogs were up to 90% aware of the audience in the online community. Although the weblog students knew that the teacher would read their blogs, none of them mentioned the teacher as reader. This implies that the students associated weblogs strongly with the online community connected to them.

Category B (Influence of Audience)

- **Category B1: No Influence, no comment.** Students who made it clear that they think the audience they had in mind did not influ-

ence their writing at all. Students who didn't make any comment are included as well.

- **Category B2: Making it interesting and understandable.** Students who mentioned that they tried to write accurately, so that others will be able to understand their texts. Furthermore, many said in the same context they wanted to make the texts interesting, because they had in mind that someone would read the texts.
- **Category B3: Writing personally.** Students who answered that they tried to write on a personal level. Some mentioned that this was meant to express attitudes, others wrote that they wanted to tell their opinion.

Table 3 indicates a tendency towards a greater influence of the audience on writers of weblogs than writers of paper journals. 66,7% of the students with paper journals either negated the influence of audience on their writing or did not mention any influence (category B1), while only 20% of the weblog writers were classified in this category. In category 2, more weblog writers (50%) than paper journal writers (33,3%) mentioned that, because of the audience, they wanted to make the journal more interesting or understandable. In category 3 the difference is even clearer. 30% of the weblog writers think that the audience makes

them write more personally, but none of the paper journal writers.

To summarize the analysis, we can say that 80% of the weblog writers see an influence of the audience on their writing, but only 33,3% of the paper journal writers can see any influence of the audience on their writing process.

Guided Interviews

In the guided interviews the students were confronted with, amongst others, the observation that the weblog students wrote more personal comments and showed a higher degree of reflective writing. The students were asked to comment on these findings and come up with reasons for the differences. The open coding process was done separately for each comparison group. Therefore, the categories for the weblog students and the paper journal students are different.

Students with Weblogs (Category A)

- **Category A1: Opinion and personal reflections.** Because they knew that other people would read their weblogs, they wrote more about their opinion and showed personal reflections. These were typical answers of students who can be categorized in category A1. They said they wanted to make

Table 2. Findings category A

Audience Category	Total	Paper Journal		Weblog	
Category A1	8	8	44,4%	0	0,0%
Category A2	11	10	55,6%	1	10,0%
Category A3	9	0	0,0%	9	90,0%

Table 3. Findings category B

Influence Category	Total	Paper Journal		Weblog	
Category B1	14	12	66,7%	2	20,0%
Category B2	11	6	33,3%	5	50,0%
Category B3	3	0	0,0%	3	30,0%

their weblog personal and make the reader understand what they think about certain parts of the book.

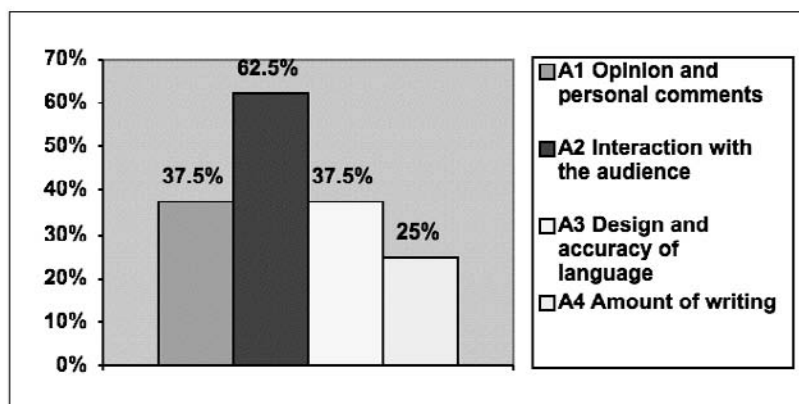
- **Category A2: Interaction with the audience.** Category A2 is in a way similar to category A1 with regard to personal communication. However, it focuses on answers in which students talk about interaction with the audience. This possibility of communicating and interacting with the audience caused them to write in a personal manner and to negotiate meaning.
- **Category A3: Design and accuracy of language.** Some students described how their consciousness of audience motivated them to pay more attention to form, i.e. either to formally correct language and/or to the appearance of the weblogs themselves. The two aspects are put together, since they both deal with form rather than with content.
- **Category A4: Amount of writing.** In addition to other influences that the weblog authors' awareness of the audience had on their weblogs, the weblog authors also tended to produce a larger amount of text. Answers in this category implied that the students thought they wrote more because they were aware of the fact that someone was actually going to be reading their weblogs.

The findings of the interviews with weblog students (Figure 3) indicate that most students in this comparison group had an awareness of the online audience and were convinced that these potential readers influenced their style of writing. Moreover, 62,5% mentioned that they meant to interact with the audience when writing posts.

Students with Paper Journals (Category B)

- **Category B1: Online audience makes a difference.** Although they did not experience an online audience for themselves when writing a reading journal, these students mentioned in the interviews that they think an online audience makes a difference concerning the content of writing. They based this assumption on observations they made on the weblogs of their classmates.
- **Category B2: Online audience is a threat.** Some students see the online audience as a threat. They did not want anybody to read their texts; therefore, they didn't use weblogs themselves. Although most of them did not specify reasons for that fear, they would feel uncomfortable with an online audience in mind.
- **Category B3: No influence of online audience.** Category B3 is comprised of students

Figure 3. Findings guided interviews weblogs



who mentioned that they don't see an influence of the online community on the writing process. They asserted that there is no difference between weblogs and paper journals with regard to audience influence.

Figure 4 shows that 62.5% of the interviewed students with paper journals think an online audience influences content, although they did not experience an online audience themselves. 25% of the interviewed students with paper journals perceived the online audience as a threat. 37.5% of the paper journal students found the online audience had no influence on the writing process. One of the most interesting findings of the guided interviews is the fact that a majority of the paper journal students saw the online audience as a main reason for more reflective and personal writing. These findings confirm the shared notion of the weblog students, the majority of whom showed at least some cognizance of an online audience.

CONCLUSIONS FROM THE STUDY

Awareness of Audience

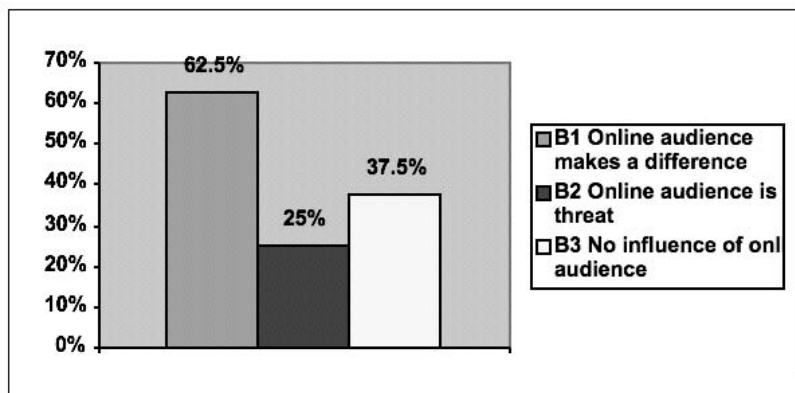
In summary, we can say that the data show that the students' writing process reflects an awareness

of the online audience. Both, weblog writers and paper journal writers mentioned the online audience as an influence either on the decision-making process for or against weblogs, or they saw that the online audience influenced the writing process of the weblog students. This shows that the audience, as is typical for social software applications like weblogs, is something that students are acutely conscious of in the writing process. They are aware of the audience and it influences them in their writing process. Thus, we can speak of a real and immediate audience since it was not constructed or made up by the teacher or through an artificial textbook task ("Imagine you are writing a letter to a friend"). Moreover, it exists independently of the task put to the students. They were not told to imagine an audience or someone who would read their entries: they were automatically aware of the audience by virtue of their familiarity with the weblog medium. These findings support the idea that students associate weblogs directly with an audience as Richardson (2006) and others have pointed out.

Meaningful Communication

Before having a look at the data here, clarification of the term "meaningful communication" is in order. For this purpose, Littlewood's (2000) defi-

Figure 4. Findings guided interviews paper journals



nition can be helpful. He describes a continuum from non-communicative learning to authentic communication with three categories (pre-communicative language practice, communicative language practice, structured communication) in between. The closer an activity moves towards authentic communication, the more a focus on meaning can be identified. He defines authentic communication as “Using language to communicate in situations where the meanings are unpredictable, e.g. in creative role-play, more complex problem-solving and discussion” (Littlewood, 2000, p. 5).

Which findings here can be associated with this definition of meaningful communication? In this respect, the findings of the reading journal are of interest. Students who wrote weblogs expressed their personal opinions and attitudes to a considerably higher degree than those students writing paper journals. These findings show that students with weblogs shared their opinion and personal attitudes on the book to a greater extent than paper journal students. Since sharing opinion and personal attitudes means communication and negotiation of meaning, students with a higher degree of these characteristics of writing can be classified in Littlewood’s categories on a level close to “authentic communication.” On the other hand, students who wrote mostly summaries of the chapters just followed a rather pre-communicative language practice, because they did not try to negotiate meaning or to communicate a message, they simply reproduced content. Since students with paper journals could be classified to a much higher level than weblog students into the category of “mostly summary writing,” they do not fulfil the criteria of authentic communication to the same degree as weblog students do. The students themselves assumed that the difference is rooted in the online audience that is associated with weblogs. These results support the assumption that weblogs are a new text genre, one of connective writing, by which author and audience communicate with each other.

Community Discourse

Hyland (2002) along with Grabe and Kaplan (1996) see a “discourse community” as an essential aspect of authentic writing. Authentic writing always happens in the context of a social community, aiming to construct meaning within this community. The findings of the research here indicate an awareness of such a social community. The weblog writers’ awareness of audience and the higher level of focus on meaning of the weblog students’ writing compared to the paper journal students’ writing suggest that the weblog students saw themselves as part of a social community in which they wanted to negotiate meaning. In particular in the interviews most weblog students mentioned that they intended to interact with the audience. Hence, they saw themselves as part of a discourse community. We can say that weblog students show a high awareness of a social community they want to interact with.

FUTURE TRENDS

Interaction and collaboration in Web 2.0 are becoming increasingly important in a globalized world and a new kind of social networking through weblogs is one key feature of this change. Users who want to participate in these social networks need the skills to understand multimodal texts. The concept of *multiliteracies*, which combines intercultural communicative competence with electronic literacy, helps to describe the skills learners of a foreign language will need to reach that goal. In the light of these changes, a sociocultural approach in the foreign language classroom will gain greater importance. For the use of weblogs in foreign language education this means that *networking* and interaction can happen within a class or beyond the classroom in collaboration with other classes worldwide. In tele-collaborative projects weblogs can be used for publishing texts, exchanging ideas and

perspectives on certain topics, or in a literature project. The sociocultural dimension of language acquisition is a vital characteristic of such projects. However, even though weblogs have the inherent potential to facilitate the kind of interaction that supports the language learning process, this process doesn't automatically come about simply by using the medium. It is important also to consider the aspect of content: if students have nothing to say, it doesn't matter in which medium they have nothing to say. Learners need meaningful, authentic tasks that encourage them to produce meaningful, authentic output. Nunan (2004) points out that the classroom itself always has a pedagogical dimension, but that the goal of task-based language learning is to prepare learners for real-world tasks. Therefore, the basic question is what learners need to do with language and how we can prepare them for these situations. As Van den Branden (2006) says, "Tasks are supposed to elicit the kinds of communicative behaviour (such as the negotiation of meaning) that naturally arises from performing real-life language tasks, because they are believed to foster language acquisition" (p. 9). Further research has to be undertaken to explore what kind of tasks support social interaction with weblogs and how the students' development of *multiliteracies* can be encouraged by certain settings.

CONCLUSION

As this chapter has shown, Web 2.0 has created new dimensions of communication. Some key aspects of this transformation are social networking, interactive user-generated content and global collaboration. This change has led to new communities in Web 2.0 and new kinds of genres are developing. This in turn requires a different literacy of the learner. Weblogs, for example, represent different text modes: creating user-generated content, interaction between the author and readers, discourse between different authors

and information on a certain topic. Furthermore, weblogs are contextualized in a certain cultural setting which the reader needs to be aware of to understand the implication of texts. These different modes require *multiliteracies*. The study has shown that students were aware of the discourse community connected to weblogs. Their texts showed a higher amount of connective writing, meaning they had an audience in mind to interact with. This supports the assumption that weblogs have created a new genre and that users are aware of the multimodal levels connected to blogging. In summary we can say that Web 2.0 has transformed writing, in particular writing in weblogs. Moreover, Web 2.0 has changed language learning because speakers of a foreign language already use Web 2.0 to communicate meaning and generate content in new genres, by using the foreign language as a lingua franca. Therefore, the community of language practice is already existent. The challenge of foreign language education will be in how far teachers realize these changes and prepare learners for these new environments of language practice. There is a variety of possibilities to work with weblogs in foreign language education and create opportunities for authentic language practice.

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KEY TERMS

Blogosphere: The term relates to the perceived network that joins all weblogs on the Internet together in one community.

Collective Intelligence: A form of intelligence that emerges from a community of individuals who collaborate together. It is an approach to working on products such as texts, documents, codes, decisions with no centralized hierarchy. One central idea is that the collective product of a community is more than just the sum of the individual parts.

Community of Practice (CoP): A group of individuals who engage in and contribute to the practices of their communities through active participation and therefore share a common identity. The term *community of practice* was created by Etienne Wenger and Jean Lave in 1991, who positioned learning in the context of social

interaction. One substantial part of knowledge acquisition in *communities of practice* is the construction of knowledge through participation in a community.

Discourse Community: This term connects the notion of discourse (typically relating to numerous forms of communication) with a group of users, usually on a specific subject or area of interest. A discourse community might be used to describe a particular group where members meet to discuss topics of specific interest to them.

Electronic Literacy: The ability to read and write in an electronic medium and to find, organize and make use of information in the context of a hypertext environment. Electronic literacy combines texts and other media, has a focus on collaboration and includes the use of online sources.

Multiliteracies: The term deals with the complexity of language in two major aspects: first, the multimodality of texts through the increasing importance of the written word as part of visual, audio and spatial patterns, and second the cultural and linguistic diversity through global connectedness.

Sociocultural Approach to Language Learning: This approach derives from sociocultural theory that sees learning as the mediation of higher forms of mental activity through interaction. A central means of mediation is verbal interaction by creating situations in which novices can negotiate meaning and thus participate in their own learning. The expert can function by providing support in order to help the learners reach the next level or understand a certain language structure they need for interaction.

Chapter XVI

Blogging in Foreign Language Education

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ABSTRACT

This chapter gives a comprehensive overview of blogs in Foreign Language Education (FLE) through reviewing literature, critically analyzing potential benefits and concerns about blogs, and suggesting research needed to better understand blogging's influence on language learning. The chapter begins with a discussion of Web 2.0's potential impact on FLE and a detailed description and definition of blogs. Following this a comprehensive literature review of blog use in FLE and a critical examination of blogging's potential benefits and problems in key areas of FLE is offered. Finally, future trends for blogs and further research areas are suggested. Though blogs are a tool that have received relatively minimal attention in FLE literature to date, this chapter argues that blogs can be an important hub of learning in Web 2.0.

INTRODUCTION

Web 2.0 technologies can revolutionize Foreign Language Education (FLE). Foreign language education, here including both linguistic and intercultural learning of another language, has been affected by technological advances throughout its history. Going as far back as the invention of paper and much later the printing press, to more recent technologies such as television, telephones, and computers, FLE has grown and changed

(Belz, 2003a). Computer Assisted Language Learning (CALL) was born with the computer, and grew through the initial use of the Internet. Nevertheless, while CALL before Web 2.0 offered new opportunities for language learners through foreign language learning software, word processing, email, and web pages, the defining characteristics of Web 2.0 — collaboration and interactive communication — are such critical elements of foreign language learning that a po-

tential revolution in foreign language education is imminent (Kern, 1996).

Web 2.0 is most thoroughly defined by O'Reilly (2005), a co-organizer of the first Web 2.0 conference. O'Reilly's (2005) article points to the "web as a platform" (p. 1), the web's "harnessing [of] collective intelligence" (p. 2), and "rich user experiences" (p. 3) among other salient characteristics of Web 2.0. These characteristics point to how active Internet users have a great influence on the applications, information and experiences to be had on the Internet. Web 2.0 is a much more organic web than Web 1.0, changing in relation to and reaction to Internet users. While prominent Internet developers such as Tim Berners-Lee have argued that Web 2.0 is nothing really new (Laningham & Berners-Lee, 2006), the possibilities for communication, collaboration and interaction on the Internet have unquestionably expanded. Because of this expansion, foreign language learning also has possibilities to change (Mandarin 2.0, 2007).

Still, while the Web 2.0 revolution insinuates change, great improvements in FLE due to Web 2.0 remain far from certain. First of all, Web 2.0 requires Internet access and computer proficiency. Though Internet access continues to increase throughout the world, there are still many people for whom Internet access is unavailable or not consistently available, and there are still many people who do not use computers proficiently. These issues are both especially of concern in institutional contexts where learning might require all students to have computer and Internet access as well as requiring a teacher proficient enough to manage an Internet-based project. Secondly, Web 2.0 offers collaboration and interaction in new ways, but how these new ways impact foreign language learning is still only beginning to be understood. On the one hand, it is reasonable to assume that more people than ever find themselves interacting and collaborating with international counterparts through Web 2.0 tools like video, voice and text chat, blogs and

wikis, and online gaming and online interactive worlds. On the other hand, does this activity lead to better foreign language learning than studying a textbook by one's self or taking a language class with a skilled instructor? Despite the new connections offered in a Web 2.0 environment, how that environment is used will pervasively affect its benefits. The potential of Web 2.0 is very exciting, and hopefully that excitement will translate into thorough research and practice to create new opportunities for FLE.

This chapter examines weblogs, one of the best-known members of Web 2.0. Weblogs, commonly known as blogs, are one of the oldest 2.0 technological advances — about 10 years as of 2008 — in fact preceding Web 2.0 itself (Stauffer, 2008). Originally conceived of as online journals, blogs now contribute to society in many ways as news, research, business sites, and still as personal online journals. As such an important new communicative tool, blogs are of interest in education, specifically in FLE. In fact, as one surveys the different tools and media of web 2.0, blogs hold a special place as a center of communication, a hub where other technologies link and can be hosted. Blogs are often a user's "home" on the web, easier to create and edit than web pages, and they can host a variety of multimedia as well as display a user's profile, sometimes containing contact information such as email and text messaging addresses. Blogs provide an updatable template for writing, and their ubiquity on the web makes them a source of reading on innumerable topics. Despite this promise, as with Web 2.0 in general, blogs' place as a learning tool is unclear. How exactly can this new exciting tool contribute to language education?

This chapter explores how blogging's potential has been and can be tapped for FLE purposes. First, blogs are defined and their characteristics are examined. Second, a comprehensive overview of how blogs have been used for FLE is given. Third, blogs' potential benefits and limitations with regard to four key language learning con-

cepts — motivation, authenticity, collaboration, and literacy — are examined. Finally, the chapter ends by looking at future blog trends and areas of research to further advance our understanding of their place in FLE and Web 2.0.

THE CHARACTERISTICS OF BLOGS

While at their simplest blogs have been defined as “a website that is updated regularly and organized chronologically according to date, and in reverse order from most recent entry backwards” (Ward, 2004, p. 1), many blogs are much more than this. Many blogs allow readers to make comments (Godwin-Jones, 2003; Pinkman, 2005; Thorne & Payne, 2005), and some bloggers (people who blog) use hyperlinks and trackbacks to and from other web content (Godwin-Jones, 2003). Also, while blogs began primarily as a site for writing text, most blogs now allow users to post images, audio, and video. The extensive use of multimedia in some blogs has created new kinds of blogs like audio blogs, video blogs, photoblogs, and social networking sites. These new kinds of blogs are beyond the scope of this chapter, but they hint at the malleability and utility of blogs and Web 2.0 environments in general.

In defining blogs, it is first important to distinguish them from other Internet-based communicative media. While blogs have some similarities to other asynchronous communicative applications such as email, discussion forums, and web pages, they also are clearly different. One of the most significant aspects of blogs, especially those used for language learning, is what Block (2007, p. 128) refers to as their “open architecture,” which means that blogs are viewable by anyone on the Internet. This viewability of blogs and the fact that blogs have a broad audience by default distinguishes them clearly from email. The fact that blogs are individually owned (or sometimes group-owned) distinguishes them from the more egalitarian com-

munication and structure of discussion forums. These distinguishing characteristics actually make them quite similar to web pages. However, blogs also differ significantly from web pages. In a study of an English language blog corpus (not including photo, video or social networking blogs), Herring, Scheidt, Bonus, and Wright (2004, p. 10) found that blogs are specifically unique in three aspects: their frequent updates, asymmetric exchange features, and limited use of multimedia. The authors note that blogs are easily updated since most blog applications do not require users to have any HTML knowledge to add text, images or other media to the blog page. Also, the comment feature on most blogs allows for asymmetric exchange, or as the authors write “blogs allow limited exchanges (in the form of comments), while according blog author and readers asymmetrical communication rights — the author retains ultimate control over the blogs content” (Herring et al. 2004, p. 10). Finally, in terms of multimedia, the authors note that while blogs do support multimedia, web pages tend to have more. Thus, the frequent updates of blogs, the comment feature of blogs, and content of blogs tends to be quite different from web pages.

Communicative features of blogs, the key to their Web 2.0 inclusion, start with the comment feature. Most blogs are structured so that comments can be made on any blog post by people who visit the blog on the Internet. Comment features often have a number of levels of control by the users. For example, it is generally possible to limit commenting to only users who are logged in to the same blog application, or it is possible to turn off the comment access completely. Also, bloggers can require certain information of commenters such as a name or email address. Finally, many blogs now have spam protection like CAPTCHA (Completely Automated Public Turing test to tell Computers and Humans Apart), which requires commenters to type a codeword before being able to post their comment, thus ensuring that blogs do not receive computer-generated spam comments.

While commenting alone is an important communicative feature, most blogs have other features to keep their users and readers connected. These features include hyperlinks, RSS (known both as Really Simple Syndication and Rich Site Summary), and trackbacks, or linkbacks. Hyperlinks are links a blogger creates in their own blog to link to another site on the Internet. Godwin-Jones (2003, p. 13) notes how bloggers “make rich use of hyperlinks to connect to what others have written on a topic, though another study found that hyperlinking is used less than expected” (Herring et al. 2004, p. 8). While perhaps an underused feature, hyperlinks add to the interactive and collaborative possibilities of blog use. Another important feature of many blogs is RSS. RSS allows Internet users to be notified when a blog they are interested in is updated. Interested readers essentially “subscribe” to blogs by entering the RSS link into what is called an aggregator (Bloglines and Google Reader are currently two popular aggregator sites), a site that will show the new blog entry and notify the reader when it is posted. In this way, blogs might resemble email in that, much like receiving an email to one’s inbox, the new blog entry is “received” in the aggregator where it can be read. A final communicative feature of blogs which is worthy of mention is a *trackback*. Simply put, trackbacks are a step beyond hyperlinking. Trackbacks actually notify a blog user when their blog has been hyperlinked by another blog. For example, if I am writing about English language education on my blog, and another blogger somewhere adds a hyperlink in their blog to connect to my blog, I will be notified that they have linked to my blog. This sometimes involves an extra step of copying and pasting a trackback link to be done successfully. While it is true that trackbacks can yield increased interactivity between blogs, spam continues to be a problem with this feature.

The above discussion is a primer for understanding blogs, and, Herring et al. (2004), the only in-depth look at the blog genre, lay an excellent

foundation for understanding what makes blogs special and unique. Of course, with the passage of time since the Herring et al. (2004) study, and this chapter’s focus specifically on blog use in language learning, many questions still must be answered. With concern to the passage of time, how have blogs evolved in the past few years? As is the nature of Web 2.0, blog sites have been rapidly changing to enable more integration with multimedia and more interactivity with features and tools like trackbacks and aggregators. Likewise, blogs have been combining and blending with other Internet-situated media like social networking sites, web pages and certain wikis. With concern to language learning, there are many genre related questions about blogs used with a language learning purpose. What are the characteristics of blogs used for L2 learning and what kind of writing do L2 writers produce on blogs?

There are clearly many questions that still need to be answered about blogs, and these will be detailed in the final section of this chapter. Before looking at future research needs, however, the next section gives a comprehensive overview of blog research up to the present.

OVERVIEW OF BLOGS IN LANGUAGE EDUCATION

Blogs’ mainstream popularity rose at the turn of the century (Thorne & Payne, 2005), but language learning literature on blogs has remained relatively scarce until around 2005. The foreign language learning literature on blogs can be divided into three basic groups: papers introducing blogs and suggesting uses for blogs with learners, educators’ anecdotes of using blogs with learners, and empirical studies focused on using blogs toward some language learning goal. Each of these types of literature will be looked at in turn, and literature is introduced chronologically to offer a perspective on the development in blog research in FLE.

The earliest introduction of blogs for language teachers, Duber (2002), pointed to a few educational uses by bloggers and offered other links for educators interested in blogging. The most intriguing aspect of Duber's piece is that it talks about blogging when it was still in its infancy stage (at least in language education). About six months later another, more focused introductory article by Campbell (2003) pointed to three different ways to use blogs for language learning — as a tutor's website for students, as an individual writing space for students, and as a collaborative class writing space. In the same year, Godwin-Jones (2003) wrote about blogs as an emerging technology for language learning in the prominent online journal, *Language Learning and Technology*. Johnson (2004), from his experiences using blogs with his science graduate students, outlined how to set up a class blog (as opposed to separate individual blogs) via Blogger, one of the most widely-used blog applications in the world. A more recent and very useful kind of introductory article about blogs came again from Campbell (2005a) in which he compared and offered detailed reviews of eight different blogging and social networking applications for language teachers. His paper is also useful in identifying nine features that are desirable in a blog application used for educational purposes. Campbell's practical, teacher-friendly comparison of blogs and blog features of interest to language educators continues to be an outstanding contribution to language learning blog literature. Other introductory blog articles worthy of mention have also appeared (e.g., Eastment, 2005; Lavin, 2006; McDonald, 2007). Since 2004-2005, however, case studies and empirical studies have become the norm.

A second kind of article about blogs is instructor accounts of using blogs in the language classroom. The earliest and perhaps most cited is Ward (2004) in which he gives an account of using blogs with university students in the United Arab Emirates. Ward's study includes both a variety

of postulated benefits for blogging as well as an account of his blogging project with students and their feedback about the project. Campbell (2004) gives an account of using LiveJournal, a popular blog and social networking site, with his students in Japan. West (2004), also with students in Japan, explains the step-by-step blogging procedure and activities he used with his students. Wu (2005) wrote about her use of Blogger.com blogs with her Taiwanese engineering majors as part of their semester-long English class. Finally, and much more recently, Tomei and Lavin (2007) offer a detailed account of student community building through blogs at a Japanese university. Their account is special because they indicate a number of activities and procedures with their students, like hyperlinking, creating avatars, and building blogrings (groups of blogs that are easily connected for commenting and other interactive purposes), which expose the benefits of the Web 2.0 environment and its interactive and integrative qualities.

More recent studies of blogs in language learning include focused empirical studies with clear objectives. Pinkman (2005) wrote about using blogs as an avenue toward independent learning, which she explained as "assisting learners with developing their language skills outside the classroom" and including "both the ideas of autonomy as well as strategy instruction" (p. 13). Though a study of only 10 English learners using blogs for writing at a Japanese university, Pinkman's research found through questionnaires and interviews that learners responded most positively to the interactive features of blogs and the chance to improve writing skills. On the other hand, participants felt most negatively about technological aspects (picture-uploading) and the time needed to complete assignments. Pinkman also reported that no students had used blogs before the study, and only two students had known what blogs were.

Ducate and Lomicka (2005) describe two distinct projects carried out through blogs at an

American university. One project involved American and French class partner students keeping blog diaries through short spring study abroad experiences. The blogs were maintained over an almost two month period in which the Americans spent one week in France and their French counterparts visited them in the United States. Blogs were written in both French and English. According to post-project questionnaires some students felt the blogs aided both cultural knowledge and reading comprehension. Questionnaires also revealed that few students had used or were aware of blogs before the study. A second project reported by the authors involved second semester German language students reading, writing down new vocabulary, and summarizing (in English) German blogs over a 6-week period. After the six weeks, learners then started writing their own blogs (in English) about a German cultural topic, using the three Ps (products, perspectives and practices) of the National Standards for Foreign Language Learning in the United States. Post-project questionnaires from this second study similarly revealed that students felt both improved cultural knowledge and reading comprehension.

Arani (2005), in an ESP-oriented class at an Iranian medical science university, used weblogs to have students write reactions to medical news, give opinions on medical topics, or give critical reviews of medical articles or books in English. Through surveys and assessments of student weblogs, Arani found that most students thought blogs were more interesting than traditional writing assignments and showed a preference for choosing their own topics when writing on the blogs. Arani also found that only 1 of the 40 students surveyed in the study had used a blog prior to the study.

Fellner and Apple (2006) researched the development of writing fluency through blog use in a seven-day required intensive English CALL-based course for low proficiency and low motivation Japanese university English language learners (proficiency and motivation were deter-

mined by their low test scores, failure to complete key university English requirements, and previous instructors' impressions). According to participant surveys, only 2 of the 21 participants in the study "had ever used computers in the university classroom" (p. 16). Writing fluency, the focus of the study, was defined as "the number of words produced in a single time-frame, together with lexical frequency, irrespective of spelling and content, provided that the writer's meaning is readily understandable" (Fellner & Apple p. 19). Through daily 20-minute freewriting activities each day of the program, they found that participants as a group increased their word output almost fourfold, from an average of 31.5 words to 121.9 words over the seven-day period (p. 20). Participants also almost doubled their use of low-frequency vocabulary and academic words over seven days. Statistics on lexical frequency were determined through use of the online Vocab Profiler application. While a close look at Fellner and Apple's study actually reveals less usage of low frequency vocabulary on average and the study is relatively short term (seven days), it presents an original look at how blogs might influence writing fluency.

Pinkman and Bortolin (2006) focused on how blogs could be a source of L1 cultural and linguistic input as well as L2 output. The participants in the study were 87 Japanese university English language learners, none of whom had previously used blogs. The authors' project consisted of having participants complete a weekly blog entry over the course of a semester, and making comments on other participants' blogs. Eventually, participants were required to read and comment on other blogs found on the Internet. Participants were asked to choose blogs based on their own interests and later present the blogs they chose and commented on to the rest of their classmates. Post project participant surveys revealed that participants felt that their vocabulary had increased and that they enjoyed giving and receiving comments through blogs. Six-months after the study the authors found that

11 of the 87 students had continued posting on their blogs or commenting on others' blogs.

Jones and Nuhfer-Halten (2006) used blogs in multiple ways for their approximately 60 university-level elementary and intermediate level Spanish learners in the United States. Blogs were used for normal class written assignments, free writing, a "scene description" information gap activity (p. 30), and peer-editing. At the end of the semester, 23 of the elementary level learners completed a voluntary survey concerning the blogs. The most frequent positive response regarded blogs' "facilitation of peer review and collaboration" (p. 34). Also, in contrast to previous blog studies mentioned here, participant surveys revealed that "most students rated their "familiarity with computers" very high and their "familiarity with the Internet" even higher" (p. 27).

Mynard (2007) analyzed the blogging activity of 26 female Japanese university students during a 12 week period of study abroad in the United Kingdom. Mynard's objective was to understand their use of blogging as a reflective tool supporting autonomous learning. In the study, students' blogging was encouraged but was voluntary, ungraded, and without guidelines. 22 of the 26 students did maintain blogs, and Mynard analyzed the data specifically to find out if blogs were used to reflect on their English language learning, as reflection on learning is a characteristic of autonomous learning. Mynard's analysis showed that 19% of blog topics did discuss English language learning, only superseded in number by the 26% of topics that discussed activities with friends (p. 4). While there was a high percentage of reflective writing, a lack of post-project questionnaires or interviews in the study left the value and meaning of this reflective writing unclear and in need of further investigation.

Carney (2007) used blogs for two language exchange projects between his Japanese university English language learners and both an American university Japanese language class and an American sixth grade public school reading class.

The focus of the study was to determine whether the blog exchange supported the development of intercultural communicative competence (ICC) (Byram, 1997). Over the course of four months, students on both sides of the exchanges posted weekly on blogs and commented on each others' blog postings. Through participant questionnaires and examination of blog and comment data, Carney found inconclusive evidence of any ICC development. One conclusion of the study was that blogs alone may not support sufficient interaction for the development of ICC.

Hann (2007) used blogs as a motivational writing tool in a semester-long interactive project with 60 low-intermediate to intermediate English language learners at a Japanese university. Through the creation of secret blog groups, Hann sought to find out if student anxiety about their writing being viewed by others, noted in pre-project questionnaires, would be affected through anonymous blogging. In the study, three separate writing classes were involved. Blog groups of three students were formed by selecting one student from each class. Groups were formed based on shared interests expressed in pre-project questionnaires. Over the course of a semester, students wrote weekly on their blogs and exchanged comments. Post-project questionnaires revealed a modest yet meaningful increase in student motivation to write. Learners tended to write idea-based rather than grammar-based comments about their partners' blog writing and some students reported more comfort writing because of writing to an anonymous partner.

The final and most recent study involving blogs is Bloch (2007). Bloch looked at the pedagogical value of blogs in a US university academic writing course for non-native English speakers. Specifically, Bloch followed the blogging activity of an immigrant Generation 1.5 Somali student named Abdullah. Generation 1.5 refers to the fact that a student has some, but not native, experience with English and with the US school system (p. 129). The study examined how teaching about plagia-

rism and other common academic composition class goals might be enhanced and improved, especially for Generation 1.5 students, through the use of blogs. Through inspection of Abdullah's blog entries, Bloch concluded that "by becoming bloggers, [students] increased the amount of time they spent writing, reading, and generating ideas as well as demonstrating a variety of complex rhetorical strategies" (p. 137). Specifically, Bloch found value in blogs used for enhancing literacy and writing rhetoric, both significant goals of the university composition class.

The above literature review is revealing about language learning research involving blogs. To date, the studies' foci are diverse and real learning gains from blogs are still inconclusive. All of the areas mentioned in the above studies merit further research. Various other observations concerning the above studies can be made. Most studies investigate blogs' use for writing rather than for reading or intercultural learning. Since blogs originated as online journals, this is perhaps not surprising. Also, most studies so far involve blog usage within the classroom rather than using blogs to interact with the wider Internet audience. A third, perhaps unexpected, find is that the majority of studies involve Japanese university EFL learners. The focus on Japan may be due to various factors including the availability of computers and Internet connections, the active community of EFL researchers and instructors, and the educators' interest in connecting isolated Japanese EFL learners with the broader Internet community. Japanese students also might be drawn to blogging. Japan has an active community of bloggers; according to Technorati, a worldwide blog and Internet activity tracking site, Japanese is the number one blogging language of the world, followed closely by English (Sifry, 2007). Mixi, the popular Japanese social networking site accounts for much of the Japanese blogging activity, and the growth of blogging in Japan could suggest a cultural link to the kind of communication blogging offers. For what might be a fugacious trend,

no generalization about Japanese EFL blogging should be made yet, but the development of blogging activity, as well as of FLE blogging research in Japan is certainly worth watching.

The above studies offer some insight into how blog use can be applied for language learning purposes, but more significantly the studies expose the relative lack of research on blog use for FLE. Furthermore, the above studies only hint at the transformative power of Web 2.0 as a collaborative and interactive Internet. These concerns will be addressed at the end of this chapter, following a theoretical discussion of blogs' potential and concerns in FLE.

BLOGGING'S POTENTIAL FOR LANGUAGE EDUCATION

This section looks at some theoretical backing for blogging in language learning environments. Language educators may intuitively feel that with blogs they can achieve many traditional goals of teaching writing, reading, and culture, arguably in more interesting ways than in the past. However, as researchers wishing to describe and understand blogging's benefits, the theoretical standpoint is important. Theoretically speaking, blogs offer promise in several key areas of language education including motivation, authenticity, collaboration, and literacy. These four concepts will each be addressed below even though the reality is that these concepts are complimentary and inseparable at times. Also, though for simplicity the following discussion may at times imply that these concepts are inherent to blogs, it is important to keep in mind that in any discussion of language learning, people and context largely determine learning, and the technology itself is just a part of that. Thus, the question of blog use is discussed in the closing section.

A first potential benefit of blogs is their enhancement of learner motivation. Language researchers know motivation is a significant

characteristic in successful second language learners, but it is not necessarily easy to engender motivation in learners. Also, motivation is a complex concept, and descriptions of how motivation works in language learning have varied (Dörnyei, 2001; Gardner, 1985; Oxford & Shearin, 1994, van Lier, 2007). Looking at the concept of motivation broadly, there are many theoretical reasons to believe that blog use has potential to motivate language learners. First of all, in general, many authors have cited the motivating factor of using Internet-based technologies in language education (e.g., Murray, 2005; Warschauer, 1996). Second, blogs offer learners ownership and individual voice. Thorne and Payne (2005) refer to blogs as “I, I, me-me-me” environment “reflect[ing] an individual’s (or group’s) point of view” (p. 382). Indeed, with blogs, learners have the opportunity to “own” a blog site, and most blogs allow users to choose a title for their blog site, change the design of their site, add multimedia, hyperlinks, and of course post their writing. Furthermore, these choices and identities become visible to others, whether members of their classroom or the full population on the Internet. This individual voice and chance to establish an online identity offers learners agency and autonomy, both ultimate sparks for motivation (van Lier, 2007). Learners also experience a third motivating factor of blogs - their interactive, collaborative element. In most of the blog studies reviewed here, the comment feature of blogs is mentioned positively by students, as is peer-review in the one study that mentioned it (Jones and Nuhfer-Halten, 2006). Interaction and collaboration with peers or even the wider Internet community offers learners an important sense of autonomy and the opportunity to reflect on themselves. Campbell (2005b), in a humorous account of an unwanted comment on a student blog, illustrates the fact that the Internet exposes students to all types of people and interaction. While this openness has led to ethical and privacy concerns by some instructors, Campbell points out the value for student autonomy and

communicative possibilities, and he conjectures that such interaction is far more motivating than most conventional textbooks. In short, blog use can be a motivating force in the language classroom when used in a way that encourages and scaffolds student agency and interaction.

A second positive aspect of using blogs is their authenticity as a communicative medium, both as reading texts as well as a writing tool. Exposing learners to authentic language and linguistic experiences has been a cornerstone of language teaching for decades. Many of the blog studies reviewed above mention authenticity as a benefit of using blogs (e.g., Campbell, 2005b; Ducate & Lomicka, 2005; Pinkman, 2006; Ward, 2004), and authenticity has been widely cited as a positive aspect Internet-based activities and information in general (e.g., Kramsch, A’Ness & Lam, 2000; Mishan, 2005; Murray, 2005; Warschauer, 1997). Blog use offers learners authenticity both for finding and interpreting reading texts as well as creating original texts on their own blogs. Here it is important to mention *blog use* as authentic rather than just blogs, as authenticity goes beyond the quality of materials and tasks and involves who learners are and how learners interact and engage with these texts and tasks (van Lier, 1994). For example, as reading materials, it can be argued that blogs (and much of the content on the web) are “authentic” because they have been created for a real purpose within the Internet community (Little, Devitt, & Singleton, 1988). Still, even while such materials might have been created authentically, language teachers must also consider task authenticity (Guariento & Morley 2001). In other words, teachers play a critical role in whether or not activities with authentic materials become authentic or not, and language instructors must keep in mind that though authentic texts may be available via blogs, the kinds of tasks learners engage in are important. Also, while authenticity has many positive connotations for learning materials, authentic texts may present various difficulties (linguistic and cultural) to language

learning students (Murray, 2005). Taking these considerations into account, blogs clearly can offer authentic reading possibilities for learners. At the same time, blogs may be used for authentic L2 writing tasks. Writing tasks with blogs generally involve learners making posts and comments on blogs. Again, given that learners are in fact writing with real purpose for communication, this could be an authentic activity. Thus, using blogs for classroom activities is not, by definition, authentic, but there are, in fact, distinguishing features of blogs such as the variability of audience and the tendency to be interactive, which make them more likely, or at least more simply, used in authentic communicative ways. As mentioned previously, even bloggers in language learning classrooms have a broader audience than only their teacher, as it will include their peers and sometimes the wider Internet using audience. Also, as classroom bloggers receive comments from peers, teachers, and perhaps from others on the Internet, they will be engaged in communication, be aware that their writing is being seen, and be more likely to write in a meaningful, authentic way. By no means is authenticity always concomitant with blogging, but it does appear that blogs have characteristics that tend to yield authentic output by users, and therefore yield authentic input opportunities as well, both exploitable for language learning ends.

A third aspect of blogs that shows great potential is their use as a communicative and interactive medium. The use of Internet technologies for real interactions between language learners and experts speakers of the language they are learning is something that Thorne (2006) sees as a “compelling shift in second (L2) and foreign language (FL) education” (p. 3). This is understandable given the vast new interactive possibilities afforded by Web 2.0, and the fact that interaction and negotiation of meaning have long been viewed as crucial elements of second language learning (Pica, 1994). Also, learning through interaction and collaboration among expert and novice learn-

ers and text is supported by current sociocultural theories of language learning (Lantolf, 2000). Both sociocultural theory as well as interactionist theories have been useful frameworks for studies of Internet-based communication studies (Kern, 2006), and past research studies using a variety of frameworks have shown interactive linguistic or cultural benefits of asynchronous interactive media such as electronic bulletin boards (e.g., Chun, 1994; Zeiss & Isabelli-Garcia, 2005) and email (e.g., Fedderholdt, 2001; Hertel, 2003; Kern, 1995; O’Dowd 2003; Stockwell, 2004; Torii-Williams, 2004). Apart from these benefits, the ease of collaboration via technologies such as blogs can be notably smoother than that of paper-based collaborative writing which can be “slow and clumsy” (Warschauer, 1997, p. 472). Indeed, there is strong reason to believe in the promise of the interactivity afforded on the Internet, but where blogs are considered, the exact nature of interaction and collaboration requires more research. Blogs are communicative and interactive and yet at the same time show many limitations in these areas (Carney, 2007; Nardi, Schiano & Gumbrecht, 2004). As mentioned earlier, blog communication differs significantly from other asynchronous media such as email and discussion forums, both in terms of interactive and linguistic style. From an interactive standpoint, email and discussion forums are designed specifically for interactive communication and collaboration, while blogs conceivably can be nothing more than a personal online diary not directed toward interaction. At the same time, however, within Web 2.0 technologies, the ubiquitous use of blogs as a personal permanent web presence distinguish them as a special hub for Web 2.0 communication and collaboration. They are like the user’s “home” on the web where one can find other information about the user, such as email and instant messenger addresses, pictures, self-introductions, and blog posts. The Web 2.0 concept of the web as a platform where content is constructed on the Internet is truly realized through blogs. A recent

educational play on this concept is Personalized Learning Environments (PLEs). Though not in mainstream use, PLEs combine various Internet-based tools and media, including blogs, to create personalized spaces on the web for learning. While most of the current concepts of PLEs have blogs as a component rather than the focus, blogs do blend well with other Internet tools, and until PLEs are used in the mainstream, blogs may be the best next option. Thus, understanding how blogs fit into an Internet-based collaborative environment merits attention. How do blogs lead to other sorts of Internet-based communication (e.g., people exchanging emails after discovering and enjoying each others' blogs), or how do other sorts of Internet-based communication lead to communication through blogs (e.g., two people meet in a chat room and share each others' blog urls). Blogs' linguistic characteristics are also important, though still require more study. How does blog writing or commenting compare to interaction on discussion forums which has been shown to have a relatively high syntactic complexity and attention to form (Sotillo, 2000)? Herring et. al. (2004) noted the asymmetric interaction of blogs which makes them different from discussion forums, but more linguistic analysis will help decipher the linguistic structure such asymmetric interaction affords. Finally, communicatively speaking, certainly not all blogs are alike. There are many different types of blogs used for a variety of purposes. Because of access controls or the blogging software, some blogs may be visible to large or small audiences. Some blogs might attract readers and receive comments often, while others might not receive many at all. Some blogs are individual while some are group blogs. The asymmetric interactive features and variability of blogs themselves create difficulty for researchers in generalizing about the interactivity of blogs. So, while blogs clearly must have some place in the collaborative Internet-based environment of Web 2.0, this aspect of blogs is also the least understood as a potential benefit to language learning.

A fourth and final positive aspect of blogs is their potential enhancement of literacy. Literacy can have various meanings (see Murray, 2005, p. 189), but in terms of blogs, technological literacy, which Warschauer (2002) refers to as electronic literacies, is considered. Warschauer (2002) describes electronic literacies as follows:

electronic literacies include computer literacy (i.e., comfort and fluency in keyboarding and using computers), information literacy (i.e., the ability to find and critically evaluate online information), multimedia literacy (i.e., the ability to produce and interpret complex documents comprising texts, images and sounds), and computer-mediated communication literacy (i.e., knowledge of the pragmatics of individual and group online interaction). (p. 455)

A first step in blogging is gaining a basic level of computer literacy. While such literacy might be taken for granted in some countries of the world or for certain aged learners, there are still many computer illiterate language learners throughout the world for whom learning to operate a computer is an essential first step. For those proficient with computers, the other electronic literacies become important. Blogs' place in engendering electronic literacies is yet to be studied, but blogs' characteristics, ease of use, and the number of blogs on the Internet make them a very attractive online medium. Specifically, both information literacy, multimedia literacy, and communication literacy seem to intersect with how blogs are used. For reading, blogs can be a valuable source of professional information, but equally or even more likely they are a source of individual opinion or viewpoints, and they also are commonly used for generating business revenue or for advertising. Because of this variability, the critical evaluation of blog sites and the information offered on them is an important reading skill for L2 Internet-users. Determining whether information is professional or personal, and determining the standpoint of writers in online

environments can be a difficult, though necessary skill in the twenty-first century. For writing, even free blog hosting sites offer users a wide variety of options for posting images, videos, sounds and text. Presenting oneself effectively through blogs can greatly influence the Internet-traffic a blog might attract, affecting the amount of readers (and potential friends) a blogger attracts, or in a business environment, the livelihood one earns. If one considers blogs an important technology for establishing one's presence on the Internet (and thereby in society), then it follows that Internet-users should become familiar not only with the blog medium but also with how one develops a presence online through a blog (e.g., what profile data to input, how formally to write in a post, the importance of titles and avatars). While this argument for blogs' literacy value holds true for all Internet-users, blogs are specifically a language-based medium, and in a world where English is quickly becoming an international language and L2 English speakers outnumber L1 English speakers, the importance of blogs in second language learning is no small matter. Warschauer (1998, p. 758) contends that "to know English well in the current era includes knowing how to read, write, and communicate in electronic environments" (p. 758). Indeed, the continuous increase of Internet access around the world and the increase in online communication make the use of English all the more necessary. English is by no means the only L2 for which blogging might be relevant — as earlier noted, Japanese is the most common blogging language, and Chinese blogging continues to grow quickly.

Adding to the notions above about electronic literacies, Kramsch, A'Ness, and Lam (2000) offer the idea that the use of computers fundamentally changes how people think, develop their identities, and interact with text, thus making computer-mediated literacy a new and important development in language education as well as other fields. Kern (2006) also feels that computer-mediated interaction is special, mentioning that the nature

of interaction on the Internet "requires a complexified view of literacy that goes well beyond the skills of encoding and decoding texts" (Kern, 2006, p. 195). Certainly the emergence of Internet-based communicative technologies within the last decade presents new considerations not only for language teachers but for educators in all fields. Blogs comprise only one part of such interaction, but an important part due to their key place among Web 2.0 technologies.

CONCERNS USING BLOGS FOR LANGUAGE LEARNING

While blogs show great potential in certain areas of language learning, there are also significant concerns. In particular, in institutional learning contexts there are three main concerns — assessment, privacy, and how blogs are used.

A first question is about how blogs can be properly assessed, specifically as a writing tool. At first glance, blog writing assessment is no different from other language research. That is, researchers of any language use must develop their own research plan and framework for study. Nevertheless, blogs are language produced often directly on the Internet and thus might pose certain concerns as to how they are produced. Two examples would be plagiarism and the use of online translators. Both of these concerns, while to some extent problematic in traditional paper writing, are just clicks away with blogs and other computer-based writing. Plagiarism, a serious academic concern, is problematic because learners easily can copy and paste to blogs from the vast information available on the Internet. While the modern ease of plagiarizing is somewhat mediated by the equal ease using search engines to find plagiarized text, there is plenty of writing on the Internet (including blogs) which can remain hidden from search engines. The only solace about this concern may be that it is not a new problem, but one educators have dealt with for centuries. Online translators

are another problem with which foreign language educators must contend. Online translators pose a particular problem for foreign language educators working with low-level learners. How can one determine if the often nonsensical language a learner posted on their blog is evidence of their lack of language skill or the work of an online translator? Look at the following excerpt from the blog of a low-level second year English language learner at a Japanese university:

An opportunity to play decreases recently because the plan of all does not match. It is the reason why everybody leaves the hometown. I realize that I became an adult when I become it in this way, but on the other hand become lonely.

This text is selected because the instructor determined much of it was translated through interviewing the student. However, not all of this student's blog was translated. How can a teacher assess such language production? Is such writing authentic? What judgments can be made about vocabulary, grammar or even pragmatics? These concerns will probably only grow with the improvement of machine translation. Both plagiarism and the easy access to online translators signal the importance of teaching learners how to properly hypertext (rather than plagiarize) and employ translators sparingly and correctly. Though these problems will doubtfully be eliminated, they can be a useful educational opportunity for language learners. Writing on the Internet will be a part of their lives, so learning methods and rules for composing legitimate text and finding their personal voice are important.

A second concern about blogs in language learning is privacy. There are various facets of privacy to be concerned about with blogs, and in fact, with most Web 2.0 communicative technologies in education. A first facet is the security of personal information. First, popular social networking sites like *Facebook* and *MySpace* have had a number of well-publicized incidents of online

predators seeking out interaction with minors. This is a concern especially for teachers working with younger children, but must be considered by any educator asking students to register for a blog site. How much personal information is available to those viewing the blogs? When using free blogs on the Internet, educators must also be concerned about what personal information is collected and available to the owner of the blog application. What information is required to sign-up for a blog (e.g., at least a valid email address is often required)? How will that information be used? Fortunately, although these privacy concerns are real, there are a number of ways to deal with such concerns when using blogs. For teachers working with children, a good solution is to have a group blog controlled by the teacher. In other words, students all write on the same blog space which the teacher controls. Students can still log-in and post on the blog freely, but the teacher can be aware of any interaction between students and others on the Internet. If young students are using individual blogs on the open Internet, then aliases should be required and profile information should be minimal. Another solution is to modify blogs so that comments cannot be posted and search engines cannot find the blogs, which some blogs allow you do. Finally, choosing the best blog application is important. If one compares blogs available at Blogger.com versus those available at Edublogs.org, two popular sites used by educators, one would find significant differences in user controls and the larger blog community using those kinds of blogs. Campbell (2005a) presents a still relevant and clear comparison of eight different blog applications for education; the article is an excellent primer for an instructor wishing to begin blogging with students. In short, while some privacy measures obviously counter the potential interactive nature of blogging, this is an important area in which educators must make proper choices based on the particular situations

THE QUESTION OF USE

Kern (2005) argues that as “any given technology may be used in a variety of ways, some effective, some not, it is difficult to generalize about the effectiveness of a technology itself” (p.188). The quote above is perhaps the best lesson about technology in the classroom. Blogging’s potential to enhance L2 learning is great, as was made clear in the previous section. However, it is always essential to remember that blogs, in fact, are never the “agents” for learning. Blog users, language learners in this case, are the agents. How learners use blogs is by far the most important element influencing how use will affect their L2 development. While blogs as a genre encourage certain types of interaction, the greatest influence on how learners use blogs for language learning often is teachers. The importance of teaching has been noted in a number of CMC-based studies (Belz, 2003b; Gray & Stockwell, 1998; O’Dowd, 2003; Mueller-Hartman, 2000). Chapelle and Hegelheimer (2004) note that teachers’ own expertise and understanding of the technologies and the materials garnered through technology are essential, while Kern (2006) supports this notion as well when stating that “teachers must be prepared for new ways of structuring tasks, establishing exchanges, guiding and monitoring interaction, and evaluating performance, not to mention mastering the relevant computer applications” (2006, p. 201). In the past, computer-mediated communication of various forms have not always offered positive communicative results (Carney 2007; Stockwell, 2004; Ware, 2005) and the success or failure of Internet-based communication can be affected by elements including task design, the technologies themselves, or the broader sociocultural and institutional context (Belz, 2002; O’Dowd, 2005).

The above discussion reiterates the important influence language instructor have on the potential of technology, and in this case, of blogs. Blogging’s significant promise as a tool

for language development can only be realized through the conscientious and knowledgeable vision of educators and institutions. Increasing this knowledge and understanding has been one goal of this chapter, and the final section looks toward the future at probable blog trends and critical areas of research.

THE FUTURE OF BLOGGING AND AREAS FOR RESEARCH

Blogs’ future as a medium of communication on the Internet seems well-established, though their future as a contributor to language learning remains unclear. This section first notes one overall trend affecting blogs and Web 2.0 technologies in general, a trend which is meaningful for how blogs might be used for language learning. Second, this section identifies a number of potential avenues for further research on blogs in language learning.

A notable trend in Web 2.0 is that different media and applications are often used not in isolation, but rather blended together for communicative purposes. The fact has been touched on above, but it is emphasized here again that a focus on blogs in isolation does not give an authentic understanding of their presence on the Internet. While originally blogs may have served as simple online diaries, blogs now serve as a hub of communication where plentiful information about the blogger may be found, and links to other sites are common. Blogs host a variety of multimedia and have thus produced vlogs (video blogs), photoblogs, mobile blogs (blogs updated via mobile communication devices), and social networking sites (websites with many features encouraging connections and personal sharing among users). Also popular is podcasting, or posting sound files on blogs or web pages so they can be downloaded from the Internet. These podcasts are often updated, like blogs, and listeners can subscribe to podcasts to have them automatically downloaded whenever a

new podcast is posted. Thus, through podcasting, completely oral blogs are possible and offer many new language learning possibilities. Aside from the different kinds of blogs, blogs are sometimes integrated into websites or wikis, thus creating a new type of site. Because of this blending and development of the original blogs, defining blogs' place in Web 2.0, and thus in language learning, will continue being a challenge when only looking at blogs in isolation. Kern (2006) writes that with the trend toward multimodal interaction on the Internet "we can expect to see communication dynamics continue to change" (p. 195). Indeed, it seems the communication will change, but exactly how it will change is difficult to precisely predict. Nevertheless, this blending and development should offer new opportunities and uses for blogs, or their evolved descendants, in language learning. As researchers continue to examine the language learning potential and benefits (as well as drawbacks) of blogs and blogish technologies, it will be paramount to also understand this development of blogs and the trend toward media integration on the Internet.

This discussion leads to the question of future research. To date, research on blogs, though gradually increasing, has been too contextually diverse to provide solid answers as to how blogs might be best utilized in a language learning curriculum or class. The paramount link between blogs' use and their value for language learning demands that we understand better the best ways to use blogs and that we understand how learners actually use blogs. For this reason, a number of research areas for blogs are suggested.

One area meriting further research is genre analysis of blogs. Earlier in this paper, a short account of the characteristics of blogs was given. Herring's coauthored work on blogs (Herring et al., 2004; Herring & Paolillo, 2006) has yielded a much better understanding of blogs in general, but focused study on the characteristics of second language blogs could reveal significant information for second language researchers and

instructors interested in integrating blogs into their programs. Matsuda, Canagarajah, Harklau, Hyland, and Warschauer (2003) point out that "if people are increasingly writing on the Internet, then this may bring about changes in the nature of writing, and it is incumbent on us to better understand what those changes are" (p. 162). Genre analysis can provide important answers about such changes in writing and the effects of using a medium such as blogs for communication. Understanding the "cultures of use" (Thorne, 2003, p. 40) of different types of blogs will help us understand the kind of engagement learners are making with language. Understanding how L2 bloggers use native speaker focused blog applications, or the stylistic qualities of L2 blogging, or the characteristics of non-English blogs can become clearer through thorough genre analysis. While genre analysis can be a monumental task for the uninitiated, Herring (2007) provides an excellent framework for the analysis of computer-mediated discourse, and the scheme could be elaborated to include classifications for second language learner discourse characteristics. Genre analysis' potential to answer the important question of how blogs are actually being used makes it an essential research area to better understand blogs' place in L2 learning.

Corpus analysis is a second needed area of blog research. Aside from blog corpora used for previously mentioned blog genre analysis studies, the only study to date focusing on a blog corpus is Foss (2008). Foss's study, still underway, will accumulate a significant corpus composed of Japanese L2 blogging data over a two-year period. The study's specific focus is to understand learner productive vocabulary (Foss, personal communication, November 8, 2007). Blogs can offer the corpus linguist a unique window into learner language as the data garnered from blogs differs from other textual CMC data as well as from traditional essays. The research possibilities in this area are plentiful and researchers can look at the significant work already done on learner

corpora to consider how to proceed with such studies (see Granger, 1998; Granger & Tribble, 1998; see also Foss 2008).

Research on the collaborative use of blogs is a third area for further research. This includes studies of blogs for both in-class as well as out-of-class collaboration. In-class collaboration might include using blogs for peer review activities, project development activities, or research work. Such activities could also become out-of-class activities, though out-of-class activities might also include intercultural learning goals offered by collaboration between internationally dispersed classes, or telecollaboration (Belz, 2003b). Studies of this latter area so far (Carney, 2007; Ducate & Lomicka, 2005) have largely been pilot studies, and a clear understanding of blogs' collaborative possibilities, whether in-class or out-of-class, is still elusive. Because the commenting feature of blogs has been cited by many studies as a positive, motivating factor in blogging, understanding how commenting leads to linguistic and intercultural learning as well as understanding how bloggers hyperlink and scaffold language learning via reading and interaction with blog texts merits a closer look. With regard to blog collaboration, one potential site of interest to researchers is www.dekita.org, a site set up by Barbara Dieu, Aaron Campbell and Rudolf Ammann. This site has a myriad of resources including links to student and class blogs worldwide at their Dekita Exchange (<http://dekita.org/exchange>), articles about blogging and other web applications, and other links of interest to teachers, researchers and students. Part of the express purpose of dekita.org includes offering students the chance to "get to engage the public Web instead of being locked into narrowly circumscribed online spaces" (<http://dekita.org/about>). Rather than focusing on connecting language classes via the web, dekita.org focuses on offering learners opportunities to determine their own connections and learning via blogs and other Internet-based media. Therefore, it is a different from the concept of "in-class" versus

"out-of-class" and looks at collaboration via learners' autonomous choices rather than teacher-led projects or tasks.

A final critical kind of blog research that is needed is longitudinal research and critical ethnography (Warschauer, 1998; Kern, 2006; Matsuda et al., 2003). It is notable that all of the blog studies reported in this chapter have been relatively short-term studies. While preliminary findings from such studies are helpful in understanding how blogs may be affecting language learning, strong conclusions are difficult to draw from such task study. As Matsuda et al. (2003) mention:

With most students' Internet-based writing taking place outside the classroom, and with the various forms of computer-mediated writing tending to merge and blur (i.e., creating a Website that one uses as a launch pad for chatting), it becomes increasingly difficult to unravel the nature of computer-mediated writing through short-term classroom based studies. (p.164)

This unraveling could be greatly assisted by detailed ethnographic studies of how individual learners interact with blogs over a long period of time. This was somewhat the perspective offered by Bloch's (2007) study reviewed above. Another benefit of longitudinal and critical ethnographic studies is resolving the important dilemma of how online language production translates to other writing and reading tasks (e.g., essays, emails, research papers) (Kern, 2006). Ethnographic studies following learners' development over a long period of time could expose how online writing and reading influence offline writing and reading tasks.

These four suggested research areas are certainly not exhaustive. Areas researched in previous studies such as writing fluency, using blogs as authentic reading materials, and studying blogs' engendering of independent learning are also viable areas for further study. What is certain is

that more research is needed. Relatively speaking, little research has been done on blogs in language learning. With further research, blogs will be better understood and language instructors and learners will be able to make better decisions as to their best use for language learning purposes both within and beyond the classroom.

CONCLUSION

Web 2.0 environments have rich potential for learning, and blogs can be an important part of this. In this chapter, two ideas should be salient; on the one hand, blog use offers promise for enhancing language learning, and on the other hand, many questions remain about how that promise can be realized. More published research and more attempts at using blogs by language educators will be necessary to understand blogs better. This chapter has also issued caution on two points. First, use is critical when talking about blogs (or other Web 2.0 technologies) and their effectiveness or utility for language learning or other purposes. Proficient instructor's guidance and the context for blog use remain vital ingredients in effective use. Second, to talk about any Web 2.0 technologies in isolation is not realistic. Web 2.0 is not only about people interacting through technology, but it is also about different technologies interacting and integrating with each other. Further research should therefore reflect and exploit this integration and complex milieu. Again, the use of Web 2.0 technologies is paramount in determining their positive effects on FLE. Blogs are a part of this, and in ten, or even five years from now, they will have evolved and blended with other Web 2.0 tools, but their utility in language learning will likely only grow.

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KEY TERMS

CAPTCHA: This term stands for Completely Automated Public Turing test to tell Computers and Humans Apart. CAPTCHA is used to screen comments on blogs, forcing commenters to type a codeword in a text box, thus preventing computer-generated spam comments.

Comment: A feature common to most blogs that allows readers to write messages in response to blog posts by the blogger. Bloggers can often control comments by (for example) requiring that commenters be logged in to the blog application, or be required to provide personal information such as an email address or name.

Facebook: This is a social networking site that allows users to connect together in online communities and share personal information. The site is free and is based on the printed books of students used by many American colleges and universities that allow faculty and students to become acquainted with their community.

Google Reader: This is a social aggregating site that allows users to keep track of all of their favourite web sites. One of its main features is that it allows users to easily share their favourites with others by using an accessible public space.

Hyperlink: A connective link from one web page to another, or from one place on a web page to another place on that same page.

Social Networking Site: A blog site that promotes the sharing of personal information and has built in features for connecting with other users so as to promote communication and exchange. In contrast to blogs, social networking sites generally contain more multimedia and the capacity to add friends so users can participate in a community and share images, video and textual information easily.

Trackback: A feature on some blogs that notifies a blogger that someone has hyperlinked to their blog. The purpose of this feature is to increase connectivity and create relationships between blogs.

Chapter XVII

Improving Learners' Speaking Skills with Podcasts

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ABSTRACT

In particular, this chapter looks at the potential role of Web 2.0 technologies and podcasting to act as a transformational force within language education. Using a case study approach, the researchers describe a project to create a series of podcasts called “Splendid Speaking” based on authentic speech recordings of English language learners from around the world. The aim of the project was to utilize a Web 2.0 technology, podcasting, to improve the speaking skills of upper-intermediate to advanced level learners. Central to this project was the question of how popular a podcasting service would be with the target audience of English language learners and teachers. The Splendid Speaking podcasts were enabled by the use of Skype, a free Internet telephony system, and other low-cost and free software to edit and publish the podcasts. It is hoped that teachers and curriculum planners reading this chapter will be able to evaluate the possibilities of creating podcasts to deliver elements of their language courses.

INTRODUCTION

The chapter begins with a discussion of current e-learning trends before explaining Web 2.0, looking at the features of this technology and its use by so-called “digital natives” (Prensky, 2001) within the realm of education. The chapter will then go on to look at the relatively short his-

tory of podcasting and the use that practitioners are making of this in education. Following this, the chapter will provide a research study of the Splendid Speaking podcasts, a learning resource aimed at upper-intermediate to advanced students of English. The chapter will outline the steps necessary to create a podcast: creating the source material, recording, editing and finally publishing

the podcasts. Although there are a growing number of informative resources outlining the process of creating a podcast, the aim in this chapter is to detail, via a case study approach, the realities in terms of time and technical requirements. In particular the researchers will explore the demands of using “user-generated content” to create learning input, in this case, recordings of non-native speakers of English made using Internet-based telephony software, or VOIP. It is hoped that this approach outlines the pedagogic skills required to enable teachers and course planners to decide if they wish to produce their own podcasts. The chapter ends with a frank assessment of the success of the project, lessons learned, as well as an overview of current and future areas of research in the area of educational podcasting.

BACKGROUND

The Internet and Learning

The Internet has had a tremendous impact on learning and brought new opportunities for learners to find and retrieve information, access learning resources, as well as to connect with other learners. However, since 2004, media commentators have observed that the Internet appeared to be entering a new phase of development with a newer range of applications, tools and services, collectively known as Web 2.0, and exemplified by blogs, wikis, podcasts and video-sharing platforms. Therefore it was only a short time before educators began to consider the impact of web 2.0 on learning.

Beyond E-Learning

The first phase of e-learning generated much excitement, and with some justification. Teachers and learners were able to use technological tools such as: interactive quizzes to test knowledge; search tools to retrieve information online; as well

as discussion boards, email and live chat, which facilitated communication. These tools certainly had the potential to enhance the learning process, by offering more flexible access to the curriculum and providing opportunities for support outside the classroom.

However, Downes (2005) asserts that far from being radical, most e-Learning to date has generally followed a similar model to traditional education. Whether e-learning is used to support face-to-face teaching or delivered as a “stand-alone” course, he states: “Content is organized according to this traditional model and delivered either completely online or in conjunction with more traditional seminars, to *cohorts of students, led by an instructor, following a specified curriculum to be completed at a predetermined pace*” [our emphasis] (para 7). He cites the way that a course syllabus and learning content is often packaged up and delivered to the learner via a Virtual Learning Environment (VLE) or a Learning Management System (LMS), rather like a coursebook or lesson plan. He argues that the next phase of the web will bring about a “social revolution” with important implications for education.

Web 2.0 and the Development of “e-Learning 2.0”

Web 2.0 is described by Anderson (2007) as “a more socially connected web in which people can contribute as much as they can consume” (p. 4). Web 2.0 provides a collection of technologies and services such as blogs, wikis and podcasts, along with sites such as Flickr and YouTube which allow users to upload media content. The wider community or network can link to, remix or re-purpose this media content before once again sharing with the network. A simple example of this is a blogger who embeds a video from an external source such as YouTube into their own blog and presents it within an entirely new context. Subscribers to this blog will then be alerted to new content through the use of RSS feeds.

Downes (2005) believes that we are witnessing a new trend in e-learning, what might be termed “e-learning 2.0,” which is characterized by “a greater emphasis on active learning, creation, communication and participation playing key roles” (para 13). Downes regards e-Learning 2.0 as synonymous with the move from the “Read” web to the “Read/Write” Web of Web 2.0, something he describes as: “shifting from being a medium, in which information was transmitted and consumed, into being a platform, in which content was created, shared, remixed, repurposed, and passed along” (para 21).

The ability of individuals to utilize these tools and networks has given rise to a new theory of learning. Siemens (2006) argues that learning is a “network phenomenon, influenced (aided) by socialization and technology” (para 5). His theory of “connectivism” describes the successful learner who can recognize patterns that appear to be hidden creating meaning and forming connections between disparate networks and individuals (Siemens, 2005).

The “Digital Native” Learner

According to some commentators, e-learning in its traditional form will not satisfy the expectations of today’s “digital natives.” This is a term coined by Prensky (2001) to describe a generation who has grown up immersed in technology and is proficient in its use. For Prensky, digital natives “think and process information fundamentally differently from their predecessors,” a generation he describes as “digital immigrants” (pp. 1-2). The former are able to process information and multi-task easily, and feel comfortable working within a network of others. The implication is that “traditional” education of the “digital immigrant” generation is under-prepared and ill-equipped to cater for the learning expectations of the so-called digital natives. He argues that “our Digital Immigrant instructors, who speak an outdated language (that of the pre-digital age),

are struggling to teach a population that speaks an entirely new language.”

The extent to which “digital natives” are making use of Web 2.0 and other technologies has, however, been called into question. Research into the use of technology by the younger generation has shown that the skills in using these tools is far from uniform. Kvavik, Caruso & Morgan (2004) have shown that whilst this generation have indeed bought into technology by owning PCs and mobile phones in large numbers, only a small proportion were actually creating content and a significant proportion of students had lower level skills than might be expected of digital natives. Bennett, Maton and Kervin (2008) agree that claims about the significance of “digital natives” has been greatly exaggerated. Furthermore they argue that this simplification has led to an “academic moral panic” with regards the pressure on educators to cater for these new learners by embracing Web 2.0 technologies. As Bennet et al. (2008), argue, there would appear to be a need for research into the question of whether a distinct new generation of students have emerged with sophisticated IT skills and learning preferences that are in conflict with traditional educational models.

PODCASTS: A WEB 2.0 TECHNOLOGY

An Overview of Podcasting

Podcasts are an example of a web 2.0 technology, and are also known as audio blogs. The term podcast is a blend of the brand name iPod (a type of MP3 or Digital Audio Player) and the word broadcast. In essence, podcasts started as radio-style broadcasts that were made available on the web. A podcast can be listened to over the Internet or downloaded and listened to offline. Despite the etymology of the term “podcast” the user is not dependent on the iPod exclusively to listen to a Podcast. Podcasts can be accessed

on any number of devices, including dedicated MP3 players, PCs and laptops and, increasingly, mobile phones.

It is important to state that podcasts are not simply audio files put on the web. A key feature of podcasts is the opportunity to subscribe to future episodes through the podcast's "RSS feed." Users copy the feed, which is essentially a web link, into a "podcatcher." This might be software installed on the user's computer such as Apple's iTunes, or a web-based service such as Google Reader or Netvibes. Once the RSS feed has been added, the user is notified of any new episodes as they become available. In the case of installed software, new podcasts can be automatically downloaded when the software is activated.

Growth of Podcasting and Predictions for Future Growth

Podcasting is a relatively new phenomenon. Even as recently as 2004, they were almost unheard of but since then their growth has been exponential. Figures from feedburner, (feedburner.com) a service that manages podcast audio feeds showed rapid growth throughout 2005 and early 2006.

The most recent research into downloads from Wizard Media, owners of several high profile podcasting services, showed that the 1 billion download mark had been reached in 2007 (Kirkpatrick, 2008). Questions remain, however, as to how many subscribers actually listen to the podcasts they have downloaded. In the same way that an individual can subscribe to an email newsletter and ignore it when it arrives, so might podcast subscribers choose not to listen to the podcast. However, growth seems incontrovertible and podcasts look set to stay for the foreseeable future.

Part of the reason for this phenomenal growth, as Glasser (2007) argues, is that the barrier to entry as a podcast producer is very low. A podcast producer need only have a microphone, computer, simple-to-use-editing software and a podcast host.

Pedagogical Uses of Podcasting

With the growth in ownership of mobile devices such as MP3 players and PDAs along with the penetration of broadband Internet connectivity, educators have become increasingly interested in how content delivered through these media might enhance the learning process. Thorne and Payne (2005, p. 385) point out how podcasting "leverages habituated behavior" as students are already in the habit of downloading music and listening to it on their MP3 players. They argue that podcasting allows for "seamless integration of in-class and out-of-class activity and materials."

Podcasts have great potential for learning precisely because they are so flexible. Once downloaded to a portable device they can be accessed on the move as well as at one's desk. Podcasting has been identified as an exciting new technology for all sectors of education. Research undertaken in America has shown that only a minority have listened to podcasts (one in ten). However, of this figure, listeners are far more likely to be students (Webster, 2006). Within schools it has been described as a means of devising cross-curricular activity, providing alternative teaching approaches or used to promote personalised learning (Jobbings, 2005). In Higher Education, there is evidence of podcasting being used for the flexible delivery of recorded lectures, for specific listening practice, and as an alternative way of tutors giving student feedback (McElearney, 2006). Podcasting also offers exciting opportunities for student-generated content whether as an outlet for creativity (Thorne & Payne, 2005), as evidence of learning or to further develop the learner's e-skills.

As Anderson claims for web 2.0 in general, podcasting has two important features: the first, the ability of users to create and publish their own content (sometimes referred to as "user-generated content" or UGC) and second, the possibility of mass user participation and interaction through the comment feature that is generic to all blogs, whether text, audio or video-based.

Literature on the educational use of podcasting is limited, but growing, and research into pedagogic models of podcasting is being undertaken within the UK Higher Education sector as part of the Informal Mobile Podcasting And Learning Adaptation (IMPALA) project. Research deliverables and outcomes promise the educational community access to pedagogical models, exemplars and guidelines for podcasting, which will hopefully lead to more widespread use of this emerging technology. Evidence from the USA shows that a common use of podcasting in higher education is to offer the opportunity to listen to recorded lectures, although there is growing evidence of more innovative uses of this technology including using them as tasters for future subjects, explaining difficult concepts or to bring in other people to offer other points of view (O'Bryan & Hegelheimer, 2007).

Podcasts in Language Learning

As discussed by Joseph (2005), podcasting has the potential to augment other language learning activities. For example, they can provide a valuable source of listening input, with teachers using podcasts to supplement coursebook topics, or learners choosing podcasts to reflect their own interests. Thorne and Payne (2005) point out how podcasts offer language learners access to listening material that diverges from the journalistic genre available through radio. In his article "Podcasting," Travis (2007) suggests additional ideas, such as having students transcribe podcasts for dictation practice, or using podcasts as the basis for project work,

There are some podcasts that are specific to English Language learning. Examples can be found at (businessenglish.com), which offers a series of podcasts for learners of Business English, and (setttexts.podomatic.com), aimed at Cambridge exam candidates studying the optional literary reading text. Others can be found via the main search engines, or specific podcasting direc-

tories. Travis (2007) presents a further discussion of how ready-made podcasts such as those above can be incorporated into the curriculum.

Joseph (2005) argues that "Teachers who are more technologically-inclined may get their students to make and distribute their own podcasts" (2005). An example of short teacher-and-student presentations with an added quiz factor can be found at: (oxfordenglishcentre.podomatic.com). A good example of a student-generated radio-show podcast can be found at: (bardwellroad.podomatic.com).

To sum up, podcasts can be used as an additional source of authentic listening input inside and outside the language classroom. Furthermore, some teachers may wish to explore creating podcasts with their students and publishing them to a wider audience. Indeed, O'Bryan and Hegelheimer (2007) argue that podcasting offers language teachers the opportunity to transform instruction, suggesting that this technology is simple enough to enable teachers to integrate CALL into their teaching more successfully. The remainder of this chapter outlines a project to develop a podcast using learners as the main contributors.

THE SPLENDID SPEAKING PODCASTS CASE STUDY

This section describes the development of a series of podcasts for the Splendid Speaking website at (splendid-speaking.com).

Rationale for the Project

The researchers' own experiences within education have shown that a student's general motivation, maturity and inherent interest in technology have all played a significant role in the degree to which they have adopted new Web 2.0 technologies for educational purposes. It is certainly the case that technologies make it very simple for students to create their own blog, to network with

others at a distance and to participate in PC to PC communication outside of class time. However, in the researchers' experience, this does not always mean learners embrace these opportunities.

The researchers had considerable experience of working with a remote audience through a website portal (flo-joe.co.uk) and felt that Web 2.0 technologies, and podcasting in particular along with the ubiquitous use of MP3 players offered a significant opportunity for the creation and delivery of new, innovative content. The researchers had a particular interest in exploring whether podcasting could help overcome the difficulties posed by the remote relationship self-study learners had with each other through a website portal. The following questions were of particular interest:

- How simple would it be to connect with learners to carry out interviews, whether between the researchers and individual students or between pairs of learners remote from each other?
- How technically challenging would it be to transform these interactions into podcasts for the wider community to listen to?
- Would learners and teachers be interested enough in these podcasts and have the technical ability to subscribe and download them in significant numbers?
- Would listeners take the opportunity to offer feedback through the "comments" feature of podcasting?

A successful project would show that the above steps could be undertaken by all parties through the use of various Web 2.0 tools and services.

Background to the Target Audience

It is natural for adult learners preparing for advanced speaking examinations like the Cambridge Certificate in Advanced English (CAE), the Business English Certificate (BEC) or IELTS to feel

daunted by the examination situation. Although these examinations have a common structure (introducing oneself, a short presentation and role-played discussion/negotiation) many learners are nevertheless nervous. Users of discussion forums like Flo-Joe for Cambridge exam preparation post messages to ask teachers and fellow students for advice, and also try to find other learners to connect with. The researchers decided to develop a series of podcasts, featuring advanced learners performing examination-style speaking tasks carried out with the support of Internet telephony tools. The focus of the podcast was two-fold: firstly, to help the participating students improve their confidence through structured speaking tasks and secondly to demystify the examination for other students who could download and listen to the recorded speaking tasks as podcasts.

What follows is a description of how the researchers prepared the source material and recorded, edited and published the "Splendid Speaking" podcasts.

Developing Source Material

The first task was to come up with a series of speaking tasks which would promote interaction between speakers. The tasks were of two main types: monologue and dialogue, and were based on the types of tasks examination candidates are required to undertake in speaking examinations, including getting-to-know-you activities, short presentations and finally discussions or role plays. In addition to their own materials, the researchers made extensive use of sample examination papers freely available on examination board websites. Typical individual long-turn tasks included: "Give a one-minute presentation on a celebration in your country" and "Give a two-minute presentation stating the importance of having good role models in life." Typical paired role-plays or discussions would last between 2 and 4 minutes and included subjects such as: "Participate in an interview talking about the job you'd like to

do and explain what skills and abilities a person needs to work in this area” and “Find out more about an important cultural or religious festival in your partner’s country.”

Each speaking task would additionally focus on a particular speaking skill. These included the following:

- Memorable introductions
- Active listening
- Responding to questions
- Making spontaneous talks
- Signposting talks
- Describing graphics
- Expressing and justifying opinions
- Reaching agreement

Where appropriate, participants would be given access to materials from the researchers’ own published e-book “Splendid Speaking On-line Course,” which focused on many of these skills.

It was also decided a few weeks into the project that listeners would benefit from full transcripts of the recordings and these were also made available from the Splendid Speaking website along with listening comprehension questions.

The second challenge was to find students who would be willing to participate. The offer of free speaking practice with a native speaker and examination expert was advertised on English language discussion forums aimed at advanced language learners, such as the authors’ own Flo-Joe website (www.flo-joe.co.uk). Invitations were posted on discussion groups like (swissenglish@yahoo.com). Also, calls for participation were sent out to Flo-Joe and Splendid Speaking’s own email mailing lists. The learner could be from anywhere in the world; the only stipulation was they must be able to use Skype, a free system (Voice Over Internet Telephony) that enables two or more people to speak over the Internet from one PC to the other.

An online timetable was created with specific time slots and students were invited to sign-up to an allocated slot by email. Two types of slot were available: a one-to-one interview or presentation with the coordinator; and one with the coordinator and another student for a two-way discussion or role-play.

A DISCUSSION OF THE TECHNICAL REQUIREMENTS

VOIP Software to Make PC-to-PC Phone Calls

At the commencement of the project two main VOIP services the authors were aware of were Skype and Gizmo, both of which enabled users to communicate by voice from one PC to another. Other services now include MSN/Windows Live Messenger and Googletalk. Both Skype and Gizmo required the user to download software to their computer and both were robust and had received good feedback from users. The decision to use Skype for the project was made because of two factors. Firstly, it was widely used by non-native speakers and its strong brand recognition meant it was more likely to be adopted by students new to Internet telephony. Also, the quality of the audio was found to be extremely good and sufficiently clear to be able to use recordings for podcasting. Another reason for choosing Skype was the ability to make recordings of conversations very simply through the use of a third party product called Powergramo. There are issues to be addressed when using Skype from within an institution, which are covered in “Reflections and lessons learned” below.

Downloading and installing Skype was very straightforward. The Skype website offers users a thorough help section which answers most questions. The free options in Skype, namely calling other Skype users one-to-one or through the conference facility for pair or group interviews, were

sufficient for the project requirements and there was no need to pay for additional services.

Recording and Editing Tools

The original intention was to use Audacity, an open source audio editing tool, to edit the podcasts. Although this software can also be used to record VOIP conversations and presentations through Skype, it was decided to use a reasonably-priced third party product called “Powergramo” for its ability to record conference calls. Once downloaded and installed, Powergramo appears within the Skype interface and records automatically when connections are made. Audacity, which is widely used in the podcasting community and which has a large user community offering support, was used to edit the recordings. Table 1 compares Audacity and Powergramo.

Hosting and Publication of the Podcasts

The next decision for the project concerned the hosting and publication of the completed podcasts. A dedicated site called Splendid Speaking was available (splendid-speaking.com), which the authors were using to promote a commercial subscription service along with freely-available resources to learners and teachers. Hosting the podcasts on the same server would have been a logical solution but this was not done due to band-

width restrictions. The team were projecting up to 1,000 downloads a day during the timescale of the project and this would have cost a substantial sum of money.

A second option was to host the podcasts with a specialist podcasting hosting service. This option offered several advantages. In the longer term the researchers were keen to promote the idea of podcasting to learners as a means of showcasing their speaking skills. For this to happen the authors needed a system that teachers and students could adopt themselves easily and without too much technical expertise. Previous experiences of online training, whereby language teachers created podcasts of their own, had shown Podomatic (Podomatic.com) to be very user-friendly and allowed teachers to be successful (Stanley, 2006).

Hosting services also offer user statistics including subscription figures and download numbers, information which was crucial if the team were to measure the success of the project. Finally, there was the issue of cost. The hosting service the authors were looking at, Podomatic, offers a free service, which was more than adequate for small scale use. However, because large numbers of downloads were expected within the timescale of the project it was eventually decided to pay for the service’s “Pro” account, at a cost of US\$90 a year and which could be upgraded if necessary. The account was set up and can be found at this address: (splendidspeaking.podomatic.com).

Table 1. Comparison of Audacity and Powergramo

	Audacity	Powergramo	Powergramo (Registered user)
Cost	Free download	Free download	\$25
Recording one to one Skype conversations	√	√	√
Recording group conversations (conference call)	X	X	√
Editing recordings	√	X	X
Exporting recordings to MP3 file	√ with extra plug-in	Now available	Now available

Although the recordings are hosted at Podomatic, the authors wanted visitors to the dedicated Splendid Speaking website to be able to listen to the weekly podcasts on this website rather than directing them to Podomatic. One method of doing this is to embed a Flash MP3 player for each podcast episode within the HTML of a webpage, with a link to the MP3 file on an external server. The podcast then plays as if it is installed on the user's own server. Another option is to use the Podomatic player, which can be embedded within a webpage on another website in a similar way. The difference here is that with the Podomatic player, all episodes appear in the same player listed one below the other rather than within separate posts. The researchers eventually opted for a third option, namely to install Wordpress, an open source blog, along with the Podpress plugin, which allows the user to embed podcasts from within Wordpress. This allowed the researchers

to present the podcasts on the Splendid Speaking website within a blog interface, allowing users to leave comments there as well as at Podomatic. Podomatic therefore hosted the podcasts, supplied the podcast's RSS feed and served all downloads. Irrespective of whether listeners activated the download from the Podomatic site or via Splendid Speaking, downloads would register in the Podomatic statistics, giving the team an accurate reflection of user figures.

The Skype Interviews

Between October 2006 and May 2007 the authors carried out 40 speaking tasks with learners of English using Skype. Of the 40 recordings 29 were eventually turned into podcasts. Of the 11 that were not used, this was due in the main to the poor audio quality of the recordings. Two students suffered excessively from nerves and subsequently

Figure 1. Screenshot of the Splendid Speaking podcasts hosted at Podomatic.com



Figure 2. Screenshot of the Splendid Speaking website at splendid-speaking.com



changed their minds about being featured in a podcast, which the authors respected. It is worth noting here the importance of permission. All participants were asked to give permission before the recordings were made. This is proper practice, and under no circumstances should recordings of VOIP enabled conversations be made without the knowledge of the participants.

Learner Preparation

Once a student had signed up they were sent preparatory learning material in the form of relevant components of the Splendid Speaking online course, written and published by the researcher, along with the speaking task itself. The task was often delivered in the form of a web link to a handbook on an examination board website. The student was asked to prepare his or her talk or role-play focusing on a particular speaking skill (see above). Although students preparing for examinations are given little or no time to rehearse,

it was felt that being recorded for Internet broadcast could be a daunting prospect and one which deserved some time to prepare. However, it was made clear to the learner that set speeches would not be appropriate and that they should simply make notes of what they were planning to say. At the allotted time, contact was made with the participant(s) either individually as a one-to-one conversation, or through the conferencing facility if two students were to be involved.

To begin with, a few minutes were spent speaking informally before starting the task. At the end of the interview, general feedback was given on the student's performance before the Skype call was terminated. However, this informal feedback was done confidentially and did not appear in the completed recording.

The Editing Process

Each podcast had a similar structure:

- An opening jingle recorded by a professional voiceover artist.
- An introduction to the podcast by the host/coordinator, describing the speaking task and the skill(s) being practised. Listeners were also given a task to listen out for specific points such as the speaker's ability to carry out certain tasks and any errors the listener hears in the speaker's use of English.
- The speaking task itself.
- Analysis and feedback from the host/coordinator on good and weak points.
- A closing jingle.

As Travis (2007) explains, the “live” feel of semi-scripted or spontaneous recordings can make them more interesting to listen to. However, Deubel (2007) highlights the importance of good quality recordings, including the need for preparation of “scripts” before recording, as well as editing prior to publishing. The researchers decided that the introduction and feedback sections of each Splendid Speaking podcast would be scripted. Firstly this would mean there were fewer mistakes and less need for editing. It was also felt that the points being made about the interviewee's performance needed to be presented in a very structured way and as clearly as possible. Finally, the script could also be recycled as a transcript, leaving just the Skype interview to be transcribed following the conversation.

The scripted introduction was recorded first. The Skype recording was then edited, cutting out the informal conversation at the start and the feedback at the end leaving the task itself. The researchers listened to the recording several times to identify good examples of language use and speaking skills, as well as language errors. These sections were all copied and saved in a separate file to be mixed later with the feedback section. With the feedback section recorded all three files were mixed together and saved as a single MP3 file using Audacity. This was then uploaded to the Podomatic website. Written notes relating to

each podcast were added to the podcast post and listeners were invited to leave comments.

The final stage involved notifying listeners of the new episode. This was done in two ways:

1. Those who had subscribed through the RSS feed could download the podcast automatically or be notified through their web-based podcatcher.
2. Subscribers to the Splendid Speaking newsletter were notified by email as soon as the podcast was available.

EVALUATION

The criteria by which the success of the project would be measured were as follows:

- How successful it would be to connect with learners to carry out interviews, whether between the researchers and individual students or between pairs of learners remote from each other.
- How technically challenging it would be to transform these interactions into podcasts for the wider community to listen to as models.
- How far learners and teachers would be interested enough in these podcasts to want to subscribe and download them in significant number, and their technical ability to do this.
- The extent to which listeners would use the “comments” feature to offer feedback to the learner.

Connecting with Learners for “Interviews”

In order for the project to be deemed a success, at least twenty-six high-quality recordings of tasks were needed. More interviews than this, in fact, had to be carried out in order to allow for students

who subsequently changed their mind about being broadcast or for when there were technical difficulties in recording.

Through the promotion of the project through existing user networks the target was easily met. However, as the project progressed requests for interviews grew to the point where the coordinator decided to introduce a “first-come first-served” appointment system. Some interview appointments were missed, which was sometimes due to confusion about time zones. In the main, the quality of the connections was sufficiently clear for recordings to be made, although conference calls (i.e. more than two speakers) were slightly more problematic.

Creating Podcasts from Source Material

Technically speaking, creating each podcast proved to be quite straightforward, although the entire process of planning, interviewing, editing, transcribing and publishing required around 4-5 hours per podcast. This was due to the chosen format of the podcast, which included excerpts from the interview being interwoven with the coordinator’s feedback, a process which was quite time consuming. The main difficulty was with the quality of the recordings of conference calls. Several such calls involving two students and the coordinator had to be postponed at various times during the project due to poor connections. Some of those that did take place resulted in poor quality recordings which were not sufficiently clear to be used as podcasts.

Teacher and Student Reaction

Feedback was ascertained by:

- The number of downloads per episode, measured on a daily basis.
- Comments received from participants about their experience of taking part.

- Feedback from listeners concerning their view of the podcasts.

In addition, the researchers were interested in evidence of listener interaction with the podcast through feedback to the speaker using the podcasts’ comment feature.

The Splendid Speaking podcasts have proved to be extremely popular. By the end of the project in May 2007 the podcasts were receiving on average over 1,000 downloads a day and at the time of writing (February 2008) this has increased to over 1,200.

For the learners involved in the Skype conversations the feedback was very positive. This was evaluated by asking each learner to reflect on the experience and to send a short email offering feedback. All apparently enjoyed the experience, and some went on to make friendships with speaking partners.

Participant feedback suggested there was potential awareness and interest in networked learning. Some appreciated the global nature of the project, especially showing an understanding of the project’s aims:

“It creates a worldwide web of English learners who share the same interest in improving their speaking skills.”

“The Skype program is a great tool but I must say too that if it weren’t for the community created by the team, it would not be possible to do half of what was done to practise my speaking. Splendid Speaking has created the very opportunities to meet CAE trainees willing to enhance their speaking. I’m definitely keeping good memories about all this.”

Others commented directly on the usefulness of the experience for their own preparation for Speaking examinations:

"I find the Skype project a very good opportunity to improve my speaking and to overcome the anxieties about the exam. The techniques that are practised help a lot."

"Taking advantage of Skype as a way of preparing for the exams is a brilliant and innovative idea!"

One of the features of the podcast is the ability for listeners to leave comments, a facility that is a key feature of Web 2.0 technology, and both English language teachers and learners were invited to leave comments at the end of each podcast recording.

As well as general praise, ("I find your podcasts very helpful and I enjoy listening"), there are also comments that show learners reflecting on their own language acquisition strategies. For example, "The feedback is very useful, and trying to find the errors is a challenging task for me. It's very good that we heard two times each clip with mistakes but we need more time between them for reflection."

Feedback given by listeners to speakers was invariably supportive and sometimes led to discussion between listeners:

"I'd like to congratulate Stefania's nice presentation. I just would like to point out that although she expressed herself very well, she should pay close attention to her pronunciation since her Italian has a great influence on her English mostly when it comes to the vowels and the 't' sound."

"I've just listened to Stefania's talk and I don't think there is much Italian language transfer, as the previous person that wrote pointed out. I have studied Italian as a second language at the C2 level and I come from an Italian family and I know how difficult is for Italians not to let their mother tongue interfere when speaking English."

In total, 18 of the 28 podcasts received feedback through the comments feature on the Splendid Speaking website blog with a total of 59 comments in all. Unfortunately, due to a server crash at the hosting site Podomatic, comments made there were lost and there are no records of numbers posted. However, visitors were encouraged to post at splendid-speaking.com and it was this site that received the bulk of comments posted. When compared to the number of downloads that were taking place each day, the researchers expected to see more in the way of comment feedback and further research is needed to find out why listeners were not more inclined to post their views more frequently.

REFLECTIONS AND LESSONS LEARNED

This section expands on the number of valuable lessons that were learned from the project.

Ways to Enhance the Learner Experience of Podcasts

Using podcasts as a listening tool can be enhanced even further by the supply of a transcript of recordings. When the podcasts were started the researchers held the assumption that advanced learners would have no need for a transcript to aid their understanding. However, it was soon realised from other models of podcasting (for example, from the world of business and marketing) that transcripts were commonly provided, and offer useful additional support. Indeed, they are useful generally in catering for those who have a strongly visual learning style. The authors were also receiving emails from users who were enquiring about the availability of transcripts and so the decision was made to supply these to listeners.

Following feedback received from users, it was also decided by Episode 5 that listeners would benefit from having listening tasks in addition

to the general questions that were asking them to evaluate the speaker's performance. Consequently, comprehension questions were added to the transcripts.

Concerns About the Use of Skype

Some universities are worried about the use of Skype for fear that it consumes excessive bandwidth. Skype's use of bandwidth means that communication between the caller and calling endpoints can be re-routed through another Skype client not otherwise involved in the call. When a third party client is used in this way it is known as a super-node. As institutions are likely to have a good connection to the Internet it is likely that the institution will find itself being used as a super node:

Any Skype client that discovers it is well connected to the Internet is likely to offer itself as a super-node by advertising its connectivity to other Skype users. As a result, a PC that has access to significant bandwidth and runs the Skype client software may handle voice communications to and from clients all over the world, not just those originating or destined for the local user of the PC. Networks with super-nodes may experience large flows of inbound and outbound traffic that have no connection with any local user. A user who installs Skype with the default configuration permits his computer and his organization's bandwidth to be used by any other Skype user. (UKERNA, 2006, p. 1)

Due to problems of bandwidth usage JANET, a private British government-funded computer network dedicated to education and research, and which connects all further and higher education organizations to the Internet, recommends institutions adopt a managed approach to its use within the institution.

Time Requirements for Teachers

There are a number of issues that understandably concern teachers, and demands on their time is a major issue. As explained above, the authors allowed approximately 5 hours per episode, which included setting up appointments, carrying out the online interview, discussion or role play, editing the recorded file, transcribing the recording and publishing. This is mentioned not to deter potential podcasters but to give a realistic view of the time constraints involved. The editing process for Splendid Speaking was particularly time-consuming due to the amount of copying and pasting of student input for the feedback section. Clearly time can also be saved if transcripts are not provided.

The technical demands of podcasting are not too high and not beyond most teachers and educators. A significant number of podcasters use dedicated hosting services such as Podomatic to publish podcasts due to the simplicity of the publishing process. These services allow teachers to experiment with podcasting independently without the need for support from their institution. Whilst time constraints are a common and very real barrier to the adoption of new teaching practices, the importance of utilizing new technology has been anticipated by Campbell (2005). While Campbell is aware of the concerns that time-pressed academics may have about learning yet another set of technical skills, he reminds us of the need to meet the expectations of our "digitally fluent" students, stating that: "we in higher education do [students] a disservice if we exclude their creative digital tools from their education" (Campbell, 2005, para 12). The ease of use that these services offer may potentially lead to greater adoption of this technology.

Reliance on Third-Party Hosting

Despite the advantages of third party hosting solutions, practitioners should be aware of potential

issues that can adversely affect their podcasting projects if a remote rather than an institutional hosting solution is used. The podcast is dependent upon the reliability of the hosting service and major crashes can occur without any recourse to local technical support. The Splendid Speaking podcast suffered a significant crash during the autumn of 2007 when following a server failure at Podomatic, all recordings were lost and had to be uploaded and published as new. While the hosting service were extremely helpful and worked long hours to save as much of the work as possible, this nevertheless led to the authors spending a great deal of time putting things right. Obviously during these few days the podcast was unavailable.

A second issue to consider when using a third party hosting service is the fact that other publishers are sharing the same webspace and visitors to a project podcast are likely to come across other material deemed inappropriate. This has led to some institutions banning the use of podcasting and blogging sites altogether, making access to projects problematic. Finally, as with blogs generally, podcasts require a degree of management. Comments left by visitors to the website need to be moderated. The Splendid Speaking podcasts have periodically suffered from spam in the comments feature of the service. Once again, a good hosting service will act to limit this but the podcast author should be prepared to monitor the situation as well.

FUTURE TRENDS

The interest in podcasting looks set to grow. The implications for teachers and language teachers in particular are that they need to be aware of the availability of podcasts as a minimum since they can be a valuable source of listening material. As teachers increasingly look to use these free resources from the Internet they will need to know how to search for and evaluate podcasts.

Teachers will also need to be supported in gaining the skills required in developing podcasts of their own or to support their students in creating podcasts.

A particular research project looking into the educational use of podcasts poses some interesting questions. These include the specific benefits podcasting might offer the learning process, for example, with regards to flexibility or learner motivation and the pedagogical applications of podcasting (IMPALA, 2007). More research needs to be done into the pedagogic value of podcasts for language learning specifically and the authors would be particularly interested in evidence of student adoption of podcasting as a means of presenting their speaking skills for informal or even formal assessment.

Although not within the remit of the immediate project the researchers have been keen to promote the idea of using the Splendid Speaking podcast as a model for students to use independently of the project. The intention has been that learners might initially connect with others for speaking practice and perhaps also to take the extra step and record their short talks independently, either as part of a class project or as an individual initiative and to publish them as podcasts for feedback from the wider community. Virtually all students who had participated in Skype interviews with the coordinator were keen to share their contact details with each other in order to speak together informally and there were some who went so far as to carry out mock role-plays and discussions independently of the project team. Outside of this select group a small number of visitors to the website forums posted advertisements for speaking partners although there is no evidence of meetings taking place after these initial postings.

It remains to be seen whether or not students can be encouraged to create podcasts of their own in order to get feedback on their speaking skills. Several attempts were made to encourage students to record themselves and post podcasts for feedback from the Splendid Speaking com-

munity. Help sheets were prepared and in some cases individuals were contacted and offered help. Despite these efforts, there has been little evidence of individual podcasts being produced for the purposes of informal assessment.

The researchers intend to continue examining this area. At the time of writing one of the coordinators is looking into how interested learners are in connecting through a community forum hosted on the Splendid Speaking website or through the social networking site, Facebook (facebook.com). A Splendid Speaking Group has been created within Facebook and the group currently has 225 members and growing. Having been helped to make connections with other learners the researchers are interested to see whether students can be encouraged to use VOIP technology like Skype or Instant Messaging independently for speaking practice. The coordinator is currently creating further help guides to encourage learners to record themselves and create podcasts for feedback. Should this prove successful, it would serve as evidence to support the “digital native” argument.

CONCLUSION

This chapter has examined the process of creating and publishing a series of podcasts with the aim of improving the speaking skills of advanced learners of English. The wider context of the project was the transformational possibilities of Web 2.0 tools in education and the promise that this technology promises for user-generated content and mass participation.

The researchers were keen to explore the degree to which these tools could simplify the process of producing podcasts and certainly this was achieved without a great deal of expertise on the part of the coordinator. Certainly if the motivation and interest exists to create a podcasting service, the researchers feel technological challenges would not prohibit either teachers or

learners from doing this. “Class” podcasts available through services such as Podomatic serve as evidence that small numbers of pioneering teachers are embracing this opportunity. There is still scant evidence however, that teachers are adopting this in large numbers, and the researchers have come across several good examples which have sadly been discontinued. The reasons for this can only be guessed at. However, as is often the case with the use of new technologies, it is often a single “champion” within an institution who experiments with these new tools. Unless the practice becomes fully integrated and adopted by the whole team, the departure of this pioneer can lead to any progress grinding to a halt. Nevertheless, it seems the technical demands of podcasting are limited enough to hope that it can form one of several possibilities for teachers looking for “new ideas” project work with their students for example.

While it is not a Web 2.0 technology, the use of Skype to carry out interviews with students around the world proved to be equally simple. As Travis explains (2008), VOIP and Instant Messaging offer institutions an exciting opportunity to develop or enhance their distance learning and learner support provision. It can also be another tool for teachers to use within an “exchange” type project, linking their students with other learners around the world or simply to help their learners develop links with other language learners independently.

The researchers are very pleased with the popularity of the podcast and there is clearly a demand for this new content. Subscription to the Splendid Speaking podcast continues to grow and feedback is very positive. Clearly the Splendid Speaking podcast along with the many others that are appearing now offer language learners and teachers a growing base of user generated content that would not have been available prior to the emergence of this technology. Since podcasting is a simple technology to adopt this looks set to grow, which is excellent news for the educational

community. Whether podcasting will be adopted by teachers to the extent that it becomes an integral part of their institutions' provision remains to be seen.

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KEY TERMS

Connectivism: A theory of learning that describes the process of learning which takes place through the building of online connections between people. The theory was outlined by George Siemens in “Connectivism: A learning theory for the digital age” (2005).

Feedburner: FeedBurner is a web-based service which provides RSS feeds for bloggers, podcasters and other users who publish frequently updated content to the web.

Podomatic: One of several podcasting services which offer a free starter account for those interested in learning more about this technology.

Powergramo: A commercial package which acts as a plugin for Skype to allow users to record conversations and conference calls.

Splendid Speaking Podcast: A series of recordings featuring advanced learners of English participating in exam-style speaking tasks carried out remotely using Skype.

Wordpress: A very popular open-source content management system popular with bloggers. A plugin for Wordpress called Podpress allows users to publish podcasts.

Chapter XVIII

Mobile Technologies, Podcasting and Language Education

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ABSTRACT

The increasing availability of mobile technologies is allowing users to interact seamlessly with a variety of content anytime, anywhere. One of these new Web 2.0 technologies, or technologies that aim at enhancing and creating opportunities for user collaboration, is podcasting (Wikipedia, 2008; O'Reilly, 2005), an online audio and video publishing tool. Podcasts are increasingly being used by language educators and learners, yet in the educational realm, podcasting is still in a development phase as teachers and students are just beginning to experiment with ways to best use the technology. Therefore, few guidelines exist in terms of researching this new technology, specifically with regards to language learning and teaching (Rosell-Aguilar, 2007). In this chapter we begin to close this gap by first providing an overview of podcasting. We then discuss the potential of podcasting to transform ways in which languages are learned. In doing so, we cite illustrative examples of podcasts currently being used by language educators and students, and suggest ways in which the effects of this technology on language learning processes may be researched in order to make pedagogically sound decisions about using podcasts for language learning and teaching. After presenting a case study investigating the use of podcasts at Iowa State University, we conclude with a reflection on the potential for podcasts to transform language learning and teaching.

INTRODUCTION

The increasing popularity of mobile technologies, the term often given to handheld devices on which materials can be accessed anytime, anywhere (Kukulka-Hulme & Shield, 2007), has spurred work in the field of mobile learning. Research in this area has focused on using such mobile technologies as cellular phones, personal digital assistants (PDAs), and tablet PCs for learning in formal or informal contexts, as well as the ways in which these technologies challenge learning in the traditional sense (Kukulka-Hulme & Traxler, 2005; Lin, 2007; Vavoula, Sharples, Lonsdale, Rudman & Meek, 2007). Digital media players, commonly referred to as MP3 or MP4 players based on the types of files these players support, have only recently begun to make their way into the mobile learning and mobile-assisted language learning (MALL) literature (Lee, 2006; Chinnery, 2006). Consequently, teachers and researchers have begun to investigate the ways in which podcasts can encourage, support, and transform learning (O'Bryan & Hegelheimer, 2007; Tinker, Horwitz, Bannasch, Staudt & Vincent, 2007).

Podcasting is the online publication of audio or video files that users can download and subscribe to using a freely-available *podcatching program* such as iTunes (Apple, 2008b) or Juice (The Juice Team, 2005). The term podcast came about in 2004 as a mix between the words *iPod*, the popular MP3 player from Apple, and *broadcast* (Oxford University Press, 2007). In other words, a podcast is an online broadcast containing a number of individual episodes that can be downloaded to the user's computer either individually or automatically (i.e. subscribed to) and may be transferred to an MP3/MP4 player; the latter option is what gives podcasting its mobile distinction. Therefore, while a podcast by itself is not a mobile technology, the ease with which podcast episodes can be listened to anytime, anywhere on portable media players enables this technology to be classified as mobile.

The characteristics of Web 2.0 technologies that make them attractive to language teachers and students, i.e. ease of use, rapid development opportunities, interactivity and community-building, are also true for podcasts and podcast-creation tools. For example, Odeo (SonicMountain, n.d.), PodOmatic (2008), and Clickcaster (2007), are just three of the programs available online to help teachers and students create and publish their podcasts using a browser interface. Many of these programs also allow listeners to post comments in response to a podcast episode, which can contribute to a sense of community and collaboration. Podcast developers may incorporate these comments into future episodes or use them as a guide for choosing content. While podcast-creation tools such as these make it easy to create podcasts, they are not necessary for creating and publishing a podcast. An increase in the amount of open source software available through online sites such as SourceForge.net has also made it easy for teachers and students to download technology applications such as Audacity which allows users to create high-quality, digital audio content while interacting with a user-friendly interface. Content can also be captured on-the-go with cell phones or digital audio recorders. Podcast creators have different interests, motivations and resources available to them, and with the right equipment content can be captured in places as varied as a Tokyo train station, the streets of Athens, or a recording studio in Los Angeles.

Solomon and Schrum (2007) argue that “[t]he Web is no longer a one-way street where someone controls the content. Anyone can control content in a Web2.0 world” (p. 8). Consequently, content creation opportunities are ubiquitous. Because podcasts can be easily created and accessed by users with little knowledge of Web publishing, they have the potential to challenge the traditional role of “knowledge holder” that is typically held by a formal instructor and transform the way knowledge is shared. Places such as the iTunes music store and Englishcaster.com contain a

number of language learning podcasts that are produced by language students, native speakers without formal teacher training, and other persons with an interest in sharing their knowledge of language. One example is *Grammar Girl's Quick and Dirty Tips for Better Writing*, a popular podcast created by magazine writer Mignon Fogarty (Holtzbrinck Publishers Holding, 2008). Rather than drawing on formal teacher training, Fogarty uses her knowledge of grammar gained through both formal education and her own professional experience to help listeners with grammar issues in their writing. This is just one example of how knowledge is disseminated through the podcasting medium by persons drawing on interest and experience rather than formal teacher training.

In addition to challenging the role of “knowledge holder,” language learning podcasts are also changing the face of the traditional language student. Because language learning podcasts are so diverse, learners can subscribe to podcasts featuring as little as one word a day to those that provide an in-depth discussion of culture in the target language. The virtual and, often, mobile classroom can be less frightening to a beginner, and an online community of learners may be preferable to students with unpredictable schedules.

Podcasting's potential for transformation has also made it an attractive option for learning institutions and educational materials designers. However rather than focusing on challenging the role of “knowledge holder” as seen in the previous example, these institutions and designers tend to focus more on providing learners with on-demand access to learning materials in an attempt to customize materials to a wide variety of learners. In 2004, Duke University provided all incoming freshmen with iPods equipped with digital voice recorders and encouraged faculty members to make use of this new mobile technology. Such uses included disseminating lectures and authentic language content in podcast format, having students record interviews and field notes, and encouraging students to engage in repeated

listening as a study support tool (Duke Center for Instructional Technology, 2005). That same year English as a foreign language (EFL) students at Osaka Jogakuin College in Japan used their iPods to listen to downloaded English news stories in order to complete homework assignments (McCarty, 2005).

To help streamline the dissemination of these instructor-produced podcasts, in May 2007, Apple announced the launch of iTunes U, “a dedicated area within the iTunes Store featuring free content such as course lectures, language lessons, lab demonstrations, sports highlights and campus tours provided by top US colleges and universities” (Apple, 2008a). With iTunes U, Apple boasts that universities can make content available at anytime, engage students using audio and video, engage in “on the go” learning, and make content available for users outside the course or university (Apple, 2008c). While some universities provide language learning materials within iTunes U, such as DePaul University which provides Spanish language audio files coinciding with first-year Spanish classes, the majority of university-sponsored language learning materials reside either within the main area of the iTunes music store or elsewhere online. Examples include the University of Wisconsin-Madison's podcasts for intermediate and advanced learners of German, and Indiana University's Central Asian language podcasts. In all of these examples, MP3 players and the podcasting technology have made it possible for students to interact with content on-demand, i.e. when and how they want to. However, the content is typically chosen by the instructor rather than by students.

While universities continue to produce a number of language learning podcasts, the majority of these podcasts available online are not affiliated with an educational institution. Likewise, podcast users come from many walks of life and have different needs, wants, and levels of motivation. Language educators and learners using podcasts do so for a number of reasons, including self-study

purposes, language test preparation, and integrating them into a language learning program. What follows is a discussion of each of these three areas of interest as well as considerations for podcast developers and users.

LANGUAGE PODCASTS FOR SELF-STUDY

This area of podcasting is booming and is by far the largest category of language learning podcasts currently available. The majority of self-study language podcasts are designed for adult learners at the beginning to advanced levels, and the podcast creators range from native language speakers without formal teacher training to university-level language educators. Both audio and video podcasts are available, but the majority is audio-only. Because the scope of podcasts in this area is so broad, we provide a brief description of the main attributes of this area of podcasting categorized by level, followed by a number of examples.

At the beginning level, most podcasts focus on very basic or survival vocabulary. *Coffee Break Spanish* (Radio Lingua Ltd, 2007) and *French for Beginners* (Dailyfrenchpod.com, 2007) are two good examples of podcasts aimed at beginners. Because these podcasts are primarily for English speakers learning another language, much of the input is in English with individual words offered in the target language.

At the intermediate level, *ESLPod* (Center for Educational Development, 2007) and *Andere Länder-Andere Deutsch* (University of Wisconsin-Madison Department of German, 2007) are two examples of podcasts that focus on issues such as holidays, politics, life, different dialects and pragmatics using sophisticated vocabulary and grammar structures. At this level, podcasts are almost exclusively in the target language, although the input is not truly authentic. Often dialogues are scripted in order to deliberately tar-

get intermediate-level vocabulary or grammatical structures. Additional help or study options such as worksheets or transcripts are often available on the web sites or within the iTunes music store.

Advanced-level podcasts typically target either a general audience using authentic texts or focus on sophisticated aspects of the language, or a very specific audience such as business workers using the language. Sometimes, speakers with varying accents will appear on these podcasts. Typically the input is entirely in the target language and there are rarely additional help options available. One example is the *Word Nerds* podcast (Shepherd, Shepherd & Chang, 2007) which is aimed at both native English speakers and very advanced learners of English. The hosts focus on subtleties of the English language such as metaphors, synonymous words and idiomatic expressions, often making historical references and connections with a number of other languages.

As most podcasts are made for adult learners, few are made for younger learners. The language podcasts that do claim to cater to a younger audience cover issues of relevance to all learners, such as grammar points or slang terms. They seem to have the same characteristics as adult podcasts depending on level (e.g. a mix of English and the target language, help options, etc.). One podcast, *Insta Spanish Lessons* (Tipton Reiman, 2007), tries to relate to its younger listeners by pointing out common features of the target language and the language young people use (e.g. use of the word “totally” in English).

The abundance of self-study podcasts provides learners with a variety of language content with which to interact. These podcasts are typically free and, as seen above, cater to learners at different language proficiency levels. This can be great for learners who wish to brush up on a language learned in the past, are planning to travel to another country and want to acquire a few key phrases, or are simply interested in finding out about a language unknown to them.

However, in order to truly learn or teach a language via podcasts, both podcast creators and language learners need to understand additional conditions helpful for language acquisition, such as interacting with materials at the appropriate level and focus on form (Chapelle, 1998). Widespread knowledge among students of how to use Web 2.0 technologies (often better than their teachers) increases the importance of being able to teach learners how to use these technologies in “educationally appropriate ways” (Solomon & Schrum, 2007, p. 9). To educate podcast users and facilitate optimal learning conditions, podcast-creators can provide a short description of the target audience at the beginning of each podcast episode, as well as provide learners with a variety of help options such as transcripts or exercises that are either included with each episode or located on a separate website. These simple steps can help decrease the chance that learners will feel overwhelmed by the podcast options available to them and at the same time increase their chances of success at learning language.

LANGUAGE TEST PREPARATION PODCASTS

Many of the examples of self-study podcasts were for those interested in gaining communicative language skills. One emerging, more specialized area of self-study podcast is aimed at preparing learners for high-stakes language — particularly English — tests such as the Test of English as a Foreign Language (TOEFL)® or the Cambridge Certificate in Advanced English (CAE) Examination. These podcasts typically focus on one or more specific parts of the test and on specific tasks (e.g. error correction tasks). Some highlight a number of test-taking strategies students can use for one or more parts of the test or while preparing for the test. The number of podcasts in this category is small, but growing. Two will be highlighted here.

The TOEFL test is an English proficiency test that is required for entrance by over 6,000 higher education institutions around the world (Educational Testing Service, 2007). One podcast, *ESLPod.com’s Guide to the TOEFL Test*, aims to prepare students for the different portions of the TOEFL exam by presenting similar listening topics to those appearing on the test and tips for preparing for the writing and speaking sections. Sample episodes center around a slow and then faster version of a scripted lecture or conversation excerpt. Because of this, the podcast is most appropriate for low-intermediate learners who need speech to be spoken slowly, as higher-level learners may find the speech rate unnaturally slow. Following the excerpt is a comprehension question similar to one that may be found on the TOEFL test.

The *Flo Joe Radio* podcast (Splendid Learning, 2005) on the other hand is specifically designed for advanced-level English students who are preparing to take the CAE Exam. It is organized a bit differently from the other podcasts discussed here in that it complements a weekly, written newsletter that students can also sign up for and have automatically sent to their email addresses. Sample episodes of this podcast feature two native English speakers using vocabulary items from the CAE exam in their spontaneous speech and short lessons addressing exam-related tasks such as writing an article for the CAE. Together with the newsletter, *Flo Joe Radio* offers students a variety of tasks for practice, semi-authentic input from native English speakers, as well as test taking strategies.

Test preparation materials can be very expensive, which is why these podcasts have the potential to reach a wide audience and help students prepare for high-stakes tests without spending a fortune. Although offering freely-available test preparation content is a major advantage for students, they need guidelines for choosing suitable content and using it appropriately to help them study for the test. Before students choose a test preparation

podcast, it is important that they are aware of the type of content (e.g. informal dialogues, academic lectures) they may hear in the test. Knowing this can help them pick and choose which podcasts they want to interact with, and can also help them begin thinking about interacting with online content that is not designated specifically for test-preparation purposes but could be useful in preparing for exams, such as authentic academic lectures found within iTunes U.

INTEGRATED PODCASTS

The podcasts discussed thus far have been designed for a relatively general audience of learners of either a particular proficiency level or with interest in a particular topic. Although there are not many examples of podcasts that are integrated components of individual language programs (whether self-designed or formal courses) we believe this is a very promising way to use podcasts. The two podcasting projects highlighted in this section:

- Are affiliated with formal language courses
- Are produced by teachers and/or students
- Contain content that overlaps with, elaborates on or exemplifies what is taught in the classroom
- Are an integral component of the course (i.e. not an optional add-on)

In addition to the content of the podcasts themselves, which has been the focus of this section thus far, issues of integration, learner training (Hubbard, 2004), and classroom, institutional, or technological constraints of including a podcasting component in a language course are addressed as well.

The first example is Iowa State University's (2007) *Academic Listening Strategies Podcast*, where each podcast episode is scripted and produced by the instructor of an academic listening

strategies course for enrolled graduate and undergraduate non-native English speaking students at the intermediate level. Because the students are so varied in their majors, interests, and goals, the aim of the course is to help students acquire and practice academic listening strategies (e.g. note-taking skills, listening for organizational cues in lectures, etc.) that will benefit them throughout their time in academia. While the course takes place in a traditional, face-to-face setting, the content of each episode coincides closely with the course textbook and also expands on it by bringing in audio excerpts of authentic lectures for additional practice or video clips demonstrating a particular strategy (see O'Bryan & Hegelheimer, 2007). Each podcast is assigned at a particular point in the semester as homework; students are assessed on their understanding of the podcast with a short, online quiz which is graded as a class assignment.

Another example of an integrated podcast is *Aiden Yeh's Speech Class Podcast* (Yeh, 2006). Rather than the teacher preparing the podcast episodes as in the previous example, this podcast is student-led. Students prepare different types of speeches (e.g. informative speeches on topics of interest, readings, and impromptu speeches) in either audio or video format, which are then posted online and released as podcasts. In addition, students post audio criticisms of their classmates' speeches in addition to self evaluations of their own. The instructor is able to post text-based feedback on individual episodes.

There are a number of similarities and differences between these two examples that highlight issues of integration, learner training, and constraints. Both podcasts use the medium of podcasting to expand class time, whether by providing additional demonstrations and opportunities for language practice as in the Iowa State example, or by providing a forum for which students can practice and reflect on their language and post examples of their language use. The podcasts are required, integral components of the course.

With regards to learner training, students in both contexts need training in what podcasts are and how they are to be used in class, but in *Aiden Yeh's Speech Class podcast* (Yeh, 2006) students also need to be trained on recording and uploading their audio or video files. Inherent in this decision to have students record podcasts are issues such as the availability of computers and microphones with which students can record.

As seen in this brief overview highlighting three different kinds of podcasts, the development of language learning podcasts is varied and dynamic. The section on integrating podcasts into the classroom shows that instructors are beginning to make sound pedagogical decisions when using podcasts with their students. However, the impact of podcasts on language acquisition and issues such as student interaction with podcasts has yet to be investigated. The following section highlights possible paths for researching language learning podcasts.

RESEARCHING THE USE OF PODCASTS

One major finding from profiling these three types of podcasts (self-study, test-preparation, classroom integration) is that the rapid and expanding development of podcasts is fueled by the desire to address apparent needs by language learners. But, whether or not second language acquisition (SLA) principles are observed or whether or not the stated goals are (or can be) met by language learners remains under-investigated.

This is not only due to the fact that podcasting is a new technology or because development is so fast that research cannot keep up – so that we are lacking appropriate and rigorous empirical studies – but perhaps because the questions are unclear and restrictively focused on the technology, or perhaps that the methodology might need to be adjusted. In this part of the chapter, we will build on the areas presented in the previous section by

providing suggestions for researching uses of this new technology. These areas for further investigation include issues relating to the language content of the podcast, student interaction with the podcast, and the integration of the podcast in the curriculum (Table 1).

Since the beginnings of podcasting in 2004 (Podcastingnews.com, n.d.), the sparse research in the area of podcasts and their use in language learning and teaching has focused on the development of listening competence (Carillo Cabello, 2007; Guikema, 2007; O'Bryan & Hegelheimer, 2007), listening and reading strategies (O'Bryan & Hegelheimer, 2007), affective considerations such as student motivation (Stanley, 2006), and the development of pragmatic competence/awareness (Guikema, 2007). However, besides these relatively few studies, much work to date has been anecdotal and frequently only involved the description of the project rather than a research report. Further, a research agenda has not been outlined. Instead, what has perhaps been happening is what Colpaert (2004) describes as “periods of hype” centered around technologies rather than placing a focus on the learner. Salaberry (2001) argues that it remains unclear whether any modern technology has offered the same pedagogical benefits as traditional second language instruction. Consequently, future research on podcasts for language learning requires a more sophisticated methodology, clear and relevant questions, and a more solid foundation in second language acquisition theory and principles. These areas are discussed in the following sections that focus on content and organization, interaction, and classroom integration.

CONTENT

Arguably, the content of podcasts is of great importance. According to Bankhofer (2005), successful podcasts share common features, such as “interesting content and consistency, generous

Table 1. Suggested research areas and questions

Type of podcast	Research areas and specific questions
Self-study podcasts	<ul style="list-style-type: none"> • Content: Are principles of second language learning easily discernable? To what extent are concepts such as scaffolding integrated? Does the podcast recycle vocabulary items and grammar concepts in appropriate intervals or sequences? • Interaction: How do students interact with the podcasts? Do students choose appropriate podcasts for their levels and goals? • Integration: Is there a relationship between listening to the podcast and the student's language goals? Is the podcast integrated into a curriculum by addressing specific areas to be covered?
Test-preparation podcasts	<ul style="list-style-type: none"> • Content: Is the material in these podcasts reflective of the language in the test (testing validity)? • Interaction: When and how do language learners use test preparation podcasts? What is the effect of the differences in the podcast vs. test delivery mechanism? • Integration: Is there a relationship between listening to the podcast and the student's language goals? Does the test preparation material relate to supplemental materials (books, web sites, etc)?
Classroom-based podcasts	<ul style="list-style-type: none"> • Content: Are principles of second language learning easily discernable? Does the content relate to topics covered in class, and if so, what function does the additional content meet (expansion, exemplification, etc)? • Interaction: How do students interact with the podcasts? What is the role of the students vis-à-vis the podcast? • Integration: How do these podcasts influence students' acquisition of language or content? Can students determine the level of integration?

doses of humor, a bit of good music, and a specific topic of conversation” (para. 20). Availability of podcasts and a potential audience is generally not the question. Indicative of large-scale thinking and planning are Carroll’s plans to deliver language learning to millions through podcasts (Moody, 2006). He further claims that this can be done without classrooms and teachers.

Thus, analyzing podcast content is so important because it allows researchers to determine if and to what extent the content is informed by principles of SLA (Rosell-Aguilar, 2007). For example, interactionist approaches to SLA stress the importance of comprehensible input and noticing as facilitating factors for acquisition. One possible framework that could be used in evaluating podcasts is outlined by Chapelle (1998). She originally outlined seven hypotheses relevant for developing multimedia computer-assisted language learning materials, including, we would argue, podcasts:

1. The linguistic characteristics of target language input need to be made salient.
2. Learners should receive help in comprehending semantic and syntactic aspects of linguistic input.
3. Learners need to have opportunities to produce target language output.
4. Learners need to notice errors in their own output.
5. Learners need to correct the linguistic output.
6. Learners need to engage in target language interaction whose structure can be modified for negotiation of meaning.
7. Learners should engage in L2 tasks designed to maximize opportunities for good interaction.

A detailed content analysis of podcasts allows us to determine if they adhere to the principles outlined by Chapelle (1998). In self-study podcasts, for example, it is crucial to make input salient (hypothesis #1), which can be achieved

through repetition in audio podcasts or through animations in video podcasts. Input modification is also particularly important because it allows learners to access content that might otherwise not be accessible to them at their current proficiency level.

While numerous help options are available in web-based environments, several of these are germane to podcasts. For example, video podcasts allow the inclusion of pictures and the synchronizing of transcripts and the audio aimed at helping learners understand semantic or syntactic aspects of the input (hypothesis #2). Additionally, it is possible to provide different versions of the podcast, one at regular speed and one that may be accessed at a slower or faster speed. Developers can also build into the podcast opportunities for learners to produce output (hypothesis #3) by including strategic pauses following elicitation tasks.

Providing appropriate content is also crucial in addressing and targeting a new audience for these podcasts (Rosell-Aguilar, 2007). For example, working adults who are interested in picking up and practicing the necessary linguistic terms to be used on the next trip are not necessarily inclined to sign up for an entire class. However, given the opportunity to listen to individual short podcasts on demand without having to go through too much trouble remains an intriguing prospect for this particular audience. People who may not pick up a phrasebook may still be inclined to listen to the podcast that introduces common phrases and review it. Plus, ease of access (through subscription) and a minimal chance of losing the podcast (unlike a phrase book) make this an appealing option.

With regard to test preparation podcasts, a content analysis may yield insights into whether the content introduced in the podcast is similar to the content required in the actual test. This is basically the same as one would expect of any good test preparation material. However, due to the rather exuberant claims of some test preparation podcasts' level of success, this remains a top priority for researchers, who should investigate

not only the content, but also the sequencing of the materials. Furthermore, most language tests are still either delivered in paper and pencil format or on the computer and some require constructed responses in addition to multiple-choice questions. Therefore, discrepancies between the mode of test delivery and test preparation need to be researched. If these and other questions are not addressed, innocent users are left to wonder whether or not the podcasts actually prepare them to do better on the test.

Several classroom-based podcasts are developed and produced by students, who would then have the opportunity to produce, notice, and perhaps correct their own output (thereby addressing hypotheses #3-5). Observing students while they create a podcast or having them record their experiences in a journal could serve as useful methods for gathering this kind of evidence.

INTERACTION

Another aspect deserving additional research is the role podcasts play vis-à-vis users in terms of how learners interact with available podcasts and how the podcasts are integrated into learners' daily lives (be it as students in a language class or as self-motivated learners studying to prepare for a test or to embark on a trip). Thus, learning in general and language learning in particular can be viewed as becoming embedded in everyday life (Naismith, Lonsdale, Vavoula, & Sharples, 2005).

Questions such as what podcasts learners subscribe to (and why) and how learners typically interact with the podcasts they are listening to require further investigation, which is necessary to inform the development of appropriate podcasts in terms of length and cognitive complexity. Consequently, research should focus on finding answers to questions such as when learners typically listen to podcasts, for example, on the bus, while shopping, working out, or driving (ideally using an FM transmitter)? Also of inter-

est would be to learn if there are certain patterns associated with listening to their MP3 player or iPod? For example, the common perception is that young adults and adolescents listen to their MP3 players everywhere, but that is largely based on assumptions. Further, Rosell-Aguilar (2007) argues that it is important to make a distinction between didactic and discursive learning, whereby Kukulska-Hulme and Traxler (2005) define didactic mobile learning as “learning from mobile educational material ... in a way that responds to the potential and the limitations of mobile devices” (p. 26). Discursive mobile learning, on the other hand, is based “on the interaction among mobile learners” (Rosell-Aguilar, 2007, p. 478). Understanding how learners are using podcasts, whether simply listening or taking full advantage of Web 2.0 capabilities and communicating with other learners by creating their own podcasts, is essential when considering issues such as learner training and motivation. Answers to these questions will also inform researchers of typical time spans learners devote to podcasts.

Based on responses to these and other questions, podcasts can then be designed to address student needs and preferences to maximize beneficial interaction. Much thought has to be given to physical aspects such as screen size, but also to pedagogical aspects such as the appropriate chunking of knowledge so the processing is facilitated (Ally, 2004). A decision on the complexity of the content covered in a podcast has ramifications on the necessary level of concentration. If learners listen to their MP3 player only while they are engaged in less cognitively demanding tasks, then easier content and strategic repetition will likely enhance the educational success of a podcasts (but also limits the information density and complexity). If, however, it turns out that learners prefer to listen to difficult content or to immerse themselves in the target language, then the resulting podcasts will be different. Material requiring attention must be carefully crafted with the needs and the habits of language learners in mind.

One important aspect that needs to be considered when dealing with podcasts is what users actually listen to and when they listen to the podcast that is provided for them (Kaplan-Leiserson, 2005). Typical measures to determine what was listened to include self-reports and evidential data such as quizzes based on content available in the podcast (i.e., listening would be a prerequisite to being able to answer questions). While some self-reports have historically been found to be unreliable, well-structured self-reports in the form of reflective journals or responses to specific questions may get around this problem and elicit the kind of information necessary to make curricular decisions. A second, perhaps more promising possibility includes use of a software solution (e.g., www.last.fm) that makes it possible for users to upload their listening history so that it can be viewed by others. While this is typically used as a part of a social networking scenario among friends, it may also be useful in an instructional setting in that teachers can see what students have listened to, how often they have listened to certain episodes, and then to adjust instruction accordingly. As with all studies, the time commitment plays an important role. While the interaction between learners and podcasts as part of classroom instruction or test preparation is limited to the period of time they are in a given class or are preparing for the test, self-study podcasts have the potential to guide the learner for an extended period of time.

INTEGRATION

As discussed previously, issues of integration apply not only to formal language courses, but more generally to learners' approaches to language learning. Therefore, how tightly a podcast is integrated into an informal language program or a classroom is another area of concern and a potential one for research. With regards to the former, one might observe commonalities among

the podcasts learners choose to interact with and other language learning activities they pursue, e.g. reading books, talking to native speakers, etc. For example, learners may become interested in a certain topic when speaking with a native speaker and seek out a podcast on the same topic with the hopes of learning more topic-specific vocabulary. Again, researchers would need to rely on either self-report data or take a more ethnographic approach.

When looking at issues of integration in a classroom context, O'Bryan and Hegelheimer (2007) outline three broad approaches where podcasts may be used to 1) provide a repository of classroom discussion or lecture, 2) extend, expand, and exemplify what was covered in class, and 3) prepare learners for the next class period. While we can speculate which type of integrative podcast might be most beneficial for language acquisition, case studies that detail the learners, podcast content, setting and possible constraints are needed in order to form a more complete picture of the ways in which integrating podcasts into a language classroom can benefit learners. A listening strategies course for non-native speakers of English at Iowa State University represents one example of how tightly podcasts can be integrated into the curriculum. For each topic covered in class, a podcast designed to reiterate and exemplify what has been covered in class is available after class. For example, after the first topic on recognizing understanding lecture cues (topic introduction/conclusion, cues to organization) is introduced in class, the podcast provides additional examples of lectures and points out organizational cues. A follow-up quiz based on the podcast content encourages student participation. In another example, Cain (2007) describes efforts of language instructors teaching Chinese, German, and Spanish at the Massachusetts Institute of Technology (MIT) with an emphasis on increased fluency. The instructors attempted to use podcasts to enhance immersion through enhanced re-podcasting (Chinese students could access

completed class sessions and complete additional activities), use of authentic sources (German students subscribed to German news podcasts), and podcasting by phone (Spanish students worked on their fluency by recording content via a phone and making it available online).

To assess the impact of integration on language acquisition, it is important to hold students accountable for interacting with the podcasts. Even when podcasts are integrated into a class or informal language program, previous experience indicates that when students are left unguided, they will not typically interact with the podcasts as much as, or in the way that, is necessary to reap the benefits. For example, if students are asked to watch a video podcast of a student taking notes while listening to a lecture, the instructor may want to assess: a) whether or not the students watched the podcast, and b) whether or not they noticed important aspects of the notes the student took, e.g. the organization, the noting of key words, etc. Consequently, podcast developers need to help train learners on how best to use a podcast for self-study, and teachers need to both train students and resort to the use of "incentives" (perhaps in the form of quizzes or journal entries) to encourage learners to listen to the podcasts, similar to what may be done in the case of reading assignments. These types of quiz and journal data can help researchers gain insight into the processes students use while interacting with a podcast as well as observe whether any factors that are believed to facilitate SLA are present (e.g. noticing). A brief synopsis of a case study follows to outline one possible research project related to the pedagogical application of podcasts.

USING PODCASTS IN AN ESL LISTENING COURSE: A CASE STUDY

There is little in the way of published research that focuses on using podcasts to facilitate

language learning. While the areas of research and specific questions we suggested in Table 1 propose topics of inquiry, an in-depth look at podcasting research conducted at Iowa State illuminates some of the challenges and findings from an exploratory study focusing on integrating language learning podcasts into an academic listening course. A complete description of this project and research can be found in O'Bryan and Hegelheimer (2007).

This exploratory case study focused on the degree to which Iowa State's *Academic Listening Strategies Podcast*, described previously in this chapter, was integrated into an ESL academic listening strategies course for graduate and undergraduate students. These fourteen students, who varied in major areas of study, interests, and listening proficiency, were placed into the course based on their scores from an English placement examination taken upon entrance to the university. The course itself met twice a week, face-to-face, and focused on academic listening strategies such as understanding lecture organization, noting numbers and statistics, and taking notes.

During the fifteen-week semester, students listened to fourteen podcasts designed specifically for the listening course and assigned as homework. These podcasts served a number of different functions, including providing authentic samples of input, elaborating this input in order to make it comprehensible to students in the class at the lower proficiency levels, demonstrating concepts from class, and providing opportunities for students to practice implementing the listening strategies learned in class. All podcasts were created by the course instructor, located on a departmental server and linked to the online course management system WebCT. Because not all students owned MP3 players, students were trained in downloading the podcasts onto their computers and transferring these files to their MP3 players as well as to simply listen to the podcasts on their computers. The training was conducted in class and all students were comfortable with down-

loading and listening to podcasts by the time the second podcast was assigned. Using a variety of measures throughout the semester — student and instructor interviews, journals and survey data — we evaluated the degree to which these instructor-produced podcasts were integrated into the course based on both the teacher's attitude and their applicability to students' needs (Bax, 2003; Warschauer & Healey, 1998). The research questions (RQs) mirror the first two presented in Table 1 for "Classroom-based podcasts"; what follows is a discussion of our findings for each of these questions, in turn.

RQ1: Does the content relate to topics covered in class, and if so, what function does the additional content meet (expansion, exemplification, etc)?

In order for any out-of-class material to be truly integrative, it must serve a course-related function, whether reviewing lecture content, elaborating upon difficult concepts, or preparing students for the next class. Table 2 provides an example of how audio and video podcasts were integrated into one existing unit on academic notetaking.

The video podcast assigned for the second day of the unit showed a student listening to an authentic lecture and taking notes in real time. The student does this twice, once producing a "not so good" set of notes where the information was written in complete sentences and formatted as a paragraph, and the next time producing a "good" set of notes where key words and bullet points made the information easy to read. Students were able to download these same notes to study and discuss during class time on day 3. The "Tips on taking notes" podcast contained an interview with an international student at Iowa State who discussed notetaking strategies she found to be helpful during her studies. While some of these strategies echoed ones discussed in class and in the textbook, some were new. This gave students an outside perspective on the subject of notetak-

Table 2. Sample integration

Classroom topic	Homework (due on date assigned)	Purpose of podcast
Unit 3: Key words, symbols and abbreviations	Read unit 3	
Unit 3: Visually representing relationships	Download example notes for podcast in WebCT; Watch video podcast “Taking notes during a lecture”; complete quiz with the notes downloaded in WebCT	Provide a model of visually “good” and “not so good” notes; demonstrate how to visually represent relationship in notes
Taking notes: in-class practice	Review video podcast	
Taking notes: in-class practice	Listen to the podcast containing an interview with an international student entitled “Tips on taking notes in class”	Provide an outside perspective on the usefulness of the strategies learned in class
Unit 3 Quiz	Listen to unit 3 summary podcast and watch part 2 of the “Spider” lecture. Take notes and bring to class	Summarize strategies and concepts covered in unit 3; targeted practice using strategies with an excerpt from an authentic lecture

ing. Finally, each unit ended with a “Summary podcast” in which the instructor summed up the strategies from the unit and provided an exercise in which students could put these strategies to use. In this case, students were asked to listen to the second part of the authentic lecture from the video podcast and add on to the “good” notes downloaded previously.

In the course instructor’s reflective journal, she remarked that using podcasts in this way allowed her to expand class time. For example, by having students watch a video podcast on taking notes and study two model sets of notes as homework, she was able to immediately launch into a discussion of this notetaking strategy in the following class. One student interviewed also voiced his appreciation of the different speakers in the podcasts, native- and non-native English speakers alike. He noted “some people are really good at pronunciation, and some are not. We also learn different pronunciation. I think this is very good ... not just the one person, but ... different level, different voice, different pronunciation ... in this way we can contact different culture, I

think.” In sum, the course podcasts allowed for a virtual expansion of class time by providing students with examples of authentic input and opportunities for targeted practice.

RQ2: How do students interact with the podcasts?

To answer this second research question we relied on student self-reports, although other options for data collection were discussed previously in this chapter. On average, students reported listening to each podcast three times, pausing and repeating portions that were misunderstood the first time. Almost all students chose to listen to the podcasts on the computer rather than on an MP3 player. Part of the reason for this was that only two students from the class reported owning an MP3 player, but another reason was that each podcast corresponded to an online comprehension quiz or exercise that was to be completed after listening. Students felt it was easier to just listen on the computer and then complete the quiz right away. In addition, having Internet access came in handy for one student who listened to the podcast

on his computer, as he said “I don’t know the ... the word’s meaning so I stop [the podcast] and find electronic dictionary and typing and see that words and I knew the word’s meaning.” While we expected more students to listen “on the go” as suggested by Goodwin Jones (2005), interacting with the podcast on the computer allowed students to take advantage of other help options available online.

While the feedback from the instructor and students gave us some insight into how podcasts could be integrated into a face-to-face listening class, completing this exploratory research also served to highlight the limitations of existing data collection methods in relation to this new technology and surprised us with the ways in which the students interacted with the podcast materials (computers vs. MP3 players). First, relying on interview and self-report data can limit the reliability of student responses to questions regarding how often they listened to the podcasts and ways in which they interacted with them. Screen recording software could be employed to capture this information on certain machines and at certain times, but only if students listened to the podcasts on their computers. The software solution www.lastfm.com, mentioned earlier, may help researchers gain insight into how students interact with podcasts. Tracking mechanisms embedded in the podcast files or MP3 players would also provide a great deal of insight into how students interact with podcast materials; however, as of yet, we are not aware of such mechanisms. Also, the fact that most students in the course did not have their own MP3 players and the completion of online quizzes corresponding to each podcast were required, meant that students primarily listened to the podcasts on their computers rather than on MP3 players. When used in this way, the podcast materials are no different than other online audio materials as the unique characteristic of podcasts, namely their ability to go mobile, is not utilized. Providing each student with an MP3 player at the beginning of the semester may have led to students

interacting with the podcasts in different ways. While these challenges were limitations in our case study, they serve to inform future research in the area of podcasting.

TRANSFORMING LANGUAGE LEARNING THROUGH PODCASTING?

As seen throughout this chapter and exemplified in the Iowa State case study, podcasts offer language learners an opportunity to learn from traditional and non-traditional “teachers” and interact with input on a variety of topics using different varieties of language (e.g. dialects, registers) in a mobile format. The question language teachers and researchers are faced with is whether technologies such as podcasts can transform language learning. Before addressing this question, however, it is useful to look at other mobile technologies that have been considered “transformative.” Sharples, Taylor and Vavoula (2007) refer to the transformative capabilities of mobile technologies in several contexts, most directly in the context of Kenya, where mobile phones are now an effective means of communication for people in rural parts of the country who would not have been able to communicate via landline telephones for perhaps another decade. While this positive transformation inspires hope, more recent news from Kenya in January 2008, illustrates that mobile technology can also be effectively used to incite hatred, such as by sending hate text messages to mobile phones. In a sense, however, this aspect of different (and unintended) uses of innovation is not new. Rather, it appears common with all innovations thought to be transformative such as radio, television, computers, and the Internet. As such, mobile technologies are not inherently different. However, prudent users of these new technologies may be more informed of the past and avoid the irrational glorification of new technologies.

Despite this obligation, researchers and teachers remain committed to providing their students with approaches that are reflective of current practices. Thus, engaging learners in technologies they also use is key for the success. A telling comment by current adolescent and young adult students that they use e-mail – still a technology of choice for many teachers – only for assignments or to communicate with their parents reflects this need to keep up with the audience we are trying to reach. Thus, transforming language learning through current practices is our task. One good example is provided by Traxler (2005) who investigated the use of text messaging to coordinate in-service training of teachers in Kenya. Podcasts will likely remain a medium of choice for adolescents and young adults for some time. Hence, researching the potential of podcasting for educational purposes is a timely and worthwhile endeavor.

Coming back to the question of whether podcasting can transform language learning and teaching, we believe that it clearly holds promise in that more and more language learners are using this technology on a daily basis. While ubiquitous access to any technology will never be achieved for the entire population and while the digital divide continues to separate the haves from the have-nots, the tremendous appeal podcasts have for those with access necessitates a thorough investigation using current methods of inquiry, including qualitative and quantitative approaches. Some of the approaches and questions outlined in this chapter provide a starting point. The unique ability to provide language learners with on-demand or regular audio and video content and to have the undivided attention of the learners is one key feature of a technology that may act as a transformative agent of language learning. The crucial element is to get learners to listen to educationally appropriate and well-designed podcasts – instead of (at least part of the time) music. Hence, transformation depends on relevant content, purposeful technology-appropri-

ate interaction, and determined integration. The content of language learning podcasts needs to address learner needs in terms of the topics and themes as well as the targeted proficiency level, which can be ascertained through needs analyses, questionnaires, and interviews, for example. Purposeful interaction with the podcast relates to investigating when and how learners listen to which podcasts so as to maximize impact. For example, it is important for podcast developers to know if students download and listen to the available podcasts soon after the class – thereby possibly increasing retention of vocabulary items – or not until later in the week, perhaps immediately before the next class. Plus, knowing how students listen to (or watch) podcasts (or vodcasts) and the goals for listening to or viewing content can guide designers in their development. Third, the solitary nature of podcasts and the inherent flexibility may suggest that podcasting is not well suited for integration into an informal language program or classroom. However, as illustrated in the examples above, integration is crucial and can be achieved through various means so that learning no longer only takes place in the classroom but also outside the confines of the classroom, e.g., on the bus, while shopping or working out. It is this unique potential of mobile learning technologies to reach learners where they could previously not be reached – outside the classroom. Only when these three elements — good content, purposeful interaction, and effective integration — are achieved can the use of podcasting become truly transformative in language learning. Clearly, each element requires focused research.

CONCLUSION

One prominent depiction of a future college student is one where a student listens to her portable music player instead of sitting in a lecture hall (Rosell-Aguilar, 2007). While this may become a reality, we do not feel that this is sufficient, nor

is it advisable to replace one medium of delivery through another. Making language materials available as podcasts because it is technically possible should not be the driving force behind this development. Rather, podcast users and developers should focus on what this technology may add to an existing program of study and reflect on how it may transform language learning.

With regard to language learning using Web 2.0 technologies, words of caution come from several sources. For example, Colpaert (2004) warns that the progression of output from visual to verbal with mobile technologies is a clear disadvantage for language learning. This approach cannot be labeled transformative. However, what truly transforms language learning may be the combination of multiple technologies – portable players, audio and video content — in conjunction with a new level of interaction on such small devices through single or multiple touch screens, thereby engaging students visually, aurally, and kinesthetically. The next step is to conduct research in this area. However, research in an area that is fundamentally a very private activity (i.e., individual listening to audio/video content and some on-screen interaction) has to rely on a variety of research methodologies that may include surveys and questionnaires, but must go significantly beyond such data elicitation methods to gain a deeper understanding of when, why and how learners listen to podcasts and what effects this may have on second language acquisition. The comparative question reminiscent of paradigms of the 1960s that should not be asked is whether learning a language using podcasts is better than learning a language without podcasts. What should be investigated is how to effectively use podcasts in the language learning process. Consequently, continued research regarding the content of podcasts, the interaction between users and the podcasts they subscribe to, and the level of integration of podcasts into language programs will help with the understanding of how podcasts can be harnessed as effective tools in the language learning process.

Podcasting was the New Oxford American Dictionary of English's word of the year in 2005 (Meyers, 2005). Perhaps *transforming learning through podcasting* (or other Web 2.0 technologies) will be a future phrase of the year.

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KEY TERMS

Integrated Podcasts: Podcasts that are integral components of a traditional or non-traditional

course of study. The podcast content overlaps with, elaborates on or exemplifies what is taught in the course.

Mobile Technologies: The term often given to handheld devices on which materials can be accessed anytime, anywhere.

MPEG-1 Audio Layer 3 (MP3): A digital audio format that compresses audio to a relatively small size, yet is of decent quality. Arguably the most popular file format for digital audio.

MPEG-4 Part 14 (MP4): A multimedia file format used most commonly for digital audio and video. This format also allows for the storage of subtitles and still images.

Podcast Subscription: The allowance of a podcatching program to automatically check for and download new podcast episodes at a time specified by the user, i.e. daily, weekly, monthly, etc.

Self-study Podcasts: Podcasts that are on general topics of general interests and designed for a variety of levels of language proficiency.

Vodcast: A vodcast or video podcast represents an evolution from an audio only podcast to include subscribable video content.

Chapter XIX

Podcasting as a Next Generation Teaching Resource

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ABSTRACT

This chapter aims to investigate how podcasts can be made to fit into the repertoire of resources utilized by teachers, especially in language education. It focuses on arming the language teacher with a fundamental knowledge of podcasting, centering on its potential applications in the classroom. Podcasts are ideal resources for language teachers, especially English language teachers, because almost all topics imaginable are now being treated in podcasts and the bulk of podcasts are recorded in English. Aside from making use of language-teaching podcasts, language teachers can also incorporate English language podcasts dealing with a wide range of issues to cater to the varying preferences of students. In addition to discussing these points, this chapter also provides suggestions for the practical incorporation of podcasts in language learning and teaching, both inside and outside the classroom. Two case studies demonstrating possible ways to use podcasts in an English as a Foreign Language (EFL) context are presented.

INTRODUCTION

Podcasting is becoming more and more popular, largely due to the fact that anyone with a computer and an Internet connection can download, or even create, their own podcasts with relative ease. For this reason, there are currently tens of thousands of podcasts available on the web covering a wide range of subject areas (Thomas, 2006).

Podcasts are especially useful to English language teachers as they are primarily recorded in English and there is no lack of topics being discussed. This means that there are already podcasts that will suit the varying tastes of individual learners across the EFL spectrum (Flanagan & Calandra, 2005). Teachers can choose to supplement classroom activities with podcasts especially created for the purpose of

language education, or they can encourage more proficient or better-motivated learners to engage in extensive listening.

This chapter aims to introduce, in layman's terms, the possibilities of incorporating podcasts in the language classroom. With this goal in mind, the chapter will cover a number of areas: an introduction to podcasting; past applications of podcasts in education; past applications of podcasts in language learning and teaching; practical applications of podcasts in the language classroom; two sample case studies (adult EFL learners in Taiwan); and a series of practical concerns.

WHAT IS PODCASTING?

Podcasting is a play on the words "iPod" and "broadcasting." Podcasts are essentially audio files that, for the most part, can be freely downloaded from the Internet and can be listened to on a computer or any portable playback device that supports MP3 files (Jordan, 2007). When stored in a portable MP3 player, the content can be "listened to as often as desired, whenever, and wherever that desire presents itself" (Gura, 2006, p. 32). Godwin-Jones (2005) calls it the "radio for the people" and the "narrowcasting version of broadcast media" (p. 9). The "pod" in podcasting can be misleading, however. One does not have to be in possession of an iPod to listen to podcasts (Selingo, 2006).

The idea of accessing audio content on the Internet is not new. In fact, both streaming and downloadable audio have been around for a number of years. What differentiates podcasting from previous forms of audio access is "the ease of publication, ease of subscription, and ease of use across multiple environments" (Campbell, 2005, p. 34). Jordan (2007) calls this the "ability to be syndicated, subscribed to, and downloaded automatically when new content is added" (para. 3). Villano (2008) calls podcasting a "digital

file-sharing activity" (para. 1). What makes this whole process possible is RSS technology including RSS feeds and mixers. RSS stands for Really Simple Syndication. These are files that specify the characteristics of individual podcasts, including its name, description, and the exact URL of the audio file so users can download the file. RSS enables listeners to automatically subscribe to preferred content and have them directly delivered to their computers or mobile devices when they become available. These files can then be listened to at one's own convenience. Software that allows for such an operation is called an aggregator, or a podcatcher. Juice (<http://juice-receiver.sourceforge.net/>), Doppler (<http://www.dopplerradio.net/>), jPodder (<http://www.jpodder.com/>), and iTunes (<http://www.apple.com/itunes/>) are popular examples of such freeware (Jordan, 2007; Villano, 2008).

The process of podcasting is actually very straightforward. Those who are familiar with the workings of blogging will find the procedures analogous as podcasts are essentially a form of audio blog. Both are similar in that they can easily be created and accessed without requiring much training or expertise; and more specifically, subscription to either is simple and easy. Like podcasts, blogs also make use of RSS to distribute content.

There are currently three kinds of podcasts: audio, enhanced, and video podcasts (Jordan, 2007). Audio podcasts are usually available in MP3 format and thus they are the most common among the three types. Enhanced podcasts include images in addition to audio; some also include chapter markers to make it easier to skip to desired episodes; and these files usually come in AAC format. Finally, video podcasts are typically movies that are saved in MPEG-4 format; although inherently attractive, the technology is still in its infancy.

Campbell (2005) compares RSS subscription to that of a newspaper subscription. In both cases, subscribers need not go to a provider (a newsstand,

for instance) to receive content because they are delivered regularly to a designated location (at home or at the office). The difference with podcasts is that “persistence of content is potentially greater” (p. 38) as the content of yesterday’s podcast may be more valuable than that of yesterday’s newspaper. Campbell also argues that it is simpler to access the content of podcasts because it is easier to listen rather than read something while one is engaged in other activities (while jogging, for example).

In a way, podcasting takes blogging to another level by adding human expression to the written word, as Manning (2005) suggests, the supplement of a voice “humanizes and personalizes” the experience (p. 2). It is often said that in such audio delivery media as podcasting, the podcaster talks not to an audience but to an individual listener. The platform also invites listener feedback, thus promoting personalized interaction between podcasters and their listeners.

The Popularity of Podcasting

In addition to its low cost and ease of use (Godwin-Jones, 2005), the popularity of podcasting is further fueled now by the fact that media giants have started to support the technology. Amateur podcasters continue to make up the bulk of podcasts since they are relatively easy to create and publish. Only a handful, however, stand the test of time because it is neither easy to regularly produce interesting content nor keep listeners interested enough to return on a regular basis. The National Public Radio (NPR) (<http://www.npr.org/>), the British Broadcasting Corporation (BBC) (<http://www.bbc.co.uk/>), Voice of America (VOA) (<http://www.voanews.com/>), and Cable News Network (CNN) (<http://www.cnn.com/>) are just some of the organizations that provide a wide range of high quality downloadable content in the form of podcasts. Adding to the popularity is the launch of the world’s first all-podcast radio station on May 16, 2005 by Infinity Broadcasting. In addition, podcasters such as KYOURadio

(<http://www.kyouradio.com/>) consist entirely of listener-submitted podcasts (Jardin, 2005).

THE PROMISE OF PODCASTING

Other factors that helped fuel the spread of podcasting include the rapid growth of broadband, which basically means that larger files can now be downloaded faster than ever, and the so-called “iPod phenomenon,” which is instrumental in promoting the popular use of portable playback devices (Godwin-Jones, 2005; Villano, 2008). A British Market Research Bureau survey (BMRB, 2007) indicated that 32 per cent of UK adults, and 69 percent of the 16-24 age group, owned an MP3 player; nearly 30 percent of this population owns at least one iPod. However, the Pew Internet & American Life Project (PIALP, 2006) reported that only approximately 12% of Internet users have downloaded a podcast for later consumption. All of these factors add up to the fact that although a considerable chunk of the population is now “podcast-ready” in terms of both hardware and software, there is still much room for improvement.

Godwin-Jones (2005) considers podcasting and similar emerging technologies disruptive technologies. He describes disruptive technologies as “new and different ways of doing familiar tasks, and in the process, may threaten traditional industries” (p. 9). These can spur student interest and augment the classroom experience when properly adapted. For instance, podcasts can potentially increase the level of class discussion, and students can also use them to review parts of lessons. They are easy to access, and can help integrate activities in and outside of the classroom (Thorne & Payne, 2005). The sections that follow take a brief look at some of these possibilities.

Podcasts in the Classroom

Campbell (2005) painted a picture of how he imagined podcasting would revolutionize learn-

ing. He described a scenario depicting a college student getting ready for a school day by loading her iPod with pre-class podcasts created by her professors and fellow classmates. He explained how the podcasts helped her prepare for a class by giving her a rough idea of what was yet to come as well as reinforcing her understanding of a past lecture by listening to her fellow classmates discuss a particularly tough concept from class.

Much of what he described has already materialized. Teachers and learners from all levels of the education system are already incorporating podcasts as “advance organizers” to help prepare students for an upcoming lesson and as supplementary materials to engage learners, augment class instruction (Flanagan & Calandra, 2005), and go beyond the textbook.

More and more educators are using podcasts to supplement their instruction. In the past, the sole source of content in the classroom was the required text. In most classrooms the curriculum caters to the average student. Little can be done to ensure that those above or below that level can make the most of their learning experience. With podcasting, it is now possible to supplement courses with content that could activate the students’ schemata before the actual lesson, which could be very helpful for students struggling through the course, or to include additional materials that could further enhance the learning experience for those who wish to go beyond the classroom text. By making both in-house and existing podcasts available to students, we can add new dimensions to the classroom, many of which include variety and attention to different learning styles.

In 2004, Duke University became the first university to distribute 20-gigabyte iPods, pre-loaded with school- and class-related information, and voice recorders to their incoming freshmen. Throughout the year, students reloaded these portable devices with content relevant to their learning. Duke no longer gives away iPods, but students continue to acquire them on a lease for

classes that require their use. The Duke University iPod First Year Experience Final Report (Belanger, 2005) described academic uses for the iPod as involving course content dissemination and study support among others.

The 2006 Engage Podcasting Adaptation Award at the University of Wisconsin-Madison (University of Wisconsin-Madison, 2007) provided instructors with technical and financial support to produce innovative audio teaching materials for students. An evaluation conducted at the end of the program revealed that the program helped instructors create exemplary new audio materials with relative ease, and that the students found the materials useful for preparing and reviewing lessons, easy to access, and more helpful than any other type of supplementary materials. In addition, both instructors and students alike displayed an interest in the continued use of podcasting for instructional purposes. It is also interesting to note that students thought the program could further be improved by adding more podcasts.

At DePaul University, Janossy (2007) investigated student’s attitudes towards the use of in-house created podcasts designed to enhance their learning experiences. Although relatively few took advantage of this additional resource, those who made use of the podcasts indicated that in so doing, they understood and remembered facts and concepts better.

In the UK, Edirisingha et al. (2007) used podcasts for academic learning as part of a national research project called Informal Mobile Podcasting and Learning Adaptation (IMPALA). The rationale for this project is that integrating these audio files into the class can solidify students’ understanding of their classroom lessons. The podcasts included staff summaries, interviews, and discussions with the participation of the staff, student mentors, and other students. Like previous studies, the participants displayed a slow uptake to the new service, but similarly, those who made use of the podcasts were generally positive about this new technology.

A-level programs are now also including podcasting as a crucial component in their courses. Students beginning Media Studies A-level courses in September will earn some marks for website, blog, or podcast creation (Lipsett, 2008). The new syllabus by the OCR (Oxford, Cambridge, and RSA) examination board has removed traditional essays from the coursework. Instead, students will be expected to complete two projects. This could include putting together a promotional package for an album release or creating a new computer game, short film, or animation. This would account for 30 percent of their total marks. 20 percent of their marks could be awarded for their description of how they planned, researched, and evaluated their projects. Finally, exams that require them to analyze TV or radio dramas will account for 50 percent of their marks. The new A-level specifications reflect the significant media development in recent years, and students reacted positively toward the change. Students not only feel great pride in showcasing their work online, the training could also give them a head start for a career in media.

iTunes U (<http://www.apple.com/education/itunesu>) is a platform that provides free university-related content, such as audio and video, course content, lectures, language lessons, lab demonstrations, sports highlights and campus tours. To date, it provides thousands of shared files from more than 40 universities, including top US colleges and universities like Stanford University, Harvard University, Yale University, UC Berkeley, Duke University and MIT. The University of Montreal in Canada recently joined iTunes U as its first francophone member (CNW Group, 2008). Member universities have the option of opening part or all of its content to the public. The “beyond campus” section of the platform showcases educational content using audio and video from sources other than colleges and universities. Examples include American Public Media, PBS, the Museum of Modern Art, and Smithsonian Global Sound. According to the

website, iTunes U makes it easier to stay connected with the university. In addition to motivating and engaging students, it also claims to continue to inform alumni, parents, and the community.

Podcasting is also becoming more prevalent in primary education. One notable example is WillowWeb (<http://www.mpsomaha.org/willow/Radio/>). The site showcases podcasts made by primary school students discussing issues relevant to various content areas. Additionally, the Educational Podcast Network (<http://epnweb.org/>) sorts K-12 podcasts according to grade level or subject area.

Gura (2006) describes the increasing interest in podcasting on campus as following a “familiar ed tech pattern” (p. 32). There are two stages: adoption and adaptation. During the adoption stage, the technology is derived from a non-educational context and appropriated to education. In the case of podcasting, it was derived from its original leisure and entertainment context. During the adaptation stage, the technology is “tweaked, altered, or customized to give it a function and identity as an instructional resource” (op. cit., p. 32). It is this adaptation process that creates “coursecasting,” which he describes as “the recording and subsequent podcasting of lectures” (op. cit., p. 32).

Podcasts in the Language Classroom

Bull (2005) pointed out that the explosion of podcasts mean that there are now podcasts that cater to previously untapped niche markets. The number of podcast feeds under management worldwide, including those with video, reached the total of 161,852 in 2007 (FeedBurner, 2007). For language teachers and learners, this essentially means that it is now easier than ever to build a language immersion environment, regardless of their physical location (Flanagan & Calandra, 2005). Topics and issues discussed in podcasts range far and wide, and language learners are

certain to find something to their liking. Language teachers will also be delighted to find that there is a myriad of podcasts that cater solely to English language learners (Stanley, 2006). These podcasts often come with transcripts to support language learners.

Zychla (2007) stated insufficient language exposure, students' overdependence on teachers, and differences in facilities among schools as some of the general problems in language education that podcasting can help alleviate. Patten and Craig (2007) added that the use of podcasts could also empower language learners to take control of their learning, or even develop their own identity as English speakers.

Podcasts are a natural addition to language classes (Flanagan & Calandra, 2005) because language is ideally learned through frequent exposure. Language classes can be recorded so that students can download them for later review. Outside resources could also be incorporated into the classroom as an alternative to stilted and often outdated course materials. In Osaka Jogakuin College in Japan, students majoring in English as a Foreign Language listened to downloaded news stories on their iPods to complete homework assignments (McCarty, 2005). Materials that are interesting to students can be chosen to link what is learned in the classroom to their real world. Language learners are usually in for a surprise the first time they attempt to speak in their foreign language because the language they learn in the classroom is nothing like the language that is used in real life (Lu, 2007). Rarely do they, if ever, become exposed to culture-laden and unpolished authentic language in the typical language classroom.

Using Readily-Available Podcasts

There are two types of podcasts that can be used in the language classroom: those that were created for the purpose of teaching languages, and those that were simply recorded in the target language.

The former usually make use of simplified language and may come with transcripts. Since they were especially created for language learners, they are usually easier to listen to and are sometimes even graded to suit learners at varying proficiency levels.

The second type of podcasts is usually not recorded for the purpose of educating learners on the intricacies of the language. They are therefore authentic in that they exist for the purpose of conveying information and the language and its connotations are not deliberately simplified. Exposure to this type of podcast affords language learners a glimpse into the real-world use of the target language. iTunes lists more than 400 podcasts from kindergarten through 12th-grade classes, and Yahoo! Podcasts has nearly 900 education-related podcasts; some of these podcasts are produced by educators, while many are created by students (Selingo, 2006).

The most straightforward way of using either type of podcasts is by assigning them to students as extensive listening assignments. Teachers can assign students to perform listening activities before, during, or after class instruction. Teachers can also design worksheets to accompany these listening assignments. Possible activities include partial transcription, summary writing, listening for details, note-taking, and providing an opinion regarding the topic. Podcasts can also simply be introduced to the learners merely as forms of entertainment. Two case studies depicting possible ways of incorporating this resource in language learning will be presented in more detail in later sections.

However, if it were so easy to make learners listen extensively in the target language without having to exert some sort of force on them, this discussion would not be necessary. Hopefully, the variety of topics introduced in podcasts will be enough to motivate some learners into becoming more enthusiastic about listening in their target language. What teachers could do is to teach students how to access podcasts and assist

them in finding what they are interested in. One way of doing this is to introduce such podcast search directories as Podcast Alley (<http://www.podcastalley.com/>), Podcast Pickle (<http://www.podcastpickle.com/>), Yahoo! Podcasts (<http://help.yahoo.com/l/us/yahoo/podcasts/>), Podcast.net (<http://www.podcast.net/>), and the NPR Podcast Directory (http://www.npr.org/rss/podcast/podcast_directory.php) to language learners. From here on, they could proceed according to their personal preferences.

The next step would be to teach them how to download the podcasts of their choice. The process is actually very straightforward. In the case of directories, podcasts can usually be downloaded by the episode. Most provide onsite playback so that listeners can sample audio files to see whether they like them enough to download them. If listeners find an entire show that they enjoy so much, they then have an option to automatically download every single episode published by the podcaster with the help of an aggregator. Learners can also be directed to platforms such as iTunes (<http://www.apple.com/itunes/>), which doubles as a podcast directory and an aggregator, and allows listeners to automatically subscribe to new content of their choice.

Finally, the downloaded files, usually in MP3 format, can then be listened to on a computer (Godwin-Jones, 2005), or on portable audio playback devices that support MP3 files.

Create Your Own Podcasts

Even with the tens of thousands of podcasts available online, it is still sometimes difficult to find something to suit one's needs. Fortunately, there is another option that is just as convenient. The idea of creating podcasts may seem daunting at first, but with a little orientation, it will be evident that the task is not as difficult as it seems.

Duke University has made in-house created podcasts available to their students since 2005 (Belanger, 2005). In a Spanish class, for instance,

students received oral feedback from their instructor; while authentic materials such as news, songs, and poems were made available to students in a Turkish class. Students were also required to submit audio assignments and journals in the form of podcasts.

Podcasting in the classroom is not reserved for educators. Some instructors may include podcast creation as part of the activities in the language classroom. Both instructor- and student-created podcasts can supplement teacher-centered instruction. Other uses for podcasting include recording lessons for students who are absent because of a long illness and recording important school events to serve as archives (Selingo, 2006; Villano, 2008).

Students are usually more involved in activities if they are given a project to complete. Allowing them to create podcasts on any topic they choose and reminding them that there is a real audience out there that will potentially listen to their creation will provide them with the incentive to create something meaningful. When students record a podcast and publish it, their audience becomes more than just a teacher. It is motivating for them to know that they have the whole world as their audience and that their work is not just something their teacher can put a grade on (Selingo, 2006). In addition, requiring them to do so in the target language would help them become more proficient in the use of that language. Daniel J. Schmit, an instructional technology specialist in the college of education at the University of Nebraska at Lincoln and the author of "KidCast: Podcasting in the Classroom" says that students creating their own podcasts learn to "do research, to communicate in print, to speak effectively, and grab attention with sound" (Selingo, 2006, para. 5). He further added that podcasting is effective in the classroom because it can be used in every subject (op. cit.).

Van Amelsvoort (2007) indicated that the use of podcast creation as a classroom activity can be very motivating for language learners, and

that it realizes several of what Kumaravadivelu (1994) calls the list of best practice macrostrategies, namely:

1. Maximizing learning opportunities
2. Facilitating negotiated interaction
3. Minimizing perceptual mismatches
4. Activating intuitive heuristics
5. Fostering language awareness
6. Contextualizing linguistic input
7. Integrating language skills
8. Promoting learner autonomy
9. Raising cultural consciousness
10. Ensuring social relevance (p.122)

Teachers can maximize learning opportunities by assigning students to create podcasts on designated topics, thus requiring them to do extra research and mastering the content area in the process (Villano, 2008). In addition, since this type of assignment usually requires students to work in groups, they would be required to interact with their peers and generate an end product borne out of consensus. Furthermore, through this activity, students will learn, among other things, to deliver their ideas in an efficient and forceful manner. Finally, when assigned regularly, these activities can help students learn to take charge of their own learning and teach them to connect what they learn in school to the real-world context.

In his own study, Van Amelsvoort (2007) made use of student-created podcasts to move vocabulary instruction out of the classroom and free up more time for student discussions on news topics in one class, and build schemata through listening to podcasts prior to the class in another. The recording activity was enthusiastically received by the students. A similar podcasting-recording activity conducted by Stanley (2006) echoed these findings.

However, according to Villano (2008, n.p.), creating podcasts with “true academic value” can be tough. He therefore suggested five ways of “turning run-of-the-mill podcasts into compelling educational exercises,” as follows:

1. **Be prepared:** Content-wise, podcasting is a lot like speechwriting. For both activities, students (and instructors) need to know their audience, pick a theme, and do extensive research on their chosen topic. Like speechwriting, podcasting also requires a beginning, middle, and conclusion. It is also crucial to stay on the subject at all times. Many podcasts fail to capture their audience when they lack focus. The educational value can be found in the process itself. The editing and revision processes help students internalize the curriculum content in the process. Students are receiving a “broader educational experience” (n.p.) by researching material well enough to create a podcast.
2. **Focus on sound:** Because podcasts are “nothing more than large sound files” (n.p.), it is critical to filter background noise and even out volume to make the podcast interesting, or at least bearable, to listen to. Podcasting educators on a tight budget can remedy the first problem by going low-tech and fashioning a recording studio with a wooden box and egg-crate insulation; a pantyhose can also be stretched across a hanger to serve as pop filter. To even out the volume, podcasters can turn to The Levelator (<http://www.conversationsnetwork.org/levelator/>) from The Conversations Network, a nonprofit podcast network. In addition, music can also be used as a transition to signal the end of one topic and the beginning of another. To avoid copyright issues, podcasters can turn to podsafe music for royalty-free tunes. Sites that provide such content include SoundzAbound (<http://www.soundzabound.com/>), RoyaltyFreeMusic.com (<http://www.royaltyfreemusic.com/>), and The Music Bakery (<http://www.musicbakery.com/>).
3. **Edit wisely:** When recording with students, keep disruptions to a minimum so as to force

them to stay on task. For K-12 audiences, the finished product should not exceed 15 minutes because young users rarely have the patience to sit through more than 10 to 15 minutes at a time. Most podcasters use GarageBand – which comes free with Macs – and Audacity to edit (Selingo, 2006).

Additionally, selecting a name can be crucial as it could catch the eye of potential listeners. Finally, a slogan can also be helpful, because it “gives listeners something to remember” (n.p.); it also “helps explain the overarching theme” (n.p.) There are sites that provide help in this respect. Examples of such sites include Sloganizer (<http://www.sloganizer.net/>) and Slogan4u (<http://slogan4u.com/>).

4. **Be consistent:** To attract audiences, podcasters should regularly come up with new content to keep listeners coming back for more. For educators aiming to include podcasting activities for students, this activity should be integrated into the classroom routine. It should be included in lesson development to see which aspects lend themselves to podcasting.
5. **Follow the leaders:** The best way for podcasters to improve their own podcasts is by studying successful examples. By listening to successful podcasts that are designed for a similar audience or covers similar topics, potential podcasters can learn what elements contribute to their attractiveness

The section that follows introduces a relatively easy way to publish podcasts. While it is by no means the only way to do so, it is out of the scope of this chapter to introduce more intricate ways of publishing podcasts.

The first step to publishing a podcast is finding a website that provides free hosting services. Examples include Odeo (<http://www.odeo.com/>) and Podomatic (<http://www.podomatic.com/>). Both websites are one-stop shops for podcasters, so everything, from recording to posting to add-

ing descriptions about the show episodes, can be completed on the site.

Podcasts can be further enhanced and improved through editing, adding music, or inserting sound effects, however, it would be advisable to record the audio file elsewhere before uploading it on either Odeo or Podomatic. One such software that is popular among podcasters is Audacity (<http://audacity.sourceforge.net/download/>). This freeware is compatible with multiple operating systems, including Windows, Mac OS, Linux, and Unix. In addition, the output file can also be exported as an MP3 file with the help of the LAME MP3 Encoder (<http://lame.buanzo.com.ar/>). As for adding music and sound effects, potential podcasters should be warned not to make use of commercial creations so as not to infringe copyright laws. Fortunately, there is another way around this problem. More and more artists are uploading their musical creations that can be used in podcasts under the Creative Commons license without the potential risk of breaking the law. This type of music is also known as “podsafesafe” music. Two such websites that provide this type of music are Podsafesafe Audio (<http://www.podsafesafeaudio.com/>) and Podsafesafe Music Network (<http://music.podshow.com/>).

A few words of caution are in order when it comes to creating podcasts. This advice goes for both teacher and student podcasters. It is of course only natural to expect other people to listen to, and better yet, enjoy one’s own creation. Following these few tips will not ensure success as the new podcasting superstar, but it will at least guarantee that the audio outcomes are, at the very least, listener-friendly. First, the recording should be done in a quiet room with good acoustics; second, as many people are not capable of creating a coherent and captivating speech in just a single take, it is advisable to prepare some show notes and do some editing to ensure coherence and listenability; third, speaking to one listener at a time will make the podcast feel more personal (Campbell, 2005); finally, the shows should

ideally be kept concise for two reasons: (a) not everyone has high-speed broadband access, and (b), long monologues can be very boring. Finding a co-host can remedy the last concern, as would adding some music to the podcasts. However, the music should not be too loud as to drown out the speaker's voice. To lower the possibility of any of the above happening, always listen to a recording, or better yet, ask a friend to help listen to it before publishing the completed material.

Before podcasting, it was not easy for language learners to find listening materials that were free or suitable for their needs. Those that are used in classrooms can be very stilted and do not reflect real use. They are also quite often very uninteresting. The preceding sections provided but a glimpse of the possible applications of podcasting in the educational context.

In addition to what has been mentioned, podcasting can also serve as an additional resource for distance education, where it can be considered a natural fit, seeing as it can deliver content with relative ease. Furthermore, it also has potential value in teacher education, especially language training. Language never ceases to evolve, and it is only logical that language teachers should continually expose themselves to the language they are teaching, especially if they themselves are nonnative speakers of that language. As with nonnative language teachers, advanced language learners can also take advantage of this resource by building their own language immersion environment through exposing themselves to ample amounts of authentic input through available podcasts.

TWO CASE STUDIES: PODCASTS IN THE EFL CONTEXT

Podcasting and Dictation

In 2006, I conducted a case study investigating the use of podcasts, specifically those down-

loaded from VOA Special English (<http://www.voaspecialenglish.com/>), as a dictation tool. The participant, a 23-year-old office worker, received his formal education in Taiwan. His first encounter with English was through a junior high school preparatory cram school during the summer before he entered seventh grade. Over the approximately eight years of formal English education he received in the school system, most of the lessons were delivered through teacher-led vocabulary and grammar-based instruction with rote memorization and information regurgitation on his part. When conversation is taught, the textbooks used were usually dated and the dialog unnaturally slow and artificial. Despite the length of his formal English learning, he was frustrated to find that he could not sustain even a simple conversation with English speakers in real life. It was hypothesized that through dictation practice, the participant would become more accustomed to real English usage, including becoming more familiar with coarticulation effects that frequently occur in spoken English. This includes elision, assimilation, and liaison.

The study was conducted for 28 consecutive days. The participant was instructed to transcribe one 200-word mini-podcast per week. The first three days of the week were dedicated to transcribing the podcast; the fourth day was dedicated to understanding the content and language of the podcast in detail; on the last three days of the week, the participant was required to produce an audio file of the passage, and to imitate the original audio file as closely as possible. Four abridged podcasts were transcribed in total for the study.

Journal and interview findings showed that the participant felt frustrated when he met with difficulties while transcribing; for example, when he encountered instances of liaison, such as “of up” in “of up to” and such instances of assimilation as the joined sound in “based this.” Through repeated exposure to the podcasts, however, he became more aware of the features of coarticu-

lation effects (Lu, 2007). He also stated that the activity helped him better understand what his international friends on Skype are saying. However, he believed that four weeks was too short to make marked progress, and that the biggest hindrance to his comprehension problem is his small vocabulary size.

Further research with a larger number of participants and more varied sources are needed to generalize the findings.

Podcasting as a Resource in the Language Classroom

The second case study looked into the value of incorporating such web-based resources as YouTube videos (<http://www.youtube.com/>) and podcasts into a 12-week TOEIC test preparation course. The class is part of a continuing education program at a university in Taiwan. Students who enroll in the class are mainly those who are preparing to take English proficiency tests.

Among the ten participants in the study, only one works full-time; the rest are either university or graduate school students. Their average age is 25.

The Test of English for International Communication (TOEIC) is administered regularly for nonnative speakers of English who wish to measure their language proficiency in a business setting. Other contexts include corporate development, dining out, entertainment, finance and budgeting, general business, health, housing/corporate property, manufacturing, offices, personnel/human resources, purchasing, technical areas, and travel. The older version (also the focus of the class) concentrates on reading and listening skills.

Each weekly session lasted three hours. In addition to the main test-preparation text, the lessons were amply complemented with additional video and audio files as listening supplements. Activities involving both video, usually short TV commercial clips, and audio from the Daily Idiom

(<http://www.englishcaster.com/idioms/>) and VOA news reports (<http://www.voanews.com>) include partial transcription, listening for the main idea, listening for details, note-taking, and summary writing. Topics relevant to the TOEIC were chosen for the activities. The participants completed a questionnaire during the last session.

Questionnaire and interview results showed that the students found the audio and video input very interesting and motivating. They also found the activities very useful in helping them improve their listening skills. One student wrote, "Listening to the podcasts helped my listening ability improve tremendously. I have become used to different accents and the normal speed of English speech through exposure in these 12 weeks." Numerous students found the listening and viewing supplements very interesting and motivating; one added that she understood more about English, not just about the language but also about the culture, through these supplements.

The downside of these activities, as one student put it, is that "it seems that few vocabulary words were picked up from the process. More organized ways of presenting vocabulary found in the podcasts should be administered."

PRACTICAL CONCERNS

Cuban (1986) calls "constancy amidst change" the "perennial paradox" facing public schools (p. 1). Schools are seen as rigid and resistant to reform even as changes occur in governance, programs, curricula, organization, instruction, and most notably, educational fashions. However, constancy and change should not be seen as a dichotomy as it is possible for both to coexist in schools. For a long time, teachers have been seen as inflexibly resistant to modern technology. However, this is not completely true, because such "technology" as textbooks and chalkboards were successfully integrated in classrooms. It is evident then, that the main concern of teachers is to find ways of

increasing teaching efficiency. Technology that helps achieve this end is effectively incorporated in the classroom. He added that there is little variation in the assertions of new and emerging technologies, and their respective claims to “revolutionize” the classroom. Cuban describes definite patterns in the introduction of technology in the classroom that he calls the “exhilaration / scientific-credibility / disappointment / teacher-bashing cycle” (p. 5). In the exhilaration stage, claims predicting extraordinary changes in teaching and learning are made by reformers; seldom are these innovations introduced by teachers. In the scientific-credibility stage, academic studies demonstrating the effectiveness of the technology are published. In the following stage, the disappointment stage, scattered complaints regarding use and effectiveness come out. Finally, when technology use becomes disappointingly low in the teacher-bashing stage, a series of sharp critiques blame teachers for resisting change. This cycle, as Cuban (1986) observed, has repeated itself through the introduction of radio, film, and television in the classroom since the 1920s.

Podcasting is an emerging technology that is finding its way into classrooms. However, different to its predecessors, many of the supporters of this technology are teachers. Even though the number of teachers who have integrated this technology into their daily classroom routine is not yet considerably large, there exists an upward trend that is climbing slowly but surely.

As Tickton notes, “Not until technical equipment in education becomes as foolproof, teacherproof, and childproof as common household appliances will teachers use it everywhere” (Tickton, as cited in Cuban, 1986, p. 53). In other words, technology that is simple, durable, flexible, and efficient will most likely be incorporated in the classroom.

Podcasting has yet to fulfill the abovementioned requirements, however it is possible to foresee its realization in the near future. Podcast creation and access is becoming more and more

intuitive, and it is only a matter of time before it becomes as basic as surfing the Internet.

Willis (as cited in Cuban, 1986) listed the following as the main reasons (capturing over three-fourths of responses) for the lack of use of instructional television in classrooms: broadcast time inconvenient, no equipment or facilities, no time, and facilities inconvenient.

Most of the reasons that are stated as hindrances for technological implementation in the classroom in the past can now be easily remedied. In the case of podcasting, broadcast time is no longer an issue because, as previously mentioned, they can be “listened to as often as desired, whenever, and wherever that desire presents itself” (Gura, 2006, p. 32). For the second and fourth issue regarding the lack of access to equipment and a decent Internet connection, we are fortunate that affordable portable computers and MP3 players are becoming more widely available and more affordable in recent years. Stanley (2006) also suggested that the instructor could compile podcasts and burn them into a disk to eliminate the problem of Internet access and unfamiliarity with the technology. As for the third issue of time, listening activities can be assigned as homework so as not to take up precious class time.

Regardless, most research done on the incorporation of supplementary podcast resources in the academic context is at most mildly successful. Although students who made use of the technology were generally positive about the experience, those who did not participate remain unconvinced of its advantages (Janossy, 2007; Van Amelsvoort, 2007). These findings are not in line with Campbell’s (2005) speculations as to student receptivity of them as a learning medium. Some reasons for not taking advantage of such a resource included lack of motivation, uninteresting content, lack of access to equipment (Van Amelsvoort, 2007), poor quality, and lack of familiarity (Edirisingha et al., 2007). In addition, Gura (2006) observed that little “true reflection” is taking place as universities scale up

coursecasting, or educational podcasting. While this type of podcast is continually increasing in number and becoming easier to create and embellish with video, little is being done to improve the effectiveness of its application as many educators continue to record lectures and upload them without further editing.

What Gura (2006) calls “beyond coursecasting” (p. 32) is the practice of planning and editing educational podcasts so that it does not serve as a mere archive of educational content. He reiterated that coursecasts should complement and enhance the efficiency of classroom learning and not serve as an alternative to live instruction.

Some educators are also concerned that class attendance will drop if lessons are recorded and easily accessible as podcasts. This is the case for the UVA School of Medicine (Weaver, 2007). This led instructors to argue whether or not they should limit accessible information to simple notes about lessons. Those supporting the other side of the argument, however, asserted that it is more important to ensure that students are learning than to insist on their physical presence.

There are some ways to improve the situation. Educators should ensure that students fully understand how to access podcasts and become comfortable in using the new technology. Although podcasting shows great promise, it will only achieve optimal efficiency when students are ready to embrace this new resource (Edirisingha et al., 2007).

Sometimes, however, the podcasts themselves may be inherently uninteresting. For instance, Janossy (2007) made use of text-to-speech software to produce podcasts. The robotic output did not motivate students to listen because it lacked human emotion. An alternative to this would be to make use of podcasts relevant to class lessons that are already available on the Internet.

Finally, Gatton (2007) warns that integrating podcasts in lessons is not beneficial unless they are integrated with student needs in mind. He further asserted that podcasts that are unrelated to what

is being learned could be more of a distraction than a useful resource.

FUTURE TRENDS

In Taiwan, a considerable percentage of the population is in possession of MP3 playing devices. PCs, laptops, MP3 players, iPods, cell phones, and even electronic dictionaries are equipped with MP3 playback functions. Freely-downloadable podcasts can provide personalized content that could appeal to each individual’s unique preferences. These could potentially make up for learners’ lack of exposure to the target language.

Another new development in podcasting is Cinch (<http://cinch.blogtalkradio.com/>). This is a website that can turn your mobile phone into a podcast recording device at the price of a phone call. Such developments can only multiply the number of podcasts available to a worldwide audience.

Jordan (2007) predicts that interactivity will further be incorporated in the future. These additions would not only make podcasts more interesting, they would also be helpful to language learners because they will then have visual cues to further aid their understanding. Although the number of portable playback devices that support video is comparatively less, interested users have the option of watching these “vodcasts” or “video podcasts,” on their computers. Of course, vodcasts also require faster Internet access and file sizes can be a lot larger than audio files. However, if the trend persists, it will not be long before affordable devices that support video will be introduced to the consumer market. By then, vodcasts could potentially become an attractive addition to teacher-led instruction.

In Taiwan, as with most language learners learning English in a Foreign Language context, advanced learners, despite being fluent in the target language, rarely achieve native-like proficiency, often manifested by a lack of accurate

control and intuition of the language. Although they are generally more motivated in learning the language, advanced EFL learners seldom go beyond classroom learning, thus generally becoming less proficient than their English as a Second-Language (ESL) counterparts. Advanced EFL learners can potentially overcome the disadvantage of not having an English environment by accessing authentic target-language materials in the form of podcasts, and even vodcasts. In addition to becoming more familiar with the language, podcasts and vodcasts can also serve as a tool for acculturation to the target culture.

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KEY TERMS

Aggregator: Aggregators, also known as “podcatchers” are software that allow listeners to subscribe to podcasts via Really Simple Syndication (RSS).

Blog: A weblog, or blog for short, is an online journal organized in reverse chronological order where a person writes about their thoughts and interests, including providing links to relevant resources on the Web. Most blogs allow readers to leave comments. Apart from blogs used as personal journals, blogs can also be an effective tool for cooperative learning and research.

iPod: These are portable playback devices that support MP3 and AIFF files produced by Apple Inc. Later versions also support photo browsing and video playback.

Podcast: This is a portmanteau consisting of the words “iPod” (from Apple’s popular MP3 player) and “broadcast.” Podcasts are generally freely downloadable MP3 files that can be subscribed to via RSS. The technology is based on

the principle of pushing information to a user who has previously subscribed to it.

Podcatcher: This term is another word for an aggregator, feed reader or news reader. An aggregator is a software application that automatically delivers content to a user’s computer thus saving search time.

RSS: Really Simple Syndication or RSS for short, is a method of subscribing to Web pages and podcasts. By automatically subscribing to an RSS feed, content is delivered to an end user’s computer each time it is updated. Content typically includes blogs, podcasts or news headlines from an online publication.

RSS Remixers: RSS tools that take multiple feeds and re-mix them into one new feed.

Section III
**Pedagogy 2.0 and Second
Language Learning**

Chapter XX

The Pedagogical Implications of Web 2.0

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ABSTRACT

Web 2.0 tools like blogs, Wikis, and podcasts are new to the vocabulary of language acquisition. Teachers and students who take full advantage of these emerging tools will participate in more dynamic, immediate, and communicative environments that provide opportunities for meaningful experiences through social constructivist learning. This chapter aims to bring perspectives rooted in educational theory to a domain too often dominated by the technological implications of its tools and argues that social constructivism is the pedagogical paradigm for learning and teaching facilitated by the next generation of Web technology. It reviews basic theoretical tenets and discusses their implications. Social constructivism lays the foundation for learning environments that foster the participation of students and teachers in today's knowledge and information-based society to their full potential.

INTRODUCTION

Language learning in the 21st century has new tools at hand. Tools like blogs, wikis, and podcasts are new to the vocabulary of language acquisition. Language learning environments are evolving into more dynamic, immediate, and communicative environments. The traffic on second language Web sites like *BBC Learning English* demonstrates the growing popularity and reach of online language learning. Concurrent with the development of the Internet over the past 20 years, learning has become intertwined with learning online; more and more people are looking for flexibility and independence in their language learning experiences.

The emergence of new technologies has always been accompanied by promises of the transformation of learning and teaching. In *Teacher and Machines*, Cuban (1996, p. 3) states that “educators [have] searched for means of communicating knowledge in simple, inexpensive, and timely ways” while “making instruction both productive and enriching” (p. 3), all in the name of transforming education to serve more students more efficiently. Cuban continues to say that “because teachers believe that interpersonal relations are essential in student learning, the use of technologies that displace, interrupt, or minimize that relationship is viewed in a negative light” (1996, p. 61). Although Cuban has argued that technologies have been oversold, he also makes a case for computers being underused in modern education. Apart from the promise of “more efficient and productive” educational institutions, the “transformation of teaching and learning into an engaging and active process connected to real life,” and “the preparation of the current generation of young people for the future workplace” have been major goals of educational technology reform (Cuban, 2002, pp. 13-15).

The promise of Web 2.0 technologies is different. Their impact on the learning process and the practice of teaching is truly revolutionary in that it

does not promise more efficiency but it extends the relations between teachers and students beyond the two-dimensional models of instruction to multi-dimensional networks that resemble the world we live in closer than ever before. However, the role of technology represents a site of struggle with effects on the quality of learning opportunities. As Warschauer (2006) argues, “Educational reformers suggest that the advent of new technologies will radically transform what people learn, how they learn, and where they learn, yet studies of diverse learners’ use of new media cast doubt on the speed and extent of change” (p. 1).

BACKGROUND

Many educators consider correspondence education the precursor of distance education. Correspondence education developed in the mid-19th century and this was the only way to reach students who were physically separated from their instructor. By the mid-20th century, education models had evolved to computer systems built to also increase the efficiency of instruction by delivering learning packages to a large number of students, for example via PLATO (Programmed Logic for Automatic Teaching Operations) (Berners-Lee & Caillau, 2000, p. 85). In the late 1960s, a computer-assisted instructional system called TICCET (Time-shared, Interactive, Computer-Controlled Educational Television) was developed by combining computer with television technology to deliver large amounts of individually controlled instructional material to students. It was not until the 1980s that progress in the areas of speech recognition, machine-assisted translation, Artificial Intelligence and generally Natural Language Processing was made to a significant extent. While computers became more available to the average consumer and the World Wide Web was invented they didn’t enter the public sphere until the early 1990s. From this the first generation of the Web as an environment for learning emerged, giving

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teachers the tools to create and disseminate electronic and digitized learning materials in more efficient ways much like correspondence courses once did with print-based resources. The learning paradigm as such remained unchanged.

Many influences have had an impact on the world of learning and on shaping the online learning landscape of the second generation of the World Wide Web, the Web 2.0 era. Richardson's (2006) book, *Blogs, Wikis, Podcasts, and other Powerful Web Tools for Classrooms* has been recognized for the use of blogs in the classroom as a "trendsetter in education" by the *New York Times*. The underlying concepts of the use of Web tools in this book are spreading throughout the online education community. Richardson states that "every educator needs to understand the potential impact of these tools [and the implications of] the social connections that students are now making on the Web, the ability to share and contribute ideas and work, the new expectation of collaboration, and the ability to truly extend the walls of our classrooms" (2006, p. viii). Throughout the book, Richardson describes these free and easy to use Web-based services to create blogs, wikis, RSS feeds, podcasts, and social bookmarks as learning tools for a constructivist and collaborative pedagogy with considerable relevance to curriculum standards.

A hugely popular blog created by the Public Library of Charlotte & Mecklenburg County called *Learning 2.0* lists 23 *Things* or small exercises developed for their staff to explore and expand their knowledge of the social Web. The blog was developed to provide professional development on Web 2.0 tools using Web 2.0 tools and has been copied, commented on, contributed to by many people, much in the same way that Richardson describes the potential of these tools for education.

While there is still some disagreement about just what Web 2.0 means, O'Reilly, a supporter of the Open Source Movement and credited with coining the term Web 2.0, states that "Web 2.0 is

the network as platform, spanning all connected devices ... creating network effects through an 'architecture of participation,' and going beyond the page metaphor of Web 1.0 to deliver rich user experiences" (O'Reilly, 2005, n.p.). Downes, a senior researcher at Canada's National Research Council, who has been regularly writing about Web 2.0 and its impact on education for some time, echoes O'Reilly's definition of Web 2.0 but underlines that most importantly, Web 2.0 is "a social phenomenon embracing an approach to generating and distributing Web content itself, characterized by open communication, decentralization of authority, freedom to share and re-use, and the market as a conversation" (Wikipedia, 2007, n.p.).

Web 2.0 tools have now become so widely available that many students are already using them (Prensky, 2001, 2004). What's more, students are using these tools in substantially different ways than any learning tools before: "The possibilities of what *Digital Natives* can do online are growing exponentially" in ways that "online life has become an entire strategy for how to live, survive and thrive" and "it's as though the cognitive structure were parallel and no longer sequential" (Richardson, 2006, pp. 6-7). Godwin-Jones (2007), a frequent contributor to *Language Learning and Technology* states that "the much-ballyhooed Web 2.0 is essentially a transition from online consumer to consumer/producer/participant" (p. 8), a self-construct that many students embody quite naturally.

Web 2.0 as an emerging social technology phenomenon is at the heart of what we have come to understand as e-Learning 2.0, environments encouraging collaborative learning via the use of innovative, community driven technologies and tools. Because of the Open Source Movement, a set of principles and practices that promotes access to the development of design and the production of software, user-generated content can now be created through individual effort or through collaboration among instructional designers.

MAIN FOCUS OF THE CHAPTER

With the arrival of technologies that provide a variety of media connecting students to teachers, peers and learning materials, online learning has come to describe a new way of reaching students and connecting them with one another. Today's instructional models have to address the complexities of online learning environments, meeting the needs of students and teachers to learn and teach in an effective way as well as the demands online learning places on them to rediscover and redefine learning and teaching practices.

Online learning students and teachers have different motivations; they may prefer working independently from their peers or they may face barriers of transportation, scheduling, and/or accessibility to services that prevent participation in a traditional school. More and more students and teachers, however, make a conscious choice to learn and teach online, with new technology in mind that makes new ways of learning and teaching possible. For instance, in the case of immigrants who are awaiting passage to new countries, online learning provides an excellent opportunity to develop the language skills and acquire cultural knowledge they will need in their new country. Today, education brings together life-long learning theory with the ideas of distributed, blended, and flexible learning that have emerged within the context of technology-based instruction over the last two decades

As new computer and communications technology has emerged, together with software applications such as browsers and other clients, distance learning has become synonymous with learning online. However, while distance learning carries the interpretative baggage of its principal defining characteristic, that is the physical separation between student and instructor, online learning is often too narrowly defined by the extent of networks such as the Internet or intranets. While both promise learners to be able to learn anytime and anyplace to a lesser or greater degree, the

implications for how students learn and teachers teach run deeper. Overall, it can be stated that online learning uses technology to breach the distance where there is a separation of student and instructor in time and space.

In exploring the potential use of technologies as a medium for learning, authors and academics have looked at the challenges for students and teachers. These challenges have defined our understanding of Web-based learning and teaching and guided us closer and closer to the paradigm shift exemplified by Web 2.0 environments, but a common understanding about aspects of quality and the different perspectives available in the design of online and distance learning environments is still needed.

The following statements may best reflect common convictions about learning that online learning environments should bring to life from the perspectives of developing a program primarily based on the technological infrastructure, the availability of learning content, and providing flexibility to learners:

- **Technology perspective:** Learning is *distributed* in that it “makes use of mixed or multimedia tools to bridge the distance between teacher and learner” (Utah Education Network, 2007, n.p.).
- **Content perspective:** Learning is *blended* in that it “employs multiple strategies, methods, and delivery systems” including e-based and print-based resources (Node, 2001, p. 5).
- **Learner perspective:** Learning is *flexible* in that it “expands the choice on what, when, where, and how people learn” (Australian National Training Authority, 2003, p. 3).

Over the past 20 years, at the same time as education has become intertwined with learning online, the Internet has evolved from information and communication technology environments to a network of virtual spaces built on the dynamics of social communities. This second generation of

the World Wide Web has come to be known as Web 2.0 bringing social aspects to the foreground while technology steps into the background and fulfills its intended purpose as a medium for learning and teaching.

The emphasis on community and social networks in Web 2.0 has a strong connection to theories of social constructivism and the learners' need to create meaning. Within this context social-constructivist learning theory has reemerged as an approach to learning independently and embedded within a social community. Social constructivism is the approach for online and distance learning for the e-Learning 2.0 paradigm and the Web 2.0 era.

As the tools of e-Learning 2.0 make their way into the hands of users, creating community and working with others online has become easier. Language learning blogs are being used to connect ideas and people around the world, educational podcasts and the communities that pop up to develop and listen to them are a vibrant and valuable phenomenon, *YouTube* has found its way into everyday language. Ideas about the decentralization of authority, freedom to share and re-use information fit perfectly with modern notions of learning as less of a transfer of knowledge from a teacher and more of students learning from each other. *WikiEducator* has begun a listing of free classroom handouts and is planning to encourage teachers to collaborate on developing free textbooks using the wiki platform.

A New Way of Learning and Teaching

Face-to-face instruction often assumes the teacher's ownership of knowledge and transmission of it to the learner, while online learning should be built with the student at the centre of the learning environment. A social-constructivist approach helps focus resources and support for learners to enable them to actively use new material rather than passively absorb information presented to them. According to Warschauer (Berners-Lee &

Caillau, 2000, p. 93), the evolution of Computer-Assisted Language Learning can be divided into 3 trends: Behavioral, Integrative, and Communicative, mirroring the evolution of technology and the evolution of linguistic and instructional sciences. The shift to a social-constructivist approach signifies a fundamental change to "willful, reflective, active, conscientious and constructive" learning (Jonassen & Land, 2000, p. v) and collaborative learning represents a key concept between teachers and students within this approach.

Berners-Lee and Caillau (2000) state that:

"in the past, methods have tended to be specialized and exclusive in technique, banishing what preceded to the scrapheap of failed technology [but] it is now generally believed that successful language learning involves competence in a large number of complex and integrated skills and that successful language teaching is more likely to result from using a combination of several different language teaching approaches as no single approach can be said to be entirely successful on its own." (p. 101)

As the epistemological foundations on which social-constructivist convictions are built, differing from cognitive theories of learning (Jonassen & Land, 2000) by expanding on them, there is much room to accommodate different teaching approaches. Social constructivism presumes that learning is a process of individual interpretation and meaning making based on a variety of experiences, and that knowledge is constructed from these experiences (Jonassen, 1991). Additionally, social-constructivist learning processes state that social interaction or social constructivism is not merely supportive of but an essential ingredient in cognitive development (Duffy & Cunningham, 1996). These fundamental changes envision learning as a social dialectic process of meaning. A learning event is characterized by internal and social negotiation between participants of an activity situated in a community.

This represents a paradigm shift in the way we think of the process of learning, and the learning medium. The locus of knowledge shifts from the teacher to the learner.

This approach values authentic activities that allow learners to explore, discuss, and construct concepts and relationships relating to real-world problems and projects. Content must be relevant and meaningful to the learner (Donovan et al, 1999). This type of learning is situated in communities of learning and practice as opposed to within the minds of individuals (Lave & Wenger, 1991). Collaborative learning is a key concept between instructors and students, and “two-way interaction is critical in learning a second language” (Ariza & Hancock, 2003, p. 2). The interactions between student-teacher, student-student and student-content are the main media for learning to take place, and specifically for language learning the two-way interaction is important (Pica, 1996). Ariza and Hancock (2003) explain that “while Krashen (1994) believes that only one-way comprehensible input is required for Second Language Acquisition” (pp. 2-3), Lightbrown and Spada (1999) believe that students learn best “when [they] are given the opportunity to engage in meaningful activities [and] are compelled to negotiate for meaning, that is, to express and clarify their intentions, thoughts, opinions, etc., in a way which permits them to arrive at a mutual understanding. This is especially true when the learners are working together to accomplish a particular goal” (p. 22). The possibility and desire to include two-way interactions represent one of the important developments over the history of using technology in language learning and in the history of approaches to language learning in general.

Especially for second language learning, the immersion of learners in authentic environments is paramount. Authentic environments are those that make learning meaningful to students, often because they have a common goal either to achieve a similar outcome or to engage in a similar learn-

ing process. Authentic environments need to be situated in real world contexts that learners can relate to because of their previous life, education, or work experiences. As an alternative or even at the same time, authentic environments can be situated learning environments that create contexts similar to the real world in which learners will have to apply the skills that they are learning. The terms “authentic” and “situated” learning are often used interchangeably.

This experience of immersion into a new learning environment and the adaptation to a new way of learning is a profoundly social-constructivist experience where learning through knowledge acquisition and problem solving can take place. In order to arrive at a successful skill transfer to and application of knowledge in another concrete context, learning must occur in authentic environments and be based on the learning of general skills that are transferable to a variety of situations (Winn, 1993).

In authentic learning environments such as these, knowledge and skills are acquired through a process of social communication and discourse. Activities that focus on social communication and discourse also focus on the connections with the community and the patterns of participation, that is connections with the community comprised of all participants who contribute to the learning experience and in the ways they contribute (Duffy & Cunningham, 1996). The following basic tenets may be derived for the practice of pedagogical design:

- Learning is a process of construction based on and situated in experience.
- Learning is based on the instruction of authentic and transferable skills.
- The student is at the centre of the learning process.
- The student is a distributed and multidimensional participant.

e-Learning 2.0

The term e-Learning 2.0 appeared first in an online article by Downes in 2005, referring to a second phase of e-learning embedded in Web 2.0 environments. It describes a new generation of e-based learning environments that allow students to create content, collaborate with peers to form a learning network with distribution of content creation and responsibilities.

According to Karrer in *Understanding e-Learning 2.0*, the second generation of the Web is one of the primary forces behind this new learning paradigm. The key components to Web 2.0 are its tools that allow for collaboration and social interaction to take place. Karrer points to the emergence of a collective intelligence as a result from e-Learning 2.0 that unfolds naturally. Web 2.0 allows learning content to be aggregated together from various sources using various tools but the central idea of e-Learning 2.0 runs deeper. In many respects, collaboration and social interaction result in the creation of content rather than building collaborative learning activities around existing material.

As a result, e-Learning 2.0 also reverses the notion of traditional learning models in terms of the roles of its participants. That is, learning content is no longer produced by publishers and organized into structured courses by teachers. Students take an active part in all aspects of their learning experience, including content creation and learning management on an ongoing basis.

Teachers Learn to Teach

Within a social-constructivist learning approach teachers are generally regarded as facilitators guiding learners through their interaction with the learning material and supporting the collaboration with other learners. The teacher has the expertise and the skills to bring the student to the appropriate learning and will work to create a learning environment where knowledge building

is fostered through social exchange.

On the one hand, online teachers share these characteristics with classroom teachers, and like them, must have sufficient knowledge of their subject domain and can be expected to convey enthusiasm for the subject and for their task as a learning motivator; and both types of teachers must have access to appropriate learning activities.

On the other hand, an online learning environment requires different approaches and methods. And different qualities define an online teacher. Most importantly, online teachers must also have sufficient technical skills to navigate and contribute effectively within the online learning context, access necessary hardware, and sufficient Internet efficacy to function within the inevitable technical challenges of these new environments (Anderson & Elloumi, 2004).

Special challenges confront teachers at a distance: these are also believed to hold for online learning environments in general. For example, the teacher must (Gottschalk, 1995, p. 2):

- Develop an understanding of the characteristics and needs of online students with little first-hand experience and limited, if any, face-to-face contact.
- Adapt teaching styles taking into consideration the needs and expectations of multiple often diverse, audiences.
- Develop a working understanding of delivery technology, while remaining focused on their teaching role.
- Function effectively as a skilled facilitator as well as content provider and manager.

As Gottschalk further suggests, “The instructor often finds it beneficial to rely on a site facilitator to act as a bridge between the students and the instructor. To be effective, a facilitator must understand the students being served and the instructor’s expectations” (Gottschalk, 1995, p. 2).

Teachers have an important place in these programs. Current research on distance and online learning indicates that interaction between learners and teachers through face-to-face, telephone, or electronic means is vital to the learning process in these programs (Porter & Sturm, 2006). During the course of this research, the following skills teachers need to know when working online with students emerged:

- How to use assessment tools with learners at a distance
- How to use synchronous and asynchronous online tools
- How to give appropriate feedback online
- How to motivate and encourage students at a distance
- How to create a positive learning environment online
- How to manage discussions in chat rooms
- How to organize and monitor project work online
- How to retain students online
- How to integrate technology into language learning programs
- How to facilitate learning in a Web-based environment
- How and where to grow and update their skills as new online communications and student support technologies evolve

Are teachers prepared to integrate Web 2.0 tools into their programs? The specific needs of teachers in online language learning programs are rarely mentioned. The management of online learning environments encompasses everything from administration to lesson planning to assessment and evaluation, with teachers often involved in these processes every step of the way. Warschauer (2000) noted that he sees distance education as a realm in which the role of technology will be a site of struggle in increasing or lowering the quality of learning opportunities, which could also bring to a head issues about the professional standing of educators in the field of

online learning (White, 2003). Although it is often helpful and practical for teachers to develop their tech skills informally, many of these skill areas are not easy to develop without guidance.

Furthermore, teachers face additional challenges in the shape of structural and attitudinal barriers. Common structural barriers may be due to the way the computers are used within a program, if they are integrated in a way that maximizes the use of the resources available to teachers, if opportunities to practice new technology skills are available, and if the educational institution values this learning process. Common attitudinal barriers are often rooted in the way technology forces change that disrupts programs. In the early stages of technology integration, teachers are often overwhelmed and need to be motivated to continue their learning process that will result in achieving their goals of improving student independence (Kennell, 2004).

An excellent resource when considering online teacher competencies is Salmon's *E-Moderator Online Competencies*. Table 1, adapted from Salmon (2002, p. 41), presents a summary of the qualities and characteristics that Salmon states are key competencies for the changing role of a teacher in an online learning environment. She also makes the point that good face-to-face teachers do not necessarily make the best online teachers and notes that face-to-face subject teachers who are used to being "experts" might have difficulty adapting to the levelling effect and informality of online discussion (Salmon, 2002, p. 42).

The Milken Exchange's Professional Competency Continuum: Professional Skills for the Digital Age Classroom provides an interesting assessment for instructors to see where their technology skills lie on a continuum that looks at five target areas of skill: core technology skills; curriculum, learning, and assessment; professional practice; classroom and instructional management; and administrative competencies (Milken Family Foundation, 2008).

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Table 1. Key competencies of an online teacher

Quality/Characteristic	1. CONFIDENT	2. CONSTRUCTIVE	3. DEVELOPMENTAL	4. FACILITATING	5. KNOWLEDGE SHARING	6. CREATIVE
Understanding of online process	Personal experience as an online learner, flexibility in approaches to teaching & learning. Empathy with the challenges of becoming an online learner	Able to build online trust & purpose for others, Understand the potential of online learning & groups	Ability to develop & enable others, act as catalyst, foster discussion, summarize, monitor challenge, restate understanding & misunderstanding, take feedback	Know when to control groups, when to let go, how to bring in non-participants, know how to pace discussion & use time on line, understand the 5-stage scaffolding process & how to use it	Able to explore ideas, develop arguments, promote valuable threads, close off unproductive threads, choose when to archive	Able to use a range of approaches from structured activities (e-tivities) to free wheeling discussions, & to evaluate & judge success of these
Technical skills	Operational understanding of software in use reasonable keyboard skills; able to read fairly comfortably on screen, good, regular, mobile access to the Internet	Able to appreciate the basic structures of bullet boards, forums, & the WWW & Internet's potential for learning	Know how to use special features of software for e-moderators, e.g. controlling, weaving, archiving. Know how to "scale up" without consuming inordinate amounts of personal time, by using the software productively	Able to use special features of software to explore learner's use e.g. message history	Able to create links between online & other features of learning programs	Able to use software facilities to create & manipulate conferences & to generate an online learning environment, able to use alternative software & platforms
Online communication skills	Courteous & respectful in online (written) communication, able to pace & use time appropriately	Able to write concise, energizing, personable online messages	Able to engage with people online (not the machine or the software), respond to messages appropriately, be appropriately "visible" online, elicit & manage students' expectations	Able to interact through e-mail & conferencing & achieve interaction between others, be a role model Able to gradually increase the number of learners dealt with successfully online, without huge amounts of extra personal time	Able to value diversity with cultural sensitivity, explore differences & meanings	Able to communicate comfortably without visual cues, able to diagnose & solve problems & opportunities online, use humour online, use & work with emotion online, handle conflict constructively
Content expertise	Knowledge & experience to share, willingness to add own contributions	Able to encourage sound contributions from others, know of useful online resources for their topic	Able to trigger debates by posing intriguing questions	Carry authority by awarding marks fairly to students for their participation & contributions	Know about valuable resources (e.g. on the WWW) & refer participants to them, and use them as sparks for participation	Able to enliven conferences through use of multi media & electronic resources, able to give creative feedback & build on participants' ideas
Personal Characteristics	Determination & motivation to become as an e-moderator	Able to establish an online identity as e-moderator	Able to adapt to new teaching contexts, methods, audiences & roles	Show sensitivity to online relationships & communication	Show a positive attitude, commitment & enthusiasm for online learning	Know how to create & sustain a useful, relevant online learning community

Learners Teach to Learn

Online learning skills are necessary in the wider world beyond language training. Increasing opportunities for online learning increases the learner's ability to participate in a multitude of learning opportunities and to take a leadership role among their peers. The world of work integrates online collaboration into more and more of the structure of professional and personal life, much like many public and academic libraries have done adopting the *23 things* learning paradigm. This could be the kind of on the job training that language students might also encounter, especially internationally trained professionals and trades people.

Online learning built on e-Learning 2.0 principles, that is learning environments that employ social-constructivist principles and include Web-based environments for communal spaces of learning and teaching, make special demands on students and teachers. Students will be working with little or no face-to-face support, and without encountering fellow students in physical spaces but depending on the suite of Web 2.0 tools at their disposal they may be connected to their teacher and peers more or less in *real-time*. For instance, internationally trained individuals are often expected to connect with mentors in their field by contributing to a blog or by listening to a podcast.

In synchronous environments, that is *real-time* exchange between the participants, student support can be implemented similarly to and in some ways better than in face-to-face classrooms. The immediacy of responses that face-to-face environments provide, for better or for worse depending on the cues of teachers acknowledging or discounting students' willingness to participate, is as much the key in student retention in online environments but the net of connections between students, their peers and their teacher can be cast wider. The tools at the disposal of all participants provide for more distributed participation patterns with

the potential of supporting students adequately. Also, it is easier for students to seek support from their peers in a less disruptive manner to the group when using tools like chat or instant messaging concurrently with virtual classroom applications, such as *Centra* and *Elluminate*.

In asynchronous environments, when students are also separated in time from the teacher and their peers and cannot expect to get an immediate response, they must be able to maintain their motivation on their own even though feedback from teachers and fellow students may be delayed. Online learning options that merely distribute learning materials by electronic means for the sake of access, expediency, and convenience without adding the value to Web 2.0 tools to enrich students' experiences suffer the same fate as correspondence courses and remain one-dimensional and undistributed. When designed and employed at the service of students and teachers within a community, asynchronous tools cannot only give anytime anywhere access to learning but can also empower students to self-manage their learning experiences, and take on roles of expertise and leadership among their peers at their own pace.

Often an ideal learning environment is built around both synchronous and asynchronous elements that provide students and teachers with an array of communication and learning tools. In order to be most effective in any online program, students need to be willing to work towards becoming more autonomous and self-directed to fulfill their multi-dimensional and distributed connections with other participants in the same space. This is substantially different from traditional classrooms where one-to-one and group-to-one interactions are mandated by the limitations of a physical environment. In order to participate to the fullest and be successful, students must see that they have an essential part to play to bring the benefits of online learning environments about. According to the Illinois Online Network (2007, n.p.), students need to:

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- Be open minded about sharing life, work, and educational experiences as part of the learning process
- Be self-motivated and self-disciplined
- Be willing to “speak-up” when problems arise
- Be willing and able to meet the minimum requirements of the program
- Accept critical thinking and decision making as part of the learning process
- Be able to think ideas through before responding
- Feel that high quality learning can take place without going to a classroom

Naturally, some students begin with more skills for online learning than others. Students without online learning experience may perform lower overall than students with online learning experience. Inexperienced students may communicate more about difficulty with software, the course management system, or mistakes in submitting work online. In contrast, experienced students may perform better overall and their more frequent communications may be indicative of seeking clarification of course concepts at higher levels. At any stage, students need to engage in self-assessment as a key step in the process of learning online successfully. Furthermore, “multi-modal, multi-tiered products ... provide students a vehicle for drawing on varied strengths and making positive contributions, regardless of whether they are fluent in [a second language]” (Warschauer, 2007, p. 2536).

Some studies have shown that “women may be more successful in online environments than men because they frequently create a sense of community by connecting with other learners” (Imel & Jacobson, 2006, p. 2; Rovai, 2003). In a learning environment that relies on students to communicate not just with a teacher but with other students as well, this is important to keep in mind for teachers customizing an e-Learning

2.0 environment. Furthermore, younger adults are more likely to drop out of online classes than older classmates (Jonassen et al., 1999) because they may not have the same learning persistence. On the other hand, many younger students are more adept at using a computer and are more familiar with e-mail, chat rooms and the Internet in general than older students. With a variety of Web 2.0 tools at hand, teachers need to select the ones that meet the needs of their students and keep up with the demands of the learning material.

The ability of learners to manage their own learning is a key competency that studies have shown to be related directly to successful participation in online learning environments. Porter and Sturm (2006, p. 105) used the following self-management survey to evaluate learners competency level by asking them about how well they thought they did in the these areas:

1. Staying focused or concentrate on what they are doing
2. Sticking with a task or problem
3. Figuring things out for themselves before asking for help
4. Asking for help when they're stuck
5. Making decisions for themselves
6. Solving problems by themselves
7. Feeling they can do things and accomplish things
8. Organizing their work and life
9. Learning things on their own
10. Setting goals for themselves
11. Managing their time
12. Evaluating their own progress and how they are doing
13. Trying or learning new things
14. Learning on their own without help
15. Accepting responsibility for themselves
16. Seeking constructive criticism of their work
17. Trying to actively try new things

The Pedagogy of Blogs and Wikis

Years before the emergence of Web 2.0 tools, Jonassen, Peck and Wilson (1999) argued that using technology as storage places for learning material does not exploit the capabilities of technology, teachers and students, but that technology can amplify students' ability to construct knowledge. Jonassen, Carr, and Yueh (1998) described "computer applications that, when used by learners to represent what they know, necessarily engage them in critical thinking about the content they are studying" as mind tools, and continues to say that "mind tools scaffold different forms of reasoning about content. That is, they require students to think about what they know in different, meaningful ways. . . . Students cannot use mind tools as learning strategies without thinking deeply about what they are studying" (p. 1). Web technology should be used to engage students in critical thinking and enable them to become intelligent designers when computers and networks serve as catalysts for facilitating planning, decision-making and self-management skills when they are used in ways to promote reflection, discussion, and problem-solving by the teacher.

Blogs and wikis exemplify these possibilities in powerful ways for students and teachers. Richardson (2006) calls blogs "a truly constructivist tool for learning" (p. 27) because their content is part of a wider body of knowledge accessible and potentially relevant to an audience outside the classroom. A high degree of *information literacy* is required. The American Library Association defines *information literacy* as "the ability to access needed information effectively and efficiently; evaluate information and its sources critically; incorporate selected information into one's knowledge base; use information effectively to accomplish a specific purpose; and understand the economic, legal, and social issues surrounding the use of information" (Warschauer, 2007, p. 2512). Furthermore, blogs and wikis facilitate reflection and metacognitive analysis through

archiving, they support different learning styles, and they provide students with opportunities to acquire the new literacy skills needed in a more and more knowledge and information-based society (Richardson, 2006). Writing on a blog is not merely writing using another medium; the medium transforms the writing process and extends its reach by making it more conversational, collaborative and in the end democratic.

Wikis take the democratization of learning even further by allowing everyone to be an editor and thus exemplary collaborative learning to emerge, including astounding self-regulatory practices of quality control. *Wikipedia*, the online encyclopedia build on the wiki paradigm, is the "poster child for the collaborative construction of knowledge and truth that the new, interactive Web facilitates" (Richardson, 2006, p. 61). *Wikipedia* has grown rapidly into one of the largest reference Web sites since 1995 and has sparked the emergence of other tools based on the wiki paradigm of collaborative knowledge management like the *WikiEducator*, an evolving community intended for the collaborative planning of education projects linked with the development of free content.

Because of the potential of open source products like wikis, many education institutions have been moving away from their exclusive use of more restrictive commercial systems, their recurring licensing and upgrading fees being only part of the problem. Many still retain these systems due to the need for the learning management features they provide, but more and more are trying out and reporting success with open source systems like *Moodle* that is designed to help educators create online courses with opportunities for rich interaction and manage groups of students effectively by providing a free online learning platform supported by a global community of developers. *Moodle* is designed to be extremely flexible for instructors and learners, and can be downloaded and used on nearly any mainstream computer; it readily scales from single-instructor or departmental Web sites to 50,000-student

universities (Instructional Technology Resource Center, 2006).

Although quality control in Web 2.0 learning environments is a major challenge, for instance Richardson (2006) adds that because of the wiki's democratic process of knowledge creation students begin to teach each other when put to the task to negotiate to agree on correctness, meaning, and relevance with their peers. With a system as openly accessible as *Wikipedia*, its potential for collaborative learning appears to be matched by its potential for unethical use. When anyone can make changes, information can be easily falsified, and the collaborative community serves as a watchdog. Richardson argues that "giving students editorial control can imbue in them a sense of responsibility and ownership" (p. 64).

Many Web 2.0 tools come together seamlessly within blogs, wikis, and learning management systems like *Moodle*, such as automatically updated RSS (Rich Site Summary) feeds from news Web sites and other blogs, audio and video podcasts (vodcasts) from amateur and professional producers, or social bookmarking features, to name just a few tools that extend the reach of distributed learning applications. The community building properties of blogs and wikis, along with other synchronous or asynchronous Web-based communication and content creation tools, build communities of practice into the paradigm of an online learning environment. In traditional classrooms, there are often social communities or cliques but they are rarely based on common learning goals since knowledge building is seen as rooted in the individual student's learning process.

FUTURE TRENDS

Language learning environments that traditionally provide opportunities for repetitive practice can still help students with lower language proficiency master the skills they need before they can handle Web 2.0 tools like blogs and wikis

effectively, but it is also important to keep in mind that students' language proficiency does not necessarily parallel their familiarity and proficiency with technology. Many students may have had varied experience with Web 2.0 tools using them for professional or personal reasons. Given the growing extent that these tools are integrated in today's working environments, communal and personal spaces, the more they are integrated in learning environments the more authentic learning experiences are and the higher rate of skills transfer students experience.

It has become more and more likely for students to be asked to create and manage content for Web 2.0 environments. Richardson (2006) points out that there is a clear disconnect between the traditional teacher who grades independent study assignments aimed at a very limited audience and the students who need to be critical readers of Web-based content, literate in Web 2.0 publishing, comfortable with virtual collaboration, and good information managers. It is this disconnect that may present a major barrier in student achievement.

According to Warschauer (2006), "the ability to learn autonomously will indeed be critical in the digital future" and he continues to say that "strong mentorship is required for students to achieve this autonomy" (p. 46) at the same time. It is through the multi-dimensional ways that Web 2.0 learning environments allow learners to connect and collaborate with teachers and other learners that independent learning and meaning making embedded in a social context and constructs is made possible. Richardson (2006) identifies the social, collaborative construction of meaningful knowledge as one of the paradigm shifts that Web 2.0 technologies demand a reexamination of the way we learn and teach. Producing work in truly collaborative ways for large audiences creates a new social context that requires teachers to rethink the demands placed on the students. Instead of completion of an assignment, contribution to project becomes more and more the ultimate

goal. As Warschauer (2006) comments, “New technologies do not replace the need for strong human mentorship, but, indeed, amplify the role of such mentorship” (p. 48). Teachers need to see themselves as *connectors* not only between students and the learning content but also with their peers. They also need to become *content creators* using Web 2.0 tools, *collaborators* in the sense of learning alongside their students, and *coaches* modeling skills students need as well as motivating them to take responsibility and ownership for their own performance. Last but not least, teachers need to become *change agents* using Web 2.0 tools to move towards a new way of learning and teaching (Richardson, 2006, pp. 132-133).

CONCLUSION

In this chapter, social constructivism has been proposed as the foundation for online language learning environments that foster the participation of students and teachers in today’s knowledge and information-based society to their full potential through the use of Web 2.0 tools like blogs and wikis. It has been argued that teachers and students need to take full advantage of these emerging tools to participate in more dynamic, immediate, and communicative environments that provide opportunities for meaningful experiences through social constructivist learning.

While putting the pedagogy of blogs and wikis to work may take some time, the following recommendations can assist program designers and teachers in making the first step towards participatory and collaborative online learning of the Web 2.0 era:

- Where possible, orientation “events” should be held to introduce students to the requirements of the technology and the expectations for student-to-instructor and peer-to-peer communication. The orientation process can

be a critical factor in the success of online learning programs (Johnston et al., n.d.).

- When possible, begin the course by providing traditional face-to-face instruction and then blend it with online education. Face-to-face instruction can provide students with a little online learning experience with support and help them develop confidence in their ability to succeed using on-line learning tools (Johnston et al., n.d.).
- Help students develop their ability to engage in self-directed learning. If the online learning program is complemented with some traditional instruction, teachers can spend time in class working with students on self-management strategies and help change their perceptions of themselves as students and allowed them to take ownership of their learning (D’Amico & Capehart, 2001). Provide opportunities for students to take leadership and engage in peer tutoring.
- In an online learning program, ongoing support should be provided for students through frequent contact with teachers via multiple modalities, e.g. e-mail, instant messaging, chat, or telephone contact. Learners should be offered opportunities to participate in online learning at the earliest possible point in their language learning.
- A tool for students to self-assess their online learning skills should be accessible to them. This tool should assess students’ familiarity with technology, their experience in online learning, their problem solving skills, their ability to motivate themselves, their level of self-directedness as well as their level of English fluency. The results should be shared with the student to help in determining their preference for learning environments.
- Encourage students and fellow teachers to explore and experiment with Web 2.0 tools and their potential for learning and teaching. Professional development activities should take advantage of the same technologies so

that teachers learn about e-Learning 2.0 the same way students would and understand the implications of the demands placed on students and their expectations better.

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KEY TERMS

Blended Learning: The term Blended Learning describes the design of a learning environment from the viewpoint of how the delivery of learning materials to the students is best accomplished by a variety of means available, be they technological or non-technological in nature. By choosing the

appropriate vehicle for the student to access the learning content, a number of different strategies are used to provide hybrid learning environments. Blended Learning is closely related to Distributed Learning and Flexible Learning.

Distributed Learning: This term refers to learning environments that use a mixture of tools to navigate the distance between teachers and learners. From a design viewpoint of a learning environment, building a variety of connections between the participants and the learning content is the main objective, as is allowing patterns of participation to develop between teachers, students and learning materials. Technological tools allow these connections to be made easily. Distributed Learning is closely related to Blended Learning and Flexible Learning.

e-Learning 2.0: The term e-Learning 2.0 refers to the second generation of eLearning making use of the social collaboration and information sharing tools embedded in Web 2.0 environments. It describes a new generation of e-based learning environments that allow students to create content, and collaborate with peers on the creation of content distributed by technological tools. e-Learning 2.0 provides a new learning paradigm naturally unfolding collective intelligences.

Flexible Learning: This term describes a learning design perspective deeply rooted in the needs of students, with the main objective being to provide them with the most flexibility about the learning content, schedules, access, and learning styles as possible. A flexible learning design customizes learning environments to meet the needs of learners, using both technological and non-technological tools. Flexible Learning is closely related to Blended Learning and Distributed Learning.

PLATO: Programmed Logic for Automated Teaching Operation, refers to one of the first computer assisted instruction systems, dating from the early 1970s and running until 2006. PLATO was

one of the first systems to test applications such as e-mail, discussion forums, and chat rooms.

TICCET: This stands for Time-shared, Interactive, Computer-Controlled Educational Television. The project ran at the same time as PLATO and was funded by the University of Texas at Austin and Brigham Young University. In place of expensive hardware, the system used television technology with minicomputers to deliver interactive educational content.

Wiki: This is a Web-based environment designed to enable readers to become creators of content and editors of previous entries. Wikis are paradigm examples of Web 2.0 tools that are effectively used to design constructivist learning environments and engage learners in collaborative learning environments. Much like blogs, wikis integrate different types of media from audio to video files, which can be played on demand, as well as podcasts to vodcasts, which readers can subscribe to. Wikis can be an integrated part of a larger learning management system.

Chapter XXI

Improving Online Readability in a Web 2.0 Context

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ABSTRACT

This study describes a task-based assessment (TBA) approach to teaching reading and writing online. It then analyzes key factors emerging from the results of implementing this approach with graduate engineering students in Japan. It is argued that these factors should be considered when designing or assessing any online reading or writing course for ESL/EFL students. The findings of this study are especially relevant to task-based approaches and technical or pedagogical innovations which can help foster more effective and enjoyable learning for teachers and students in blended learning environments. It is hoped that this discussion can serve as a model of what can be done to enhance online EAP/ESP/ETP courses, as well as any other online reading or writing course being designed for speakers and readers of languages other than English. The goal in this chapter is to summarize research aimed at integrating some of the most useful Web sites for English language learning into a user-friendly system for optimal online vocabulary development — which could be self-monitored by students as well as tracked by teachers via a course management system.

INTRODUCTION

The emergence of new types of electronic media such as blogs, wikis, mobile phones and social networking sites is having a profound effect on the way people communicate. This is especially true of written communication and therefore as a consequence also greatly affects the way people

read and consume information. The high levels of familiarity that today's students exhibit vis-à-vis these technologies is set to have profound effects on the ways that foreign languages are taught in a Web 2.0 context. If students of English as a Foreign Language cannot comprehend the high level of vocabulary and technological jargon found online, messages will not be understood and learning will

be impeded. Given the challenge presented by the new landscape of Web 2.0 communications, there are two main objectives in this chapter:

1. To examine how best to assess and improve the readability of any website or application. Furthermore to indicate how a series of critical linkages can be formed to better integrate listening, glossing and translation so as to empower learners to better comprehend any Internet application or location.
2. Using the Virtual Language Education Links Library, known as the World CALL Language Links Library (Loucky, 2008), this chapter aims to identify which kinds of language learning sites and Web 2.0 functions are most helpful to Japanese graduate students vis-à-vis improving their online English reading and vocabulary skills. This World CALL Directory (found at www.CALL4ALL.us) is a Free/Open Source Language Education Resource Repository. Its aim is to serve as a Virtual Encyclopedia of all major language learning links, Web dictionaries and Computer-Assisted Language Learning organizations in the world.

In an age where multi-literacy and foreign language literacy in multimedia environments are becoming increasingly more important, teachers need to be able to understand and use more CALL technologies for efficient reading and vocabulary assessment to produce effective and enjoyable language development. The need for quick, easy

and reliable readability checking for English reading texts has recently become more pronounced. Whether assessing print, online fiction or nonfiction texts for either Extensive or Intensive Reading (ER or IR) use, language learners and teachers are in real need of helpful, user-friendly ways of assessing the reading levels of texts.

For over 50 years, readability formulas have been used to help guide students to books at their appropriate level of reading and interest. Briefly stated, it is very important for ESL/EFL teachers to be able to individually test their students to determine their actual reading instructional level. EFL teachers using extensive reading are still in a quandary about how to arrive at commonly understood reading levels for various publishers, who do not use a uniform system. Before deciding what reading methods or materials to use, English reading teachers need to realize that three different kinds of reading levels are most crucial to understand. These three categories of reading ability are 1) Frustration Level, to be avoided; 2) Instructional Level, which Intensive Reading and classwork may be done at; and 3) Independent Level, which is appropriate for Free or Extensive Reading. Table 1, adapted from Loucky (1996, p. 301) and (Ekwall, 1976, p. 267), illustrates what these different levels involve.

Three other types of reading levels should be considered and compared when trying to best match texts or books to students:

1. The readability level of a text or a book's grade level: a particular text's reading difficulty level has most commonly been

Table 1. Reading level criteria

Reading Level	Word Recognition	Comprehension %
Free or Independent	98 - 99% or more	90% or more
Instructional	95% - 98/99%*	75 Ideal (51 - 89%)
Frustration	90% or less	Under 50%

Note. The asterisk indicates not more than 1/20 unknown words.

measured by a given readability formula (e.g. Flesch Reading Ease, Flesch Kincaid Grade Level).

2. The interest and maturity level of a book or text's ideas and content (usually grouped by Lower Grades, Middle Grades and Upper Grades).
3. The individual reading and maturity level of each student.

Ekwall's (1976) classic reading education text listed approximately 50 standardized reading tests, all based on using such formulae for estimating American students' average independent reading level. A learner's independent reading level may be defined as the most difficult level of text s/he can comprehend alone without using a dictionary or another's help. Loucky (1994, 1996, 1997, 2003, 2006a) has used these kinds of tests to assess several thousand Japanese college students' English reading levels. Based on nearly two decades of research, it has been possible to identify consistent patterns that are useful for language teachers to know, especially those wanting to tailor the level of required or free readings to individually appropriate levels. Once each learner's independent reading level has been determined and compared to the average for particular grade levels, each student can be guided to materials that are at his or her appropriate instructional level. This is normally defined as 1-2 grades above their free or independent reading level. Frustration levels beyond that should be avoided at all costs. Today there are many proponents of stress free-reading, or fluent, independent reading, whereas instructional level reading may be reserved for practice of particular reading skills during Intensive Reading classes.

Palmer distinguished extensive from intensive reading (1968, p. 137). Intensive reading tends to teach reading as a set of component skills and usually refers to careful or close reading (or translation) of shorter, more difficult foreign language texts with the goal of deeper and more detailed

understanding. Texts are studied intensively in order to introduce and practice reading skills that are distinct. By contrast, Bamford and Day (1997) characterize free or extensive reading as being:

generally associated with reading large amounts with the aim of getting an overall understanding of the material. Readers are more concerned with the meaning of the text than the meaning of individual words or sentences ... Extensive reading as an approach to teaching reading may be thought of in terms of purpose or outcome ... It can also be viewed as a teaching procedure, as when Stephen Krashen (1993) terms it free voluntary reading, or when teachers give students time for in-class Sustained Silent Reading (SSR) — a period of 20 minutes, for example, when students and teacher quietly and independently read self-selected material ... No matter how sophisticated the teaching profession's understanding of and ability to teach the reading process, until students read in quantity, they will not become fluent readers. (n.p.)

The two main elements that determine a student's reading rate are the difficulty or readability of a text and the purpose of reading it. Readability formulas have generally been a combination of two factors: 1) a measure of a text's word difficulty level, and 2) a measure of a text's sentence complexity. Raygor and Raygor (1985) have graphed readability estimates showing that a text's grade level is based on both its total number of sentences and its number of long or difficult words. Readability formulas measure a text's word difficulty and sentence complexity as follows: "Word difficulty is measured by word length or frequency. ... Sentence complexity or syntactical difficulty is usually measured using the average number of words in the sentences" (p. 192). Two other important principles deduced from readability studies are also evident:

1. Readability formulas use objective measurements to analyze text and predict which ma-

- materials can be comprehended by individual readers as long as they are used to assess both text and learner appropriately.
2. Students generally show the most reading improvement if they regularly practice reading within a range of difficulty that is neither too challenging (known as the *frustration level*) nor too easy (their *independent reading level*). While all readability formulas are based on analyzing some aspects of a text or book's difficulty, they cannot indicate the suitability of a particular text's content or literary merit for particular learners. The choice to read is usually a decision best left to educators and parents in consultation with the learners themselves.

Space constraints do not permit a thorough discussion of a new type of technology affecting reading, portable digital devices such as Amazon's Kindle or Sony's e-Reader, though they will clearly affect the way texts and books are read in the years ahead. A number of thinkers have already predicted that only devices that are wired to the Internet will have a long-term appeal, as the web will enable them to integrate and use free online glossing, storage, review and translation tools. Proprietary devices such as Kindle are currently limited by copyright protection, and can only read Digital Rights Management (DRM) content from Amazon. As Amazon mainly sells publishers' books, their central interest will be commercial rather than educational, thus creating a natural conflict of interest in terms of the real costs of overheads and royalties (for author and agent). All of this will continue to drive the price of e-books too high for most normal consumers. Many now believe that globalization includes the ideal of making generic knowledge freely available to as many people as possible, and making computers as cheaply available as possible, as evidenced by the MIT-sponsored One Laptop Per Child Foundation (OLPC). Those supporting these general educational ideals would no doubt agree with OLPC's five core principles:

1. Child ownership
2. Low ages
3. Saturation
4. Connection
5. Free and open source (OLPC, 2008, n.p.)

With such a contrast of principles and features available, and the substantially cheaper online costs and greater benefits available through open source online materials, it is not hard to predict who will win the next Information Revolution.

Accelerated Reader is another online commercial learning information system designed to help teachers manage and monitor their learners' reading practice. Renaissance Learning offers a set of teaching practices online; information on judging the suitability of books; articles on readability and how to use it in the classroom. Most Extensive Reading (ER) is done at the free or independent reading level. However, there is not only a need for more careful, individualized testing of what exactly constitutes each student's free-reading level, particularly when it comes to foreign or second language readers. Those having non-European native scripts are often more challenged and frustrated than native readers would be, due to having even more differences between the expectations of that second language system, as compared with reading their own native text. In addition, the complexities and different skills required to read online text fluently make it a rather different species of reading, whether in L1 or L2. Thus, the need for a strategy to better assess online as well as print texts in more uniform ways is becoming more apparent to reading teachers worldwide.

LITERATURE REVIEW

First, it is important to define Web 2.0 with reference to O'Reilly. Then we will contrast this definition with emerging definitions of nascent Web 3.0. From O'Reilly's definition we can see

that rather than merely being a new technology, Web 2.0 is characterized by a new mindset, or attitude towards the use of the Internet:

Web 2.0 is the network as platform, spanning all connected devices; Web 2.0 applications are those that make the most of the intrinsic advantages of that platform: delivering software as a continually-updated service that gets better the more people use it, consuming and remixing data from multiple sources, including individual users, while providing their own data and services in a form that allows remixing by others, creating network effects through an “architecture of participation,” and going beyond the page metaphor of Web 1.0 to deliver rich user experiences. (O’Reilly, 2005)

Secondly, there are distinct differences both in how technologies are seen and used in successive generations of the Web, just as there are clear differences between reading print and online reading. Although Web 1.0 took people to information, Web 2.0 is involving people in information and knowledge construction, following a constructivist philosophy, creating what has become known as “an architecture of participation” (O’Reilly, 2004). While typical definitions characterizing this new style of online participatory information-gathering and meaning-construction generally range from positive to almost ecstatic hype, there are definite dangers and downsides for businesses, parents and public institutions to be aware of.

Devo (2008) explains both the upside and downside of emerging Web 2.0 tele-communication applications, which have been spreading like viruses. These include wikis, blogs, mash-ups, folksonomies, social bookmarking and podcasts:

Neatly labelled Web 2.0, zealous users appear to see bilateral and multi-lateral discourse with others, using collaborative and social networking, as not so much good as utterly compulsive.

For the business world, there is a real concern emerging on the coat tails of the social explosion — a concern that employees are now spending so much time networking, that business could become a secondary consideration. (n.p.)

So what do we mean by Web 2.0? Devo (2008) summarizes Smee, marketing director of the Web Technology Group, who notes that this catch-all term for online social networking is still much misunderstood:

“In a way, the Web 2.0 label is a buzzword and there are lots of different interpretations of what it means,” she says. “My personal view is that it is what Web 1.0 was always meant to be, which is simply to enable knowledge sharing. Putting user-generated content in the way of blogs on to the web is just the next step. It is an evolutionary process and not a case of yesterday we had Web 1.0, today we magically have Web 2.0.” (n.p.)

Others have called this basic change of focus seen in many Web 2.0 applications a major paradigm or head-shift, an embracing of a freer, more two-way “E-democratic” mutual sharing of information by both user and provider. As such, it is seen as being most useful for e-Learning and sharing of discussion on social, political economic and human rights issues, as well as the full gamut of human discourse. Space limitations prohibit a full discussion of these issues, but groups like Involve (www.involving.org) go into detail about past failures and future hopes from using these new participatory online technologies more intelligently and democratically (Bryant & Wilcox, n.d.).

Comparing three generations of Internet website design and usage, it is possible to contrast Web 1.0 (read-only web) and 2.0 (read-write web) with what is now perceived as the Internet’s future, Web 3.0 — a term which refers to the emergence of users who can modify substantial parts of the site or web-based resource. Others foresee Web

3.0 as an evolution of Internet use and interaction where it becomes a database in which information is accessible by various non-browser applications, not only by different browsers as at present. What is important for improving online reading and language learning in such an environment is to make sure that whatever browser or generation of Internet is being used, learners have instant access to a wide variety of glossing and translation engines, Text-to-Speech listening support, review test generation and language development programs that are needed to maximize their target language vocabulary learning recognition and use. Some others have seen the term Web 2.0 as just a marketing term, contrasting it with a more 3-Dimensional Web, which leverages various artificial intelligences, the Semantic and Geospatial Webs, into what Berners-Lee called a Giant Global Graph (GGG) (Dignan, Perlow, & Steinert-Threlkeld, 2007). He sees Web 3.0 as more of a “Social Graph,” representing its third great conceptual leap — from net to web to graph (n.p.). Probably the best comparison of these second and third generations of Internet use is in Spivack’s (2006) article called “The Third Generation Web is Coming.” There he discusses its eight major characteristics, as well as offering the clearest definitions and distinctions between the first three generations of the web.

Finally, we can gain a good prediction of how the Internet will develop in the third decade of the Web (2010–2020), during which Spivack (2006) suggests that several major complementary technology trends will reach new levels of maturity simultaneously. His expanded definition of Web 3.0 envisions the third-generation of the Web as being enabled by a convergence of several key emerging technology trends. He predicted these new features of Web 3.0 would include:

1. The transformation of the Web from a network of separately siloed applications and content repositories into a more seamless and inter-operable whole.
2. Ubiquitous connectivity, broadband adoption, mobile Internet access and mobile devices.
3. Network computing, software-as-a-service business models, Web services inter-operability, distributed computing.
4. Open technologies, open APIs and protocols, open data formats, open-source software platforms and open data (e.g. Creative Commons, Open Data License).
5. Open identity, OpenID, open reputation, roaming portable identity and personal data.
6. The intelligent web, Semantic Web technologies such as RDF, OWL, SWRL, SPARQL, GRDDL, semantic application platforms, and statement-based datastores.
7. Distributed databases, the “World Wide Database” (enabled by Semantic Web technologies).
8. Intelligent applications, natural language processing, machine learning, machine reasoning, autonomous agents. (Wikipedia, 2008a, n.p.)

According to O’Reilly and Battelle (Wikipedia, 2008b), an architecture of participation where users can contribute website content creates network effects. Thus, in order to most effectively harness the power of the Internet for language education following a Web 2.0 paradigm, teachers need to learn to leverage the power of its “Long Tail” to develop “an architecture of participation where users can contribute website content [that] creates network effects” (n.p.). Since data becomes a driving force in Web 2.0, and even more so in Web 3.0 models, language teachers need to know and focus on which vocabulary (or lexical corpus and collocations) and grammatical structures their learners need to be exposed to in order to reach higher levels of fluency.

How can this be done most effectively to enhance online vocabulary and related reading comprehension development and language learn-

ing? This can be accomplished by integrating various programs needed by language teachers and learners into a more seamless whole, as is being done at some more innovative CALL sites. WordChamp.com, for example, combines many automatic functions, such as auto-glossing, auto-archiving, audio and visual enhancement, auto-uploading and test generation to provide a complete Course Management System (CMS) for courses. It also established peer-to-peer communication between users from 137 language backgrounds from any point in the world, using both an internal Instant Messenger system and the possibility of file-sharing. Learners' or teachers' vocabulary files can also be uploaded online or use mobile devices easily.

So perhaps the best way to enhance language learning using the Web is by finding and using good programs like these and by building more open source language learning communities online, which encourage maximum active participation and collaboration in the exchange for authentic communication between learners and speakers/readers of various languages. This means teachers need to embrace the web as a platform and aim to use its strengths (global audiences and collaborative learning, for example). Rather than fight or ignore the Web, teachers and researchers should aim to build applications and services around its unique features, especially its ability to enable users to both create and share content across various networks and boundaries.

USING READABILITY ENHANCING PROGRAMS

Chun (2006) examined CALL technologies for L2 reading, and compared the effect of providing some type of glosses upon improvements in vocabulary acquisition and reading comprehension. As she stated, results from CALL studies should always specify participants' L2 language proficiency, and cannot be generalized to all L2

learners. Chun noted various implications for online reading instruction from Grabe's (2004) reading research. Her rationale for having language learners use electronic and multimedia glosses is that:

They aid readers in performing the bottom-up function of recognizing and/or understanding individual lexical items, which in turn frees up working memory capacity and allows more of the reader's attention to go toward the top-down processes of reading comprehension. ... Online glossing is thought to provide fast and easy access to the meanings of unknown words and to compensate for insufficiently automatic lower level processes and thus allows the reader to attend to higher level processes. (Chun, 2006. p. 70)

There is still a lack of extensive, quality research about how to improve both skills and assessment of reading online, and more generally, how to improve the readability of web pages for learners from various backgrounds. Taking students to the Web should serve the double purpose of helping them to learn to read better either in their native (L1) or target foreign language (TL/L2), while simultaneously helping them to improve their acquisition of essential electronic literacy skills needed to cope with content and/or academic courses. While some of this delay seems caused by resistance to educational and technical change, instructors also seem to still lack clear pedagogical or theoretical models of reading online. Better understanding and application of Web 2.0 and Web 3.0 technologies can certainly help to design more effective models for successful interactive online reading and language learning communities. Another example is *Qnext*, a site which promises to be one of the fastest growing phenomena since *Facebook*, as it enables users to integrate and communicate with any Instant Messenger program, and share any and all files online with anyone else anywhere, free of charge.

Indeed, the educational community does seem to be a bit slow in making the transition from traditional text-based reading to online reading, which requires the teaching and learning of different perceptual approaches in both L2 text comprehension, as well as in lexical acquisition and processing strategies. Two major book readability grading systems already exist online:

1. Renaissance Learning's program which features the "Accelerated Reader" system with computerized quizzes and record tracking for more than 22,000 titles, also known as ATOS.
2. Touchtone Applied Science Associates' (TASA) Depth of Reading Power (DRP) program. TASA Literacy Online uses a scale of 0-100 in their own measure of text level and student reading level. They call these levels Degrees of Reading Power (DRP). They have also designed and used tests of vocabulary in context called Degrees of Word Meaning (DWM). Perhaps the best part of this vocabulary level testing scheme is that they provide a brief Conversion Table, which helps teachers convert these DWM vocabulary level scores into an estimated size of reading vocabulary.

Degrees of Word Meaning scores range from 850 (the equivalent to knowing over 157,000 words), to less than 300 (indicating that such a test taker knows 100 or fewer English words). Their products for educational assessment are numerous and include the Degrees of Reading Power (DRP) tests as well as online programs and steps for estimating both reading levels or the readability of any text or book.

Renaissance Learning is a commercial educational program for schools, with readability measures available for approximately 30,000 books. Anyone can estimate the level of any book by selecting three 150-word passages and emailing them to the site. Even more interesting is that

users can enter three such samples in MS Word and freely analyze their level via Word Count with Readability measures activated.

Many reading teachers are looking for these kinds of helpful services to assess any text's readability. To help meet this need, Loucky (2005) developed an integrated English for Advanced/Specific/Technical Purposes online course, combining various online Reading Labs, for Japanese students. Its final Listening-enhanced Step for those having Natural Voice Reader or other text-recognition software includes:

1. Listen to the text read electronically.
2. Learners should try to understand its meaning phrase by phrase, paragraph by paragraph in whole sense units, not just reading word by word.

Where reading on screen differs most, however, is in the areas that Taylor (2005) notes. First, much more skimming and scanning is used. In fact 79% of Web users were found to be using these skills rather than reading word for word. This finding has huge implications for teaching the skills most needed for efficient online reading. Clearly both web writers and language teachers wanting to use online resources most effectively need to be aware of these major reading differences, as well as demonstrate sensitivity to the foreign readers for whom reading L2 texts designed for natives is often impossible or highly frustrating. Some studies, such as those done by Sun Microsystems Science Office have claimed that "Reading from a computer screen is 25% slower than reading from paper" (Nielsen, Schemenaur, & Fox, 1994). Many differences in reading rates have also been noted between on-screen reading using a monitor versus the printed page. Some of these differences may be due to differences in the text delivery system, in the layout, number of columns and length, etc. Other distractions to the reading task online may be caused by the need to use scrolling, hyperlinks or pop-up ads. All these factors

may impede one's reading on a digital screen. Once practiced and proficient at reading online, however, probably the opposite is true for fluent readers. Much more research comparing skills, speed and accuracy levels of online versus print text reading is needed on readers at various levels, both native and non-native speakers, before such general claims can be accepted.

Teachers trying to use CALL or e-learning as well as web writers need to write in clear chunks and make text scannable at a glance, since an eye-tracking study done by the Stanford and Poynter Institute found that online readers often focus narrowly upon headlines and summaries (78% of their eye attention was here). Since online readers must use more skimming and scanning to get the gist and locate relevant information quickly, and Web distractions can make their speed 25% slower, these principles recommended by Taylor (2005) can help improve the readability of web copy.

Online authors must aim to write web materials clearly and succinctly in summary style. As Taylor (2005) states, a Web materials writer should think like a graphic artist, treating "each page like a painting that is framed by the computer on this electronic canvas [where there] are elements that you, the artist, must weave together, linearly, to form a coherent whole that can be accessed with little or no reading. ... Web writing places a premium on good organization of content and devices [navigational bars or buttons] that clarify the content's organization to the web user" (n.p.). Other principles advanced by Taylor also include:

1. Invert the pyramid of information, using journalism's major headlines and summary first style.
2. Compress information and be more concise, so reduce word count by at least 50%.
3. Make one paragraph carry one major idea.
4. Make each page's text stand alone, since users can enter through hyperlinks from various places.

5. Provide needed hyperlinks, using keywords as titles/headings. In other words, make useful and relevant links to helpful resources, both within a site as well as to other sites.

Some important new principles come into play with a Web 2.0 approach to information dissemination. These include a user-centered mentality, where more readable and comprehensible information should be made available to users, when, where and in forms that they need and can readily use. Since Web 2.0 enables more people to share and author information by means such as text and audio file-sharing, podcasting, photo-sharing, blogging, etc., such information can become more personally relevant and meaningful to specific user groups. On the other hand, copyright, expensive monolithic publication systems and "Information Gate-Keepers" will tend to be by-passed or disintegrate, while information-sharing technologies give users more direct access to publically available, Web-visible learning resources. But how can Internet resources be used most effectively to improve online reading and language development? This is the key question under discussion in this chapter.

Having established a better understanding of the major differences between reading print text versus on-screen text, teachers and web writers can implement better solutions for the special needs of L2 readers. Beside these clear reading differences, others have only become apparent in recent research. As Taylor (2005) noted, "In both cases, it's essential for web writers to be aware of the differences between the world of linear text flowing like a river, and the fragmented world of hypertext on a pixel screen. The most successful web writers have honed in on the key differences between writing for print and writing for the web" (n.p.).

Finally, we must remember that the Web is rigorously democratic, in that the user is in much more control of an online, interactive learning experience, than when reading print text, or other

more passive, non-responsive mass media. The Internet is a self-access mode of learning, but a majority of learners may not be “self-starters,” and especially foreign language learners can be quite intimidated and feel threatened by L2 online materials. Thus we need to provide a variety of levels (with both authentic and simplified text), entry points, and plenty of multi-media and bilingual assistance to aid and encourage their language learning.

Many of these factors are considered by Coll (2002), Loucky (2002, 2005, 2006a, 2006b), and Akbulut’s (2006) studies of learning in hypertext environments. Online reading seems to discourage word-for-word reading, since print readers can hold the entire document in their hands at once, whereas a web document must be called up one page at a time, either by the action of scrolling or by using hyperlinks. Even better for discouraging single word reading, however, are reading pacers, some of which can be set by the learner to at least three different speeds to adjust for their own comfort and ability level. This type of on-screen reading function is essential, for at least some Web reading, especially for lower level readers. It is available, for example, when using Eichousha’s *Reading Skill Trainer* software, or *Rocket Reader* online.

Another type of help for enhancing online reading called, Visual-Syntactic Text Formatting (VSTF), has been tested by Walker, Schloss, Fletcher, Vogel and Walker (2007). This method transforms block-shaped text into cascading patterns to help readers identify grammatical structures. It has helped increase reading comprehension and the efficiency of reading online texts while reducing eye-strain among college readers. This VSTF method also helped increase high school students’ academic achievement and long-term reading proficiency by more than a full standard deviation over randomized control groups in one academic year. This new method has been made feasible through computer-executed algorithms and electronic displays by integrating

converging evidence from educational, visual, and cognitive research.

There do not seem to be many rigorous online studies yet of Web reading done by non-native speakers, using both speed and accuracy tracking, and also eye cameras to track and monitor perceptual movements such as regressions when reading online versus on paper. If such a comprehensive public grading system could be made available, it might indeed become a useful standard for both web-based and paper-based ER materials, but one must also recognize what a large project it would be, requiring the input of various educational bodies to achieve wider acceptance and use. In the meantime, traditional reading level tests that are online should be used and compared to see which provide the most helpful and consistent results for learners from various language backgrounds.

METHOD AND MATERIALS

Programs for Improving Vocabulary Accessibility with Online Glossing

Two major bilingual glossing programs — Rikai.com and Wordchamp.com (See Burston, 2007) — were used in a graduate reading course, alongside two online vocabulary level checkers. Rikai.com provides glosses from English to Chinese, Japanese, or Spanish, and can do auto-archiving of all target words looked up for later printing and review. Wordchamp.com will be explained in more detail below. The first vocabulary checker used was a simple, author-designed Vocabulary Knowledge Scale, known as the Dual Assessment Vocabulary Instructor-Evaluator (DAVIE). The second vocabulary checker used is called Vocab Check. In researching the use of these tools, three main research questions were identified:

1. Our primary and most basic research question was to find out: What is the relationship between using new types of Web 2.0

technology for CALL? Specifically, how can this more interactive, mobile World Wide Web of educational and social networks be used most effectively to produce the much-promised transformation of learning? In what ways can Web 2.0 and 3.0 transform and improve language learning?

2. Secondary research questions applying this new technology to vocabulary, reading and language learning were: Do web 2.0 technologies contribute to the development of both intensive and extensive reading skills? If so, how? Why, or why not? Which online resources do EFL learners find most helpful in learning and using new English vocabulary and grammatical structures? Language educators and researchers need to ask: What are the implications and uses of web 2.0 for language education with reference to its innovative audio-visual, participatory and assistive technology? How can these new online technologies best be harnessed to increase language learning rates, proficiency and enjoyment? How can language teachers effectively guide students in the use of such online resources and socially interactive programs, in ways that are ethical, enjoyable and educational, so that their use does not degenerate into classes of online dating or worse?

Participants

Two groups of students were involved in this study. The first group consisted of a class of Japanese engineering students on a master's course (M = 38, F = 1). The second consisted of two classes of English and Applied English Major students. Of the latter, one class had 15 students from the National Taiwan Normal University; the second class was from St. John's University and had 37 students. Thus, the total number of Chinese English students in this study was 52. The total of Japanese and Chinese in this study was 9, of

whom 56 completed the English surveys summarized below.

Students taking the online reading course in Japan were Master's candidates in the new Department of Applied Science for Integrated Systems Engineering at a national university in Kyushu. Students' vocabulary and comprehension level and total estimated reading level were computed at the start of the semester course relative to American norms. A "Course Survey" and a "Website Evaluation" were also given at the end of this one-semester course. Average class reading levels for all 39 Japanese students relative to native reader norms in America (Loucky, 2003a) were assessed at the start of the fall semester: the average vocabulary level was grade 3.93, equivalent to the start of fourth grade level in the USA. The average reading comprehension level was 3.02, hindered by this low vocabulary level. The average expected reading grade level was the middle of third grade, or 3.51. Students wrote brief reports on each reading including a) a summary paragraph, b) impressions paragraph, c) five free comprehension questions and answers of their own, and d) constructed complete sentences for each new word they had listed. These were each printed or emailed, corrected by the teacher and returned for oral interviews.

DURATION AND DATA COLLECTION

Students had ten weeks from a fifteen-week one semester course in which to write at least five emails to Distant Learning Partners (DLPs) on their own outside of class, constructed around five general themes. They could choose words freely from pre-arranged Semantic Field Keyword (SFK) groups relevant to five academic disciplines, to help guide their writing. Each of these students was randomly assigned a keypal in the other country to write to online. Students had an average of two weeks for each email exchange, after

which they were to print and submit it for credit. Partners could give each other peer-corrections, as well as making any corrections on their own after getting quick markups from teachers of where errors might exist in grammar, wording or usage. Students simply received credit for all email exchange letters handed in, and rough markups so they could make corrections and resend if they wished to do so. They were awarded a grade from 60-100% based on how well they completed email assignments in terms of their purpose, theme, and use of proper lexis and grammatical structures. Only printed versions were checked, though drafts could be written. Sending corrected versions to their partners was encouraged, but not checked or enforced.

Japanese students did all of their readings for this study online. In addition to online writings, blogs and use of a bilingual program, the Taiwanese students also used a writing text called *Steps to Writing Well* (Wyrick, 2005). Blogs did not work well enough to enhance these Chinese students' English this semester, so peer comments were encouraged and collected in addition.

ONLINE COLLABORATIVE WRITING PROCEDURES

Students were assigned five topics to write on, and told to use questions or statements for each of them, depending on their purpose and content. These five Collaborative Writing Exchange Topics Using the Semantic Field Keyword Approach (Loucky, 2004) within a Task-Based Language Teaching approach (Willis, 1996) were:

- **Topic 1:** Interview your new distance-learning partner (Using terms from Unit 1: Scientific Experimentation).
- **Topic 2:** Tell "My Life Story" (Using terms from Unit 2: History).
- **Topic 3:** Interview your new distance-learning partner (Using terms from Unit 3: Psychology).

- **Topic 4:** Tell your view of man, or how you think people and human civilizations came to be and where you think the world and humanity is going. (Using terms from Unit 4: Anthropology).
- **Topic 5:** Describe the culture and traditions of your people and country so a foreigner could better understand your nationality. (Using terms from Unit 5: Sociology).

These topics were first shared using the three phases of Willis' (1996) Task-Based Instructional Framework:

1. Pre-task Introduction
2. Task Cycle
3. Language Focus

For each of these five writing topics (different for each of five academic discipline areas and themes assigned), they were given 36 sets of Semantic Field Keyword groups of similar meaning-related words, but students could choose which of these they wanted to use and in what order. Their motivation was greatly heightened for writing in EFL since these were cross-cultural "Collaborative Writing Exchanges" between them as Japanese engineering graduate students and Taiwanese undergraduate English students. Data collection mainly consisted of recording students' averages for email exchanges done, pre-and post-test data for Japanese students on their knowledge of the first Unit of Semantic Field Keyword groups, and survey results for all who chose to complete English course surveys.

RESULTS

Pre- and Post-test class average scores for the Japanese graduate engineering students for Semantic Field Keyword Approach Unit 1-1 Sample provided interesting results. The pre-test raw scores were 22.86/60, equivalent to 37.92%

organized correctly. Similarly, post-test raw scores were 33.73/60, or 56.11% organized correctly. The Learning Rate for Unit 1-1 was therefore 18.19%, a very good rate for a short-term study.

Taiwanese students did not use the LEARN Online Reading Lab program. Being higher-level English education majors, they both did some limited blogging and peer-correction of other written essays. Researchers only had direct control over the Japanese student's instructional material, but Taiwanese email exchange classes cooperated fully on five SFKA writing exchanges.

Survey of Online Reading and Collaborative Writing

On the "Survey of Online Reading and Writing Collaborative Course," 38 Japanese Graduate Engineering students and collaborating Taiwanese students completed an English survey and generally answered the questions very positively. 97 Japanese and Chinese participated in this study and 38/45 Japanese students completed surveys. However, just 18 Taiwanese students completed English surveys. The Survey Questions were as follows ($N=56$):

What have you learned from using the pre-organized, bilingual Semantic Field Keyword Approach online and doing Collaborative-Writing Exchanges using some of these words within assigned grammatical or topical frameworks?

Japanese Students' Answers: 13/37 or 35.14% were very positive. Chinese Students' Answers: 16/18 or 88.89% of answers were positive.

Which topic did you find the most difficult to write about? Why?

Various answers were articulated, for example:

Japanese Students' Answers: 1 each said the "Freed Hostage Trio" or the "Sake Story"; 4 said: "Kagawa's story because I didn't know him at all" (1 due to its difficult vocabulary); "Also his life was so busy it's hard to tell all that he did!" 2 said: "The first story in Japanese about Scientists." 2 said: "Manjiro/Neejima Joe." 3 said: "Pearl Harbor." 1 wrote: "(PH) Story, as I don't know about war"; 1 said: "PH as I didn't know those words. A third wrote: "Pearl Harbor, because the story is very long." 6 said: "SFKA Topics 4 & 5, Anthropology and Sociology — We don't think about it usually; I don't know much about my country to explain it to others." 2 said: "All SFKA Topics. All, since written in a language I don't know well."

Chinese Students' Answers: More than half wrote: Anthropology, "because the words and subject are complex or difficult (abstract)." Human civilization or Academic subjects, "since I am not professional in those fields"; "Because one's view of man is the most difficult topic, with many new words, so it took longer than others."

Do you think SFKA word lists improve your writing? Why or why not?

Japanese Students' Answers: 100% or 38 were positive. Chinese Students' Answers: A. 55.56% positive. B. 2 negative (5.25%). C. 33.33% or 6 gave no answer.

Do you think using the pre-organized, bilingual Semantic Field Keyword Approach online is a good way to help you increase your English vocabulary? Why or why not?

Japanese Students' Answers: A. 21/37 (56.76%) were positive. B. Negative: Only 1 (2.7%). C. Neutral/No opinion expressed: 15 (40.54%) gave no opinion.

Chinese Students' Answers: A. 11/18 (61.11%) positive. B. 1 Negative. C. 2 Undecided. D. 1 Recommendation given: One said: "It'll be better if

SFKA could show us some example sentences.”
E. 2 (11.11%) Neutral/No opinion expressed.

*Do you think our email exchange successful?
Do you think your writing improved after this
exchange? State the reasons for your opinions
clearly please.*

Japanese Students’ Answers: A. 22 (57.89%)
positive. B. 8 (21.05%) negative. Including 1: “No,
because I couldn’t get emails.” 1: “No, since words
or topics were limited.” 1: “No because one sent
me none, the other’s English was too difficult for
me.” C. 1 Neutral said: “Not sure if successful,
but it improved our English!”

Chinese Students’ Answers: 7/18 (38.89%) of
Taiwanese said: A. “Yes, it’s a good way.” B. 5/18
(27.78%) gave “No” answers. C. One (5.56%) gave
it a 50% rating. Reason: “Because our keypal was
Japanese ... If the nationality could be European
[with higher language proficiency many others
wrote] that’ll be better.”

*If you took the V-Check or used the WordChamp.
com website to test your vocabulary level online,
did it help you? If so, please tell your impression
or opinion about how it was helpful or motivating
to you.* (Japanese students used both V-Check
and the WordChamp.com website. Chinese only
used V-Check).

Japanese Students’ Answers about V-Check:
14 (36.84%) were positive, 2 mixed, the rest
(58%) gave no specific response to this question.
However, when ranking websites used in class for
the usefulness, 24/38 (63%) of them chose Word-
Champ.com as their first or second favorite site.

Japanese Students’ Answers about Word-
Champ.com: A. 18 Positive (47.4%). B. 2 Negative,
“No, it was too slow on our LAN.”

Chinese Students’ Answers about V-Check:
8/18 (44.44%) were positive. Five wrote mixed
opinions, with complaints or suggestions to im-
prove V-Check.

*Did you gain any new ideas or strategies for
improving your English vocabulary, reading or
writing strategies and skills? Yes or No. If Yes,
please tell which particular skills and strategies
did you learn that you will use the most or may
help you most practically in the future?*

Japanese Students’ Answers: Six (16%) said:
“yes.” 4 wrote: “Reading in English improved. I
will study English harder!” Two said: “Especially
I gained Vocabulary skills; I gained practice in
writing English sentences!”

Chinese Students Answers: Half (9/18) were
positive.

*If you took the V-Check to test your vocabulary
level online, what was your impression or opinion
about it? Was it helpful to you? Motivating?*

Japanese students were given a survey about
their online reading practices and learning, shown
above. Chinese students instead were asked: *What
do you feel about peer-commenting? Did you
benefit from your classmate’s comments? Why or
why not?* Taiwanese students used and appreci-
ated the ability to develop their English by doing
blogging and peer-correction online.

Japanese students’ responses to a mini-survey
on websites and reading methods used in class and
two scientists studied using them will be summa-
rized here, called Question 9 on their survey.

*Rank 1-5 which of these Websites “Most helped
you to improve your English skills.” Also “Put a
check” on the right of any Website that you used
if it helped you to learn new English vocabu-
lary, reading/writing skills and strategies online
(Rank#, then #ofStudents). Rank 1-5; Circle with
“O” if this Website helped you to improve.*

- A. (www.call4all.us) #1-18; #2-7; #3-4; #4-2;
#5-1; #7-1.
- O. 26/38 students said this website helped them
to improve their English. Numbers show
how they ranked each site.

- B. (www.WordChamp.com) #1-10; #2-14; #3-2; #4-5; #5-2. O-25/38 “Helped my English”.
- C. (www.Rikai.com) #1-6; #2-10; #3-13; #4-1; #5-3; #6-1; #7-1. O-26/38 “Helped”.
- D. Online Dictionaries — CALL4ALL’s Dictionary page, or which online dictionary did you use most? #1-2; #2-8; #3-7; #4-11; #5-3 #6-1. O-18/38 “Helped my English.”
- E. (www.learn.com Site) #1-2; #2-3; #3-5; #4-6; #5-10. O-19/38 “Helped.” 1-X “Did not help.”
- F. Online Reading Labs (assembled at R-Reading Page of CALL4ALL.us). #1-2; #2-5; #3-6; #4-3; #5-6; #6-5. O-17/38 “Helped my English.”
- G. OTHER English-Japanese Web Dictionaries Used: 4 Listed. 2 used ALC (SPACE); 1 Sanseido.net; 1 MSN Encarta Dictionary.

To summarize the above ranking of websites used, one can see that Loucky’s course website was the most highly favored, with 68.42% (26/38) saying it “Helped me improve my English,” and 47.37% (18/38 students) choosing it as their #1; 7 students as their #2; 4 students as their #3; 2 students as their #4; 1 student respectively as his #5; or #7 choice. WordChamp.com, found helpful by 65.79% of these students (25/38), was second in popularity, with 10 students choosing it as their first choice, 14 as their second, and 9 others choosing it as their third to fifth choices. Third in popularity was Rikai.com, found helpful also by 68.42% (26/38 learners), and chosen as their top by 6. It was second choice for 10, and third choice for 13 learners, with another 6 ranking it #4-7 among their choices. 32 students viewed CALL4ALL’s Dictionary page as being helpful to them (84.21% using it) 17 ranking it in their top 3 choices. Fifteen others placed it in their top fourth to sixth choices. When asked, “Which online dictionary did you use most?”, only these other online dictionaries were listed, all of which are included on CALL4ALL’s Dictionary page as well: 4 listed ALC (SPACE); 1 Sanseido.net;

and 1 MSN Encarta Dictionary. Finally, Japanese student responses to the mini-survey on reading methods and scientists will be summarized here. Asked on their final Reading Survey section:

Which way of reading did you prefer?

92.10% (35/38) chose: a) reading online with bilingual glossing support, vs. only 7.89% or 3/38 chose: b) reading printed handouts or textbook articles?

An overwhelming majority (92.1%) prefer having bilingual glossing support for their online readings. Teachers and E-Learning developers should always keep this in mind.

Which way of reading was easier for you to learn the meaning of new words?

65.79% or 25/38 chose: a) When reading online with bilingual glossing support, or 28.95% or 11/38 chose: b) when reading printed handouts or textbook articles? So approximately 66% said it was easier for them to learn new words having such bilingual glossing.

Do you think you learned how to use strategies for reading more effectively?

32 chose: a) When reading online with bilingual glossing support, or 3 chose: b) When reading printed handouts or textbook articles?

84.21% state they learn to use a larger number of reading strategies more effectively when reading online with such bilingual support.

When reading about scientists using the LEARN Website, which way did you read?

- A. Einstein Story: 9 read only and 14 read and listened to it
- B. Edison Story: 8 read only and 16 read and listened to it

Which way of reading did you prefer doing in this class?

- A. Online Reading without Listening support: 4 (10.53%)
- B. Online Reading with Listening support: 31 (81.58%)
- C. Offline Reading of printed texts only: 3 (7.89%)

Again it was clear that about 82% of these learners prefer reading online with listening support. This is a significant finding with potentially far reaching implications for CALL and Extensive Reading to analyze.

Based on your reading, who do you think was smarter?

7 answered a) Einstein and 8 b) Edison as opposed to c) with 23 and “both the same.” Only 1 answered d) another scientist.

Why do you think so? Please give your specific reasons for your opinion here.

23 said “Both.” Example answers included: “Both were great, so I can’t decide.” “Because I think all scientists are great.” “These two are too smart to compare!” “Both were geniuses.” “Both, because everyone knows both.” “Both contributed to the world’s development.” A number said, “I respect both. They are not comparable, since Einstein theorized, but Edison manufactured.” “Both are great scientists, both very smart.” “We can’t compare them.” 7 chose Einstein, one saying, “Einstein, since his IQ score was 300!” 8 chose Edison, one saying “because he not only invented new products, but also a system to earn money!” “I like Edison ... most popular inventor for our lives.”

When designing language learning websites three major parameters of subjective enjoyment and objective effectiveness as well as technologi-

cal efficiency should all be considered. In order to do so, students’ improvement during this one semester course was assessed by two measures: a) average performance and participation in written reports and twelve online articles, and b) overall performance during three sessions using the Online Reading Lab articles. Their performance when reading these articles was assessed in three ways: 1) by the average number of stories read, 2) by their average speed when doing these timed readings, and 3) their average percentage of comprehension for all stories read during each session.

A majority of students reported that using the teacher’s website ([www. CALL4all.us](http://www.CALL4all.us)) made the course very enjoyable and efficient for them. Students always did the reports unless absent, often making up written reports with much diligence, resulting in an overall class average of 76.75% on these homework reports, which were graded based on their grammatical accuracy, completeness of reporting and word study indicated. Objective test results — 59% average online comprehension despite this EFL class averaging just 3.5 in their total reading grade level — also showed a good level of improvement in learners’ average vocabulary and grammar use levels, clearly supporting the effectiveness of such a blended online course. Thirty-five students completed an average of 18 online readings in a mean time of 6.78 minutes per reading. Since these readings were designed to be read in just five minutes, it became apparent that these graduate engineering students need more work on learning the essential core vocabulary required to read at a higher level with greater speed.

These were Japanese average comprehension scores for all readings done using Balsamo’s Online Reading Lab on each of three days, as well as students’ total overall average. As one would expect, from an initial average score of 54.19%, their comprehension scores increased to 63% and 60.5% on two subsequent days. Each time they were encouraged to try to read ten online articles

on topics in areas of their choice. Students' total overall "Online Reading Averages" when doing timed online extensive readings on topics of their choice were as follows: 1) Average Comprehension, for Day 1: 54.19; 2) Average Comprehension, for Day 2: 63; and 3) Average Comprehension, for Day 3: 60.5. The Total Average Comprehension was 59.39% over three days using this online reading lab.

In sum, both objective and subjective assessments showed that a large majority of these students improved markedly, and enjoyed this course, which blended assigned online readings with integrated four skills English language development activities (written reports and paired interviews based on online readings) as described above. The course was not long enough (just one semester) to measure reading gains by grade level.

Students wrote brief reports on each online reading including: a) a summary paragraph, b) impressions paragraph, c) 5 free comprehension questions and answers of their own, and d) constructed complete sentences for each new word they had listed. These were each printed or emailed, corrected by the teacher and returned for oral interviews, emphasizing oral and written correction of grammar errors. All reports received a grade as they accounted for 80% of the semester grade. Consequently, assignments were taken seriously and done regularly by almost all students. Final class average for ten of these reports required was 78%, a figure close to Japan's A level for 80% and above.

This five-month semester course emphasized developing online reading skills using bilingual glosses and regular, blended and balanced integration of CALL with all four communication skill areas as described above. It was necessary to try to balance an intensive reading approach to cover higher level technical articles assigned by other engineering teachers, with an extensive approach using an online reading lab. The students' general surveys ($N=38$) showed an appreciation for both approaches, and improvement in their speed and

comprehension during second and third sessions using the online reading lab as follows. Using Balsamo's Online Reading Lab, they averaged reading 18 stories over three weeks, at an average speed of 6.78 minutes. While average comprehension scores were close to just half (54.18) during the first week, they improved to 63 and 60.5% during weeks 2-3.

DISCUSSION

We have been able to develop a multi-purpose language learning site including an Online Reading Lab (ORL) and succeeded in fully integrating practice in all four communication skills with it for a graduate level course. Since the learners' average vocabulary level (grade 4.0) was comparable to that of undergraduate freshmen engineering students at the same national engineering university in Kyushu, Japan, such a course using only the Online Reading Lab's easier articles could be more successful in the future.

Technical articles would be skipped and simpler Rikai.com articles used instead, especially ones having instant online bilingual glossing available. The following resources and services were provided by this course and website:

1. Interesting, authentic online reading materials (copyright free).
2. Comprehensible input facilitated by instant bilingual glossing and other web dictionaries.
3. Comprehension questions on each article were available for each timed, online Reading Lab article. Learners wrote their own questions and answers for online articles, chosen and assigned by ten other engineering professors, to enhance and ensure their mental and linguistic interaction with each text. These were followed up with oral/aural practice using these same questions after

being checked for grammatical accuracy by the teacher.

4. Feedback was given by writing brief summaries, impressions and comprehension questions for each of these 10-12 academic articles.

The high levels of learner enjoyment and clear effectiveness of this type of CALL-based ESP online reading course suggests that many more courses should strive to have a web presence, especially reading and writing courses. This study also showed the benefits of giving end-user surveys and interviews, as well as objective post-tests and ongoing monitoring and assessment of students' learning, in order to improve such courses with added feedback. This online ESP course blended with interactive, communicative language learning activities both in-class and out also revealed that making parts of an online reading course available at all times on the Web and demonstrating it in class can ensure that students do use it effectively. Not only do language learners use such a website when it is intentionally and effectively integrated into regular class use, but they also seem to greatly enjoy and benefit from using it, as reported on their course surveys averaged by the school, and demonstrated in their online reading reports.

These were the results for assessing just the first article on hurricanes from Balsamo's online Reading Lab:

1. In less than 2 seconds, so much linguistic and lexical data can be generated for any text such as this, either inputted from any online text, text file or scanned text that one must summarize only the word data types, as it generated seven pages of data. They included this information about word families, types, tokens and percentages; a color-coded text showing word bands clearly with different colors. In addition, Token Lists for various Word Bands were all printed out. The AWL

File produced at level 10: for Hurricanes and Tornadoes article showed these academic words in bold print: similar, temporary, area, normally, predicted, ignored, considerably, normal, enormous, encounter, and capable. In this program each level includes all the previous levels, so band 10 includes 1-10. By providing such color-coding and word frequency bands, teachers can help students to focus on how to study the words they most need to learn in communicative and effective ways.

2. AWL only highlights ten levels of academic words within similar bands by bolding them. This is very helpful for quickly focusing both teachers' and learner's attention on essential vocabulary for understanding that text, for example here shown for the first Academic Word List level. This program will identify core academic vocabulary in a text, using the Academic Word List. It does look easier to print and much more manageable for teachers and students who are not linguists than the Vocab Profiler, whose advantage is its ability to assess both easier General Service List (GSL) words, as well as AWL words, focusing learners' attention on words above their present level.

English Vocabulary Profilers

Other linguistic data important to note and summarize here are these facts, which can be edited from an excellent function provided by Cobb's Vocab Profiler site called "Edit/print-friendly table." It is important to note that while our Target Story was reported to have only about 3% (2.68%) AWL words, 15.05% of the text are off-list words, which must be known to comprehend the story or read it fluently with adequate understanding. Since no more than 1 in 20 running words or 5% should ideally be unknown even for native readers (Ekwall, 1976), encountering these close to 18% yet unknown AWL and Off-List Words would

make even this short article incomprehensible or frustrating for a majority of Japanese college students. Most undergraduates possess an average of only about 2,500 words, with graduates averaging about 3,500 known words, among thousands of learners studied repeatedly at seven colleges over ten years (Loucky, 1996; 1997; 2003a; 2003b).

Alternatively, one may use the AWL Highlighter to work on vocabulary found in the Academic Word List, but this has only 570 words (Coxhead, 2000). Thus off-list words needed by students would not be covered here, making the Vocab Profiler a much more versatile instrument, especially once learners have mastered these AWL terms. As an example, when inputting our target Pearl Harbor Story text into it, CAVE allows one to choose which of the AWL Sub-lists to scan for. At the highest level 10, these 35 words were highlighted (and at times repeated) in bold type by this vocabulary search engine: intelligence (information), objective (aim), military (adjective form), preliminary, accurately, plus, exploit, primary, principal, intervention, converts, ignore(d), encounter, assistance, conference, distributing, published, involved, committed, eventually, volunteered, found, finally, eventually, relevant, dynamic, attitude, liberated, motivation, seeking, purchase, despite, traditionally, drama, substitute. The advantages of using CAVE first are that it is more narrowly focused just on helping one to identify AWL terms needed by sub-lists, without distracting users by any other linguistic data, many of whom would be overwhelmed by Vocab Profiler's excessive data.

3. **Flesch Reading Ease:** First a percentage of passive sentences is shown as 36%. Then a reading ease score of 54.1 out of 100 is given.
4. **Flesch-Kincaid Grade Level:** Finally, the most important reading level perhaps for teachers to know and pay attention to when assigning online reading tasks is this, since it determines a text's estimated grade level of

difficulty. The Hurricane text was assessed as being at a grade 10.2 (2nd month), so that students at a level of more than 6 months to a year lower than that should not be asked to read such texts for free reading. Generally speaking, such texts could be used for instructional reading for students reading at 1-2 levels below that, from about grade 8-9 level. Students reading at less than that level would tend to become frustrated with such texts, mainly due to their not knowing over 5%, or 1/20 running words. Two conditions could reduce their learning burden, to enable learners reading at lower grade (such as grade levels 5-7) to endure such texts without undue frustration: a) allowing and instructing them to use online or portable bilingual/bilingualized dictionaries, or b) if they have a very strong interest and background knowledge in the field of a particular text. Otherwise avoid the frustration level. Other lexical and linguistic data displayed at the same time by this program for this reading text for example were these facts. This text had 565 words, 9 paragraphs, 30 sentences; averaging 5 per paragraph, 18.4 words per sentence, with 4.6 characters per word.

Interestingly, reading pacers differ. The one used at Balsamo's online Reading Lab is basically a five-minute countdown speed-reading stimulator. Robb's (2008) reading lab site provides another timing device, which ideally should be part of all online reading or language learning labs. It measures total time on task. Learners and teachers can thereby get clear measurements of either free-reading or study times. Adding adjustable pacers and levels of text difficulty to all Web pages intended for E-Learning — along with a choice of either bilingual, monolingual glosses or both, as well as instant Text-to-Speech services — would be even more ideal, especially for lower level language learners. Adding listening support

should be done wherever possible for language learners, since Extensive Reading alone is known to be too slow to allow more than incremental vocabulary development to occur (Rory, 2005). These options are already all available through references and links integrated at the CALL4ALL website (Loucky, 2008), which serves as a free Web 2.0 Virtual Language Education Library of various websites and applications useful for learning or teaching 120 languages.

CONCLUSION

More innovative Web 2.0 technology enables us to manage increasing amounts of semantically rich metadata and to deliver software and services for information management to users from most language backgrounds worldwide. There is a clear drive towards connectivity happening globally today, so that almost anyone with access to a computer can connect with millions of people around the world to collaboratively create, share and consume all forms of digital content at virtually no cost. Using Web 2.0 educators can now manipulate and share enormous quantities of data, so that people all over the world can more easily connect, talk to one another and exchange ideas, provided of course that they can overcome linguistic, cultural and vocabulary barriers.

Due to the potential for sophisticated mass collaboration that this technology wave provides, people are now able to make almost unlimited connections across the planet. However, often a majority of users are not English native speakers or readers, so they require many more means of support to enhance comprehensibility. Clearly such text analyzers, summarizers, glossing and translation engines to simplify text, as well as multimedia and TTS listening support options have great relevance to the needs of many users of Web 2.0, whether it be for online language learning, social collaboration, rating or tagging shared content, collaborative filtering of news, blogs, or

other recommended content or to help improve the comprehensibility of any other shared Web browsers, program applications, components or recombinations.

In summary, one may assess vocabulary and reading levels not only for print but online for text from any of these Web components in the following ways, the first three of which are free and described by Loucky (2008) with links from the Reading and Readability page. Enter any text at any of these three programs to find out its reading level:

1. AWL URL: (<http://www.nottingham.ac.uk/~alzsh3/acvocab/awllhighlighter.htm>).
2. Vocab Profiler URL: (<http://www.lex tutor.ca/vp/eng/>).
3. Word Spelling/Grammar Checker (explained in Office 2007 Word Help).

When Microsoft Office Outlook and Microsoft Office Word finish checking the spelling and grammar, you can choose to display information about the reading level of the document, including readability scores according to the following two tests: a) Flesch Reading Ease, and b) Flesch-Kincaid Grade Level.

Alternatively, enter any book title and or its ISBN to find out its grade level:

1. By using TASA's Depth of Reading Power, on a scale of 1-100.
2. By Reading Renaissance's ATOS, by school grade levels (relative to U.S. norms).

Loucky (2008) has been able to develop a multi-purpose language learning site, including several Online Reading Labs (ORLs) and succeeded in fully integrating practice in all four communication skills using it with graduate level Japanese engineering students. Since the learners' average vocabulary level (grade 4.0) was comparable to that of undergraduate freshmen engineering students at the same national engineering university

in Kyushu, Japan, such a course using only the Online Reading Lab's easier articles could be more successful in the future. Technical articles would be simplified, by having the *WebReader* instant online bilingual glossing feature (www.WordChamp.com) made available for them, along with TTS listening support.

The following resources and services were provided by Loucky's (2008) online course and website:

1. Interesting, authentic online reading materials (copyright free).
2. Comprehensible input, facilitated by instant bilingual glossing and other web dictionaries.
3. Comprehension questions on each article were available for each timed, online Reading Lab article. Learners wrote their own questions and answers for ETP articles, chosen and assigned by ten other engineering professors, to enhance and ensure their mental and linguistic interaction with each text. These were followed up with oral/aural practice using these same questions after being checked for grammatical accuracy by the teacher.
4. Feedback was offline and done personally with the teacher, orally or in writing brief summaries, impressions and comprehension questions for each of these 12 academic articles.

The high levels of learner enjoyment and clear effectiveness of this type of CALL-based ESP online reading course suggested that many more courses should strive to have a web presence, especially reading and writing courses. This study also shows the benefits of giving end-user surveys and interviews, as well as objective post-tests and ongoing monitoring and assessment of students' learning, in order to improve such courses with such added feedback. This online ESP course blended with interactive, communi-

cative language learning activities both in-class and out has certainly shown that making parts of an online reading course available at all times on the Web and demonstrating it in class can ensure that students do use it effectively. Not only do language learners use such a website when it is intentionally and effectively integrated into regular class use, but they also seem to greatly enjoy and benefit from using it, as they reported on their course surveys and demonstrated by high homework averages (78%).

Pedagogical Implications and Recommendations for Web 2.0 Reading Programs

Recent proposals for a standardized grading scheme for web-based reading materials are timely and welcome. This overview has shown how online reading lab stories and articles linked to Loucky's (2008) site can be easily copied and pasted into Cobb's Vocab Profiler for quick reading level analysis. The text of any scanned story or webpage can be analyzed in the same way, giving results that are extremely helpful to teacher, researcher or students in terms of word levels or frequency bands. Others such as McGovern's EFL Reading site report using a rudimentary scheme combining the readability statistics available with Word (Flesch Reading Ease, Flesch Kincaid Grade Level) with his own personal judgment based on experience as a teacher and writer.

Besides using these two Word readability formulas, both Cobb's Vocab Profiler and the AWL (using CAVE formula) site were used to assess basic reading level of articles from Balsamo's online reading lab. Links to each of these are included at the author's website, under L. Language Learning and Reading Labs Online. Teachers, learners or web writers should learn to use these. These were the results for assessing just the first article on "Hurricanes" from Balsamo's online Reading Lab: 1) in less than 2 seconds, so much linguistic and lexical data can be generated for

any text such as this, either inputted from any online text, text file or scanned text that one must summarize only the word data types, as it generated several pages of data. They included this information about word families, types, tokens and percentages; plus a color-coded text showing word frequency bands clearly.

Two conditions could help *reduce the cognitive load or learning burden* of more difficult texts, online or in print, to enable learners reading at lower grade (such as grade levels 5-7) to endure such texts without undue frustration: a) allowing and instructing them to use online or portable bilingual/bilingualized dictionaries, or b) if they have a very strong interest and background knowledge in the field of a particular text. Otherwise we should always avoid frustration level materials, and employ reading materials at appropriate independent levels for free/extensive reading outside of class, or at instructional levels (generally not more than ½-1 year beyond independent levels) for content or classroom learning.

Conclusions Considering Cultural Aspects of Technology Usage

In regard to our Research Questions we have shown various ways new types of Web 2.0 technology can be employed to enhance CALL. First this needs to be done by making online reading more accessible to readers of all language backgrounds by adding instant access glossing (both bilingual and monolingual) and translation engines to all sites, along with listening support and summarization tools. Secondly, we have suggested some ways that interactive, mobile educational and social networks can be used to more effectively and enjoyably bring about the transformation and improvement of language learning promised by Web 2.0 and 3.0 technologies. Finally, we have demonstrated at our large Virtual Language Education site how to more fully integrate and apply this new technology to enhance vocabu-

lary, reading and language learning. Naturally, Web 2.0 technologies can be used in the many ways shown by Loucky (2008), to contribute to the development of both intensive and extensive reading, and all four communication skills in any language available online.

In previous studies Loucky (2008) found Engineering students in Japan were generally more open to the use of technology and more adept at using electronic dictionaries effectively than typical humanities students of English in Japan, including English majors (Loucky, 2003b). No distinctions between male and female participants were found, although few females tend to major in Engineering in Japan. What relationship could we find between Chinese and Japanese students and their English language learning in this study? What common problems do they have with reading or writing in English? How can technology enhance reading strategies in Asian contexts, such as Japan and Taiwan, where our collaborative writing exchanges were done? These students do seem to be more open to using technology in the classroom than other students because of their society's normalization of technology, and due to having higher computer and English literacy than average Japanese lower level learners.

Using such digital devices as e-readers and mobile phones with Internet connectivity can enable students to gain better access to reading materials in the classroom or for mobile online learning. Such Web 2.0 and emerging Web 3.0 technology promises to revolutionize reading, especially as language learning becomes more mobile/portable, user-generated and –controlled. Language learning sites that enable users to download content directly to their portable or desktop devices should enhance out of class, independent language learning and use. So far, though, Japanese students' use of mobile phones for reading and vocabulary learning has been too expensive, slow or hard to keep on task (Loucky, 2003c). iPods could greatly enhance extensive reading with listening support if text and sound files could

be easily downloaded simultaneously by users at different speeds and levels of text difficulty (as our students experimented with using the learn.com site). In Japan, for example, the DoCoMo cell phone service already offers downloadable novels and Manga to mobile phones.

Among the aspects of online learning course design to take into consideration in future online course development are these:

1. How to ensure that the website's purposes and learning objectives are clear to both students and teachers using them.
2. What are implications for learners' workload (how can blended in-class use help increase actual communication, learning and motivation while decreasing time they must spend working alone).
3. What are implications for teachers' workloads? (How can CALL help to decrease teachers' "take-home work," or enable them to even communicate or give feedback from home or office between infrequent classes?).
4. How can we ensure that end-users' online learning experiences are "of a seamless whole that incorporates all aspects of the online experience (conferencing, library, student and tutor homepage, etc.)" (Shield & Kukulska-Hume, 2004, p. 32), and better blend these together with other aspects of in-class or take-home integrated four-skills communicative language learning?

This study and website suggest initial answers to these questions, and could serve as a useful model for EAP/ESP/ETP online courses, as well as for blended reading courses to consider. It helps to advance an integrated model of how language learning websites can be better designed for blended in-class and mobile use, so that more enjoyable and effective language learning can take place, helping students to improve their vocabulary and reading skills online, as well as

other communication skills interactively, face-to-face off-line.

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KEY TERMS

Degrees of Reading Power (DRP): Touchtone Applied Science Associates' (TASA) Depth of Reading Power (DRP) program. TASA Literacy Online uses a scale of 0-100 in their measure of text and student reading level. They call these levels Degrees of Reading Power (DRP). Primary and Standard DRP tests assess learners' ability to comprehend surface meaning of prose, whereas Advanced tests assess the inferential and global reading skills of more proficient readers. DRP technology relies on the close link between text difficulty or readability level and comprehension test results. As such, they can be interpreted as criterion-referenced tests, indicating what a particular student can actually do.

Degrees of Word Meaning (DWM): TASA has designed and used tests of vocabulary in context called Degrees of Word Meaning (DWM). This vocabulary level testing scheme provides a brief Conversion Table, which helps teachers convert these DWM vocabulary level scores into an estimated size of students' reading vocabularies. Degrees of Word Meaning scores range from 850 (the equivalent to knowing over 157,000 words), to less than 300 (indicating that such a test taker knows 100 or fewer English words). Their products for educational assessment are include tests as well as online programs and steps for estimating both reading levels and readability of any text or book.

Digital Rights Management (DDR): An umbrella term that refers to access control technologies used by publishers and copyright holders to limit usage of digital media or devices. It may also refer to restrictions associated with specific instances of digital works or devices. DRM overlaps with software copy protection to some extent, however the term DRM is usually applied to creative media (music, films, etc.) whereas the term "copy protection" tends to refer to copy protection mechanisms in computer software.

Extensive Reading: This approach to reading is used when encouraging students to read widely, especially outside of class, at their Independent or Free Reading Level. Extensive reading is also known as pleasure reading, since its purpose is free, independent reading that is not overly dependent upon either teacher or dictionary.

Frustration Level: Learner recognizes less than 90% of running text. Comprehends under 50% of text. Such texts should either be totally avoided, unless working online with bilingual glossing available. Ideally language learners should also have fully bilingualized lexicons, concordancer and listening support available for any texts at less than Independent Level.

Intensive Reading: This approach to reading is used when intentionally teaching and practicing reading skills in classes or doing assignments out of class that require reading at one's Instructional Level, which may be from ½ to 2 years above free or Independent Level.

Independent Reading Level: Learners recognize 98-100% of words in text. Comprehend at better than 90%, so they can read such texts freely on their own.

Instructional Reading Level: Learners recognize 95-97% of words in text. Comprehends ideally at least 75%.

Online Language-Supported Manageable Text (OLSM Text): This refers to text not yet at a language learner's Independent Level, but made manageable via online tools such as fully bilingualized lexicons, concordancer and listening support. Levels might range as follows: learners may recognize 90-95% of words in such texts and comprehend ideally at about 75-89%, although with harder texts comprehension levels may fall between 51-74%.

Readability: Readability is an assessment of how easy a text is to understand for a given population. Online text readability includes four distinct constructs: 1) the reading ability or level of the user, 2) the readability level of a text, 3) its vocabulary level, and finally 4) readability assessment tests, instrument scales or indices themselves.

Chapter XXII

Concordancing 2.0: On Custom-Made Corpora in the Classroom

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ABSTRACT

This chapter contrasts the use of corpora and concordancing in the Web 1.0 era with the opportunities presented to the language teachers by the Web 2.0 stand-alone concordancing software, which make it much easier to access, compile, and consult the corpora that are more relevant for particular classroom contexts. It is argued here that once trained in the basic corpus consultation procedures with demo interfaces, teachers can exercise their autonomy by using texts available locally and globally to compile custom-made collections. In the chapter the two basic approaches to custom-made concordancing, namely the Web as Corpus and the compilation of ad-hoc collections will be described, together with a summary of sample tools. It is hoped that given careful selection of relevant sources, the learning process will become significantly enhanced thanks to more authentic and relevant language data, promoting teacher autonomy and discovery-based procedures.

INTRODUCTION

Corpora and concordancing have been widely used in ELT by materials writers and lexicographers, also to assist teachers in making informed choices about curriculum development, vocabulary selection and lexical testing. However, these tools were not of wide use by teachers in the pre-Web 2.0 stage, mainly due to lack of proper information and training, largely limited access, as well as lack of full relevance for some contexts (e.g., LSP).

With a computer being a standard tool of a contemporary language teacher, together with greatly facilitated Internet access and much higher bandwidth, the reflection on the incorporation of concordancing procedures by language teachers in materials development or vocabulary selection seems to be of prime importance. The possible impact of hands-on concordancing on teacher autonomy (and, in effect, learner autonomy), resulting in much greater awareness of the teaching

content and judicious use of coursebook materials, is another factor that calls for the wider implementation of corpus linguistics procedures, on various planes and in different respects, in actual teacher training. Concordancing 2.0 takes as its primary characteristics teacher independence in selecting materials for a corpus, more effective information retrieval, setting criteria for corpus compilation or choosing browsing tools for text analysis.

The aim of the present chapter is to expose the shift from the use of ready-made online corpora, often limited in size, scope and functionality due to their demonstrative nature, which is tentatively termed “Concordancing 1.0,” to the unrestricted selection and compilation of corpora, as well as analysis with the use of widely accessible text analysis tools (“Concordancing 2.0”). The chapter will address the issues involved in implementing tailor-made corpora in language learning, as regards the process of corpus compilation, the browsing procedures and the corpus-based teaching activities. After establishing such introductory notions as definitions, arguments for and against in-class concordancing and sample corpus-based language learning activities, the present chapter will analyse two main approaches to preparing custom-made corpora – the Web as Corpus and using document files. A description of concordancing tools occupies the most prominent place in the chapter, as well as a discussion of the process of corpus compilation. The chapter also aims to investigate the in-class implementation procedure, proposing a multi-staged training process reflecting teachers’ and learners’ growing independence in concordancing.

BACKGROUND: OPPORTUNITIES AND DRAWBACKS OF IN-CLASS CORPUS CONSULTATION PROCEDURES

There are numerous studies reporting the investigation of the effectiveness of corpus-based proce-

dures in foreign language instruction. These range from the use of small corpora tailored to students’ needs (Aston, 1997) to promoting large corpus concordancing (Bernardini, 2000; de Schryver, 2002); improving writing performance at lower (Yoon & Hirvela, 2004; Gaskell & Cobb, 2004) and advanced levels (Chambers & O’Sullivan, 2004); grammar presentation (Hadley, 2002) and rule inferencing (St. John, 2001). An extensive body of research can be, quite naturally, found in the area of vocabulary acquisition (Cobb, 1997; Cobb, 1998) and teaching foreign language reading, not only assisted by concordancers themselves, but performed in the wider context of a resource-assisted environment, encompassing for instance concordance, dictionary, cloze-builder, hypertext, and a database with the interactive self-quizzing feature (Cobb et al., 2001; Horst et al., 2005). Some studies reported on the relation between the effectiveness of corpus-consultation procedures and strategy training (Kennedy & Miceli, 2001; St. John, 2001; Chambers, 2005), indicating the need to reflect on the conscious and gradual introduction of the tool in the classroom. The perspective that is most relevant for the purposes of the present chapter is represented by the increase of writing proficiency due to learner corpus self-compilation (Lee & Swales, 2006).

In introduction, some space should be devoted to the definition of a corpus. Crystal (1991) defines it as a collection of linguistic data, either written texts or a transcription of recorded speech, which can be used as a starting-point of linguistic description or as a means of verifying hypotheses about a language. In a similar vein, Sinclair (1991) adds that corpora are made of naturally occurring language, while Krishnamurthy (2001) points out the genuine communicative situations that are recorded without any editing to create corpus contexts. McEnery and Wilson (1996) enumerate four crucial characteristics of a corpus, namely sampling and representativeness, finite and fixed size, machine-readability and standard reference. Four other criteria indispensable for a body of

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texts to be labelled a corpus are, according to Sinclair (1996), considerable quantity, authentic quality, plain text simplicity of data storage and documentation of full details about the constituents of a component (annotation) kept separately from the document itself. Kilgariff and Grefenstette (2003) opt for a broader definition, terming a corpus “a collection of texts when considered as an object of language or literary study” (p. 2), thus avoiding strict criteria of McEnery and Wilson (1996), and, consequently, regarding the Web as a corpus. Atkins et al. (1992) make an important distinction between an archive (an electronic collection of texts, not connected with one another), an electronic text library (ETL - a standardised collection of texts in an electronic format with some assumptions on the content, but without rigorous criteria of selection), and a corpus, a subtype of ETL, compiled according to clearly specified criteria for a particular purpose. Thus, what makes a collection a corpus is a clearly defined purpose that one has in mind when gathering samples of language.

Concordancing procedures, or formulating queries to retrieve occurrences of linguistic data from a corpus, can constitute a significant teaching aid both in teacher preparation for classes, in their self-development as well as in building students’ language awareness (direct corpus use – Leech, 1997). Some arguments for implementing the tool in teaching and learning might be the following:

- Concordancing interjects authenticity (of text, purpose, and activity) into the learning process, as students assume control of that process and their competence is built by gaining access to the facts of linguistic performance (Johns, 1988).
 - Noticing a word in several contexts extends the knowledge of the word, thus promoting successful learning (Cobb, 1998).
 - As a corpus is built from many texts, it displays words in many more situations than just the most prototypical ones included in a coursebook (Cobb, 1998).
 - The diversity of a language can never be fully presented in a dictionary, and only few dictionaries provide a sufficient amount of data about a word’s grammar or its collocations, while it takes a concordancer only seconds to search a corpus and give more language data (Thomas, 2003).
 - Language students, teachers, translators and people writing in a foreign language find as invaluable help the opportunity to get access to data for checking one’s intuitions on the fly (Thomas, 2003).
 - Knowledge encoded from data by learners themselves will be more flexible, transferable, and useful than knowledge encoded by experts and transmitted to them by an instructor (Cobb, 1999).
 - Corpus-based procedures create conditions for internalizing certain abstract grammatical concepts, such as part-of-speech or part-of-sentence distinctions (Godwin-Jones, 2001).
 - Sociolinguistic competence is addressed by drawing attention to the issue of register through analysis of actual language use (Krieger, 2003).
- The direct use of corpora advocated here involves the teacher constructing classroom tasks or self-study learning activities, while native speaker, learner or custom-made corpora serve as a source of attested examples demonstrating language use. The process can enhance teaching diverse language skills, as is illustrated in the sample activities below:
- **Grammar:** Presenting new language points, assisting the induction of grammatical rules or constructing error correction tasks to be verified with the use of concordance queries (see, for instance, Lextutor’s “Check grammar against corpus data” activity, http://www.lex Tutor.ca/grammar_tester/).

- **Vocabulary:** Organizing corpus-based enquiries to investigate the differences between words commonly confused or misused (Krishnamurthy, 2001), implementing vocabulary-based concordance sheets, classroom projects and task-based gap-filling (Tribble & Jones, 1990; Chen, 2004).
- **Reading comprehension:** Assisting inferring new words from the text with corpus-derived examples (Cobb, 1999) or activating schemata in the pre-reading stage by concordancing selected words.
- **Writing:** Improving the awareness of register by using a concordancer as a look-up tool or organising learner-made comparisons of their personal corpora with publicly available collections to enhance language awareness (Krishnamurthy, 2001).
- Not all learners may have equally positive attitudes towards inductive discovery learning (Krieger, 2003).
- Careless overreliance on corpora may give a false impression of language, as corpora rarely, if at all, feature all the samples of language that are most preferable for classroom teaching.

Thus, the awareness of the strengths of concordancing as presented above makes it possible to structure successful learning activities with significant potential. On the other hand, the reflection on the problems and technical shortcomings should lead to structuring the activities to prevent those imperfections.

MAIN FOCUS OF THE CHAPTER: TOWARDS CONCORDANCING 2.0, FROM USABILITY TO CUSTOMISABILITY

At the same time, one needs to be aware of at least some difficulties and obstacles of the process:

- Lexical information may be vast and confusing to learners, and even though words appear in rich contexts, many of the words in the contexts are certainly unknown (Cobb, 1998).
- The contexts are rich, varied and plentiful but they are also short, incomplete, and do not form a coherent whole (Cobb, 1998);
- Concordancers are not tools to be used by computer novices without any instruction nor preparation, and in order to formulate more efficient searches, one has to undergo proper training (Stevens, 1995).
- Inherent limitations in the database are rarely intuitively understood by learners, who may treat a corpus as yet another dictionary (Stevens, 1995).
- As it is difficult for language learners to independently formulate queries to observe subtle language patterns, the role of the teacher as a facilitator is indispensable (Stevens, 1995).
- The availability of ready-made corpora for widespread and unlimited pedagogical use by LSP teachers has largely increased recently, together with the popularization of the Internet and open source software movement (Tribble, 1997). The proliferation of corpora resources demands careful categorisation and classification, to ensure proper understanding of the strengths and limitations of the specific tools both by teachers and learners. Thus, the major dichotomies in corpus classification are the following:
- Representative/reference corpora (the Brown Corpus, the Lancaster-Oslo-Bergen Corpus, the British National Corpus), both extensive and balanced in terms of content, genre and text length; and monitor corpora (e.g., the Collins COBUILD Bank of English), which adopt the sheer size as the basis for the corpus authority (Tribble, 1997; Gabrielatos, 2005).

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- Large corpora (e.g., of 100,000,000 word size) typically aiming at a broad coverage of language categories, and small corpora (e.g., 20,000 words), far more specialised by topic, genre or both (Aston, 1997).
- General corpora, which reflect a certain language in all its contexts of use, and specialised corpora, focusing only on a particular context or user.
- Written or spoken language collections.
- General English resources or restricted to a geographical variety of the language (British, Indian, Singaporean, etc.).
- Synchronic (recording language in its particular stage of development) or diachronic corpora (enabling historical analysis of language over time).
- Monolingual (with samples of only one language), multilingual/comparable (containing the same text-types in different languages), or parallel (with the same texts translated into different languages).
- Native speaker, non-native speaker and learner corpora (e.g., the Louvain International Corpus of Learners' English), the latter being concerned with the problem of learner writing and demonstrating inter-language problems (see Pravec, 2002, for a comprehensive discussion of learner corpora available).

As Tribble (1997) notes, to become effective language users in many different contexts students need many corpora instead of one. Gavioli and Aston (2001) support this view, claiming that one of the prerequisites for effective hands-on concordancing by learners is the availability of different corpora, both spoken and written, specialized language, particular geographical and social varieties, as well as large mixed corpora such as the British National Corpus. This is essential to enable learners to “compare data from different sources, and to discuss language use in relation to different types of text, topic, and genre” (Gavioli & Aston, 2001, p. 245).

The sample Web 1.0 resources listed in the Appendix may serve as a starting point for language teachers to introduce the elements of corpus linguistics in their teaching. The list is by no means complete, and has been compiled to indicate possible types of corpora rather than actual examples (for more, also within other foreign languages, see <http://www.sfb441.uni-tuebingen.de/cl/corpora.html> or <http://devoted.to/corpora>).

DEFINING WEB 2.0 AND CONCORDANCING 2.0

When defining the origins of Web 2.0, Downes (n.d.) quotes George Siemens' claims that “We derive our competence from forming connections ... Unlike constructivism, which states that learners attempt to foster understanding by meaning-making tasks, chaos states that the meaning exists — the learner's challenge is to recognize the patterns which appear to be hidden. Meaning-making and forming connections between specialized communities are important activities” (n.p.).

MacManus and Porter (2005) also emphasize the aspect of interaction with content, where users can build interfaces which combine information in ways that a single domain tool could never do. Thus, one of the crucial issues of the Web 2.0 approach is that “the Web was shifting from being a medium, in which information was transmitted and consumed, into being a platform, in which content was created, shared, remixed, repurposed, and passed along” (Downes, n.d.). Tim O'Reilly himself attributes the mechanisms of Web 2.0 to the assumption that users add value, however, only a small portion of these will care to add value to a particular application via explicit means (O'Reilly, 2005). Therefore, Web 2.0 services exploit the mechanisms of “aggregating user data and building value as a side-effect of ordinary use of the application” (O'Reilly, 2005, n.p.), in

other words, such systems as for instance social search engines get better the more people use them. The key aspects of Web 2.0 are enumerated by Hinchcliffe (2006) as follows:

- The Web and all its connected devices as one global platform of reusable services and data.
- Data consumption and remixing from all sources, particularly user generated data.
- Continuous and seamless update of software and data, often very rapidly.
- Rich and interactive user interfaces.
- Architecture of participation that encourages user contribution.

A new compact definition of Web 2.0 formulated by O'Reilly (2006) reads as follows "Web 2.0 is the business revolution in the computer industry caused by the move to the internet as platform, and an attempt to understand the rules for success on that new platform" (n.p.) with additional rules formulated in the following way:

1. Don't treat software as an artifact, but as a process of engagement with your users.
2. Open your data and services for re-use by others, and re-use the data and services of others whenever possible.
3. Don't think of applications that reside on either client or server, but build applications that reside in the space between devices.
4. Remember that in a network environment, open APIs and standard protocols win, but this doesn't mean that the idea of competitive advantage goes away.
5. Chief among the future sources of lock in and competitive advantage will be data, whether through increasing returns from user-generated data, through owning a namespace, or through proprietary file formats.

Ribes (2007), on the other hand, defines the Web 2.0 movement as "all those Internet utilities

and services sustained in a data base which can be modified by users whether in its content (adding, changing or deleting information or associating metadates with the existing information), or how to display them, or in content and external aspect simultaneously" (n.p.). In a more general sense, Downes (n.d.) claims that the Web was transformed from what was called "the Read Web" to the "Read-Write Web," changing from "a medium, in which information was transmitted and consumed, into being a platform, in which content was created, shared, remixed, repurposed, and passed along" (n.p.).

Alexander (2006) draws attention to such crucial concepts of Web 2.0 as social software, microcontent (focusing on individual blog posts, atoms of information and meaning, rather than entire pages), openness ensuring the flow of micro-content between domains, servers, and machines, as well as folksonomic organisation of information. When covering various definitions of Web 2.0, Zalenski (2007) stresses the "Wisdom of the crowd" - sites and services that use joint estimate to define the importance of news, shared Web applications, Web as a platform, users' participation, extended users' interfaces to expand usability by providing the possibility of creating customised ways of organizing information.

Addressing the issue of what kind of transformation of learning Web 2.0, and Concordancing 2.0 as described in the present chapter, can bring about, is a major point to focus on. Johnson (2005) indicates the general shift of the Web from a library of interlinked pages to an information ecosystem, with "thousands of services scrutinizing each new piece of information online, grabbing interesting bits, remixing them in new ways, and passing them along to other services" (n.p.). Thus, data in this new model are constantly processed, analyzed, re-packaged, digested, and passed on. Downes (n.d.) stresses the fact that the emergence of the Web 2.0 is more of a social revolution than a technological one. As Web 2.0, in his view, is more about enabling and encouraging participation through

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open applications and services, educators become equipped with “rights granted to use the content in new and exciting contexts” (n.p.). Alexander (2006) shows how social writing platforms enhance the world of higher education, as logistically useful tools for a variety of campus needs, from student group learning to faculty department work to staff collaborations. He evokes the writing instruction, with building on the established body of collaborative composition practice, and using Web 2.0 tools as an alternative platform for peer editing, asynchronous writing or groupwork for distributed members. To sum up, given there is proper evaluation of Web 2.0 technology by teacher trainers and the resultant ICT training geared towards their incorporation in language instruction, the teachers of tomorrow should find it easy to aggregate personalised target language input, develop their language expertise in social networks, find greater impact of instruction by implementing more powerful tools like Virtual Learning Environments to mediate the process.

What is the specific nature of Web 2.0 in the area of concordancing? From among Hinchcliffe’s features outlined above, there will be quite important implications for the procedures of concordancing. Web 2.0 tools are characterised by interactive user interfaces, where one can personalize the features and functionalities to be used. The unrestricted selection of a concordancing tool to use with a teacher-made corpus, conditioned only by the specific teaching needs, will be a good example here. Similarly, Hinchcliffe’s “architecture of participation” may be demonstrated in collaborative corpus compilation procedures, either using discussion group postings, texts from websites recommended by users or participants’ own writing samples as sources of language data. In addition, as MacManus and Porter (2005) point out, in the Web 2.0 vision the Web of documents to be accessed has been redefined as the Web of data, which can be retrieved using varied tools. The “microcontent” units can be distributed over

several domains, and, consequently, they need new, more flexible and versatile tools to aggregate and remix content. When combined with RSS notifications, Web 2.0 searches, applied to corpus compilation procedures, not only let people mix content from various sources, but provide them with yet another way to extract personalized content.

While discussing the characteristic features of Web 2.0 movement, a discussion of some of the problems and dangers needs to be executed as well. When asked if it is fair to say that the difference between the two might be described as “Web 1.0 is about connecting computers, while Web 2.0 is about connecting people” (n.p.), Tim Berners-Lee (after Anderson, 2006) questions whether one can use the term in a meaningful way, since many of the technology components of Web 2.0 have existed since the early days of the Web.

Downes (n.d.) points to the fact that within Web 2.0 tools, sharing content is not considered unethical, on the other hand, the hoarding of content is viewed as antisocial. And open content is viewed not merely as nice to have but essential for the creation of the specific sort of learning. Moreover, Downes adds that “the structures and organization that characterized life prior to the Internet are breaking down. Where intermediaries, such as public relations staff, journalists or professors, are not needed, they are disregarded” (n.p.).

Alexander (2006), for that matter, emphasizes two major problems brought about by the implementation of Web 2.0 tools in education. One concerns the problems of hosting – mainly external hosting means not necessarily embracing the culture of higher education and lack of proper control over the content. The other deals with copyright issues - since the new Web services allow users to freely modify and exchange data, most probably intellectual property holders will soon file lawsuits investigating perceived infringements.

CONCORDANCING 2.0: USING THE WEB AS A CORPUS

With the problems of limited access to established corpora, there arises the option to use the Web as a corpus in the search for an even greater number of instances of use. Even though Rundell (2000) claims that the Internet “is not a corpus at all according to any of the standard definitions: what it is is a huge ragbag of digital text, whose content and balance are largely unknown,” claiming it is in no way balanced, with some text-types very well-represented, while others hardly present at all, the obvious advantages of using the Web as a corpus must be noted. These are, among others, much greater size, up-to-dateness and greater likelihood of containing relatively rare or novel lexical items (such as Rundell’s “Hitchcockian”), where the standard corpus search proves to be unsatisfactory. Also Fletcher (2001) acknowledges the potential of the Web as a constantly expanding, self-renewing machine-readable body of linguistic data, much richer in current language usage, infrequent expressions, text genres and domains than even the biggest standard reference corpus. Elsewhere (Fletcher, 2007), some more essential arguments for using the Web as a corpus, such as freshness and spontaneity, completeness and scope, linguistic diversity, representativeness and free availability, are enumerated. The very last factor can stimulate corpus linguists to the compilation of corpora very large in scope, either in terms of sheer size (almost 2 billion words – see Baroni and Kilgariff, 2006) or languages used (de Schryver’s parallel corpus confronting as many as 11 languages, 2002).

In order to maximize the benefits gained from the Web as a Corpus concordance query, Robb (2003) recommends careful selection of target sources and using trusted websites to authenticate language usage. One way to do that could be to use the advanced searching options to narrow down the possible pool of sites only to a specific domain (e.g., gov. or edu.), where one can reasonably expect

educated usage, or use specific searching syntax to direct the search to the specific site/domain/user, excluding possible mismatches (see Robb, 2003, for a detailed procedure).

COMPILING AD-HOC CORPORA USING SELECTED TEXTS

Custom-made collections, compiled by ESP/EAP teachers with the use of pre-selected texts in response to the specific requirements of a particular teaching context (Fletcher, 2004; Lee & Swales, 2006), can constitute a viable alternative to ready-made corpus resources. Such “do-it-yourself corpora” will be an indispensable solution when students’ needs cannot be satisfied by the existing corpora, when representative corpora contain relatively little coverage of specialist areas or text types (Tribble, 1997), since even 100-million British National Corpus is “ill-equipped to meet the needs of translators working with very specialised texts and confronted with specific terminology” (Zanettin, 2001, n.p.), or when the teacher aims at enhancing the classroom with the language of a particular domain, geographical area or register. A DIY web corpus (for translation purposes) can be characterized as follows (Zanettin, 2001). It is:

- A collection of Internet documents, or more precisely of web pages in HTML.
- Created ad hoc as a response to a specific text to be translated.
- An open corpus. More material can be added as the need arises.
- Disposable (Varantola, 2000) or virtual (Ahmad et al., 1994). It is not destined to be part of a more permanent corpus, and can be disposed of as soon as the translation is completed. Copyright permissions are not required.
- Like “parallel texts” it can be either bilingual comparable or target monolingual.

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Out of the above criteria, in the teaching context especially the disposability of an ad-hoc corpus needs to be replaced with reusability, as the purpose of the language teacher should be creating a set of resources that will maintain consistency of lexical coverage of the language taught. Similarly, ad-hoc corpora may be equally well compiled of texts available locally, rather than a collection of online documents.

Elsewhere, Aston (2002) points out to such important features of home-made corpora as control, certainty of the content, stimulation of user's creativity, increasing critical awareness through trial and error of corpus compilation, finally, triggering discussion and leading to self-improvement. Contrary to the approach of the Web as a corpus, which emphasizes larger size achieved via automatic retrieval at the expense of relevance, corpora made of carefully selected texts (available locally or globally) involve greater teacher's control over content.

However, even though a custom-made corpus seems to be more relevant to a particular teaching context, and a standard reference corpus like BNC may not be adequate for the needs of a particular domain, Aston (2001) advocates confronting hypotheses based on DIY corpora with established corpora, to add credibility to the process and to gain a better awareness of the limitations of concordancing in the decoding process.

CONCORDANCING 2.0 TOOLS

The technical solutions enabling teachers to use the Web as a corpus, extracting websites and adding them to corpora or browsing specific domains online, are multifold, ranging from the advanced search features of a widely accessible search engine to dedicated corpus creation solutions. The selection of a tool to use depends on a number of factors, such as, among others, familiarity of the user with corpus linguistics procedures and

terminology, the amount of resources to be retrieved, or global (online) or local (off-line) use. For a more advanced discussion of the process, see Lüdeling et al. (2007).

Concordancing 2.0 based on using the Web as a corpus can be implemented using some of the solutions below:

- **Google** (<http://www.google.com>) or any other search engine, used to construct simple searches with advanced searching interfaces or query operators; however, with lack of support for wildcards, accented characters or case-sensitivity, lack of control over the educational level or nationality, lack of register pre-selection and the provision of only raw output rather than the usual KWIC (Key Word in Context) format, without the possibility to subsort on adjacent words or generate frequency/collocates lists (Robb, 2003; Fletcher, 2004).
- **Webcorp** (<http://www.webcorp.org.uk/>), a set of tools using the Web as a corpus for concordance searches (Rundell, 2000; Kehoe & Renouf, 2002; Morley et al., 2003), with the output being a proper concordance with the custom amount of surrounding context, and with all concordance lines presented on a single page with links to the original sites.
- **WebCONC** (<http://www.niederlandistik.fu-berlin.de/cgi-bin/web-conc.cgi>), a simple online form generating KWIC concordances based on Google exclusively (with the specification of site language and the number of sites to be retrieved), with no option of deciding which of the Google search hits will be used for a corpus, or, alternatively, compiling a corpus by specification of particular website domains for retrieval.
- **WebAsCorpus.org** with its Web Concordancer (<http://webascorpus.org/searchwac.html>), which allows web search for selected words or phrases specifying the language, the amount of left and right context and the number of webpages to be processed.

- **GlossaNet** (<http://glossa.fltr.ucl.ac.be/scripts/gtoday/gtoday.pl>), termed as “Corpus Linguistics & information retrieval” tool (see Fletcher, 2004), a web spider search engine that allows use of selected newspapers online as sources of data to locate attestations of words or syntactic structures in basic concordancing procedures.
 - **Sketch Engine** (<http://www.sketchengine.co.uk/>), a web-based service (available for free for a 30-day trial), which takes as its input a corpus of any language and produces the output as a one-page automatic corpus-based summary of a word’s grammatical and collocational behaviour, a so-called “word sketch” (Kilgariff et al., 2004; Baroni & Bernardini, 2004; Baroni et al., 2006).
 - **KWiCFinder** (<http://www.kwicfinder.com/KWiCFinder.html>), a search-engine-based research tool, mining the Web for the occurrences of particular words and displaying concordances, also enabling sophisticated queries with wildcards, operators “before” and “after” together with the specification of the number of words to separate them (for more, see Fletcher, 2004).
 - **TEXTStat** (<http://www.niederlandistik.fu-berlin.de/textstat/software-en.html>), a corpus building tool itself, enabling .html files and newsgroup postings directly from the Internet as components of a custom-made corpus.
- be used to browse custom-made collections are listed below:
- **Web Concordancer** (<http://www.edict.com.hk/concordance/ConcUpload.htm>), an online form following a highly transparent drop-down menu query interface, enabling upload of a single-file corpus, keyword and associated words searches, with the KWIC or gapped concordance display.
 - **ConcApp** (<http://www.edict.com.hk/PUB/concapp/>), a downloadable query application allowing browsing a corpus composed of separate files, formulating keyword and associated words searches with up to 3 additional words, with the full source text display on demand.
 - **TextSTAT** (<http://www.niederlandistik.fu-berlin.de/textstat/>), a multilingual application enabling a user to compile a corpus of selected files, websites, and newsgroup postings with the option of case-sensitive keyword and associated word search implementing wildcards and regular expressions.
 - **Simple Concordance Program** (<http://www.textworld.com/scp/>), a freeware program providing the functionalities of browsing selected files for concordances in the keyword and part-of-word (prefix, suffix) search, with additional features of frequency list, word profile and letter frequency.
 - **AntConc** (<http://www.antlab.sci.waseda.ac.jp/software.html>), a free-of-charge downloadable software solution, enabling formulating queries in a wide range of options, with full text display and concordance list export.

The approach of building a corpus out of selected texts locally rather than based on online materials can be served by a plethora of open source or freeware concordancing programs to be used with any collection of texts gathered into a corpus. What needs to be noted here is that the teacher has greater flexibility and freedom in concordancing, which should result in increased teacher autonomy and metalinguistic awareness. Some of the concordancing programs which can

Apart from the tools that relate exclusively to concordancing, the procedures of do-it-yourself corpus compilation can be facilitated to a large extent by the implementation of other Web 2.0 tools, which add the important dimensions of

flexibility, versatility and relevance of sources of data to corpus compilation.

1. **Websearching 2.0:**

- Allowing greater precision of search results, both by pre-processing (specifying advanced search options) and post-processing (refining search options after the query), together with browsing by phonetic spelling, adjacent words, approximate spelling or regular expressions (Exalead, <http://www.exalead.com/search>).
- Metasearch engines, collecting a variety of search tools in one interface, activated by the use of icons or tags (Dhoondho, <http://www.dhoondho.com>; Ambedo, <http://www.ambedo.com>; YubNub, <http://yubnub.org>).
- Customising the search by creating custom-made searchrolls, or collections of websites for browsing (Rollyo, <http://www.rollyo.com>).

2. **Social 2.0:**

- Building a community of Internet users around searching and sharing search results, browsing to see what sites other people have already used when searching for this particular topic (PreFound, <http://www.prefound.com>; Wink, <http://www.wink.com>).
- Ranking sites to recommend their content to other Web users (Kratia, <http://www.kratia.com>).

3. **Text 2.0:**

- Online text composing and editing using online text word processors, e.g., creating a learner corpus by their collaborative document writing at remote locations (Google Docs and Spreadsheets, <http://docs.google.com>; Zoho Writer, <http://writer.zoho.com>; ajaxWrite, <http://ajaxwrite.com>; ThinkFree, <http://www.thinkfree.com>).

4. **Podcast 2.0:**

- Fee-based services taking a selected online podcast/audio recording and transcribing it to form a corpus (Castingwords, <http://castingwords.com>; Transcribr, <http://www.enablr.com/transcribr.php>).

5. **News 2.0:**

- Using selected newspaper content, customised either by compiling a personal newspaper (Crayon, <http://www.crayon.net>), or by using newspaper website feeds to deliver newly posted content by mail.

COMPILING A CUSTOM-MADE CORPUS

The starting point for the process of corpus compilation, as Kilgariff et al. (2005) demonstrate, is to formulate a detailed corpus-design document, agreeing at target size and target proportions for different text types, basing on generally accepted factors (Atkins et al., 1992), but modified according to local needs. Gózdź-Roszkowski and Witczak-Plisiecka (2005) point out to the need to make the decisions about the following factors: size, theme, text type, medium (oral or written), authorship, language (native speaker, non-native or learner), publication date.

When analyzing the issue of sources selection for corpus compilation, Curado (2006) quotes Hunston (2002) saying that “the selection of sources should reflect the communicative exchanges that take place in the target context of research and work” (p. 16). For instance, a custom-made LSP corpus should constitute a balanced view of materials, ranging from formal writing (e.g., technical reports and instruction manuals) to informal conversational messages (discussion forum postings). Whistle (1999) reports after Polezzi (1993) that a custom-made FL corpus needs to satisfy three basic requirements: “it must

be based on the learners' needs; its size should be determined by the nature of the course and the level of the learners; it must be flexible allowing addition and modification" (p. 75).

Thus, to give a practical example, when compiling his teacher-made corpus for business English students, Curado (2006) used such specific subject areas as accounting, management, marketing, MIS and statistics, with each area accounted for in a similar number of words, and such text sources as textbooks, journal articles, e-discussions and reports, varying in number within the area but adding up to a similar total.

An interesting perspective, with significant potential for LSP teaching, may be offered by compiling parallel corpora, containing the same texts translated into various languages. While such efforts for as many as 11 languages may be difficult (see de Schryver, 2002), the compilation of a bilingual L1-L2 parallel corpus from a particular domain should be quite feasible, given the versatility of the data sources.

Obviously, the selection of sources, their balance resulting in the representativeness of a corpus (Biber et al., 1998) or, on the contrary, the overrepresentation of a certain genre, text type or register are the result of the needs of the class and the didactic purposes for the exploitation of a mini-corpus. Thus, the teacher may decide to create a corpus for the English for archaeology class that will be as representative as possible, trying to balance subareas, text genres and levels of formality, if the general language development of LSP students is the main goal. On the other hand, with a clear focus shared by most students in a group, e.g., Polish drivers planning to work in the public transportation system in the UK and Ireland, the teacher might use the sources focused more on the specific area of interest, such as the websites of drivers' trade unions, traffic regulations, bus operation manuals, to arrive at a home-made corpus which is narrower in scope but better targeted at specific needs of students.

The possible sources of texts for a teacher-made corpus may be as follows:

- A CD-ROM (Microsoft Encarta, Hutchinson's, Grolier's) or online encyclopedia (Wikipedia, <http://en.wikipedia.org>), with texts browsable by topic and categorized into domains, for semi-formal register and essay/biography/process description genres (Tribble 1997).
- A legislation repository (European Commission's Eur-Lex, <http://eur-lex.europa.eu/>), with acts, treaties and agreements browsable by subject, date, keyword and the like, for highly formal register and act/contract/agreement genres.
- An archive of a subject matter discussion group, e.g., hosted at Yahoo!Groups (<http://groups.yahoo.com>), browsable by author, date and keyword, for informal register and written discussion genre.
- Frequently-Asked-Questions sections of ask-an-expert sites of the area (e.g., Refdesk.com's Ask the Experts, <http://www.refdesk.com/expert.html>; CIESE - Ask-An-Expert Links, <http://www.k12science.org/askan-expert.html>; Pitsco's Ask an Expert Site, <http://www.askanexpert.com> or Expert Central, <http://expertcentral.com>), for process descriptions and advice giving.
- A specific Web-based journal, characteristic for a particular area and well-renowned in the field ("expert" writing – Lee & Swales, 2006), retrievable via one of the many journal-finding interfaces (e.g., EBSCO – <http://search.ebscohost.com/>, SAGE – <http://www.sagepub.com/journals.nav>), for formal register and article genre.
- M.A./Ph.D. dissertations in the area, retrieved from university websites or via EBSCO search interface, for formal register and research paper genre.
- Official documents, manuals, procedure descriptions.
- Online newspapers, e.g., tabloid vs. broadsheet types for contrasting registers (e.g., gathered at [Onlinenewspapers.com](http://www.onlinenewspapers.com), <http://www.onlinenewspapers.com>).

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- A collection of institutional websites (e.g., airport authorities - <http://www.baa.com/>, <http://www.gtaa.com/>, <http://www.metwas-airports.com/>), for semi-formal register and company description genre.

A major issue to be addressed in the corpus compilation process is the awareness of copyright restrictions and the avoidance of potential copyright infringement. The point has been debated by some authors (Whistle, 1999; Fletcher, 2004), with the main line of reasoning being that the corpus compiler needs to obtain permission for educational use with no modification or publication prospects. This need is especially justified by the fact that concordancing software basically extracts the statements from their original context, which may be viewed as illegitimate use. However, Fletcher (2004) notes that “in the United States, a KWiC concordance of webpages appears to fall under the fair-use provisions of copyright law as well” (fn. 11), while de Schryver (2002) adds that “as long as the compiled corpora are thus solely manipulated for research purposes, and are not used or published commercially, linguists should be on the right track” (p. 269). However, specific regulations may vary from country to country, and need to be checked beforehand to ensure the legality of the actions taken, and most probably the approach adopted by Kilgariff et al. (2005), namely contacting numerous potential text-donors, sending a short notice explaining the use of the text in the process, asking to contribute and sign permission letters, seems to be the safest possible.

TEACHER TRAINING IN CONCORDANCING 2.0

In order to meet the expectations of learners and be ready to use custom-made corpus collections, multi-staged training seems to be necessary, especially when delivered to computer novices.

It seems it needs to focus on various areas of the language learning/teaching curriculum exposing diverse applications, starting with passive use of ready-made or trainer-made resources, and proceeding to more active explorations of individually-made collections. Below one can find a set of training activities, reflecting the gradual process of gaining teacher independence in concordancing:

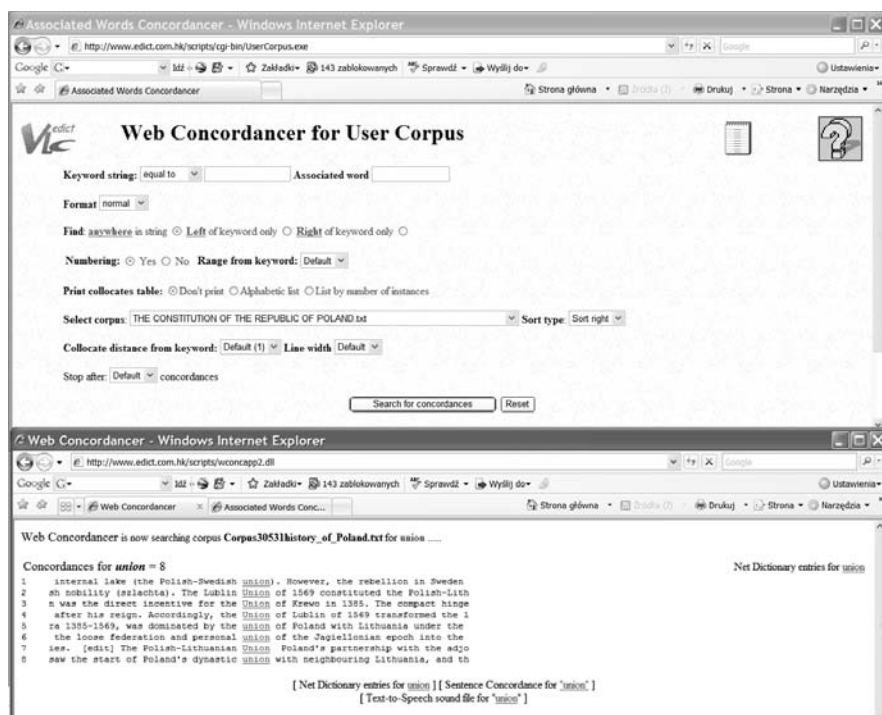
1. Introduction to basic concepts of corpus linguistics – defining a corpus and a concordancer, analysing sample concordance output, making a distinction between corpus lookup and dictionary lookup, highlighting different types of corpora, analysing concordance output and query syntax.
2. Using a concordance-enhanced dictionary (NetDictionary, <http://www.edict.com.hk/lexiconindex/>) – during text-based activities trainees are instructed in how to extend their knowledge of the new words encountered in the text with a concordancer.
3. Using ready-made corpora to formulate and test hypotheses about grammar (e.g., Online Concordancers, <http://www.lex tutor.ca/concordancers/> or Web Concordancer, www.edict.com.hk/concordance/) – trainees are guided to the free concordancers to try to verify pairs of correct/incorrect statements.
4. Contrasting the coverage of corpora (a literary text corpus, a representative corpus, a teacher-made ESP corpus) - the trainer uploads a custom-made ESP corpus to the Online Concordancer interface (<http://www.edict.com.hk/concordance/ConcUpload.htm>). In the whole-class tutorial learners are guided to make concordance searches about selected vocabulary items in a non-ESP general corpus (e.g., literature corpora or Brown Corpus at Web Concordancer, www.edict.com.hk/concordance/) and a custom-made ESP corpus, to make generalisations about their coverage.

Figure 1. Looking up words from a new text in a concordance-enhanced dictionary



5. Using a custom-made corpus with a concordancing tool to enhance the awareness of register – the trainer prepares two parallel files with texts representing different registers (e.g., magazine articles vs. legislation from a specific area), which are later added to a single corpus. Then trainees are guided to follow particular search procedures to check the use of the same words in two different areas of language use by evoking the full context of the source file.
6. Increasing the awareness of concordancing procedures to exploit word formation – a trainer-made corpus is used in searches taking a root word and applying prefix or suffix search to build word families and formulate generalisations on word formation rules.
7. Encouraging trainees to browse the Internet to suggest sources of texts for a custom-made corpus – having acquired the awareness of varied opportunities of enhancing language instruction by corpus-based studies, trainees are asked to browse the Internet to find sources of texts for inclusion in the personal corpus.
8. Introducing the procedures of compiling custom-made corpora – trainees discuss the sources recommended in the previous activity and make one corpus of texts with a selected didactic focus (e.g., as reference for essay writing). Then they conduct searches for the occurrences of the same words, comparing their usage in reference texts and personal texts respectively.
9. Using a custom-made corpus for vocabulary matching activities – the trainer provides a matching exercise (joining verbs and nouns or adjectives and nouns), which the trainees try to complete using each other's corpora as reference, in this way getting acquainted with a greater range of possible materials.

Figure 2. Browsing a custom-made corpus (Constitution of the Republic of Poland) for students of history



- Using a collaborative learner corpus to make reference for language use: trainees contribute their own writing pieces or their students' to a custom-made learner corpus (providing the procedures for expressing consent and copyright are observed), to be browsed for occurrences of grammar or lexis in the process of self-correction.

CONCLUSION

Together with the implementation of Information and Communication Technology in language teacher training curricula, there arises a need to address the issues expanding upon the teacher's inventory, empowering teachers to gain greater awareness of the target language as the object of study. An example of such an area is concordancing, which, when implemented into teacher training, should find its reflection later in teachers'

more informed choices about the teaching content and resulting learner autonomy stimulated by discovery learning procedures.

The prerequisite for teacher-made concordancing, be it in general EFL/ESL or specialized areas, is the availability of corpora providing adequate coverage of genres, modes and topics. In many teaching contexts ready-made corpora will not prove fully adequate for a number of language needs, and due to an ever-changing nature of language and more and more crystallized language expectations of students, there may arise a necessity to create custom-made collections based on either online materials (Web as a Corpus), teacher-selected or learner-produced texts. Such an approach enables achieving greater relevance of the materials especially for the LSP contexts, as the ready-made corpora available for searching do not prominently represent specialist areas.

With teacher-made concordancing procedures made feasible by widely available text analysis

tools, the awareness of the opportunities of the process imparted in teachers should find its reflection in the development of materials which are more relevant lexically. The teachers' control over the vocabulary level of the task, achieved by conscious selection of appropriate examples from a custom-made corpus, should trigger increased students' motivation to use the materials. Given both teachers and learners are provided with proper training in using concordancing as proposed in the final section of the present chapter, the language classroom will be equipped with important tools fostering learner and teacher autonomy. Thus, personalization, customization and control that language teachers gain thanks to Web 2.0 tools will expand their teaching skills making them better professionals. Other features of Web 2.0, including folksonomy, architecture of participation and openness, if properly exploited in pedagogical tools such as stand-alone concordancers or Web as a Corpus interfaces, might help build language teachers' confidence in materials preparation.

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KEY TERMS

British National Corpus: Sometimes referred to as the BNC, this corpus includes up to 100 million examples of written and spoken language thus presenting an extremely wide representation of British English. The latest edition dates from 2007 and includes extracts from all areas of contemporary British life, from newspapers to periodicals as well as radio and television programmes.

Concordancer: A tool, either an online form or an installable piece of software, enabling formulating queries of different levels of sophistication and browsing a selected or customized corpus for instances of use, producing the KWIC (Key Word In Context) output.

Concordancing: The procedure of browsing a corpus (either ready-made or custom-made) for occurrences of particular words or phrases, used to assist dictionary lookup, observe language use

in particular registers or test hypotheses about collocations.

Corpus: A collection of linguistic data, either written texts or a transcription of recorded speech, which can be used as a starting-point of linguistic description or as a means of verifying hypotheses about a language.

Corpus Compilation: The process of collecting samples of language according to predefined criteria, such as medium, register, genre, etc., and putting them together either in a single file or a file collection to serve as data for concordance queries.

Custom-Made/Do-It-Yourself/Ad-Hoc Corpus: A collection prepared by a particular teacher/translator to address specific needs of a teaching/translating context, compiled by spotting and retrieving relevant texts either on the Web or locally.

The Web as Corpus: A movement in computational linguistics, advocating the use of pre-selected or randomly chosen websites or discussion group postings as sources for custom-made corpus collections, usually going with dedicated concordancing solutions.

APPENDIX

Sample English Language Corpora Available on the Web

Full versions of specialist corpora with unlimited access: MICASE Michigan Corpus of Academic Spoken English, <http://www.hti.umich.edu/m/micase/>; International Corpus of Learner English – Polish section, http://ifa.amu.edu.pl/~kprzemek/concord2advr/search_adv_new.html.

Official demonstration versions of renowned corpora, usually with only basic keyword search facilities: British National Corpus, <http://sara.natcorp.ox.ac.uk/lookup.html>; Collins COBUILD Bank of English, <http://www.collins.co.uk/Corpus/CorpusSearch.aspx>.

Full access custom-made interfaces to renowned corpora developed by researchers: British National Corpus, http://www.lex Tutor.ca/concordancers/concord_e.html and <http://corpus.byu.edu/bnc/>; Brown Corpus, http://www.lex Tutor.ca/concordancers/concord_e.html, <http://www.edict.com.hk/concordance> and <http://www ldc.upenn.edu/cgi-bin/ldc/textcorpus?doc=yes&corpus=BROWN>; Lancaster-Oslo-Bergen Corpus, <http://www.edict.com.hk/concordance>.

Corpora compiled of selected works of the English literature, such as *Alice in Wonderland*, *The Lord of the Rings*, *Call of the Wild* or Sherlock Holmes stories: Online Concordancer, http://www.lex Tutor.ca/concordancers/concord_e.html, Web Concordancer, <http://www.edict.com.hk/concordance>.

Corpora composed of newspaper articles and television news transcripts, also based on current issues of online newspapers: Online Concordancer, http://www.lex Tutor.ca/concordancers/concord_e.html; Web Concordancer, <http://www.edict.com.hk/concordance>; Reuters Corpora, <http://trec.nist.gov/data/reuters/reuters.html>.

Learner corpora: PICLE Polish International Corpus of Learner English, http://ifa.amu.edu.pl/~kprzemek/concord2advr/search_adv_new.html; Online Concordancer, http://www.lex Tutor.ca/concordancers/concord_e.html; Web Concordancer, <http://www.edict.com.hk/concordance>.

Thematic corpora, e.g., of telephone conversations: <http://www ldc.upenn.edu/cgi-bin/lol/swb/speechcorpus?&corpus=swb>, business letters (<http://ysomeya.hp.infoseek.co.jp/>), EU legislation (<http://logos.uio.no/opus/>), culinary, ecotourism, computer and environmental protection texts (<http://www.nilc.icmc.usp.br/cortec/ibusca.php>), European Parliament session transcripts (Europarl, <http://www.statmt.org/europarl/>).

Chapter XXIII

Internet Technologies and Language Teacher Education

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ABSTRACT

This chapter looks at the ways in which teacher training and teacher development are taking place online. It seeks to address the ways in which teachers learn to teach and considers how “Web 2.0” applications and other collaborative, interactive technologies may transform teacher education. In an overview of teacher development theories, including social constructivism and critical reflection, the chapter attempts to situate current practices in relation to research in teacher learning. The second part of the chapter focuses on blended and distance learning, Computer Mediated Communication, and the applicability of Web 2.0 applications to teacher development. It is hoped that the chapter will provide a useful summary for teacher trainers and classroom practitioners who are hoping to use technology for developmental purposes. At the same time, it may assist those who are working with technology but are less familiar with the context of how teachers learn.

INTRODUCTION

English Language teachers are a disparate and diverse professional group. There are teachers working in tertiary, secondary and primary education, as well as private institutions, across the globe. Teachers may work with students on a one-to-one basis, or teach hundreds at a time. Certain approaches or methodologies are practiced rigidly by some, while others take a more eclectic approach. It is also very important to remember

that the vast majority of English teachers are not native speakers of the language.

Teachers from different contexts also learn to teach in different ways. Non-native speakers of English, especially those working in state sponsored institutions, usually require nationally recognized qualifications to enter the profession, with formally established developmental pathways. On the other hand, many native speakers come to English Language Teaching with little or no specific teacher training. This chapter will

deal with the idea that, whether teachers are “educated” in directed programmes or they “develop” through experience and reflection, all teachers are to some degree responsible for their own growth. The assertion is that all teachers operate in their own “spaces,” both metaphorically and literally, and the issue of how they develop themselves professionally is a pertinent one. As the Internet evolves, the options for both teachers and teacher educators are changing; flexibility across time and space is improving and new paradigms of interaction are beginning to gain credibility.

Changes in the role and influence of ICT in teacher development occur very quickly. Technology cannot yet meet the goals of some practitioners, who are glimpsing the possibilities of this new world. As they race ahead, there are far more who are in danger of being left behind. The digitally poor, who do not have the equipment, the knowledge or the confidence to enter the online world fully, may be missing out on developmental opportunities. Normalization, as defined by Bax (2003), is not a uniform process. However, even those who are not familiar with the term “Web 2.0” may well be familiar with some of the applications to which it refers. What Web 2.0 is exactly is not so easy to define. O’Reilly’s (2005) comparative list of Web 1.0 and 2.0 applications has been much re-presented, and remains one of the pithiest distillations of the concept. Kelly (2005) was almost evangelical over the development of Web 2.0 as a religious “Beginning,” which concerned Carr (2005) greatly. His criticism of those who sought to assign ethical values to technology is not directly relevant here, although it is worth remembering that computers are merely tools and will never be a panacea for all social or educational problems. Tim Berners-Lee, one of the Internet’s founding fathers, is somewhat cautious about the term, and has complained that it “lacked coherent meaning,” having become a marketing buzzword (quoted in Anderson, 2006). Brown’s insights (2007) into the links between constructivist theories of learning, CMS (Content Management Systems) and Web

2.0 in education seem especially apposite to this study. He drew parallels between the characteristics of Web 2.0 and the learning paradigm (active, multilateral, engaged), as opposed to Web 1.0’s traditional teacher centred style, and cautiously suggested layering higher education CMS’s with appropriate Web 2.0 applications.

Despite some misgivings about the term itself, what is undeniable is that millions of people have access to broadband, and that interactive Web applications and platforms are now increasingly part of the mainstream. This chapter approaches the Internet from the perspective of teacher education and defines Web 2.0 as a platform through which tools can be accessed, a shared space for collaboration, and as a repository of knowledge which can be added to, manipulated and re-presented.

There are three central questions in this chapter, or perhaps one question in three parts. One of these is whether online teacher trainers and trainees are fully utilizing the potential of current technologies. Leading on from that question, we need to look at whether it is possible to successfully deliver teacher training through Web 2.0 technologies, and if it this is not possible now, consider if it might be possible in the future. Finally, it is vitally important to consider the construction of wholly new paradigms, based on the ways in which people interact and learn online. The first two questions deal largely with teacher training, and in particular pre-service training or the education of “novice” teachers. The final question is also relevant, perhaps more so, in the area of teacher development. These terms will be defined in greater depth in the first section, in order to locate the chapter in the greater body of thinking about teacher learning to date.

It is the third question, too, which really gets to the heart of the “transformation of learning” that this book engages with. Modern technologies have undoubtedly “changed” the way teachers teach, and learn to teach, on a surface level. The interactivity, the potential for collaborative research and shared data, the new ways of receiving,

organizing and manipulating information offered by Web 2.0; these are what might *transform* the way teachers develop. Access across continents and time zones to information and social networks will allow motivated teachers to free themselves from a reliance on institutional development. Educational policy, with its many stakeholders to satisfy, is by its nature conservative in its attitude towards the new. Cuban (1986) addresses this in his historical overview of technology throughout the twentieth century, and concludes that a lack of planning or real understanding has led to a slow and erratic adoption of new machines. In describing the early years of microcomputers in the classroom, he really does sound like a voice from another age. Yet in the broader context of the technology that came before, and what we have seen since, Web 2.0 could be considered the latest fad in the cycle of hyperbole, or something truly unique and new; a transformation.

There are claims that the way humans think is already being inexorably transformed. Prensky (2001) coined the terms “digital immigrant” and “digital native” to describe the generations raised before and after the advent of personal computers. He posits that, through different kinds of input, digital natives have a different brain structure geared towards multi-tasking, networking and “twitch” response times. Prensky argues, and this is very significant for this study, that the time for debating changes to pedagogy is over and educators must learn to connect with the new actuality.

This chapter intends to explore some of the ways in which teachers are now more able to manage their own learning through the use of technology. It will also consider how teacher training is developing online, how teacher education programs and classroom practitioners are beginning to discover new Web applications, and suggest some potential future interactions between language teacher education and emerging technologies.

The first section will look at concepts of teacher development and training in English language

teaching in order to set the context for where we sit now. The next section will attempt to link practice and theory regarding existing beliefs about teacher education and network technologies. Finally, we will look to the future, speculating on possible directions for both research and practice in the field.

TEACHER EDUCATION, TEACHER TRAINING, TEACHER DEVELOPMENT

Teacher training, teacher education and teacher development are three concepts which need to be defined and clarified for the purposes of this study. Some theorists have used the terms interchangeably, while others have suggested overlapping definitions and still more have drawn clear distinctions. Mann (2005, p. 104) points out differing European and American perspectives, with Europeans separating development from training and education with regard to agency; teachers are trained or educated, but they develop themselves.

Mann (2005) summarizes teacher development as a bottom-up, continuous process in which teachers seek to understand the interactions between their inner and outer worlds. Although professional development, or continuing professional development, may appear quite similar, CPD is often driven by institutions and tends to emphasize career requirements over personal values.

Teacher training, imposed or top-down, is a process in which skills are imparted and honed (Roberts, 1998). It can be in a process in which teachers *are developed*, rather than one in which they are given the opportunity to develop. However, a significant number of contemporary thinkers in teacher education believe that teachers should be assisted in building life-long learning skills through such skills as reflective practice. It could also be argued that training can be a part of teacher development, but development is not

necessarily achieved through training. Head and Taylor define development simply as “change and growth” (1997, p. 1) and describe how training and development are “complementary components of fully rounded teacher education” (1997, p. 9). For clarity in this chapter, “Teacher Education” is designated as an umbrella term to cover both self-initiated / self-directed practices, and more formalized training programmes and systems — that is, any activity in which teachers participate in order to learn to teach or improve their teaching is Teacher Education.

Davis (adapted in Woodward, 1991, p. 147) offers us a model with which to distinguish between “Teacher Training” and “Teacher Development.” This model also provides us with a framework with which to analyse and evaluate teacher edu-

cation theories, and how they may be operating in the new reality.

Learner autonomy, empowerment and other similar concepts of self-determined lifelong learning are generally seen as “good things” in contemporary western education. Thus “teacher training,” defined here as top-down, compulsory and product / competency oriented, is treated by some as suspicious in its motivations and as a less desirable mode of education than the more democratic “teacher development.” The current orthodoxy seems to be that autonomous learning skills should be fostered in trainee teachers, but that pre-service and early teachers can benefit from competency based training programs. Studies in career-long levels of expertise in teaching generally show that teachers’ foci shift over time, and

Table 1. Development vs. Training (Woodward 1991, p. 147)

Training	Development
competency based	holistic
short-term	long-term
one-off	temporary
external agenda	internal agenda
skill / technique and knowledge based	awareness based, towards personal growth and the development of attitudes / insights
compulsory for entry to the profession	non- compulsory
top-down	bottom-up
product / certificate weighted	process weighted
means you can get a job	means you can stay interested in your job
done with experts	done with peers
compulsory	voluntary
competency based	holistic
short-term	long-term
one-off	temporary
external agenda	internal agenda
skill / technique and knowledge based	awareness based, towards personal growth and the development of attitudes / insights
compulsory for entry to the profession	non- compulsory
top-down	bottom-up
product / certificate weighted	process weighted
means you can get a job	means you can stay interested in your job
done with experts	done with peers

teachers and teacher educators need to recognize that teacher education techniques should be appropriate to the particular developmental stage.

DEVELOPMENTAL STAGE MODELS: FROM NOVICE TO EXPERT?

In her “concerns based” model, Fuller (1969, 1974) sought to address the motivations of pre-service undergraduate teachers and inexperienced teachers in comparison with experienced teachers. The professional concerns that preoccupied them were characterized as “early” and “late” respectively. Through her own research and analysis of similar contemporary studies she discovered that “early” teacher concerns are with the “self”: “Young, inexperienced teachers usually are not concerned about teaching at all. Our research indicates that they don’t know enough about teaching to be concerned about its realities” (Fuller, 1974, p. 113).

The Dreyfus and Dreyfus model (1986) describes a transition through five key developmental stages in the whole career of a teacher; Novice, Advanced Beginner, Competent, Proficient and Expert. Rather than “concerns,” this model is related to *intuition* in teaching, with a progression from dependence on rules to an ability to work in the classroom intuitively. Huberman (1993) based his research on the concept of life-cycles and created a more complex model which allowed for different outcomes in teachers’ careers. Whereas progression in the previous models was linear and followed a single strand, Huberman includes such aspects as monotony and self-doubt which may lead to a mid-career crisis. The direction of “trajectory” will decide whether the teacher ends their career in serene or bitter disengagement.

These theories are relevant to this enquiry for three reasons. Firstly, it appears that novice teachers are concerned with survival in the classroom and this usually means building basic competencies such as language knowledge, classroom management techniques and materials selection

and design. These early teaching concerns have traditionally been developed through intensive training programmes (such as the PGCE or CELTA), which involve a great deal of real time trainer / trainee contact, observed classroom teaching practice and face-to-face feedback. The question is whether such programs can be delivered or administered successfully (in part or wholly) through emerging Internet technologies.

The answer to this question is also of significance to employers; certain qualifications have international currency and credibility, and act as gatekeepers to areas of the teaching profession (for example, CELTA and DELTA have the cachet of the Cambridge University brand, and standards are painstakingly applied). In the broader community, the online degree is gaining acceptance but is still seen as a poor relation to the traditional degree by many employers (Carnevale, 2007). This is complicated by regional and institutional variances in expectations, as many native speakers embark on their careers in TESOL with no training whatsoever, especially in Asia. However, with the proliferation of certification bodies through the Internet, both employers and employees will have to check carefully that the pieces of paper they receive are of professional consequence.

Finally, it seems pertinent that, as Huberman suggests, “expertise” is not a foregone conclusion and teachers can just as easily follow a path to monotony or disillusionment. One of Woodward’s defining qualities for development is that it means you can stay interested in your job. The opportunities offered by emerging technologies for collaboration and reflection, enabling teachers to maintain interest throughout their careers, should not be underestimated.

TEACHER TRAINING

Pre-service training, particularly in the Tertiary, Secondary and Primary sectors (TESEP), is the first step of the development process for

the majority of teachers. These run the gamut from intensive certification courses for entry-level teachers (eg. CELTA) to undergraduate or postgraduate qualifications necessary to teach in state education. The goals of such programs differ greatly, and in turn are distinct from the aims of in-service programs. Formalized training for in-service teachers also takes many forms, from the institutionally designed workshop led by a senior teacher, to advanced qualification programmes such as the Cambridge DELTA. Somewhat dichotomous to the growth in interest in personal construct theories in teacher development is the fact that, in real terms, competency based teacher evaluation has become more popular in recent times (Richards, 1998, p. 5).

Johnstone (2006, p. 652-3) has produced a framework for the provision of Language Teacher Education with eleven key variables, including stage, sector, mode, type recipient and provider. Into a complex permutation of external, contextual factors, teacher trainers face further difficulties in the fragmentary nature of the content that is to be transmitted to trainees. English Language Teaching requires an interdisciplinary understanding, with elements from Education, Linguistics, Psychology, Anthropology and Second Language Acquisition (Johnstone, 2006, p. 659). With this in mind, selecting which competencies teachers need becomes even more challenging. Richards (1998) outlines six domains of focus for training, which draw on sources from Linguistics and Education; theories of teaching, teaching skills, communication skills and language proficiency, contextual knowledge, subject matter knowledge, and pedagogical reasoning skills and decision making. Although acquisition of some of these competencies (theories of teaching, for example) may be achieved through traditional knowledge-transmission instruction, it has been suggested that teacher beliefs and personal theories are the main force which drives classroom practice. If that is the case, then trainers need to work on a

deeper level to help teachers develop and change and straightforward lectures are likely to be insufficient. Woodward's "Loop Input" (1991), for example, is an interesting attempt to recreate the language learning experience in the language teaching learning experience. One important question is whether we need to build an entirely new paradigm for online teacher training, based on differences between the ways people interact and thus learn online. This is further complicated when we consider online training courses for online teachers. We will return to this idea later in the chapter, when we look at what trainers are doing in practice, in both the "real" and "virtual" worlds.

TEACHER DEVELOPMENT

The prescriptive, "top-down" (Mann, 2005) model of teacher development, in which teachers *are developed*, has become insufficient in recent years. Many researchers, teacher educators, and indeed classroom practitioners themselves, have turned to theories of lifelong learning, psychology and personal growth to look for ways in which teachers can develop themselves (Head and Taylor, 1997; Christison & Palmer, 2007). This development is directed by the teacher his or herself, and focuses on levels of expertise pieced together through experiential "honing of the teaching craft."

The English Language Teaching professional is quite likely to follow a circuitous course in his or her career. Changes in role, institution and even country tend to be fairly frequent for many in the field. This is a somewhat neglected area of study; "mainstream" education, in which most of the research is situated, generally structures developmental pathways more rigidly. Many TESEP teachers are involved in the management of their own development, either individually or through peer networks. They are also party to institutional change (sometimes at a national level) and in-

novation. These processes take place against a background of standardization that enables the operation of large-scale training programmes. (Examples of this can be seen in Guskey, 2002; Woolfolk Hoy & Burke Spero, 2005; Schulz and Manzuk, 2005).

For many ESL/EFL teachers, especially those outside state education contexts, there are few structures in place for professional development. Teachers of English may need to be more capable of managing their own development than others. Franke et al. (1998, p. 67) refer to this as “Self-Sustaining Generative Change,” in which teachers “engage in practices which serve as a basis for their continued learning.” This works on a deeper level than merely noticing that classroom practice seems effective, but entails an understanding of why something has worked in order to generate further effective practice.

How these activities are being facilitated and transformed online will be addressed later in the chapter, along with some speculation regarding future possibilities. To foreground this discussion, we must first consider two of the central theories which dominate the field of teacher education and teacher learning.

SOCIAL CONSTRUCTIVISM

The work of Piaget and Vygotsky has been central to the social constructivist theory of learning and development. In simple terms, each of us constructs a personal knowledge base through

interaction with the environment around us. The tools we use to do this actively shape the knowledge as we reframe (Lavin & Claro, 2006, p. 10). Vygotsky stressed the role of mediation in learning, and hypothesized the Zone of Proximal Development; a psychological space in which ideas too challenging to be understood by the learner alone can be understood collaboratively (Vygotsky, 1978). Roberts (1998, p. 43) argues that the theory is especially relevant to the teaching profession as teachers “only have partial agency in their own development”; public requirements do not allow self-determination for teachers. In addition, the theory helps us to understand differences in personal beliefs and behaviours between teachers in that all teachers are a product of their prior experience, or their own social construction.

If technology is truly transforming learning, then theories of learning need to be transformed too. Siemens (2004) rejects social constructivism (along with behaviourism and cognitivism) as outdated, and proposes a new model of “connectivism.” Whereas constructivists believe that we each learn through our own experiences, Siemens argues that, with the sum of information growing at a frightening speed, we must store our knowledge in our neighbours. Learning is not about internal processes but rather the access to knowledge based on network communities. Certainly, the amount and speed of information we process now has increased dramatically since the original development of social constructivist theories. Vygotsky and social constructivism are still commonly cited in research into Web 2.0 and

Table 2. Activities for teacher development (Richards & Farrell, 2005, p. 14)

Individual	One-To-One	Group-Based	Institutional
<ul style="list-style-type: none"> • self monitoring • journal writing • critical incidents • teaching portfolios • action research 	<ul style="list-style-type: none"> • peer coaching • peer observation • critical friendships • team teaching 	<ul style="list-style-type: none"> • case studies • action research • journal writing • teacher support groups 	<ul style="list-style-type: none"> • workshops • action research • teacher support groups

learning theory (e.g. Dysthe, 2002); perhaps connectivism is not quite the radical departure that Siemens claims but it deserves consideration.

REFLECTION AND REFLECTIVE PRACTICE

If social constructivism states that we are a product of our interactions, then reflective practice theorizes the ways in which educators can most effectively and positively process those interactions to enhance development. The two theories are in many ways complimentary. Dewey (1938) was a pioneer in the field, advancing his idea of “forked road” situations, in which the practitioner solves a dilemma and incorporates the new theory into their personal schema (Roberts, 1998, p. 48). Schon (1983) built on Dewey’s work to formulate the twin hypotheses of “reflection-in-action” and “reflection-on-action.” While those working on specialized tasks often perform intuitively (knowing-in-action), stimulus can prompt thought (reflection-in-action). This operates on an unconscious or semi-conscious level, often in a split second for the experienced classroom practitioner. Reflection-on-action, however, is the more considered questioning of teaching beliefs and practices (Korthagen & Lagerwerf, 1998). The importance of “reflection on action” is especially relevant to this chapter in that it expects educators to critically examine their own practice in order to grow as a teacher.

To reflect both objectively and productively is not an easy task, and teachers often need training. An environment which encourages positive reflection is also significant. If teachers are to develop to the best of their abilities, the opportunity for supportive collaboration is also a necessity. The next section will look at the ways in which online teacher education utilises these theories in more detail.

THE INTERNET, WEB 2.0 AND CURRENT PRACTICE

Distance and Blended Learning in Teacher Training Online

About twenty percent of students in higher education in the USA take at least one class online (Abramson, 2007). It is the growth area in education, and even traditional face-to-face courses often incorporate some element of online interaction. This is known as blended learning — a form of learning which balances face-to-face contact between trainer and trainee with Internet-based input delivery and interaction (Elliott, 2007). In distance learning, on the other hand, content is delivered almost entirely via the Internet, and interaction takes place almost exclusively online (although some postgraduate courses, for example, have a short residential requirement). Distance learning is not new, with the first external courses being offered in the nineteenth century, and institutions such as the Open University in the UK operating since the early 1970s. Initially, materials were delivered, read and responded to through the public mail system. Later, video and audio cassettes, or television were also used to present content. This section will explore two main questions: whether teacher training programs are utilizing the full potential of emerging technologies and whether the particular needs of those learning to teach can be met through online interaction alone.

A representative example of current distance / blended teacher education is the Cert. TESOL course at St. Andrews University in Scotland. During the first four weeks, readings and tasks are conveyed through the Internet, and participants receive weekly feedback from their tutor. Trainees are also expected to take part in online, asynchronous discussions. The final five weeks of the course are full-time and face-to-face, and incorporate a teaching practicum (University of St. Andrews, 2006). It would be unfair to criticize such a course for failing to exploit the available technology to its fullest potential. The basic ra-

tionale behind the set up is to save time (Trealor, 2006), and by having the trainees read and respond to content in advance of the residential portion of the course, the aim was achieved. Besides the limited asynchronous Computer Mediated Communication, there is nothing in this course that could not have been done fifty years ago through the post. In very practical terms, information delivery through the Internet is quicker and cheaper than by post; this was the key concern. The most important part of the course as a whole, however, was the teaching practice, and it remains so for the vast majority of trainee teachers, teacher trainers, and (importantly) employers looking at freshly minted certificates and considering their credibility.

Both trainers and trainees were reported to be very satisfied with the outcomes of the course, yet this is the kind of set up that Downes (2006) critiqued in his description of traditional transactional models adapted slightly for use with computers: "Content is organized according to this traditional model and delivered either completely online or in conjunction with more traditional seminars, to cohorts of students, led by an instructor, following a specified curriculum to be completed at a predetermined pace" (n.p.). Much of what Downes then goes on to describe, the new world of cyberspace, is not being harnessed by teacher trainers as yet. Learning may be being transformed, but teaching is changing at its own pace.

In Western universities, the Virtual Learning Environment (VLE) or Learning Management System (LMS) has become a core part of the delivery and management of information, at both undergraduate and postgraduate level. These networks allow registered users access to a variety of media, interaction between students and staff, and trainers to track trainee progress. The UK authorities have a strong commitment to such technologies, including Moodle and Blackboard. However, despite this commitment, reactions on the ground have ranged from the passionate embrace to the disinterested shrug. Eayrs wrote

about his experience at the University of Salford, with a "the core of power users" and a majority who were "initially reticent to adopt Blackboard at all" (2006, p. 19). Confidence and familiarity are very important if a large scale system such as this is to be a success, but all too often those who are excited by the possibilities will exploit the technology to its fullest potential while those who are intimidated merely post copies of class handouts. Part of the problem here is the "digital divide." Prensky (2001) raises a very important issue regarding the marked division between generations (he describes it as a "discontinuity"); with a cohort of students from the same age group and similar backgrounds, there is a clear case for pedagogical change. However, it is self-evident that peer study groups are rarely uniform. Mature and international students make up a large percentage of the student body in western tertiary education. In the United Kingdom, 65% of full-time taught postgraduates were from outside Britain in 2005/6 according to the UK Council for International Student Affairs, and Higher Education and Research Opportunities UK records that 52% of students enrolling on a first year undergraduate course were categorized as "mature" (over 23 years of age) in 2003/4 (Higher Education Research and Opportunities UK, n.d.). Teacher trainers are faced with a dilemma in catering for the broadest range of trainees when designing pedagogical technology. "Digital immigrants," for whom technology is inaccessible due to fear, lack of confidence, or limited resources need to be brought into the fold, if we are to use technology in mainstream teacher education. Prensky, not illogically, seems to assume that educators are likely to be less technoliterate than their students, but this is not necessarily the case. And if "digital natives," for whom technology is becoming "normalized" – that is, "used every day ... like a pen or a book" (Bax, 2003, pp. 23-24), are steering implementation of new systems, there is a serious danger that significant numbers will be left behind and ultimately this will lead to failure.

Stanford (2006) offers us a glimpse of what can be achieved with Moodle, which is both open-source and free. His pilot scheme, for a CELTA programme at the City of Bristol College, incorporated text, video and audio, RSS feeds from relevant sources, searchable content, Wikis, blogs, forums and instant messaging. He points out how the format is based on social constructivist theories rather than a “methodologically regressive ... top-down approach” (2006, p. 26). In evaluation, a proportion of the trainees accessed the site daily and, perhaps more importantly from a teacher development perspective, continued to use the facility as a resource after completing the course.

Brandl (2006, p. 20) believes that Moodle’s particular strength is in its design, which is based on social constructivist principles. Trainees are encouraged to share ideas freely, either guided by a trainer or as a group. For teachers already in practice, this collaboration can be based practical issues as they arise in the trainees’ own contexts. This immediacy and relevancy is a great benefit, enabling trainees to assimilate new ideas and incorporate them into their “cognitive constructs.” As trainees test new ideas, reflect on them and share their thoughts and feelings online, they can develop both personally and professionally. It could be argued though that pre-service teachers require a knowledge base and the achievement of basic competencies before they feel equipped to experiment and reflect in the classroom. Moodle may help trainee teachers take responsibility for their own learning about teaching from the outset of their career, but it could be argued that pure distance learning is still a challenging model for training novice teachers. This position is borne out by the findings of Kupetz and Ziegenmeyer (2006) in their online pilot program, which showed that significant numbers of the trainees were unable to make links between theory input and classroom video recordings. The incorporation of video into entry level online courses is now commonplace, thanks to modern applications, and on a purely

practical basis it is cheaper, faster and more efficient than sending video or audio cassettes by mail. However, it appears that novice teachers may require training towards autonomy.

This conundrum is particularly apparent when we come to consider teaching practice — still a cornerstone of most worthwhile pre-service training courses. Postgraduate degrees, targeting mid-career teachers or those wishing to pursue more academic goals, tend to centre on research and theory. Online training can replicate or even enhance the learning process in these areas. Inexperienced trainees, however, perceive a need for close supervision and timely feedback. In addition, the observed demonstration of a certain level of teaching ability is an important evaluation tool. Internationally recognized awards such as the Cambridge ESOL qualifications require the trainee to observe and teach a number of “real” lessons.

One possible solution to this dilemma is what has been termed the “proxy tutor” (Elliott, 2007, p. 14). The Distance DELTA trainees are part of a distance learning course utilizing a typical VLE. The difference is the appointment of a local mentor, who will observe classes and give feedback face-to-face (Cambridge ESOL et al., 2006). International House are taking advantage of their global network by offering online development programmes administered in local centres (Cattlin, 2006). Once again, although this may provide an elegant and workable model for teachers with some experience, a blended or face-to-face learning program for novice teachers is still recommended, to provide a greater level of support and guidance during a crucial developmental stage.

COMPUTER-MEDIATED COMMUNICATION (CMC)

Any communication event that takes place via networked computers can be referred to as com-

puter-mediated. CMC can either be synchronous (in “real time” — e.g. instant messaging, video conferencing), or asynchronous (email, Internet forums). As we have discussed, one of the central tenets for teacher learning is the facility for collaboration and communication. Trainee teachers need to communicate with their peers and with their tutor comfortably and freely. At this point in time, the question is not so much whether CMC is possible, as for many of us it is becoming “normalized.” We need to establish if and how the new styles of communication are different from what has gone before.

Teacher trainers need to be skilled facilitators, yet without the verbal and non-verbal cues available to participants in face-to-face communication, the tutor may need to develop new techniques. Despite improvements in technological capabilities for video and audio conferencing (via free applications such as Skype and Google talk, for example), ensuring that a whole cohort of trainees has access to equipment of sufficient power and capacity is still challenging. At the time of writing, most synchronous group discussion is still conducted via “chat” or similar facility.

In order to do this Nunan (1999) attempted to replicate spoken discourse markers with a set of protocols. The MA TESOL (based at Newport Asia-Pacific University) was fully online.

H. Japes (personal communication, August 7, 2006) encountered a similar situation administering an online Diploma course; he found that his initial attempts to facilitate synchronous discussion groups was an impossible task, eventually

settling on five trainees at one time with arranged turn-taking cues. Nunan claims that “some of the transcripts (from synchronous discussions) could easily have been from a classroom” (Nunan, 1999, p. 58), yet it seems fair to say that the synchronous, textual CMC needs to be deftly directed, and often more teacher-centred than its face-to-face equivalent. This leads to a more teacher centred style than might be found in face-to-face interaction. Both Nunan and Japes stressed, however, that the community building aspect of the online seminar sessions were a very positive part of the overall experience, for both learners and tutors.

Despite the clear value of synchronous CMC, most online teacher training still takes place asynchronously, through discussion boards, forums, email and similar applications. Some practical issues include procrastination or non-participation from trainees, and the difference between the student’s expectations and the tutor’s workload regarding feedback response times. Most online teacher trainers report increased workloads in comparison to face-to-face courses. The “anywhere, anytime” benefits of the Internet can just as easily become a millstone; ask any harassed businessman with a Blackberry. However, in the main, online courses are gaining in popularity due to their flexibility, portability, and the lack of physical or chronological constraints holding back participants.

Beyond these obvious benefits, there is a growing body of research investigating deeper cognitive and pedagogical benefits of Computer Mediated Communication in teacher education.

Table 3. (Nunan, 1999, p. 55)

?	I want to ask a question
+	I would like to add something on this point
A	I agree with this point
D	I disagree with this point
//	I’ve finished my turn
Go X	It’s your turn

Garrison et al. (2001) built a “model of practical inquiry” expressing ways in which teacher trainees can use asynchronous discussion groups to address “problems” collectively. *Trigger* events begin discussion, leading to the *exploration* phase, in which learners reflect individually and explore ideas as a group. This takes learners to the *integration* stage, when solutions begin to emerge. Finally, the ideas are tested in the *resolution* phase (Garrison et al., 2001, p.11). This kind of collaboration promotes reflective practice in trainees, and with less time pressure than in the conventional classroom setting, learners are not only able to reflect more deeply, but actively encouraged to do so (Arnold & Ducate, 2006, p. 43).

When a training cohort is comprised of both native (NS) and non-native speakers (NNS) of English, CMC may hold several advantages over traditional classroom-based communication. Perceived weaknesses in language ability and cultural inhibitions sometimes combine to leave NNS teacher trainees feeling out of their depth in lively seminar groups. CMC allows participants time in a less intimidating atmosphere. Hirvela (2006, p. 239) observes how shy trainees in a programme he administered became much more confident online, and how a larger number of students were able to reflect and participate, building self-esteem and a sense of community. On the other hand, challenging as face-to-face seminars can be they are also a powerful learning experience for NNS who wish to test and improve their speaking skills in a live discourse setting (Carrier, 2003).

As an aside, H. Japes (personal communication August 7, 2006) claims that the permanence of text compared to speech led to some initial reservations amongst trainees. In general, though, the fact that communication is not *direct* but *mediated* allows participants to be more direct than they might otherwise be. This can be negative too; on anonymous Internet forums, it is generally understood that interaction can easily descend into aggressive personal attacks known as flaming. However, the literature reviewed in this study

typically focused on the positive outcomes of CMC amongst members of a training group.

Boon’s (2007) research into instant messaging and cooperative development is an interesting example of how in-service teachers can utilize free software for professional development. Cooperative development was formulated by Edge (1992) as a reflective tool involving a “speaker” and an “understander.” By reframing the speakers’ utterances without advice, judgement or evaluation, the “understander” helps the speaker to become more self-aware, or find the solution to a particular problem. Boon reported success in the technique through instant messaging, with the main advantage being that teachers could take part across distance. It would be intriguing to know if the written yet instantaneous format had any effect on the reflective process.

Discussing the training of online language teachers and online trainer training feels like walking into a hall of mirrors, but it is clear that online teacher trainers do need to develop a different skill set. Of course, many “non-virtual” teacher trainers attain that status without formal preparation yet still succeed. However, trainees on accredited courses are likely to expect professionally recognized trainers. Online teacher / trainer accreditation is growing, with courses from well established providers such as the consultants-e and International House. This is certainly an area with great relevance to this chapter which requires further research.

APPLICATIONS FOR TEACHER DEVELOPMENT

Beyond formalized training programmes, the potential for self-directed and collaborative development online is immense. Teachers who were previously professionally isolated are making new connections and collaborating across the Internet. New applications enable an unprecedented level of interaction between teachers working in contexts worldwide and the ability to create as

well as share content is a vital tool in promoting self-directed learning. This section will look at some specific applications and the ways they are being used, with reference to social constructivist and reflective practice theories.

WIKIS

Wikis are Websites that are “collaboratively and incrementally updateable” (Lavin & Claro, 2006, p. 10), the most famous being Wikipedia (<http://www.wikipedia.org/>). The ability to constantly edit and readjust the content appears to be the social constructivist brain made digital. Lavin and Claro (2006) link key factors from constructivist theory to the wiki and conclude that it can become an effective tool for learning and development. It is an undeniably “learner” centred and learner relevant tool, and allows participants to consider issues from multiple perspectives by editing existing material from other contributors.

Wikigogy (<http://wikigogy.org/>) is an attempt to build a large-scale collaboration of knowledge in the field of language teaching, but many smaller, more focused projects are taking place worldwide. It would be an error to assume that participants must be working at a distance; the wiki provides a convenient tool for project management, whether participants share an office or are working on different continents. Google Docs (<http://docs.google.com/>) allows teachers to create and share spreadsheets, text documents or presentations and to store them online for portability and flexible access. Basecamp (<http://www.basecampq.com/>) and Goplan (<http://www.goplan.info/>) are two examples of how this technology has been adapted for practical use. In addition to shared timetables and documents, projects can be synched to other applications such as email or RSS, and developers are encouraged to add new applications to the platform.

One potential use for teacher-researchers would be for action research projects. The wiki,

and platforms incorporating it, can enable previously isolated teachers to share techniques and data, enabling researchers to meet virtually as well as face-to-face.

BLOGS

Journal writing has been popular in teacher education for some years, as a method for exercising or promoting reflection. As Russell and Bullock (1999) argued, “Keeping a written record of teaching is an exercise in metacognition” (p. 137). Training programmes also incorporate the practice to obtain feedback from trainees. Studying a group of MA TESL students in Hong Kong, Richards and Ho (1998) discovered that journal writing was beneficial in opening dialogue between trainee and tutor or peers, and also supplied the tutor with classroom data. However, without explicit training in how to keep a reflective journal, it appeared that students basically maintained their starting level of critical reflection throughout the course; if they were capable, they were that way from the from the outset but students with little capacity for critical reflection at the start of the course had not developed the skill by the end. Despite the inconclusive results, 71% of the participants claimed that the exercise had been worthwhile.

Even with training and guidance, some teachers will struggle to develop critical reflection through journaling alone. Richards and Farrell (2005, p. 75) outline the key factors in successful logging, stressing the importance of deciding the goals, audience, time frame and evaluation criteria in advance. With perseverance, a journal can facilitate a variety of tasks for the developing teacher, as listed by Porter, et al. (1990, p. 228):

1. *React* to class discussions
2. *Describe* class discussions
3. *Ask* questions about readings/discussions

4. *Relate* readings/discussions to your own experiences
5. *React* to something that you read
6. *Describe* something that you read
7. *Argue* for or against something that you read
8. *Explore* pedagogical implications of readings/discussions
9. *Describe* new knowledge you have obtained
10. *Fit* new knowledge into what you already know
11. *Question* the applications, motivations, uses or significance of what you have learned
12. *React* to class demonstrations, observations, teaching/tutoring experiences, etc
13. *Make connections* between course content and previous experiences you have had as a teacher, tutor, language learner etc
14. *Argue* for/against a particular technique or procedure
15. *Describe* your progress or problems with the current assignment/exam
16. *React* to the tutors' evaluation of your last assignment/exam

While some teachers prefer to use a hardback journal and an ink pen for recording their stories, millions are now blogging on the Internet. It is not hard to find a teacher' blog which serves each of the purposes on Porter's list, but blogs can actually do a great deal more than the old fashioned journal.

The physical act of writing a journal in long-hand can be an irksome task, especially if it is obligatory. A major advantage of blogging is its versatility; that is, bloggers can embed video clips, pictures, sound files and links to other sites. Bloggers can also decide how much of their content they would like to share and with whom. Blogs can be set up as membership of a class group, with peer and trainee feedback encouraged, or entirely private. Commonly, blogs are open to anyone who might happen to discover them, and

there are increasing numbers of teachers using blogs to "self-publish" by getting their ideas out into the world. Although podcasts are not technically blogs, they fill a similar space conceptually, as do social networking sites, and content sharing sites such as flickr and youtube.

The blog is a very good example of Web 2.0 offering something that would otherwise be impossible; the possibility to share anonymously with strangers (at least, in "real life"), and thus without agenda or fear. Blogging incorporates elements of reflective practice and social constructivism, but could also be said to fit Siemens' connectivist model.

VIRTUAL WORLDS AND GAMING

Blogs and wikis enable educators to work and collaborate in new and exciting ways, but they are still dealing with applications and platforms that share a visual and stylistic lineage with that which has gone before. MUVE's (3D Multi User Virtual Environments) like Second Life, on the other hand, do not at first glance look like a place for academic or professional development. Many millions have visited Second Life out of curiosity, and large numbers have stayed and created something independent and of potential value for educators. The site claims that approximately 900,000 residents logged in during January 2008 (http://secondlife.com/whatis/economy_stats.php). Corporations and educational institutions such as IBM and Harvard have a second life presence that lends further credibility. A typical example of the way in which teachers might use second life for their own development (rather than for language education) was the keynote speech at the 2007 Wireless Ready International Symposium. The "real-time" address, in Nagoya, Japan, was also attended "virtually" by a number of interested parties from across the world who were able to interact through Voice over Internet Protocol (VoIP) and observe the same multimedia

presentation. Conferences such as this, and the IATEFL 2007 conference, are enabling teachers who would never be able to travel to take part in activities on the other side of the world.

However, at this stage it appears that what Second Life can offer technically is slightly behind the imagination of the vanguard of educators championing it. Purely practical considerations such as processing power, bugs in the software and user compatibility mean that it is still a struggle to make such conferences work technically at the time of writing, but in the near future it is likely to become more and more commonplace.

The potential is what virtual worlds have to offer at this stage. It is certainly the case, demographically, that tomorrow's trainee teachers will be digital natives, and teacher educators will need to engage them in ways they understand and are motivated by. However, as of May 2007 the largest age bracket in Second Life was in the 25–34 range, at 38.47% (Second Life, 2007), which suggests that patterns of technology use should not be generalized across demographic groups.

In addition to Second Life, online games, particularly role-playing games, have been cited as an area for future exploitation as an educational environment. Oblinger (2004) believes that games can be highly motivational for college age students, and that we need to look to the future as the digital generation reaches university age. She cites a number of existing projects that have used virtual technology for simulation and role-play, such as the University of Michigan's virtual democracy, and an MBA strategy simulation at the University of Phoenix. Programmes typically allow learners to do things which they would not be able to do in real life, perhaps due to distance in time or space (visit historical or foreign sites) or risk (medical procedures, military or financial simulations).

Beside these practical benefits, there are also pedagogical and learning advantages. Oblinger also lists some of the attributes of gaming which she links to sound learning theory, such as the ac-

tivation of prior learning and the experiential and social aspects. Returning once more to the theme of constructivism, so prevalent in the analysis of Web 2.0 learning, Coffman and Klinger (2008) suggests that learners can create a Vygotskian zone of proximal development within a virtual world and collaborate to learn together, provided that the instructor is careful to establish realistic tasks to promote complex cognitive processing. Despite their clear enthusiasm, however, they do suggest that MUVE's should not be the sole learning tool, but incorporated into a programme of personal communication and face to face collaboration. There is clear potential for teacher educators; indeed, there are already virtual language classrooms in Second Life and it would be a short stretch to enable trainees in one country to present model lessons for trainers in another. This might be one of the ways that distance teacher education can recreate the teaching practicum experience. Looking further ahead we face the possibility that language learners will study solely to communicate in virtual worlds, with teachers who have trained in Second Life.

CONCLUSION

At the outset of this chapter three key questions were highlighted:

1. Are online teacher trainers and trainees are fully utilising the potential of current technologies?
2. Is it possible to successfully deliver teacher training through Web 2.0 technologies, and if it isn't now then might it be possible in the future?
3. Is the Internet transforming the way teachers learn to teach, or learn about teaching?

The answer to the first question is, so far, negative. Downes' (2006) snapshot of the reality and the potential in this area seems very accurate

based on the literature surveyed for this chapter. Most higher education teacher training is grafting old transmission style training models on to VLE platforms; the transformation of both teaching and learning is minimal. Governments are unwieldy and take time to enact policy change, yet at the same time many of their decisions are taken with an eye on the ballot box and short term results. Many of the educators and policy makers in a position to make decisions that would transform the whole structure of learning to incorporate Web 2.0 technologies and the brand new styles of learning are not members of the “twitch speed” generation.

The second question cannot be answered so succinctly. It appears that certain elements of initial teacher training can be delivered very effectively with the aid of Web 2.0 tools. Indeed, multimedia platforms, social networking, MUVE’s and so on all offer very exciting and motivating ways for new teachers to learn their craft. This is Web 2.0 as a tool, as a system that fits into existing paradigms. The notion of competency-based training, however, does not really sit comfortably with the new learning that Web 2.0 is a product of and a driving force behind. New teachers do need certain technical skills, but it is not yet clear whether they can be acquired using Web 2.0 in a deeper way.

Which brings us to our final question. There are those like Kelly (2005) who almost deify the Web, Seimens (2004) who believes we need a whole new learning theory, and Prensky (2001) who claims that the new generation are wired differently to the old. However, returning to those like Cuban (1986) and Jonscher (1999), the first writing as microcomputers began to join mainstream life, and the second as the Internet did the same, puts these claims into perspective. Jonscher (1999, p. 248) makes two apposite points in this regard: “The first is to regard almost any prediction of the future power of the technology itself as understated. The second is to regard almost any prediction of what it will do to our everyday lives as overstated.”

It is tempting to become excited by the rapid development of new technologies; changes in the way people receive their entertainment and news, the ways they work and make friends, seem self-apparent. However, it is not yet clear if these changes are surface alterations or indicative of more fundamental transformations. This is certainly an area which warrants further research.

Whether this proves to be the case or not, the possibilities for the future are extremely exciting for professional teachers who want to collaborate and develop. Ultimately, in considering the implementation of any new innovation, the question must be asked: is this better than what we have already? Teacher development is much better situated to take advantage of new technologies, as individuals and like-minded groups move quickly to set up projects or collaborations in their fields of interest. Loosely affiliated groups can be set up and dismantled easily and inexpensively thanks to the Internet, and for this reason alone the future looks bright.

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KEY TERMS

Metacognition: This term is used in cognitive theory to describe the awareness of one's own thinking or cognitive processes in order to improve self-development.

Novice / Expert: A teachers experience and confidence leads to expertise. Novice teachers may be skilful, but experience enables teachers to know "what to do." Expertise is neither a permanent state nor a foregone conclusion.

Reflection: The act of critical consideration on experience, in order to grow.

Social Constructivism: A learning theory. Each of us is shaped by our experiences and interactions. Each new experience or interaction is taken into our schemata and shapes our perspectives and behaviour.

Teacher Development: Self-initiated or directed activities which enable the teacher to learn more about teaching and / or themselves.

Teacher Training: A top-down process in which teachers are equipped to teach. Based on the evaluation of competencies.

Virtual Learning Environment: A platform which allows educators to deliver material, interact with learners and track progress.

Chapter XXIV

Personal Learning Environments for Language Learning

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ABSTRACT

This chapter discusses the potential of social software and Web 2.0 tools to enhance language learning in a blended learning context. It describes an English as a Foreign Language course that introduces students to several Web 2.0 tools with the aim of helping them develop their own Personal Learning Environment. As students become familiar with the almost endless opportunities for accessing and participating in authentic language on the Web today, they must also learn to find appropriate resources, filter unsuitable materials, manage this information overload, and decide which tools best suit their own learning style. The chapter argues that accompanied with the right pedagogical approach, these tools enhance learning by allowing students to engage in self-directed learning and gain skills and resources that are transferable to their informal, lifelong language learning.

INTRODUCTION

Developments in Computer-Assisted Language Learning (CALL) theory and practice are inherently connected to evolutions in technology and societal changes (Kern & Warschauer, 2000). The first phase of CALL in the 1960s and 1970s adopted a structural approach to language learning and was characterized by drill and practice methods. The most advanced technology available at the time was the mainframe computer, which was

suited to these methods. By the end of the 1970s, behaviouristic approaches had been rejected in favour of communicative approaches to language learning based on cognitive/constructivist views of learning. These changes were accompanied by the advent of the personal computer, and at the end of the decade multi-media CDs and other software. Learners were encouraged to interact with the computer or to use computer-based tasks as stimuli for learner-learner interaction. The focus was no longer on merely learning

form but on learning how to *use* forms. Though educators felt this was progress, by the end of the 1980s they were calling for more integrative methods for teaching languages that could take into account the many different aspects of the language learning process from form to communication to culture. The advent of the Internet in the 1990s made a shift towards integrative, sociocognitive approaches possible. The Internet allowed educators to implement Computer Mediated Communication (CMC) in their classrooms which led to a shift “from learner’s interaction *with* computers to interaction with other humans *via* the computer” (Kern & Warschauer, 2000, p. 11). In 1996, Warschauer (1996) claimed that CMC via the Internet was “the single computer application to date with the greatest impact on language teaching” (p. 9). Indeed the technology-centred approaches that characterized both the first two phases of CALL failed to provide the “killer” application for teaching and learning processes that would transform language learning (Cuban, 1986) just as time has proven that computers-as-tutors cannot replace teachers (Cognition and Technology Group at Vanderbilt, 1996). On the other hand, the learner-centred approach that characterizes the third phase can “help students and teachers to learn and teach through the aid of technology with a focus on how ICT can be used as an aid to human cognition and consistent with the way the mind works solving complex tasks and dealing with today’s information overflow” (Petrucco, in press).

At the turn of the century, the way the Web was used began to change significantly: rather than a place where information was merely made accessible, it was becoming a space where knowledge was being created. Users, everyday people, began to *produce* content and global communities of users sharing knowledge or just similar interests began to develop. Millions of software developers around the globe were voluntarily writing the code for open source software programs such as the operating system Linux and the web server

Apache, which would rival proprietary software. Universities, such as MIT and Stanford, began to publish course content and lectures on websites open to the public. In other words, a revolution characterized by sharing, openness and co-creation was taking place. In 2003, Tim O’Reilly and Dale Dougherty dubbed this new revolution “Web 2.0” (O’Reilly, 2005). Some argue that the term is superfluous and that the Web today is simply an evolution of what it originally was. In a podcast interview, Tim Berners-Lee, the creator of the World Wide Web, stated: “If Web 2.0 for you is blogs and wikis, then that is people to people. But that was what the Web was supposed to be all along” (Laningham, 2006). Regardless of whether or not the term is used, the point is that the way regular users can contribute to the Web has changed. Berners-Lee goes on to explain that for some people Web 2.0 “means moving some of the thinking client side so making it more immediate” and it is just this immediacy and ease with which users can generate content on the Web and participate in online communities that will define what is called Web 2.0 in this chapter.

The use of Web 2.0 in education is still in its infancy, but this chapter will argue that it can transform learning in general and in the language classroom in particular. In his introduction to CALL, Warschauer (1996) states that “the introduction of a new phase does not necessarily entail rejecting the programs and methods of a previous phase; rather the old is subsumed within the new. In addition, the phases do not gain prominence one fell swoop, but, like all innovations, gain acceptance slowly and unevenly” (p. 3). As will be seen in this chapter, the use of Web 2.0 in language learning taps into approaches and methods that characterize the previous phases of CALL, but it also offers new opportunities that were not previously technologically possible.

This chapter reports on an action research study carried out at the University of Padova, Italy. The aim of the project is to explore the potential of Web 2.0 and social software to enhance language

learning. The project the study is based on is a course called BloggingEnglish, which is now in its third iteration. The focus of this chapter will be on the activities carried out in the first semester of the course, which aim to help students develop their own Personal Learning Environment (PLE) (Attwell, 2006) for language learning using Web 2.0 tools. The chapter begins with a brief overview of the implications of social software and PLEs for education in general and language acquisition in particular. This is followed by a description of the 2007-2008 iteration of the course and some of the findings from the first three iterations. The chapter ends with a discussion of the challenges associated with using these tools and conclusions.

PLES AND SOCIAL SOFTWARE IN EDUCATION

Educators today are faced with the challenge of preparing students to become active members of today's information society where the way knowledge is created and organized and the very nature of knowledge have changed. In this context, students must develop "the resources and skills necessary to engage with social and technical change, and to continue learning throughout the rest of their lives" (Owen *et al.*, 2006, p. 3). Recognition of the importance of life-long learning has also been accompanied by an "increasing recognition of the importance of informal learning" (Attwell, 2007, p. 1). Language acquisition, especially, is a life-long process that cannot end with traditional education and must be cultivated throughout life often through informal learning in different contexts and situations.

In this context, we can see a paradigm shift taking place in the educational arena. According to the traditional epistemology of most traditional Western institutions, the learning experience is centralized, and usually instructor-controlled and teacher-centric. The focus tends to be on the individual within the sole context of a time-

limited experience of formal learning. However, for students to acquire the new skills they need, the learning must be more distributed, placing control over the experience into the learner's hands. Pedagogy based on a learner-centric, social-constructivist (Vygotsky, 1978) approach and supported by tools readily available online and part of the every-day lives of students can help create an active learning environment in which students and instructors work together to solve problems contextualized in the real world. What is more, in this context, collaboration should not be limited to the classroom or to a course, but rather flow over into other arenas as well. To do this, an effort must be made to try and integrate formal and informal learning (Cross, 2006).

One limit to making these shifts possible may be the very technology that many higher education institutions have adopted to deploy learning: the Learning Management System (LMS). LMSs have made courses and course material more readily available and accessible to students and "afforded teachers the capacity to create their own web courses with minimal programming expertise or even instructional design support" (Anderson, 2006, Summary section, para. 1). LMSs allow institutions to have a protected platform where many different services (e.g. email, course management, access to online libraries) can be deployed. Nonetheless, it is this very protection within a closed environment that has begun to come under scrutiny. If the very nature of the Internet is to promote connections via hyperlinks in order to "break out of tree structures and form semilattices of connections," why do LMSs prevent this from happening (Wilson, 2005, slide 18)? Furthermore, the way courses are deployed via LMSs tends to promote teacher-centric and technology-centric approaches to learning rather than encourage learner-centred social-constructivist approaches.

An alternative to an LMS is the concept of the Personal Learning Environment (PLE). Whereas the former is a technology, the latter is not a new

software application but rather “a new approach to using technologies for learning” (Attwell, 2007, p. 1). There is still no universally agreed-upon definition of exactly what a PLE is. Some do not limit the concept of PLE to technology, but offer a generic definition that could include anything we do or use to learn: “a combination of the formal and informal tools and processes we use to gather information, reflect on it and do something with it, which is essentially what we mean when we talk about learning” (Martin, 2007, para. 2). Others limit the definition to the toolset used to aggregate and connect what we learn: “A Personal Learning Environment (PLE) is a collection of free, distributed, web-based tools, usually centred around a blog, linked together and aggregating content using RSS feeds and simple HTML scripts” (Fitzgerald, 2006, wiki section 3, para. 1). The fact that there are very different definitions of the concept is “reflective of the infancy of the concept, and the practical applications of the read/write web itself” (LTC wiki, 2007, wiki section 2, para. 1).

Although there is no universally agreed-upon definition of a PLE, most share the following four characteristics (adapted from Lubensky, 2006):

1. **Individual control over tools and contents:** PLEs are just that, *personal*. PLEs are controlled by the learner and as such are learner-controlled and learner-centric. The learner need not respond to any institutional requirements, but rather is free to fully express him/herself and his/her needs and interests.
2. **Aggregation of contents:** PLEs aggregate digital contents and artefacts, both learner-created and acquired that express the learner’s interests, needs and learning process. By aggregating contents, the learner can more easily manage the artefacts that make up the learning experience. Aggregation can take place by locating contents in one place, linking, and/or metadata tagging. Contents can be text-based or multi-media.
3. **Integration of services:** PLEs integrate the various tools that the learner uses to aggregate content.
4. **No space and time limits:** PLEs are not limited to a given course or learning context (e.g. school or university) and may continue to grow and change throughout the learner’s life.

It is no coincidence that this concept has developed with the advent of social software. Social software tools are flexible and can be personalized and as such give students the technology needed to develop a PLE for both their formal and informal language learning. Thanks to social software, contents can be created, shared and re-assembled in an unlimited number of different configurations, all of which are determined by learners themselves (Milligan *et al*, 2006). These tools also respond to the social nature of learning as they are almost always open to the global community of Web 2.0 users for interaction, exchanging of opinions and sharing of resources and materials.

In language education, using and integrating social software has several advantages with respect to other computer-mediated communication (CMC) tools. When learners aggregate different services, as is the case when they develop a PLE, they learn how to learn by taking on responsibility for managing the social software tools, working cooperatively and learning from each other and developing online research skills (Mejias, 2006). Dalsgaard (2006) argues that, “social software tools can support a social constructivist approach to e-learning by providing students with personal tools and engaging them in social networks” (Introduction section, para. 2). Obviously more traditional CMC tools such as computer conferencing and email can be used to engage students in social networks, but the key difference with social software is that the latter can be *personal*. Anderson (2005) goes one step further by speaking specifically of *educational* social software tools, which are “networked tools

that support and encourage individuals to learn together while retaining individual control over their time, space, presence, activity, identity and relationship” (p. 4). Again, the focus is on individual control, which is often what is lacking in many examples of CMC and network-based language teaching (NBLT) (Kern & Warschauer, 2000). Most CMC and NBLT projects currently use closed systems, such as video conferencing software (O’Dowd, 2000), conferencing software (Fratter *et al.*, 2005) or forums (Furstenberg *et al.*, 2001), that are closed off to students upon completion of the course. On the contrary, social software tools are freely available online and can be controlled by students, opening up new opportunities for the learning experience to extend beyond the planned exchange.

Just like many of the tools offered on LMSs, social software tools allow communication in multiple formats from synchronous to asynchronous, from one-to-one to one-to-many, and from text to full media (Levin, 2004), but they do so in an open format. Chappelle (1998) states that it is “important that learners have an audience for the linguistic output they produce so that they attempt to use the language to construct meanings for communication rather than solely for practice” (p. 23). Indeed by using these tools, students can communicate their thoughts and opinions with other users (blogs), share and co-create knowledge (wikis), and create and share multimedia content (image, audio and video sharing) not only with their peers, but with a potential global community of users as well. Though at times this can be intimidating for students, studies have found that having a potentially global audience is in the end stimulating for most students (Guth, 2008).

In addition to linguistic competence, today’s language learners must also acquire other literacies, namely participation literacy, electronic literacy and information literacy. According to Kern and Warschauer (2000), “If our goal is to help students enter into new authentic discourse communities, and if those discourse communities

are increasingly located on-line, then it seems appropriate to incorporate on-line activities for their social utility as well as for their perceived particular pedagogical value” (p. 13). Giger (2006) defines participation literacy as “skills and knowledge about how to participate and how to invite participation in a Web 2.0 environment” (Participation Literacy Post, para. 3). As students develop a PLE using Web 2.0 tools within the context of a course, they begin to develop their participation literacy and can then transfer these skills into the wider online community and other learning contexts. Similarly, Shetzer and Warschauer (2000) focus on the importance of electronic literacy, i.e. “how to read and write in a new medium” (p. 173). Learners can develop this skill by participating in activities such as blogging and collaborative editing on a wiki. Information literacy is the ability to identify what it is you need to know and how to locate it effectively and then evaluate and use what you find. Since the Internet has become one of the main sources of information for students today and at the same time is characterized by an information overload, this skill is quite important. By collaboratively collecting and indexing information through tools such as social bookmarking and receiving notification of updates through RSS feeds, students learn how to manage this overload and to build knowledge that fits their specific needs (Owen *et al.*, 2006).

The following section will describe a course that aims to teach students how to exploit the Web for their autonomous language learning in the context of online communities and effectively develop a PLE. The discussion will demonstrate how social software tools can take the practice of CMC and NBLT beyond the limits of the language learning classroom into the global communities of Web 2.0 offering students true opportunities for authentic communication and as such effectively transforming learning in the language classroom.

DEVELOPING A PLE FOR LANGUAGE LEARNING

In the Spring of 2006, an action research project was set up at the University of Padova to study the potential of social software to effectively teach blended learning English as a Foreign Language (EFL) courses. Since the use of these technologies in language education is in its infancy and there was no empirical research to guide decisions in course design, action research was chosen as the most appropriate method for exploring the potential of Web 2.0 tools to enhance learning. The project is being carried out following Dick's (1997) definition of action research as "a process by which change and understanding can be pursued at the one time. It is usually described as cyclic, with action and critical reflection taking place in turn. The reflection is used to review the previous action and plan the next one" (Action research section, para. 1). The tools are trialled with students using specific pedagogical approaches, the effectiveness of the tools is analyzed and the design of the next iteration of the course is modified on the basis of the analysis. The project was initiated with a group of students at the Faculty of Engineering using blogs and a wiki to conduct an upper-intermediate EFL course. A careful analysis of the data collected led to a more extended version of the course for a second-year EFL course for graduate students in International Communications Studies. The course was then again re-adapted for the 2007-2008 iteration; it is structured in such a way as to promote the development of a PLE using a blog as a hub in the first semester and developing a wiki based on telecollaboration (Belz, 2005; O'Dowd, 2005) projects carried out using Skype for oral communication in the second semester.

Different data sources have been used, including the following: participant observation, posts in students' personal blogs, transcripts of students' online correspondence in the forums and recordings of their Skype conversations, recorded

informal interviews, comparison of students' writing at different points throughout the course, and end-of-course questionnaires. Students use their personal blogs to reflect weekly on their learning process allowing the instructor to read students' impressions and then check her interpretations of the data with students in class.

The following sections describe the activities in the first semester that lead students toward the development of their own PLE for language learning using Web 2.0 tools. This is followed by a more focused discussion of how these tools impact students' language learning.

BloggingEnglish

The course, called *BloggingEnglish*, is a blended learning course with 2 hours a week in the computer laboratory, 2 hours in a regular classroom and 3-4 hours a week online. The cohort who took part in the second (25 students) and third (60 students) iterations of the course are in their fifth and final year of EFL on a Master's level degree course. They are mostly women (90%) aged 23-24. Most students commute from their homes each day or live in the city during the week and return home on weekends. Few have broadband Internet at home or in their student housing facilities and rely on the few computers available in the University language labs to complete the online component of the course. Very few have ever used Web 2.0 tools, e.g. blogs, and though some are familiar with Web 2.0 tools such as YouTube; they have never used these tools for their language learning or actively contributed content on Web 2.0. Their only experience with online learning has been using the Language Centre's conferencing software.

The virtual meeting place for the online component is a public course blog (hence the name of the course) (www.bloggingenglish1.blogspot.com), which is used much the same way as discussion forums in LMSs are used. All students are contributors to the blog and as such can not only

leave comments on existing posts, but publish new posts as well. Starting in the third week of the course, students develop their own personal blogs as a place where they can reflect on their learning experience, express their own creativity and interact with their classmates. This was believed to be important because, as Godwin-Jones (2006) states: “it is possible to create a more student-centred learning environment using blogs, particularly if students create blogs that they control and whose content they own” (p. 4). Blogs were chosen to be the Web 2.0 platform for several reasons. First of all, according to Ferdig and Trammell (2004), “knowledge construction is discursive, relational and conversational in nature. Therefore, as students appropriate and transform knowledge, they must have authentic opportunities for publication of knowledge” (para. 4). Students use a free blogging service with remote hosting rather than an institutional blogging service so that their blogs are public and the contents under their own control. This gives students a real, and potentially global, audience for their writing, which in turn increases their sense of ownership and responsibility for what they write (Godwin-Jones, 2004). Furthermore, posts are archived and can be retrieved promoting reflective analysis of their writing (Ferdig & Trammell, 2004; Bryant, 2006). Finally, though blogs are often thought of as a journal or diary, if interconnected, as they are in this course, they can actually promote active socialization: “[w]hen a weblog is related to other weblogs, the weblogs become social, and communities or networks are formed” (Dalsgaard, 2006, Social software section, para. 4). In addition to the blogs, students have their own account with a feed reader (<http://www.bloglines.com/>) and are members of a course network on a social bookmarking site (<http://del.icio.us/>).

The main objectives in the course aim at helping students develop all four language skills through tasks that also improve their participation, electronic and information literacy skills

as described in the previous section. The theme running throughout the course is intercultural competence since the students study International Communications Studies and in online communities students must learn how to communicate effectively with people from different cultures. In the first semester, as students learn how to use the different Web 2.0 tools, they explore issues of culture that come out of their observations of blogs (text, image and video). Telecollaboration projects with Italian language students in the United States are set up in the second semester to give students opportunities to develop their intercultural competence (Byram, 2000). A wiki developed for the action research study, Interculture Wiki (<http://interculturewiki.pbwiki.com/>), is used as the platform for these projects.

During the first semester, weekly e-tivities (Salmon, 2002) are posted on the course blog and are to be completed either there or on students’ personal blogs. As indicated by Salmon, each e-tivity starts with a spark to promote interest in the task, followed by the “Purpose” of the task and the “Task” itself. The final part of each e-tivity is “Respond,” which is the interactive or participative element; the comment function on the blogs lends itself to the completion of this part of each e-tivity. In order to make responding manageable, students are divided into groups of 3-5 and their personal blogs and course blog interconnected through RSS feeds and “blog-rolls,” i.e. links to other blogs. The structure of the course in the first semester follows Salmon’s (2000) five-stage framework for active online learning. In this framework, the beginning of an online course focuses on access, motivation and socialization. Through five progressive stages, the course focus gradually shifts from socialization (e-tivities 1-3), to course-related cooperative goals and collaboration (e-tivities 4-7), and finally to personal goals and reflection (e-tivities 8-9 and mid-term paper). The e-tivities are organized in such a way as to gradually lead students to the creation of their own PLE (Table 1).

Table 1. Weekly e-tivities

e-tivity	Title	Purpose
e-tivity 1	Let's get started	To become familiarized with the course blog and one another.
e-tivity 2	Exploring the blogosphere	To learn how to exploit the blogosphere as a source of information.
e-tivity 3	Developing your own blog	To develop a space to express one's own creativity and opinions.
e-tivity 4	Feeds and Feed Aggregators	To learn how to have selected updated information come to you.
e-tivity 5	Social Bookmarking	To learn how to save resources found on the Web, exploit the knowledge of others and create distributed research networks.
e-tivity 6	Podcasts	To learn how to harness the potential for practicing listening skills using Web 2.0 resources.
e-tivity 7	YouTube	To learn how to exploit video online for language learning.
e-tivity 8	Judging online resources	To reflect on how you judge online resources.
e-tivity 9	What's your Personal Learning Environment?	To create a mind map of your own PLE.

As the pedagogical approach is student-centered, there are no teacher-produced materials. Students are encouraged to find text, media, and sites that have the potential to support their learning. Within the learning community that is slowly created through the interconnected blogs, the resources found can become learning materials. As Hill and Hannafin (2001, in Dalsgaard, 2006) state in their writing about resource-based learning:

for learning, resources must be contextualized to determine situational relevance and meaning. Resources also need to be recontextualized to enable the use of information gleaned from various resources. Once contextual meaning has been established, information becomes organized as knowledge. (Personal tools and social networks section, para. 2)

The first e-tivity involves students getting to know one another and the technology being used. However, rather than simply writing a brief presentation, students are asked to choose an image, insert it in a blog post on the course blog and explain what it says about them. They are to do this using the Creative Commons page

on the image-sharing website Flickr (<http://flickr.com/creativecommons/>). Whereas many images and other artistic works on the Web are covered by copyright indicating "All Rights Reserved," Creative Commons licenses allow authors of artistic works to protect their creations with "Some Rights Reserved." In Flickr students can choose from over six million photos that members of the Flickr community have uploaded and protected using a Creative Commons "Attribution" license meaning students can use the images as long as they cite the source and author. This task gives students an introduction to the "netiquette" of Web 2.0 by focusing on the importance of attribution and linking when sharing and using shared materials.

E-tivities 2-7 aim at exploring Web 2.0 and learning how to use social software tools for language learning. E-tivities 2 and 3 focus on the blogosphere. As an introduction to how vast it is, in e-tivity 2 students are encouraged to find blogs using the blog search engine Technorati (<http://www.technorati.com/>). The initial reaction is often negative: "uf, I just got back from very long trip around the blogosphere. I have to say that I do feel overwhelmed with information right now. There is just so much out there to explore,

read and learn about” (Nina at <http://ninablogging.blogspot.com/>). This, however, is the purpose: for students to realize that they need to learn how to effectively exploit resources on the Web. For e-tivity 3 students have to develop their own personal blogs. They are able to use this space for personal expression as can be seen in the wide variety of layout and colours used, the extra media added to the different blogs, and the way each student develops his/her own writing style.

Once they have their blogs set up and have become bloggers, they have to learn how to start managing the information coming from the blogs they have to access. To do this, they are introduced to RSS feeds and feed readers in e-tivity 4. As Dalsgaard (2006) explains, “RSS enables connections between weblogs – or, rather, between people” (Personal tools and social networks section, para. 13). Students set up their own account in Bloglines and subscribe to the feeds for the course blog, the blogs of the peers in their peer group and other useful websites they have found that have feeds. They then create playlists in their accounts to keep track of whether or not their peers have completed the Task part of the e-tivity so that they can complete the Respond part. The instructor also uses playlists to keep track of students’ blogging without having to go to each student’s blog. The playlist shows all of the blogs, the titles of the most recent posts, when they were published and whether or not they have been read yet. By clicking on the title of a post, it is possible to read the contents without having to go to the blog. Students quickly learn that this tool can help them save a lot of time. As one student commented: “I appreciated this technology from the very first instant. As a matter of fact, I thought: This means that, to see if my peers have written something new in my blog, I’m not obliged to go in it and feel frustrated if there’s nothing new :(and, overall, I no longer have to waste my precious time surfing the net” (Sara at <http://zarascorner.blogspot.com/>).

While exploring the Web for feeds to subscribe to, students quickly learn that not all sites have feeds (their own institutional website, which is updated regularly, being an example). E-tivity 5 introduces them to del.icio.us (<http://del.icio.us>), an online social bookmarking site students can use to access and share bookmarks of their favourite websites online from any computer. First students learn that social bookmarking sites can serve as a filter for the information overload on the Web; for example, rather than finding everything on the Web in a Google search, in del.icio.us they only find resources other community members have taken the time to save and share. Students then learn to save their bookmarks, write short descriptions of them in the notes section and select appropriate tags. In order to create a distributed research network, students tag all the websites they find with the tag “BloggingEnglish” and create a network with all of their peers so that they can easily access both the websites of all the students in the course by using the course tag or only the websites of the peers in their groups by using their networks. Not only is the site easy to use, but students quickly realize how useful it can be as can be seen by the many titles of their blog posts which resemble one student’s “Another del.icio.us surprise!”. Students in the fall semester 2007 identified 4 main affordances of social bookmarking: exploiting the knowledge of the community, searching sites that have already been filtered, saving time by reading the notes or descriptions, and organizing bookmarks using tags, tag bundles and tag clouds.

The last two Web 2.0 tools explored during the first semester involve audio (podcasts) and video (YouTube) resources. E-tivity 6 asks students to search for and share podcasts that might be useful for their language learning and of interest to them and their peers. At this point in the course, students begin integrating the various tools by searching for them on del.icio.us, subscribing to the feeds of podcasts they are interested in having updates on and saving them in del.icio.us.

us. By sharing podcasts, students again find resources they had not come up with in their own searches. E-tivity 7 focuses on how YouTube can be used for educational purposes. The instructor places videos from YouTube in a BloggingEnglish group set up in YouTube (<http://www.youtube.com/group/bloggingenglish>) and asks students to discuss the videos directly in YouTube after having watched the videos. The videos chosen are mostly comedy skits from different countries; through discussion students analyze how various aspects of the culture are dealt with in the short skits. This activity is very similar to using comments in YouTube, but the discussion is reserved to a specific group of users. The choice to “close” this activity in a protected environment is based on the fact that the frequency of comments on the public space in YouTube would interrupt the flow of students’ discussion of the videos. Students are then encouraged to embed videos into their personal blogs. Students not only find this e-tivity fun, but they are also able to see how the tool, which many are already familiar with, can also be useful for their language learning.

After having explored numerous tools, students are asked to stop and reflect on the experience and what they have learned. First, with e-tivity 8, they are asked to consider what criteria they have used when judging whether resources they find, e.g. blogs, podcasts, videos, are valid and authoritative or not. They are then given a series of online resources from various English-speaking universities that discuss these issues of information literacy and asked to compare these “tips” to their own criteria. Students discuss their criteria via their blog posts and comments and then in class. Finally, with e-tivity 9, students have to start “building” a mindmap their own PLE for language learning. Together in class students brainstorm all of the different tools and sources they use to learn languages, both technological and not. In the e-tivity, they are provided with several links to sites that describe, discuss and demonstrate personal learning environments.

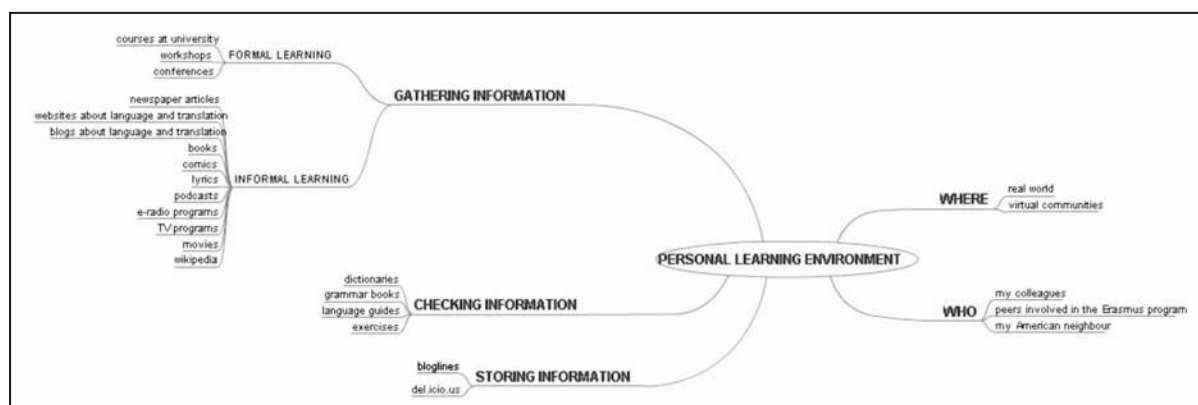
As was already mentioned, the concept of a PLE is still relatively new, meaning that there are no universally agreed-upon definitions. Therefore, it is up to each student to develop his or her own definition as he or she understands it and create a mindmap (Figure 1) of his or her own PLE and upload it to his or her blog. Students then present them to the class and are video-taped. The videos are uploaded to YouTube for analysis and reflection of their oral production. Finally, students have to write a mid-term paper describing what their personal language learning environment has become. They often find it a difficult task, “I found the PLE e-tivity to be the most difficult one” (Alessandra at <http://bloggingenglish1.blogspot.com/2007/12/freemind-trouble-shooting.html>) since it is the first time in their formal instruction that they have been asked to think about how they learn. In the end, they also find it stimulating, as Anna (<http://annabord.blogspot.com/>) states in her blog:

*I have to say that this is the first time I'm seriously reflecting on how and how much I'm actually learning English. I was surely aware of the fact that only a very low percentage of what I learnt at school or at the university is fixed into my brain! Anyway I didn't imagine how much of my knowledge came from those silly things I do every day! For example, do you know what a screwdriver is? I didn't until I discovered it during a match on a **point & click** game! Of course this is not enough ... I have to keep studying, reading and discovering new things such as words, slang, fixed expressions, and more! In other words, I need to regularly update my PLE!*

In the second semester, students are involved in telecollaboration projects with students in the United States. As part of the projects, in groups they develop the Interculture wiki (see Guth, 2008, for a more detailed description of this part of the course). While collaboratively developing the wiki with their peers abroad, they tap into the

Personal Learning Environments for Language Learning

Figure 1. Example of one student's mindmap of her PLE for language learning



various resources and tools they have learned to use during the first semester. For example, for communication, all use Skype in class, some outside of class, some groups use a blog created for the project and some use Facebook; many use del.icio.us to save their group's resources and most embed videos and images into their pages to enrich the content. Through this process, students continue to explore which tools best suit their own PLE. Throughout the second semester, students continue to do what is called "reflective blogging" on their personal blogs. In these posts, they focus on what they are learning and how they are learning. At the end of the second semester, they are asked to re-think their PLE and revise their mindmap if necessary.

Language Learning

During the first few weeks of the course, at the beginning of each e-tivity, students often ask themselves what all the technology might have to do with learning English. Although little research has yet to be done on the use of social software for language learning, an analysis of the data from the three iterations of this action research project seems to indicate that these tools promote language acquisition as well as learner autonomy.

The course described here has been designed for students with a C1 level (advanced) on the

Common European Framework of Reference for Languages (Council of Europe, 2001). These students must both revise known structures and learn new, more complex ones. If a course focuses solely on major structural components that have already been studied, then students may feel bored and that they are not making progress. Indeed, at this level it is more difficult for students to identify their progress. One of the most effective means for having learners recognize progress is self-diagnosis and raising awareness of their learning process. This is the aim of developing a PLE. Furthermore, at this level of EFL, one of the greatest challenges is building vocabulary and acquiring all of those expressions that cannot simply be learned by memory. Graduates in EFL should also be fluent in different registers, not just academic English. Exposure to authentic language used in real contexts, such as that offered on Web 2.0, helps students assimilate new language and then, through blogging, class discussions and their intercultural exchanges in the second semester, they learn to put new language into use. The following paragraphs will describe in greater detail how the four main skills, reading, writing, listening and speaking, are developed.

Blogging and exploring the world of Web 2.0 involve significant amounts of reading and developing different reading sub-skills from

scanning to careful reading. As Will Richardson (2004) states in his blog on educational blogging: “Blogging starts with reading. ... blogging, at base, is writing down what you think when you read others. ... The tool requires writing. The act requires reading. Without reading, you’re just writing, not blogging” (para. 2). In other words, in order to write their blog posts each week, students first have to read large quantities of text online, and to leave comments on their peers’ blogs, they must first carefully read and process the content. A rather typical comment was that of one student: “[t]hanks to this task I was obliged to search some news and first of all ... READ, READ, READ!” (Giorgia at <http://blogginggiorgia.blogspot.com/>). In the end-of-course questionnaire at the end of the 2006-2007 iteration of the course, students answered open questions on what they felt they had learnt with regard to different skills. Their comments regarding reading indicate that students learned to skim online texts quickly “in order to focus on the relevant aspects” but also “to be critical, interpret and select information.” Many felt they had “become more familiar with grammatical structures and different genres” through their reading as well. They felt confident they had improved both their reading and electronic literacy skills, i.e. how to read online.

Students have to write regularly throughout the course. They are encouraged to develop their own, personal informal style for writing in their blogs and providing peer feedback. They do this both by observing the language used by other bloggers and experimenting with their own style. Since they are more used to using a formal register when writing in English, the possibility to express themselves in a more informal and colloquial way is particularly important. As one student commented: “Till now, at the university, I was always supposed to study grammar and translation and in this way worked just with the formal side of the English language. But, I think that, while studying a language, one should also be aware of the more informal side of it, which emerges exactly from

blogs” (Monica at <http://joyful85.blogspot.com/>). Blogging allows each student to express his or her own style while maintaining an acceptable level of accuracy; the latter is guaranteed by students’ awareness that they have a real audience. They become aware of this fact as they receive comments not only from their peers but from bloggers outside of the course as well. Not only does this make students more responsible, but it also motivates them. One of the more sceptical students wrote in a comment to a peer’s post: “To me, the interesting thing about [the course] and e-tivities is the process of creating a written text that YOU KNOW will have readers!” (Enrico, comment on Nina’s blog <https://www.blogger.com/comment.g?blogID=5194152854192043022&postID=7995056968657446727>). Students also learn how to be concise and clear and effectively organize their blog posts into small, well-structured readable pieces of information, which is one of the greatest challenges for native Italian speakers.

In the second semester students have to maintain a more academic style of writing when writing on the wiki. In their questionnaires, 2006-07 students mentioned having improved their ability to use different registers (blog, peer feedback, wiki) and, given the amount of writing, to write more quickly under time pressure. In the 2006-07 iteration, students had to contribute both to the course wiki as well as to a public wiki called EduTech Wiki hosted at the University of Geneva (http://edutechwiki.unige.ch/en/Blog#Educational_Usages). Table 2 shows a wiki entry and a blog post written by the same student; a comparison of the two texts highlights the different registers used. There has been discussion about whether or not publishing online encourages plagiarism. Though it may be easier for students to cut and paste contents, it is also easier for the teacher to detect plagiarism in a digital text online. It is often clear when a sentence or paragraph in a student’s blog post or wiki is different from the rest of the text and by simply searching for the presumably copied text

Table 2. Comparison of a student's contribution to the public wiki

public wiki	<p>When writing on a blog, students have the possibility to explore the real world and its sources. They come to know a variety of tools they may never have considered before (i.e. blogs, syndication feeds, social bookmarking) and learn how to use them. First steps are sometimes frustrating. This can happen because of students' lack of knowledge of some technologies, but in the end this new knowledge becomes useful not only for classroom activities, but also for everyday life. Usually students' apprehension about blogging decreases in a few weeks as they learn to use the tools and increase their active participation. As pointed out by Jonathan Benda (2001, in Lowe and Williams 2004) "students lack background in the principles behind designing a Web site that really communicates something to an audience." Therefore, using blogs helps bloggers in their activities and increases their motivation.</p> <p>According to Susan McLeod (2001, in Lowe and Williams 2004), weblogs are "ways to help students explore and assimilate new ideas, create links between the familiar and the unfamiliar, mull over possibilities and explain things to the self before explaining them to others."</p> <p>If used within a class, blogs can be used by students to share their ideas, knowledge and thoughts. Writing online has a two-fold advantage: first of all, students can share materials –be it works, ideas, etc-; secondly, they can learn through practice and repeated use of the same tools.</p>
blog post	<p>This week we're collaborating on a public wiki: EdutechWiki, a wiki on educational technologies created by the University of Geneva. Erica Buzz and I decided to edit the Blog page.</p> <p>First of all, we had a look at the existing page and its contents. Its structure wasn't very clear: some sections were very short ("stubs"), while others were more developed, but contained repetitions. The language, too, needed to be improved. Erica and I decided only to focus on the section about the educational uses of blogs, but also to try and give the page a more logical structure.</p> <p>Then we looked for sources. This time I thought, "Forget about Google, let's see if del.icio.us really works!". I was stunned by the results--I immediately found a lot of useful resources. I'm starting to believe del.icio.us is the most useful tool we've learned about so far.</p> <p>Getting down to write our paragraphs wasn't difficult: Erica wrote a long piece about the advantages of using blogs in educational settings, while I edited the first sections (definition, blog structure, and blog etiquette--I didn't know Susanne wanted to do this part herself. Sorry, Susanne!). I found it particularly amusing that the system asks for simple maths each time you edit a page inserting an external link. A nice way to prevent automatic spamming, I imagine.</p>

in a search engine such as Google, students can be immediately found out. Once they realize this, they learn the importance of both paraphrasing and citation. The marks 2006-2007 students received on their mid-term and final papers, based on the same set of rubrics (including task fulfilment, organization, vocabulary and grammar) and done by the same two raters, indicated improvement for almost all of the students. In the 2007-2008 iteration most students shared a common weak point in their mid-term papers, i.e. task fulfilment and organization. Their final wiki pages, collaboratively developed in groups with their American peers, showed significant improvements in these two areas. The ease with which several features on the wiki can be used, e.g. table of contents, hypertext footnotes and links, and collaboration most likely encouraged these improvements (see http://tulanepadova.pbwiki.com/BloggingEnglish08_Final#Groups

for examples of the wiki pages produced by students in the 2007-2008 iteration).

As far as listening is concerned, as students learn to exploit resources like podcasts and YouTube, they find ways to develop their listening skills autonomously rather than solely in a classroom with the teacher. Unlike the other tools, podcasts are portable and can be downloaded onto tools students already have such as mp3 players (not only iPods), computers and even some cellular phones. They give students access to authentic texts on demand, i.e. when they want to access them and when they can. Many students are commuters and spend several hours each day on trains and buses and find that podcasts are a useful way to practice their listening skills while travelling. Indeed, podcasts became a part of many students' PLEs. Finally, from a motivational point of view, both online audio and video appeal to students because, as one student commented in the final questionnaire, "they give you the possibility to learn by having fun."

The one skill that offers more limited opportunities for practice on Web 2.0 is speaking, including conversation. Although students have 6-9 1-hour conversations via Skype with their American peers in the classroom and often in their free time, in the 2006-2007 iteration, they indicated in their questionnaires that they had not had enough opportunities to practice their speaking. Therefore, in the 2007-08 academic year, 2 hours a week were taken away from online tasks in order to have in-class discussions. Indeed, at the end of the Fall 2007 semester, one student stated: "What I liked most in classroom lessons throughout this semester were group discussions. Through discussions, in fact, I was encouraged to reflect critically on the issue which was being debated and to support my own ideas, which are both essential abilities in everyday life." Another possible solution would be having students develop their own podcasts and/or presentations to upload to slidecasts (<http://www.slideshare.net/>). This does not, however, meet conversation needs. However, new services such as the Language Channel on Chinswing (<http://www.chinswing.com/pages/channel.aspx?id=64d51c82-e192-49f2-8f60-d5f6a314ccc9>) are offering opportunities for students to have asynchronous spoken conversations on the Web.

Finally, just as important as learning any one of the four skills, is learning to be an autonomous language learner. Rarely are students asked to take a step back and consider what they are learning, how they are learning, and what their future learning goals are. This is the purpose of developing the PLE. One student summed the experience up with the following comment:

The final presentation of our P.L.E. we had in class made it finally clear to me that what we've been doing with Delicious, and Bloglines and YouTube and so on was actually a way to broaden our possibilities and increase our sources. Getting acquainted with new tools which can be useful for us is great but they are means, the end remaining our very personal process of learning.

Autonomy is especially important in this course because it is the last EFL course in these students' formal education. In other words, whether or not they continue actively learning after graduation will depend solely on them. It is worth pointing out that 4 students from the 2006-07 academic year have continued blogging in English since the end of the course. They have changed the names of their blogs but continue to explore the potential of Web 2.0 and participate in discussions with each other and other bloggers through comments. These students have continued to integrate various Web 2.0 tools into their blogs and use what they learned in the course to develop their own PLE for language learning as part of their post-graduation, informal language learning process.

BARRIERS AND CHALLENGES TO USING WEB 2.0

This chapter has so far mainly focused on the benefits of using Web 2.0 tools in language education. There are, of course, barriers and challenges as well. These can more or less be divided into two categories: technological barriers and pedagogical challenges. The former are referred to as "barriers" because they cannot necessarily be controlled by the instructor and students whereas the latter are "challenges" since there are often solutions to overcome them.

Technological Barriers

Many of the tools used in this course require broadband in order to work efficiently yet broadband remains inaccessible in many parts of the world, Italy included. Therefore, before embarking on any Web 2.0 project involving multimedia, educators must be certain that all students have access to broadband either at home or at designated computer labs. Although many students in this study decided to get broadband during the

course, several hours are reserved for students in the computer labs each week to allow them access to broadband to complete the e-tivities. This is particularly important for the exchange students staying in student housing without broadband.

Several authors (Blackall, 2005; Anderson, 2006) have noted that there may be barriers or drawbacks to using Web 2.0 tools to create PLEs. Whereas on an LMS, students have access to several different tools, some similar to Web 2.0 tools, bundled in one package, creating a PLE using Web 2.0 tools requires learners to learn how to use a myriad of tools. This can be a challenge considering that students, depending on their age, where they have grown up, how much access they have had to technology, etc., may have very different digital literacy competencies. One way this course aims to overcome this barrier is to introduce the tools during lessons in the computer lab and gradually, one at a time. Students then have the second semester to start fully exploiting the tools that most suit their needs and learning styles.

Another drawback when using any new technology is instability. The number of new tools available online increases significantly every year and at the same time many tools disappear after only a year or two online. Those that do remain go through the various versions often changing functions, layout and access permissions even every few months. This makes choosing which tools to use in education a very important decision. If the benefit of a PLE is that students can continue to use and develop it in the long term, then the tools that form the basis of the PLE must be as stable as possible. The tools used in this course were chosen because of their stability over several years and the large user base they have (which is often a guarantee of success and stability over time).

Finally, there is currently a lively debate, in both educational settings and not, about the quality of the content produced by Web 2.0 users (Keen, 2007). Although there is undoubtedly worthless,

if not harmful, content on the Internet, this fact makes it that much more critical to teach students the skills they need to filter out these contents. The Internet has opened the door to informed discussions by thinkers and academics who pre-Web 2.0 would have had to go through the long process of publishing to share their opinion with a wide public. If students learn how to access this material, they no longer have to depend on their local libraries and publishing houses to have access to a significant amount, though clearly not all, knowledge. The goal of both the blogs and wikis in this course is for students to learn how to become producers of knowledge and to contribute to that portion of Web 2.0 which contains quality contents.

Pedagogical Challenges

Grading and assessment are a challenge, especially when there are many students involved and when students are asked to collaborate. According to Johnson and Johnson (in Swan *et al.* 2006), “the key to successful cooperative learning is maintaining both individual accountability, in which students are held responsible for their own learning, and positive interdependence, in which students reach their goals if and only if the other students in the learning group also reach theirs” (p. 47). In other words, in a formal academic context where students place great value on grades, collaboration, not only language production, must be assessed if students are to place value on it. In order to do this in this course, based on the work by Meijas (2006), different percentages are assigned to the various aspects to be assessed. These aspects include both individual work (blog posts, papers, presentations), participation (in class and blog comments), and collaborative work (the wiki pages and group presentations). Students are also assessed not only on the linguistic quality of their work but their ability to reflect on their learning process, to interact and to stimulate debate. This process requires the teacher to assign weekly

grades for students' production, which can be time-demanding depending on the number of students. All the blog posts can be read directly in the feed reader whereas comments can only be accessed directly on students' blogs. With anywhere from 25 to 60 students, simply going to each student's blog and reading the posts and comments takes hours. Consequently, the instructor provides linguistic feedback for one or two groups only each week and more general feedback for the entire group. At various moments throughout the course students are also asked to self-assess and peer-assess using anonymous online questionnaires. Peer assessment allows students to receive more feedback than the teacher alone could give (see http://tulanepadova.pbwiki.com/BloggingEnglish08_Final#Groups for an example of peer assessment pages on the wiki). Finally, the results of the questionnaires help confirm or point out differences from the teacher's assessment of students when assigning the final grade.

Time is an issue for both instructor and students. Although the promise of e-learning was originally seen to be that it would save time and money, effective e-learning based on intense interaction between students and between the instructor and students has proven to be more time-demanding than traditional methods of deploying learning. Clearly the amount of time to be dedicated to a task depends on task design. Nonetheless, the model followed in this course (Salmon, 2000) requires students to interact, which is time-demanding. The rationale behind a social-constructivist approach to learning is that the learners gain more from the experience when they interact and learn to learn from each other. It is interesting to note that student participation is extremely active, nearly 100% for all tasks, in spite of the fact that, according to their questionnaires, students in this course work on average 7-8 hours a week online and attend 4 hours in-class for 20 weeks to receive only 3 ECTS credits (http://ec.europa.eu/education/programmes/socrates/ects/index_en.html), which indicate approximately 75 hours of study.

This would seem to indicate that students feel the time commitment is worth what they gain from the course.

Another issue that might be considered a challenge is level. The course described here has been designed for advanced (C1) EFL students. Therefore, they are able to exploit a vast range of online resources and express themselves freely and with ease on their blogs and the wiki. Nonetheless, these tools could be used with beginner (A1) and pre-intermediate (A2) students as well by simplifying the tasks and choosing appropriate resources for lower-level students to access. For example, a teacher could choose images from Flickr and have students describe the image using the comment function or have students blog about their personal lives, families, hobbies, etc.. Indeed, ideally students would start developing their PLE for language learning at the beginning of their language studies and then adapt it over time as they develop their skills.

PLEs and Web 2.0 are still at an early stage in their development and adoption in academia. "Unfortunately, large scale adoption of PLEs in formal academic environments will be stifled until the process of implementation can be duplicated (to ensure quality) and control points (in the form of metrics) exist for funding bodies and other stakeholders (like parents)" (LTC wiki, 2007, Current Barriers section, para. 5). For the time being their use in education seems to be limited to individual teachers and educators interested in using these tools in classroom and blended learning contexts, such as the course described here. Until they are used on a wider scale and in different contexts, it will be difficult to draw any definitive conclusions regarding the affordances of using these tools for language learning.

CONCLUSION

Any true transformation in language learning can only come about with significant paradigm shifts

in language teaching pedagogy. However, new technologies can help promote new approaches to language teaching. This chapter has argued that using new Web 2.0 tools to create social networks of learners on a public platform that is student controlled can empower students and effectively change the way they learn.

The first step in this process is active learning in a social context. In the BloggingEnglish course, working together in groups of interconnected personal blogs, students must learn together how to exploit Web 2.0 tools such as blogs, social bookmarking, podcasts, etc., for their autonomous language learning. Students develop their reading and listening skills by accessing resources on the Web and their critical judgement skills by learning how to choose which resources are useful for their learning. The second step in the process is reflection. This takes place weekly in their personal blog posts and culminates in the creation of a mindmap of their own Personal Learning Environment (PLE) for their language learning. Reflection and discussion take place both on the blogs, where the focus is on writing, and in classroom discussions, where the focus is on speaking. The third and final step is the lifelong process of adapting one's PLE to one's language learning needs in different contexts and moments in one's life.

The promise of using these new tools in language teaching does not lie in the technologies themselves, but rather the ideologies behind them. O'Reilly (2005) states: "You can visualize Web 2.0 as a set of principles and practices that tie together a veritable solar system of sites that demonstrate some or all of those principles, at a varying distance from that core" (The Web as Platform section, para. 1). The tools used in BloggingEnglish are characterized by three main principles and practices. The first is interaction. Blogging is based on the idea that we all have something worthwhile to say and that there is someone out there interested in reading what we have to say. As one student commented, "I'm aware

of the importance of technology in this course. I just think that the great thing about each one of us having to write a blog post every week is the inherent need for us to come up with something meaningful to say each time we sit in front of our computers, so that our posts are really worth posting." The second is sharing. Novices, and not just experts, can publish and share contents on Web 2.0. Image, audio and video sharing have created a plethora of resources for language learners that was inconceivable just 5 years ago and students themselves can now easily publish on the Web using these tools. The third is community. Social bookmarking has been successful because it has created communities of people with shared interests sharing resources. Language students can create their own networks that extend beyond the boundaries of their formal education. If language educators harness the potential these new technologies have, language teaching and learning can take place in an authentic social context where interaction and knowledge sharing create a community of learners that learn to learn from each other.

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KEY TERMS

Blog: Simply defined a blog, or weblog, is a sort of online journal organized in reverse chronological order where a person writes about their thoughts and interests, including providing links to relevant resources on the Web. Most blogs allow readers to leave comments. There are many different types of blogs from very personal journals to educational blogs. Different types of media from audio to video to images can often be integrated into a text blog. A blog may have one author only or several authors.

Feed Aggregators: A feed aggregator is a client software that allows users to receive syndicated web content from any type of website that uses feeds, such as newspaper websites, blogs, podcasts, etc. In other words, rather than having to regularly check websites for updated information, through the use of feeds (RSS, XML RSD, XML Atom), updated information is sent to the feed aggregator so that users have only one place to check for updated content. Users can decide how much of the updated information they would like to receive in the aggregator, e.g. a few lines or the entire text, and whether or not to receive just text or other media as well. Users can also go

directly to the websites from the aggregator. Feed aggregators provide a useful tool for managing the information overload on the Internet.

Informal Learning: Informal learning is learning that takes place outside of institutionally defined contexts, for example learning on the job and in one's personal life. It can be associated with other concepts such as lifelong and continuous learning, both of which are becoming more important in today's information society.

Podcast: A podcast is the distribution of audio files over the Internet using syndication feeds such as RSS so that users can subscribe to the podcast using feed aggregators to be notified when new content is added or so-called "podcatchers" such as iTunes or Juice which automatically download new content. Once downloaded the content can be played back using portable media players or personal computers. Although podcasts can often be listened to in streaming, what differentiates them from other online audio files is that they can be downloaded, are updated regularly and updates can be read by feed aggregators or podcatchers.

Personal Learning Environment (PLE): Although there is not to date a fully agreed-upon definition of this term, in this context it refers both to the set of web-based tools that are used to aggregate content and produce content on the Web as well as to the personal experiences and processes that lead to learning. An individual has control over the tools and contents of his/her PLE, which is not limited to a given course or learning context (e.g. school or university) but may continue to grow and change throughout the learner's life.

Social Bookmarking: Social bookmarking websites allow users to store, classify, share and search their own Internet bookmarks, as well as those of other community members, through using tags (folksonomies). Most services offer remote hosting so that users can access their bookmarks from any computer. Social bookmarking can serve as a filter for the information overload on the Internet. When users search on these websites, they are not searching the entire Web using an algorithm, as is the case on most search engines, but rather viewing websites other users have found to be useful, and taken the time to save, describe and choose semantically classified tags for.

Social Software: A generic term used to describe different types of software that enable people to collaborate and create and join online communities. The tools can promote different types of communication: synchronous one-to-one (instant messaging), synchronous one-to-many (Skypecasts), asynchronous one-to-many (blogs), asynchronous many-to-many (wikis), or asynchronous many-to-one (feed aggregators). These tools allow users to share and create content, collaboratively create and edit content and/or manage content.

Web 2.0: Although there is still controversy over the term, Web 2.0 is generally used to contrast the World Wide Web in the 1990s as a collection of websites produced by experts, institutions and companies (the read-only Web) with the changes that took place starting with the twenty-first century where Web applications allow end users to create and share content on the Web (the read-write Web).

Chapter XXV

Mobile 2.0 and Mobile Language Learning

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ABSTRACT

This chapter introduces the concept of Mobile 2.0, a mobile version of Web 2.0, and its application to language learning. The chapter addresses the following questions: What is Mobile 2.0? How is it relevant to the concept of Web 2.0? Is Mobile 2.0 ready for language learning analogous to that of Web 2.0? How is the efficacy of m-learning using Mobile 2.0 technology compared to PC Web 2.0? If Mobile 2.0 is appropriate for language learning, then how does one go about setting up a Mobile 2.0 site? Is Mobile 2.0 leading to a transformation of mLearning? Are there any limitations in using Mobile 2.0 for language learning? Finally, is Mobile 3.0 already emerging for learning? These issues will be discussed, and the relevant data will be presented to support the claims made in this chapter. Furthermore, specific examples of Mobile 2.0 and the empirical data of specific uses of mobile phones for educational purposes, especially for language learning in Japan, will be delineated. This chapter suggests that knowledge of Mobile 2.0 will strengthen and reinforce language teaching and allow students to learn more ubiquitously, more effectively, and in a way that is more at ease with their learning styles.

INTRODUCTION

This chapter will describe the notion of Mobile 2.0, which essentially, is Web 2.0 on mobile handsets, and the implications for language learning. It will provide definitions, current developments in Mo-

bile 2.0, and how Mobile 2.0 applies to language learning. The final section of the chapter will focus on the future and implications of Mobile 3.0.

The structure of the chapter is as follows: following an introduction to the field, the background of the existing research on Mobile 2.0 is outlined,

and a definition of Mobile 2.0, and its relationship to Web 2.0 is provided. The next section discusses several Mobile 2.0 phenomena that have recently been seen in the realm of business, and their possible applications to the field of language learning. Some examples of existing Mobile 2.0 sites will then be outlined, and ideas for using these mobile phone oriented sites for language learning purposes are given. Next, the chapter discusses some of the technical details for constructing one's own Mobile 2.0 sites for teaching, while considering the economics of creating them. This leads to a discussion of exactly how Mobile 2.0 brings about a new trend in mLearning and provides an explanation of how a transformation in mLearning will occur. Finally, some drawbacks of Mobile 2.0 technologies for learning purposes will be delineated.

In this chapter, we are primarily concerned with mobile phones, the most commonly carried and used handheld device. There are many other handheld devices which have the potential to supply language learners with the opportunity to learn ubiquitously, such as Personal Digital Assistants (PDAs), smartphones (a combination of mobile phones and PDAs), MP3/MP4 players, iPods, IC-recorders/players, portable radios, tablet PCs, portable DVD players, and digital dictionaries. However, with the ever-improving development of mobile phone technologies, the dividing line between mobile phones, smartphones and PDAs is becoming blurred, and it will soon be difficult to differentiate between them, as mobile phones will be able to build on most of the functions of these other devices in the near future (Trinder, 2005).

BACKGROUND

Technological Background of Mobile Assisted Language Learning (MALL)

In the last decade, mobile phone technology has witnessed incredible developments in technology:

from analog to digital and from plain and simple mobile phones to the current 3G smartphones which can serve as mini-computers, telephones, radios, televisions and cameras. This rise in technology has been so monumental that it is outpacing the devices that are currently on the market.

In Japan, as of September of 2007, the number of contracts with mobile phone companies (mainly NTT DoCoMo, au-KDDI, Softbank and EMOBILE) was 99,333,600 (Japan Telecommunication Carriers Association, 2007), which is roughly 79% of Japan's population. China, the largest mobile phone market in the world, had 508 million mobile phone users as of July, 2007 (Ministry of Information and Industry of the People's Republic of China, 2007). When coupled with other formats of mobile devices, such a large figure has created an enormous number of potential language learners who can learn anytime and anywhere.

As impressive as the increasing numbers of mobile phone users are, equally surprising is the development in the wireless telecommunications infrastructure and mobile device manufacturing technology. Since 2004 in Japan, mobile phone networks have been completely transformed into 3G, which allows the transmission of 384 kbit/s for mobile systems and 2 Mb/s for stationary systems. Currently, 75% of Japanese mobile phone users are using 3G services (Mobile White Book, 2007). Infrared, Wi-Fi, WiMAX and Bluetooth technology enable data communication between mobile phones and other digital devices. In the case of Japan, all mobile phones have Internet connectivity capabilities. Furthermore, of the 508 million mobile phones users in China, about 50.4 million are active Wireless Application Protocol (WAP) users (CNNIC Report, 2008).

The use of the Internet has become commonplace for most mobile phone users, enabling ubiquitous access to email, music, news, e-books, e-animation, blogs, online tickets, shopping, and auctions. In addition to the Internet, mobile phone users can access FM radio, mobile TV, and Global Positioning System (GPS) services. Putting aside

services stemming from mobile networks, mobile phones themselves can also act as multi-functional devices which can be used for purposes such as taking pictures and short videos, recording voices and mobile TV/radio programs, reading e-books, playing games, processing simple files, exchanging data with other electronic devices, and accessing dictionaries for language learning. On the whole, mobile phones are used as more than merely voice communication tools: they have changed our lives and have the potential to drastically change the way we learn.

Social Background of MALL

Technology acts to mediate communication (Sharples, 2000, p. 183), with communication now being the focal point of the teaching methods used by language teachers worldwide. Mobile learning is regarded as the new generation of learning (Levy & Stockwell, 2006), and with the establishment of the mLearning pedagogical theory (Ogata & Yano, 2004), in many countries, some open universities have already successfully conducted mLearning in distance learning education programs, and the results have proven to be effective (Thornton & Houser, 2004).

Japanese university students use mobile phones when commuting to and from school, during intervals between classes, before and after dinner, and when they relax at home. To this end, Kogure et al. (2007) found that 70% of Japanese university students spend 30-90 minutes on their mobile phones each day. In the same survey, 63% of the respondents said they would like to use mobile phones for language learning.

Despite the globalization of the telecommunications business, some human behavior is still local. The widespread use of mobile Internet in Japan has occurred because of the unique communication pattern among Japanese people. Japanese university-aged students use their mobile phones for any number of functions, and tend to carry them with them everywhere they go. In addition,

the use of SMS and emails via mobile phones enhances sociability among university students (Ishii, 2004), which has clear implications for the manner in which these students live their lives and their resultant expectations in terms of their communication habits. To be precise, young Japanese people tend to use their mobile phones for socialization and for text-based communication with their friends and classmates (Ito, 2004). As a result, the cultural trends and needs of Japanese university students auger well for mobile-based language teaching.

Thus, there is no doubt that mobile phones have great potential for language learning. From a pedagogical viewpoint, mLearning is often associated with an informal learning setting which can take place whenever learners want it to happen. To this end, language learning appears to be a good candidate for learning in informal settings (Hoppe, 2007).

The term MALL (Mobile Assisted Language Learning) was coined by Chinnery (2006), who regarded digital handsets such as mobile phones, PDAs and iPods as useful tools for language learning. He cited several language learning projects using mobile phones, including ones by Stanford Learning Lab, which gives Spanish learners access to vocabulary, quizzes and live talking tutors, all via their mobile phones. Second, Thornton and Houser (2003) tested short English lessons with their learners by sending them to mobile phone email addresses. Levy and Kennedy (2005) used the SMS function on mobile phones to assist students in learning Italian. All of the results of these programs were reported to be effective for language learning (Chinnery, 2006).

However, all of the above programs were developed before the concept of Web 2.0 became as popular as it is now. In these programs, learners could interact within the program to a certain extent, but the interaction was not really user-led. Likewise, the essential features of Web 2.0 are its user-led, community-based and collaborative content. Similarly, language learning on mobile

phones must emulate this type of interaction in order to best serve the needs of learners.

WHAT IS MOBILE 2.0?

O'Reilly Media created the phrase Web 2.0 in 2004 to refer to a supposed second-coming of the web that allowed users to collaborate and share information online in new ways by using web technologies such as CSS (Cascading Style Sheets), SOAP (Simple Object Access Protocol), REST (Representational State Transfer), XHTML, Ajax (Asynchronous JavaScript and XML), mashups, RSS and tagging. The concept of Web 2.0 is essentially a transition from the online consumer to the consumer/producer/participant. Podcasting, blogs, SNS, Second Life, wikis and YouTube are all examples of Web 2.0 that have been enthusiastically researched and used for language learning purposes (Thomas, 2007a, 2007b). However, what will happen if Web 2.0 for the PC world is extended to mobile handsets?

For the purposes of this chapter, Mobile 2.0, or Mobile Web 2.0 (Jaokar & Fish, 2006), refers to the extension of Web 2.0 to mobile devices, and specifically to mobile phones. Mobile 2.0 is a term that has been used since the appearance of Web 2.0 in 2004. Since then, educators started using terms such as 2.0 to refer to applications that have innovations stemming from Web 2.0 technologies, like CALL 2.0 (Computer Assisted Language Learning), MALL 2.0, and Learning 2.0 (McCarty, 2007). Mobile 2.0 can be understood as extending the idea of Web 2.0 to mobile devices; the mobile version of Web 2.0.

Mobile 2.0 constitutes the next generation of transferring data to mobile devices and it links Web 2.0 with the mobile platform to create something new: it creates a new set of services with increased mobility, and is as easy to use as the Web. These services point the way forward for the mobile data industry (Appelquist, 2006, para. 21). This demonstrates the pace at which this

emerging field of research and learning is moving. Furthermore, some researchers argue that Mobile 2.0 is outpacing the speed and form of Web 2.0, because the former is not limited by time and location constraints (Miyazawa, 2006).

From the above overview, some conclusions about the relations between Mobile 2.0 and Web 2.0 can be drawn: Mobile 2.0 is concerned with mobile devices and particularly concentrates on web-enabled interfaces that stem from PC Web 2.0 (Appelquist, 2006). Mobile 2.0 is not device dependent: any mobile device which can be connected to the Internet can be considered to be a Mobile 2.0 carrier. All functioning mobile phones, PDAs and iPods fall within the realm of Mobile 2.0.

Web 2.0 focuses on processing and storing data on the server side and offering services for the user, while the content is generated by the user. In the world of PC Web 2.0, most requests from clients for information are processed on the server side and then the user side retrieves data stored on the server and updates it. Unlike Web 2.0, Mobile 2.0 is more concerned with user-led services and focuses more on the user-side than PC Web 2.0, as mobile handsets can be used in almost any situation and in any place.

Most multi-functional applications, usually developed in Java, Python, or open C/C++, run fairly well on mobile phones. This has given mobile phones qualities resembling small, handheld computers. It can also be argued that the built-in GPS, FM radio and TV services on mobile phones makes Mobile 2.0 more revolutionary than PC Web 2.0.

One of the major advantages of mLearning is that it is spontaneous, portable and very personal to the user. Further, it can also be informal, unobtrusive and ubiquitous (Kukulaska-Hulme & Traxler, 2005). The following section will propose, examine and prove the efficacy of Mobile 2.0 when it is integrated with language learning and teaching.

MOBILE 2.0 AND LANGUAGE LEARNING

Some technologies are best suited for particular language learning activities. For example, the SMS function on mobile phones is ideal for vocabulary learning, as vocabulary items are naturally short and can be easily segmented into individual definitions and examples (Levy & Kennedy, 2005). A similar situation exists with the nexus between Mobile 2.0 and language learning. For example, text blogs are helpful for training writing ability and improving social identity (Thorne & Payne, 2005; Chiao, 2006). Wikis are useful as a medium of scaffolding for process writing. Thorne and Payne (2005) cite some educational projects utilizing Wiki technologies for language learning. For instance, L.Wiki (a particular Wiki to support Unicode encoding), supported by Pennsylvania State's national foreign language resource center, is used by a variety of groups and language courses, including Chinese, German, Russian, Spanish, English composition, and also for English as a Second Language.

The primary uses of iPods include individual and collaborative student authoring, course project management, and multiparty running commentaries. In the case of Podcasting (combining iPods and broadcasting) for language listening, it is worth noting that podcasting-assisted English learning programs started in April, 2004 at Osaka Jogakuin College, Japan (McCarty, 2005). 15-gigabyte iPods were provided to 210 newly enrolled freshmen. These iPods came installed with audio materials designed to improve learners' listening abilities.

Timely Teaching Feedback

Mobile 2.0 has seen the development of language learning topics, language tips, and even textbooks and teaching plans that can be ranked and commented on via mobile phones. Since mobile phones are highly accessible, the feedback from

students for their teacher's products can occur quite quickly and accurately. Mobile devices used for language learning should act as the learner's assistant rather than teacher (Sharples, 2000), and should offer the opportunity for an interface with which to interact in a meaningful way for language learners.

Mobile phone users tend to carry their phones with them everywhere they go and have access to them all day long. For the purposes of learning languages, PC users can only have access to learning materials when they are in front of their computers. For this reason, learners can only gain access to lesson content or evaluate their teachers when they get online in school or at home. This prevents the students from giving timely feedback on the teacher's lesson immediately after class when they have the lesson content fresh in their minds. Mobile 2.0 changes this in a remarkable way. If learners can use an evaluation system that is based on their mobile phones, feedback can be collected accurately and quickly without any extra burden on the learner.

To this end, Maeda, Okamoto, Miura, Fukushima and Asada (2007) formulated a survey which can be used for evaluating teaching based on the mobile phone's email function. The system proved to be more effective than PC and paper evaluations commonly conducted by language teachers and learners. In the mobile email-based system developed by Maeda et al., students are asked to view an online questionnaire with several multiple-choice questions and comment boxes to investigate their attitudes toward the class they just attended. As every student had a mobile phone with Internet capability, the survey had a very high rate of effective responses (Maeda, et al., 2007).

Real-Time Email Alerts

In a world of PC Web 2.0, people need to sign into their accounts to generate Web 2.0 content such as blogs, SNS and share photos and videos.

After that, content developers (users) must wait for others to view their messages or choose to subscribe to new ones through RSS feeds. The problem with this method is that in order to perform all these functions, users must be near a PC. This is not a restriction for Mobile 2.0 users, as they can send updated information to subscribers via mobile-based mail systems, which can be accessed in real-time.

Mobile 2.0 can also spread information more effectively than Web 2.0 by utilizing existing mobile phone numbers. In most cases, a Mobile 2.0 site can send messages to mobile phones without knowing any actual email addresses; all that is needed is a phone number. In China, SMS is available to all mobile phones contracted with any telecommunications company. In Europe, SMS can also be sent to mobile phones from PCs or from mobile phones (Miyazawa, 2006). In Japan, SMS is limited to mobile phones contracted to the same company, and SMS from PCs to mobile phones is blocked by major telecommunication companies in order to prevent large-scale spamming. Still, email is universally available for Japanese mobile phones (Mobile White Book, 2007), and mobile phone holders can also be reached by PC email accounts.

Kogure et al. (2007) and Thornton and Houser's (2005) surveys indicated that 100% of Japanese students possess mobile phones, with 99% of these students using their phones to send and receive emails. What is more important to educators in Kogure et al.'s (2007) survey is that 89% of Japanese university students use their mobile phone email function more than their PC email function. Thus, the ubiquitous nature of mobile phones and the desire for students to use them frequently creates great potential for language learners and teachers alike.

Registered or Unregistered Mobile 2.0 Sites

The URLs that are built into mobile phone menus are known as *registered* sites. These sites must

sign contracts with mobile telecommunications companies and pay a fee in order for them to be incorporated into the phones. Further, the content of registered mobile sites is investigated thoroughly by mobile phone companies (Tsutsumu & Yuyichi, 2005). For example, NTT DoCoMo, au KDDI, ezweb, and Softbank Yahoo! Mobile have a large number of mobile sites registered with them. Users merely need to scroll through their menu lists to find their desired sites.

Most language learning sites on mobile phones are registered sites, and provide a surfeit of Mobile 2.0 services. Sites such as the one in Figure 1 offer online quizzes, message posting, Wikis, RSS feeds, photos and video sharing services (see Figure 1).

Some well-known examples of registered language learning Mobile 2.0 sites in Japan include: English Forest (www.eigonomori.com/keitai.php), from which mobile phone users can do listening exercises, download texts, and take online quizzes; and English People (<http://eigojin.net>) enables mobile phone users to learn English words through games and Binary Runtime Environment for Wireless (BREW) applications. Learners can download and run programs from the site for playing games, sending messages and sharing photos.

These registered language learning mobile sites are mostly run by language schools and

Figure 1. A registered language learning site on EZweb, au-KDDI mobile phones



other language-related companies for a profit. The obvious drawback of these sites is that users pay for the time they spend online and for the use of the language learning site. For this reason, it may not be advisable for language teachers to put time and money into building a registered site. In the case of Japan, it is also unlikely that an individual mobile site will be approved by the major mobile phone companies.

As a result of the drawbacks noted above, language teachers may have to turn to *unregistered* mobile sites. These sites work much like a majority of sites on the Internet: they are made by users who have no affiliation to any specific site or company, and they are made for a user community with a specific purpose. Thus, language teachers can take advantage of this option, as it is a much cheaper and more user-friendly option to registered sites. A further advantage of unregistered sites is that they are built to have exactly the same functions as registered sites. In fact, the only added burden on the user of these sites is that s/he must manually input the URL of the site into his or her mobile phone.

Do-it-Yourself: Mobile 2.0 Sites for Language Learning

A popular and free Mobile 2.0 site builder for language teaching can be found at Winksite (<http://winksite.com>). The site claims that it makes it easy to create mobile Websites and communities that can be viewed worldwide on any mobile phone. Winksite allows users to build their own blogs, chat forums, conduct polls and create journals. It is truly user-friendly in that it does not require the user to download or install any software, and allows users to build and manage a mobile community over which they basically have a control (Winksite, 2007).

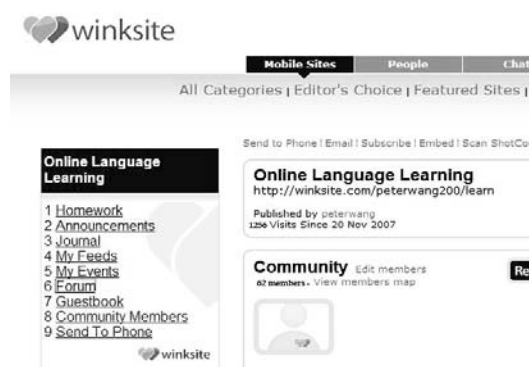
Language teachers can easily avail themselves of Winksite's functions. For example, teachers can make announcements to students, post homework assignments, give quizzes, and discuss language

tasks assigned in previous lessons. The use of mobile phones for these activities offers a multitude of educational opportunities for language learners, as it promotes interactivity and gives them quick and easy access to discussion and timely feedback from teachers (Thornton & Houser, 2003). Furthermore, teachers can encourage learners to work collaboratively on writing assignments in the target language, read magazines, and conduct group work, all via their mobile phones by customizing services from this site (see Figure 2). In Japan, there are several mobile page providers, such as HP Maker (<http://hp.0zero.jp>), Forest Page (<http://id.fm-p.jp>), and FHP (<http://fhp.jp>), which all have similar services to Winksite.

Foreign Language Acquisition through Mobile Blogs, SNS and Games

Beginning with mixi (<http://mixi.jp>), SNS in Japan has become extremely popular since 2004. As of May 15, 2006, Mixi had 4 million registered users and 130 million page views (PV) per day. Another popular blog site in Japan, Livedoor, had 8.6 million registered users by the end of April, 2006 (Mobile White Book, 2007). Both sites can be accessed by mobile phones, with both having a large contingency of foreign community users. Japanese language learners using these mobile sites have access to everyday Japanese language

Figure 2. Mobile 2.0 site using Winksite (2007)



use at their fingertips. The same can be said for learners of English, as there are a large number of English speaking bloggers belonging to these sites who regularly read and comment on the blogs on the sites. Access to these blogs gives foreign language learners yet another study option for learning the TL.

In the first half of 2004, SNS providers simply transferred their services from PCs to mobile phones without considering the special features of mobile phones. From the winter of 2004 to 2005, Japanese providers using SNS started to embed mobile phones with unique functions like GPS and mobile games. Coupled with these, Mobile Social Software (MoSoSo) can facilitate social encounters by allowing users to see others who are in the same geographic location as them. The implications for language learning are clear: Mobile 2.0 users can easily find out who in their community is nearby and available to talk and/or learn simultaneously.

Mobile SNS integrated with online games is another new tendency in Mobile 2.0. One successful integration of SNS and online games in Japan can be found at Mobage-town (<http://mbga.jp>), a mobile site offering free online games and a wide variety of community functions such as blogs, email, chat, and message boards. The site has some English games on it that can be used by language learners to gain a different perspective on language learning. After all, language teachers often employ games in their classrooms, so extending them to mobile phone usage is another facet of Mobile 2.0 that can greatly assist the language learner.

Lastly, mobile 2.0 users are ubiquitously involved in content editing. In schools, language teachers can encourage students to write or film their blogs or edit class wikis in the TL. Research shows that mobile communication can significantly increase students' extrinsic motivation without increasing pressure on language learners (Pei, Qin & Lu, 2006).

Language Learning via Animated Media on Mobile 2.0 Phones

Since Flash Lite 1.0 was released by Macromedia in 2004, it has been supported by most mobile phone companies. Flash Lite is very popular with mobile users who buy discount contracts with their providers, as they can usually view as many flash movies as they like for the same price each month. For language learning, Flash Lite can be used for creating flash cards to review vocabulary and grammar; a very popular method of learning new words with many language learners. Students who use smartphones can download the Flash Lite language software from the Internet and install it on their mobile phones. Students can also choose to view flash movies by connecting to a Mobile 2.0 site. In Japan, (<http://freedom-mobile.jp>) is a good example of how flash can be used to provide rich format contexts on mobile phones.

SMS Integrated with Instant Messengers (IM)

SMS for language learning has been gaining in popularity as of late. Levy and Kennedy (2005) sent Italian words, idioms and example sentences to students' mobile phones as SMS messages. The project proved successful for aiding in language learning and demonstrated that the use of SMS in language learning is a pedagogically sound technique.

Instant messengers (IM) are also valuable tool for language learners. According to Warschauer (1997), time and place-independent communication is one of the fundamental tenets of CALL, indicating that using movable instant messengers has the potential to greatly enhance a learners' experience with the TL. The integration of SMS and IM, which is advancing in the Mobile 2.0 world, serves as a connection between mobile phone users and PC users. Moreover, it connects mobile phone users even more closely to each other, giving them an advantage over conventional

PC users. In China, people can send SMS messages to mobile phones using QQ, the most popular instant messenger with Chinese youth. Skype, Yahoo! and MSN also allow users to send SMS to mobile phones by typing in the users' mobile phone number. Instant messengers like MSN and Yahoo messenger are available on most mobile phones with Internet capabilities, and mobile phone users can easily enter communities like mobile blogs from their phone's IM mode. Users can chat online with mobile phones partners or PC users. This allows potential language learners to exchange information much more conveniently when they are on the move.

Li and Erben (2007) report that language learners are capable of increasing their intercultural awareness with prolonged use of instant messenger services. They argue that these services can assist in boosting self-reflection capacities, critical thinking skills and create a greater sensitivity and respect for intercultural differences. In a time and age when these skills are so important for survival in an increasingly globalized world, language teachers and learners cannot afford to overlook the benefits of acquiring these qualities.

Mobile Search

In July 2006, Japan-based au-KDDI, in cooperation with Google, started a mobile search engine service that is available on their phone's menu bar. Then, the Japanese telecommunications company NTT Docomo, which was the first company in the world to create a mobile phone with Internet capability, embedded a whole host of Internet search engines onto its i-mode service: Google, R25, CROOZ! SeafTyy, and mobile Goo. Clients using these search engines can also obtain content from unregistered mobile sites and the original PC sites.

Furthermore, since the summer of 2006, Softbank has led the growing trend of Mobile 2.0 in Japan. Every Softbank mobile phone is now embedded with the following Yahoo! products:

page search; calendar; mail; messenger; animated cartoons; comic books with their popularity ranked by readers; games and news. As these services are quite new, many language learners do not possess a concrete knowledge of them. Language instructors can utilize these services in their classrooms by demonstrating how they work and by introducing potential peers with whom their learners can communicate.

GPS for Context Aware Language Learning

GPS navigation service allows people to find out a precise physical location with a high degree of accuracy. In Japan, GPS functions have been built into 26% of mobile phones (Mobile White Book, 2007). Educators can use this function with their learners to get them to work as a team and to make language learning more context-aware.

For example, language learners can use this function to search for other users who are near their current location. A Mobile Social Networking Service (SNS) using GPS makes it much easier for language learners to find a near friend who is interested in creating a learning group with similar interests. Accordingly, a group of like-minded Japanese learners could use the mobile site (<http://activo.jp>), a SNS site integrated with GPS. On the teaching side, instructors can usually identify the sender's location by analyzing the email s/he sent from a GPS mobile phone.

Mobile 2.0 LMS/CMS for Language Learning

LMS (Learning Management Systems) or CMS (Course Management Systems) are complex software or platforms designed for planning and managing learning activities online or offline. Popular LMSs for educational use are Moodle, a free open source teaching and learning management platform, and Blackboard (WebCT), a widely used commercial LMS. Gyuto-e, smart

HTML and ALCNetAcademy are good examples of LMS used for language learning purposes in Japan. In the era of Web 2.0, many of these LMSs have integrated Web 2.0 technologies.

It is natural to expect that the above types of LMS work on mobile handsets so that teachers can manage teaching and students can conduct learning remotely. Unfortunately, due to the fact that both the hardware and software on mobile handsets have inherent limitations in running a multi-functional LMS, it is difficult to transfer all types of LMS to mobile handsets. Hardware limitations include small screens, low bandwidths, low resolution of images, and the difficulty of typing on small handsets. Software limitations include the rejection of cookies and the fact that mobile handsets do not support as many applications as PCs. Moreover, mobile online learning security such as access control can only work reliably through integrating an operating system, which many current mobile phones do not have (Weippl, 2005).

Poodle, a mini-LMS course-management system developed by Houser and Thornton, is designed to read quizzes in Moodle's GIFT format, and randomly distribute questions and responses to learners of English, with each of these displayed in its own tiny webpage. The authors also built a Wiki and forum server which enables students to collaboratively learn about American culture. Poodle was highly rated by learners, who cited its ability to be used anywhere and anytime as one of its main advantages (Houser & Thornton, 2005).

With the exception of its online quiz function, Wikis and forums, other Moodle functions were not mentioned in Houser and Thornton's (2005) paper. Researchers at Sapporo Gakuin University, Japan, have successfully converted PC Moodle to mobile phones, allowing feedback and quiz modules to be viewed, but not any other functions of Moodle. Nevertheless, both Poodle and Moodle for Mobiles maintain their status as groundbreaking mobile LMS developments. With

the increasing enhancement in mobile hardware and software, powerful and comprehensive LMSs are bound to emerge in the near future.

CONSTRUCTING MOBILE 2.0 SITES FOR LANGUAGE LEARNING

A key element of using Mobile 2.0 sites effectively for learning is to be able to use them without being interrupted by the advertisements that seem to proliferate on many websites. But, seeing as most mobile sites are profit driven, it almost seems inevitable that advertisements are an evil that must be tolerated by language learners and teachers alike. For example, leading companies like *Google* and *Yahoo!* will always display search results ranked by their main advertisers first. Furthermore, email-based mobile sites force users to receive advertisement newsletters and marketing news. Naturally, users can choose to ignore these mails, but, unlike with conventional PCs, the mere act of receiving these materials costs time and money.

Therefore, language teachers need to concentrate on constructing easy-to-manage Mobile 2.0 sites that put the teacher in total control and are also free from such advertisements. Accordingly, this sub-section will provide some technical details for constructing one's own Mobile 2.0 sites for teaching while considering the economics of designing and using such sites. These details include: how to configure a server and a database using a free OS like Linux for hosting a Mobile 2.0 site; and the easiest and simplest ways to edit mobile phone web pages. Some ideas for creating QR codes, RSS feeds, and how to read these types of information will also be introduced in an easy to comprehend manner.

First, there are not many differences between building a Mobile site and a PC Web site. The main issues to be dealt with are that mobile phone screens and keypads are much smaller than those found on a PC, and the bandwidth of the former is

much smaller than that of the latter. When creating a Mobile 2.0 site, one needs a computer operating system, a server platform, a home-paging application to build web pages, and a File Transfer Protocol (FTP) program to remotely deliver web pages to the server. Hardware configuration can vary from needing an ordinary PC to a special server. In order to guarantee a quick and high-speed connection with the server, a stable high-speed broadband connection is one of the most important factors to consider.

Language teachers are usually operating under tight budget constraints that may hinder their abilities to create quality Mobile websites. The easy and low-cost Mobile 2.0 site proposed here is based on free open-source computer components. An ideal Linux-based operating system for these purposes is Fedora 8, especially when installed with an Apache Server platform, Mysql database, and PHP scripting language (<http://fedoraproject.org/get-fedora.html>). Next, because a Mobile 2.0 site needs interactive functions, a server environment that can support a Common Gateway Interface (CGI), and a Wireless Markup Language (WML), needs to be configured. Teachers without HTML knowledge can use the IBM Homepage Builder to assist them in making their homepages. The IBM Homepage Builder (Version 10 or higher) has all of the necessary functions for creating mobile phone pages and also provides the required FTP tools for transferring pages to the server.

When creators have finished their site, a mobile phone simulator is needed in order to view the pages that have been created and how they will actually look on mobile phones. Usually, these simulators can be downloaded from either the site of the mobile phone maker or from the telecommunication companies for free. For example, Nokia, Motorola and the three main Japanese telecommunications companies all offer simulators on their websites.

Considering the costs involved with registering a site so that its URL appears in the menu

of most mobile phones, teachers must find other ways of informing their learners of the sites they wish them to use for language learning purposes. Aside from sending the URL of the mobile site to students via email, another useful method is through the use of Quick Response (QR) codes. If a mobile phone's camera can read and interpret QR codes (as most newer models of phones these days can), we now have an easy and efficient method of distributing URLs to our learners. Creating QR codes is quite simple and there is free software available for download that can assist in the process. Some good examples include QR Window (<http://www.qrcode.org>) and Kaywa Reader (<http://qrcode.kaywa.com/>). Teachers can easily create their own QR code by simply entering the text to be used (for example, reading passages, information gap activities or quizzes), then hitting the create key. A QR code containing a URL with the input information will be automatically generated (see Figure 3).

When the mobile site is up and ready to use, it should enable learners to know in real time when data has been uploaded and updated, with RSS feeds making this possible. Many Internet sites now provide services to generate RSS feeds that are applicable to the content of any website. Hence, mobile phone users only need to download an application called RSS Reader, which allows them to have information continuously updated onto their phones.

Figure 3. QR image for URL: www.mobile2.com



MOBILE 2.0: A TRANSFORMATION OF mLEARNING

The potential of Mobile 2.0 for language learning was presented in the previous section. In fact, not only has Mobile 2.0 changed language learning for the better, but it has also fundamentally altered many other aspects of business and education. From shopping to making ticket reservations, and from finding accurate directions to learning, mobile devices have not only made our lives easier, but they also present us with opportunities we once may never have imagined. Throughout history, educational technology has greatly increased the way in which we learn: technology like movies, which has brought the world into the classroom since 1920, was considered to be a progressive teaching approach in the 1920s and the 1930s (Cuban, 1986). Moreover, radio was regarded as “the assistant teacher” (Cuban, 1986, p. 19) in 1930s. The 1950s witnessed a teaching transformation when TV was first used in the classroom (Cuban, 1986), and the 1990s witnessed the World Wide Web being introduced into educational settings. Nowadays, Mobile 2.0 has changed both the way we live our lives and the learning styles we employ.

There has been a plethora of research that envisions e-learning as an educational paradigm shift from classroom learning to distance learning (Ferguson & Keengwe, 2007; O’Neill, Singh & O’Donoghue, 2004; Blass & Davis, 2003). From 1996 onwards, when the Internet first applied to teaching, classroom teachers started to incorporate it into their regular classroom teaching. In the past decade, mobile devices have presented educators and learners alike with new opportunities for learning. They bestow upon us innovative means with which to conduct research, gain access to course administration and management, provide learners with support and guidance, and offer us the up-to-the-minute knowledge we require to compete and succeed in today’s increasingly wired world (Kukulska-Hulme & Traxler, 2005). Ally,

Schafer, Cheung, McGreal, and Tin (2007) assert that mLearning is distinctive because it facilitates the manner in which learning is delivered to people at the right time and in the right place. In the near future, “mLearning will become a normal part of lifelong education and self-directed learning” (Ally et al., 2007, p. 5). Accordingly, we believe the emergence of Mobile 2.0 will bring about a revolution in mLearning.

Mobile 2.0 frees people’s learning from a fixed place to any location with a rich user-led learning content. Since the emergence of Web 2.0 technology for mobile devices, not only can we now send and receive traditional emails and SMS on mobile devices, but other forms of 2.0 style mobile learning can also be used.

Mobile 2.0 uniquely provides learners with a movable, sociable, community-based synchronous or asynchronous learning environment. Face-to-face learning is usually restricted to classrooms, and e-learning on wired networks is confined to PC desks. On the other hand, mLearning without Mobile 2.0 tends to be too individual, isolated and fragmented. Multi-featured Mobile 2.0 learning environments cannot be duplicated in any other contexts.

Pedagogically, the learning theories that are typically applied to e-learning are also applicable to mLearning. Furthermore, already-established and newly emerging mLearning theories will guide educators’ mobile teaching and learners’ mobile learning in the right direction in the near future.

The limitations of mobile phone learning, which will be discussed in the next section, are likely to be overcome by the development of new technologies in the coming years. When mobile networks gain the capacity to reach broadband speeds, and when the inherent typing problems associated with mobile devices are eventually solved, the rich interaction and ease of content management that Mobile 2.0 promises will be fully functioning on mobile handsets. We will begin to see a complete transformation of hardware that will also facilitate a transformation in learning.

LIMITATIONS OF MOBILE 2.0 FOR LANGUAGE LEARNING

Mobile handsets have some inherent limitations. Small memories, small screen sizes and low image resolution, inconvenient word input, lack of technical standardization and compatibility, and slow Internet connection are the common complaints of mobile phone users. Nevertheless, Japanese learners may have different attitudes towards mobile phones than learners in other countries. Thornton and Houser (2005) and Houser and Thornton (2004) report that Japanese learners do not mind the small screen sizes of mobile phones, and had positive attitudes towards both mobile technology in general and using mobile phones for educational purposes. As a result of these cultural differences between learners in different countries, Japanese learners are very well suited to language learning with mobile handsets.

Some of the hardware drawbacks mentioned above negatively affect Mobile 2.0 functionality for language learning. A further pitfall outlined by Stockwell (2007) is the possible psychological barriers learners face: the apparent lack of willingness to even try language learning activities on a mobile phone. This section will outline these hardware drawbacks and propose some ways of remedying them so that mobile phones can be more useful tools for language teachers and learners.

Slow Internet Connection

The advent of 3G networks has dramatically increased the capabilities for Internet connections on mobile phones. However, compared to PCs, mobile networks are still lagging behind in bandwidth. Mobile 2.0 language learning sites with Consumer Generated Management (GGM) need students' interactions to rise in order to be successful, and a slow network speed can greatly frustrate students and eventually impede the efficacy of language learning. Thus, language

learners may soon lose interest if connection speeds are not improved upon.

Unlike PC Web 2.0, the weak storage capacity of mobile phones lowers the information volume available to them. Users cannot quickly upload high-quality and clear images and audio files when they write blogs and send messages to a Mobile 2.0 site. When a site lacks substantial multimedia content, it is bound to be less attractive to language learners. Even though more and more mobile phones now support Flash animation, since audio and video files are usually large, downloading these files can prove to be quite costly. Although discount packages are available to offset these costs (Kogure et al., 2007), users can easily surpass their monthly limit, thus making extensive use of mobile networks expensive. Hence, if our target is university students, the reality of budgetary concerns may supersede their needs as language learners.

Furthermore, even the capabilities of mobile-based email are limited. For example, Japan's NTT DoCoMo has a 250 double-byte maximum on all emails; Au-KDDI 2000 double-bytes; and Softbank only permits 192 double-bytes. Clearly these limitations can inhibit language teachers wanting to deliver learning content via email to their learners. Seeing as a short assignment in pure text format usually exceeds 200 bytes, there is a need for more space to ensure teachers can deliver quality lesson content to their learners.

Display Limitations of Search Results

Neither *Google* mobile nor *Yahoo!* mobile can display pages and lines in the same format as they appear on PCs. On mobile phones many links quickly become invalid, thus rendering them ineffective. Since mobile phone search engines use a different technology to PC search engines, the accuracy of searching on mobile phones is not nearly as proficient as on PCs.

With the exception of some so-called smart-phones with operating systems embedded in them, cookies are usually not allowed by the Internet browsers on these devices. As a result, a user's browsing history, browser version and other preferences cannot be detected. Without this information, teachers gain less feedback for the learning material they have designed. Consequently, if a learner's learning history and preferences cannot be obtained, the content designed by teachers turns out to be less adaptive to their needs (Gaudioso & Boticario, 2003). This is a clear drawback to Mobile 2.0 and further advances in this area are sorely needed.

Limitations of Data Transformation

In order to interact with Mobile 2.0 sites, learners need to exchange data with them. Exporting data from mobile phones is a cumbersome process that frustrates some learners. For example, upon asking our learners to upload short films made on their phones to a site, we found that the videos were in various formats: MP4, 3GP and AVI. Of these, AVI is the only one that is compatible with Windows Media Player and Real Player, which are the most popular and widely used media players on PCs. Therefore, teachers who want their learners to share their videos must first indicate where to download other players that can either play the files or convert them into a readable format. Moreover, attachments to mobile emails are bound by volume limits, thus further reducing the usefulness of learning via this method. Students can export data from their phones by using SD cards, a data cable, or via the Bluetooth or Infrared device on their phones. However, this only serves to reduce learning mobility.

The other weaknesses of Mobile 2.0 are that its tools and environment can be frightening to elderly language learners and those who are technically less proficient. Furthermore, there may be difficulty in monitoring interactions between

students, and problems with assessing mobile learning results (Dron & Bhattacharya, 2007).

All of these points are drawbacks to learning via mobile phones. Clearly the technology exists, and is improving at a rapid rate. It may only be a matter of time before these limitations are resolved. However, without further innovation, teachers can only use the tools available to them to facilitate language learning inside and outside of the classroom.

CONCLUSION AND THE FUTURE OF MOBILE LEARNING

Mobile phone technology seems to be improving daily. The innovations in technology and learning that occur on PCs will eventually be transferred to mobile phones, and it will not be long before they happen simultaneously. Just as PC Web 2.0 has had a dramatic effect on language learning, Mobile 2.0 has the capacity to revolutionize the way in which language learners access, and interact with, the target language. Mobile 2.0 enables Web 2.0 to reach beyond the restrictions of the wired PC world and connect directly to users and mobile devices which are always-on, always-available, and always-flexible, in ever changing and ubiquitous locations (Bruns, Cobcroft, Smith & Towers, 2007).

This chapter focused on how to use Mobile 2.0 concepts and technologies to benefit language learning and teaching. After explaining the salient terms in relation to Mobile 2.0, this chapter discussed how mobile emailing, chatting, blogging, SNS, online games, mobile searching, and the integration of SMS and IM can be used on mobile phones for learning foreign languages. This community-based and user-led educational style is undoubtedly leading to a transformation into mLearning; a transformation that will positively affect the way in which we teach and learn languages. Since Web 2.0 is still a developing process, changes in Mobile 2.0 are constantly

taking place. Arising from this discussion is a transformation from Mobile 2.0 to Mobile 3.0 that will eventually take place with a Semantic Web element possessing artificial intelligence being built-in to mobile phones. This will result in a virtual classroom that can be viewed on mobile phones that will feature 3.5G and 4G technology.

Furthermore, this transformation is one that has the potential to contribute toward a more comprehensive educational environment for language learners. That is, coupled with this new engagement with technology, pedagogical practices are bound to change in dramatic ways: teachers who now have new methods of conducting classes, communicating with students, assigning homework, informing students of grades, and of consulting with their fellow students (Thornton & Houser, 2004, 2005) will have improved methods of performing all these tasks at their fingertips. As a direct result of this, classes will no longer be fully dependent on the face-to-face interaction that is needed in the traditional CALL classroom. Language teachers who take advantage of mobile devices for teaching and learning can approach their classes differently, knowing that they have more resources at their disposal for conducting their lessons.

It is estimated that in 2009-2010 in Japan, mobile network bandwidth will be expanded to 100Mbps (Kozaki & Nishii, 2006). When mobile networks are capable of reaching such speeds, mobile phones will play a far more important role in language learning (Stockwell, 2007). Thus, the limitations described previously in this chapter will more or less become obsolete. Finally, with these increases in technology, mobile phones are bound to become indispensable learning tools for language learners who have the resources at their disposal. MALL will become as ubiquitous a term as CALL, and language learning will become an anywhere-anytime endeavor.

The challenge facing language teachers is to successfully harness these technological develop-

ments so that we can better serve our learners in the classroom. A further challenge for teaching and learning foreign languages in Japan is the relatively small number of language teachers that offer some online content for their classes (Thornton & Houser, 2005). More teachers need to take up the mantle of using technology to teach languages so our learners can benefit from the advantages of doing so. Moreover, training and practice is needed in order to make learners more efficient at using handheld devices for language learning purposes (Houser & Thornton, 2004). If these problems can be solved, then the pedagogical prospects seem limitless.

Finally, the following questions arise from the above discussion on Mobile 2.0 and its eventual transition into Mobile 3.0: How can we use the technological tools given to us to benefit language learning? How can we improve on these tools? How can we assist our learners in exploiting these tools so that they become better equipped to communicate in the target language in as many different modes as possible? These questions have clear implications for language teachers with the means at their disposal. It is up to teachers to realize the great potential and opportunity presented to them and their learners as a result of the innovative changes in technology we are currently witnessing.

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KEY TERMS

Learning Transformation: Learning transformation refers to dramatic transitions in the way in which people learn. Individual learning from families to school group learning was the first kind of learning transformation. The introduction of TV to classrooms led to a learning transformation in the 1950s, and in the 1990s the Internet brought a revolution to traditional classroom teaching. In recent years, Web 2.0 has been changing peoples learning styles, which is considered to be yet another type of learning transformation.

MALL: Short for Mobile Assisted Language Learning, refers to using mobile devices, such as mobile phones, PDAs, tablet PCs and iPods to assist language acquisition. As learners can use mobile handsets to learn anytime, anywhere, MALL is considered an effective language learning style and has received a lot of attention by educators in recent years.

Mobile 2.0: Mobile 2.0 is also known as Mobile Web 2.0, but there is no universally agreed upon definition. In this chapter, Mobile 2.0 refers to the extension, but not a simple replication, of Web 2.0 to mobile devices. Taking advantage of the unique features of mobile telecommunication networks and mobile devices such as mobility and handiness, Mobile 2.0 enables users to not only communicate by voice, but also to actively participate in the mobile Internet world by creating, consuming and sharing personalized content.

Mobile 2.0 Applications: This term refers to those applications which use Mobile 2.0 technology and run on mobile devices through mobile networks. Typical applications include mobile instant messenger, mobile media sharing, mobile web and mobile search, mobile GPS, and mobile RSS.

Mobile 2.0 Limitations on Learning: Mobile 2.0 has great potential in assisting learning activities, however, it also has some drawbacks in both its hardware and software aspects. The main drawbacks for learning purposes include: small memory, small screen, slow Internet connection

and the high cost of acquiring Internet content through these devices.

Mobile 3.0: Mobile 3.0 refers to the advent of Generation 3.5 or Generation 4, and mobile Internet activities will feature a Semantic Web element possessing artificial intelligence. This will result in a virtual classroom that can be viewed on mobile devices.

PDA: A Personal Digital Assistant is a handheld mobile device sometimes known as a Palm, can be used a phone or minicomputer. Using either a touchscreen or stylus, users enter data on office software such as address books, email, or schedule planners.

Chapter XXVI

The Pedagogical Potential of Interactive Whiteboards 2.0

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ABSTRACT

The first part of this chapter discusses the transformative potential of Interactive Whiteboards (IWBs), by analyzing the opportunities of using this technology in conjunction with Web 2.0 tools to support constructivist practice in the language classroom. The second part draws upon research data and literature review results to examine the role played by teachers in the realization of this potential. A special focus has been placed on the various evolutionary stages that teachers go through as they integrate IWB technology into their teaching. The research data derives from a case study conducted with nine English teachers from a secondary school in Germany. The study was conducted within an interpretative research paradigm, and data were collected via qualitative research instruments, namely interviews, classroom observations and the video recording of one IWB training session. Research findings revealed that the teachers investigated were gradually becoming aware of the transformative potential of IWB technology.

INTRODUCTION

The creative and transformative potential of new technologies has been widely discussed in the literature (Hubbard & Levy, 2006; King, 2002). One of the claims that have been made is that new technologies create new opportunities for the implementation of a constructivist-based learning environment, in which learning is seen

as an active process of knowledge construction through interaction (Vygotsky, 1978). From the teachers' perspective, it has been pointed out that access and use of technology can help teachers to rethink their practices and, in doing so, may lead to a professional development that goes beyond the acquisition of new skills and knowledge about the technology (King, 2002; Meskill et al, 2007).

This chapter discusses the transformative potential of interactive whiteboard (IWB) technology by considering two main factors: a) the role played by teachers in the realization of this potential and b) the IWB applications that create new opportunities for transformative learning. The main focus will be on how IWB technology and WEB 2.0 tools can be combined to support constructivist practice in the language classroom. The term “IWB 2.0” (Wenger, 2007) has already been coined to describe the possibilities of melding IWB technology with Web 2.0 tools. However, there is a need for more extensive discussion of how this could be done in practice.

INTERACTIVE WHITEBOARD TECHNOLOGY FEATURES

An IWB is basically a surface onto which a computer screen can be displayed via a projector. It is touch-sensitive, which means that all applications on the computer can be controlled by touching the board, either with your finger or with an electronic pen/stylus. Through interaction with whiteboard, the users can change the displayed information on the computer and save them for later use. In other

words, the IWB with its projection capability and touch-sensitive feature facilitates interaction with a computer in the classroom in a similar way as known from blackboards. Many different brands of IWB are currently available. Some examples are: Activboard (Promethean), Smartboard (Smart) and Starboard (Hitachi).

Most IWBs are supplied with specific software tools to exploit the potential of the board. This software enables the use of “electronic flipcharts,” which are blank pages for creating teaching materials. Pages can be turned backwards and forwards. The number of pages that can be used is unlimited. By making use of the software, the teacher has access to various tools which enable several activities, such as: handwriting, colouring, highlighting, dragging and dropping, hiding and revealing, handwriting recognition, web browsing, creating snapshots, designing interactive exercises and so on. IWBs can also be used to present and control other software, for example, any teaching application, Web browsers with all related tools or video applications.

IWBs are often used in conjunction with remote devices, such as graphic slates and learner response systems (voting systems), which help to enhance the scope of pupils’ participation and

Figure 1. One of the researchers using the interactive whiteboard during a workshop session



interactivity during the lessons. Learner response systems, for instance, enable teachers to ask their pupils to vote electronically on questions. Each student is given a voting keypad (which can be registered with the whiteboard so that each student has a unique ID) and can respond to teachers' questions. Results can then be displayed immediately on the whiteboard in graphical form and exported to a spreadsheet. The technology allows teachers to decide whether they want pupils to vote anonymously or on "named mode" (Cutrim Schmid, 2006, 2007, 2008a).

LITERATURE ON INTERACTIVE RESEARCH AND PRACTICE

As Higgins et al (2007) explain, the use of the IWB may be the most significant change in the classroom learning environment in the past decade. Although it is still considered a relatively new technology, it is becoming increasingly commonplace in educational institutions in many parts of the world. The UK was the first school-level market to substantially invest in the use of IWBs. However, many other countries including Australia, Mexico, China, France and Portugal, have also invested heavily in the installation of IWBs in their primary and secondary schools.

Most literature is positive about the potential of IWB technology. Some of the advantages associated with the use of IWB technology are: a) it facilitates the integration of multimedia into the curriculum (Walker, 2003; Hall & Higgins, 2005; Gray et al., 2005), b) it caters for diverse learning styles (Wall et al., 2005), c) it enhances motivation (Moss et al., 2007), d) it enhances interaction and collaborative learning in the whole class setting (Cutrim Schmid, 2008c), and e) it models Information and communication technology (ICT) skills (Goodison, 2002a, 2002b).

However, the IWB has also been a target of criticism by proponents of constructivism. It has been argued, for instance, that the IWB technol-

ogy may encourage teacher-centeredness, since it tends to reinforce the dominance of the front of the room. More recently, with the advent of Web 2.0 applications (such as Wikis, blogs, and podcasts), which provide novel opportunities for online collaboration, IWB use has been seen by some educationalists as a step backwards in the process of breaking down the walls of the classroom with the new Web technology. In fact, the topic of this chapter was motivated by a comment made by James Yap (2006) on *the Pulse: Education's Place for Debate* blog, in which the writer defined the IWB as the antithesis of everything that Web 2.0 technologies represent. The commenter points out:

Everything that Web 2.0 technologies represent, the interactive whiteboard is the antithesis of. Web 2.0 technologies allow for interactivity by all and from anywhere. Spending 1500 or more on a technology that keeps the four walls of the classroom up, whether it be a front of the classroom approach or otherwise, is just wrong. We must give our students ways of collaborating and learning outside of school and the normal school day. (Yap, 2006, n.p.)

As a proponent of the use of new media, and in particular Web 2.0 tools in education, and a conversant researcher in the area of IWBs for use in the language classroom, I felt the need to respond to this comment. One of the insights that emerged from my past research was a better understanding of the relationship between the potential of a technology and the actual realization of this potential. For example, while in some contexts the IWB technology might be used to "keep the four walls of the classroom up" (Yap, 2006, n.p.), the technology also holds the potential for being used as an open window to the world. This potential can be realized, for instance, by using the whiteboard as a) an access portal to the vast amount of Internet resources (including Web 2.0 tools), b) a platform for collaboration

with other classrooms/experts by means of videoconferencing, and c) a means to provide whole class access to student-generated Web 2.0 content in the classroom.

In the same way as the pedagogical use of Web 2.0 tools will not, in itself, support a constructive approach to teaching, the IWB whiteboard can also be exploited for the implementation of various pedagogical approaches. The success of using either of the technologies depends on several factors, namely: teachers' pedagogical views and knowledge, teachers' and pupils' levels of media literacy, teacher's experience with the technology, teachers' access to technology training, and so on. In this chapter, I will draw upon the findings of a case study carried out in a private German integrated school to discuss how the IWB technology can be used as a useful resource for the implementation of an activity-rich, autonomy-enhancing, project-based approach to language teaching.

THE RESEARCH PROJECT

The school investigated is an integrated school, which provides high quality teaching in the private sector at primary and secondary levels. It is equipped with IWB technology in every classroom. The main motivation for the investment in IWBs by this school was the fact that many of its pupils have physical disabilities and face difficulties in taking notes during the lessons. The IWB was thus seen as the appropriate technology to meet the needs of those pupils, since all whiteboard annotations can be saved to the classroom computer and then moved to an Intranet, where they can be accessed by all pupils at any time. However, the installation of IWBs is only one element of a broader program of technology integration, which also involved a huge investment in laptops and educational software. Some of the IWB classrooms in the school are also equipped with one laptop for each pupil.

Nine English teachers, who had been using IWB technology for about three years, participated in the research project, which was carried out from May to September 2007. All participants are well-qualified English teachers who subscribe to the principles of constructivism, and in most lessons employ a communicative approach to language teaching, with a special focus on project-based learning. Their teaching experience ranges from three to twenty-five years and their levels of media literacy also varies, ranging from basic to intermediate. All of them are teachers at the secondary level. In the first part of the project, teachers' use of IWB technology was investigated in order to identify the level of support they needed for the effective integration of this technology into their teaching. In the second part, the data collected through classroom observation were used for the design and implementation of four IWB training workshops. The training sessions were held at the school in question and lasted for about two hours each.

The teachers underwent individual in-depth semi-structured interviews in the initial and final stages of the project to explore the following issues: a) their perceptions of the pedagogical potential of IWB technology to enhance language learning, b) their evaluation of the quality of the support and feedback they received throughout the training program, and c) their suggestions for the design of future technology training programs. All the interviews and one training session were recorded and transcribed for analysis. Classroom observation data were collected through field notes produced by three researchers working in the project.

Although the teachers investigated had been using IWB technology for about three years at the time of the project, their level of IWB technology expertise was still considerably low and several of them used the IWB as a mere writing space. Most teachers pointed out in the interviews that they felt insecure in their abilities to use the IWB in the classroom due to a lack of training and

experience. Therefore, in addition to the description of the activities and materials used during the lessons investigated, I will also include other possible pedagogical uses of IWB technology, with a special focus on the incorporation of Web 2.0 into the pedagogical process. This will be referred to as “what the teacher could also have done” in that context. In the second part of this chapter, I will focus on the role played by teachers in the realization of the transformative potential of IWB technology.

HOW CAN THE IWB CONTRIBUTE TO THE WEB 2.0 REVOLUTION?

Several authors (Rüschhoff, 2007) have pointed out that Web 2.0 tools, such as wikis, blogs and podcasts have the potential to revolutionize language learning because they a) support communication in the target language through a medium that the students are already familiar with and find engaging, b) create new opportunities for collaborative language learning outside the classroom, and c) provide students with a sense of audience for their language writing.

However, one of the difficulties associated with the integration of Web 2.0 tools into the teaching and learning process is the fact that many teachers do not have access to these technologies in their normal classrooms, which makes it difficult to link the Web 2.0 related activities to their everyday teaching. In many contexts, the use of these tools is associated with isolated projects which have little to do with pupils’ everyday classroom practice. In this context, the IWB could serve as a linking bridge between the collaboration that is done outside the classroom and the collaboration that happens in the classroom (e.g. through the use of online multi-user whiteboards in connection with IWBs).

A key issue associated with the use of Web 2.0 tools is the student familiarization with the so called “electronic literacies” (Warschauer, 1999).

As students make use of Web 2.0 tools they need to be supported in the process of finding, evaluating, critically interpreting net-based information and communicating online. Today’s students are usually referred to as “digital natives” (Prensky, 2001) since they have grown up exposed to and using digital tools. However, a closer examination of their literacy practices in connection with their use of digital technologies will show that they face several challenges which can compromise the quality of their web-based learning experiences. Two of these challenges are a) the overwhelming amount of information available on the Internet and b) the practice of plagiarism. Online practices, such as students copying and pasting web information directly into their wiki pages, have been reported in the literature and are an issue of concern to teachers.

In what follows, I will discuss how the IWB can be used as a digital platform for discussing important reading and writing strategies, and how students can use them to enhance their language learning experiences with Web 2.0-type activities. In order to provide a more practical and tangible view of this point, I will use an example of one of the English lessons observed. It was a 10th grade double lesson which lasted ninety minutes.

THE IWB AS A PLATFORM FOR MODELING ICT SKILLS

The classroom was equipped with an IWB and laptops for each pupil with wireless Internet connection. The overall topic of the teaching unit was “business and companies” and the pupils had read a text about the history of Sony Corporation in the previous lesson. The lesson started with a listening activity about rules of politeness when meeting Japanese business partners. During the listening phase, the pupils had to answer some textbook-based multiple choice and true or false questions. In the second part of the lesson, the pupils had to complete the following task: prepare a five-minute PowerPoint presentation about a

company of their choice, focusing on its history, business and level of success.

While the students worked individually on their laptops, two researchers observed how the pupils approached the task, especially their reliance on the *Google* search engine to find information on the Web. The researchers noticed that only a few employed successful Internet search strategies in that phase. Another problem was pupils' tendency to copy information from the Web and paste whole chunks of text into their newly created PowerPoint presentations without reading it first, which could encourage plagiarism. Therefore, it became clear that those pupils would have needed more guidance and support for the successful completion of the task proposed. Some of the skills the teacher could have helped the students acquire are: a) developing strategies to search the Web effectively in English b) understanding online plagiarism and ways of preventing it c) developing adequate paraphrasing strategies and d) referencing online material. In this specific lesson, the students were not required to engage with Web 2.0 tools. However, the strategies listed above are also extremely important for the successful exploitation of these tools in the language learning context.

Although this was an IWB-based classroom, the technology was not used during the lesson. In terms of learner use of the technology, the IWB was going to be employed by the students in the "report stage" of the task cycle (see TBLL framework proposed by Willis 1996). However, the potential of IWB technology for supporting whole-class collaborative learning (Cutrim Schmid, 2008c) and the acquisition of new media literacies (Goodison 2002a, 2002b) was being underexploited. These pupils would have benefited, for instance, from a whole group discussion on the best strategies for searching such information on the Internet, and the IWB could be used as a collaborative digital portal to better prepare the learners for the task they would have to accomplish individually later on.

In the school investigated, teachers often required or (at least) encouraged learners to use new technologies for their learning. However, in the lessons observed, the pupils were hardly ever provided with adequate guidance and support to help them explore ICT for educational purposes. In that context, the pupils were often seen as more computer-literate than the teachers. Therefore, their ability to use electronic material for educational purposes was usually taken for granted. However, a detailed investigation of how those pupils use new technologies in their learning process would certainly show that this is not always the case. Although the students are skilled in manipulating new technology applications, they sometimes lack basic strategies to exploit these tools for language learning purposes.

The teacher in question characterized his level of technology expertise in general as low. In the interviews, he acknowledged that he had not embraced the IWB technology fully because he did not feel confident enough to experiment with the technology in front of the pupils. He pointed out that his students tended to use the technology much more often than he did.

Therefore, in this context the teacher's low level of technology expertise was the main obstacle to a more holistic approach to technology integration. In other contexts, however, more computer-literate teachers find themselves in similar situations due to the lack of access to new technologies in their classrooms, which creates a separation between computer lab work and classroom learning. However, the access to an IWB may create a new learning environment in which the distinction between computer lab work and classroom learning is diminished.

THE IWB AS A PLATFORM FOR COLLABORATION

Other important skills pupils need to acquire (or develop) in order to benefit from Web 2.0 learn-

ing environments are *online collaboration skills*. When engaged in the production of wiki pages, for instance, pupils are required to engage in collaborative writing with their peers. However, many pupils still lack basic skills needed for collaborative writing, namely: brainstorming of ideas, editing each other's work and completing and counter pointing each other's ideas and thoughts. Furthermore, this new collaboration medium also has inherent features which need to be dealt with, such as: history links, interlinking of pages and collaborative editing. In what follows, I will discuss the potential of IWB technology to support the development of collaborative writing strategies in the whole class setting.

In one of the lessons observed, the IWB was used by the teacher to display students' writing so that it could be analyzed and edited by the whole class. This was a 12th grade group and the general topic of the teaching unit was "homelessness." In the previous lesson, the teacher had used Phil Collin's "Another Day in Paradise" lyrics to introduce the topic, and the pupils read a text about homelessness in Europe. Their homework consisted of creating a dialogue between themselves and a homeless person reaching out for help. In this lesson, the pupils brought their dialogues in MS Word format, which had been saved on USB sticks, and the teacher displayed some of the students' texts on the IWB for collaborative analysis. The pupils were then encouraged to evaluate the appropriateness, coherence and linguistic quality of the texts. During the analysis, the teacher drew a distinction between the elements that could be edited directly by the class (mainly language mistakes) and the so-called "suggestions for improvement" or comments, which left space for the final decision of the author. After being revised, the texts were saved and returned to the authors.

The collective analysis of a MS Word document by the whole class was beneficial to the students not only in language learning terms, but also helped them to a) develop important strate-

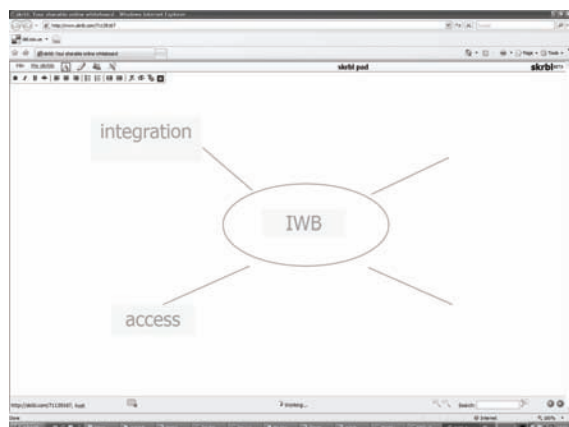
gies for collaborative writing and b) familiarize themselves with technological tools, such as the "Track Changes" and "Synonym Search" in MS Word, which can be harnessed to enhance language learning.

This is an illustration of how IWB technology can support the collaborative use of ICT tools and the development of strategies that can then be used for computer-based group work, which is done outside the classroom. The group in question used MS Word tools because this is the technology they are familiar with at this stage. However, the same approach could have been used by a group of learners involved in the creation of a wiki. The teacher could display the wiki page on the IWB and, together with the students, evaluate not only their wiki product but also their writing processes (by checking the history links). Therefore, with the access to IWB technology in the classroom, the teacher could more easily integrate the wiki work into other classroom-based pedagogical activities, such as proof-reading and strategy training.

The teacher also made extensive use of the IWB to create mind maps together with the students, with the use of IWB software. The main advantage of using IWB technology for this kind of activity is that all the annotations made by the teacher and pupils can be saved to the computer, printed off and/or retrieved in other lessons. The handwriting recognition tool can also be used to convert handwritten script into computer-style text, which can be useful to improve the clarity of presentation and quality of printouts.

In this school, the mind map files are saved to an Intranet, where they can be accessed by the pupils at any time. A possible limitation of this approach is that the collaborative construction of mind maps is restricted to the classroom environment. However, there is also the possibility of combining the use of the IWB as a collaboration platform with the use of free Web 2.0 applications for brainstorming, the so called "online multi-user whiteboards," such as *skrb1* and *bubbl.us* (see Figures 2 and 3). By using these applications, mind

Figure 2. *Skrbl* interface

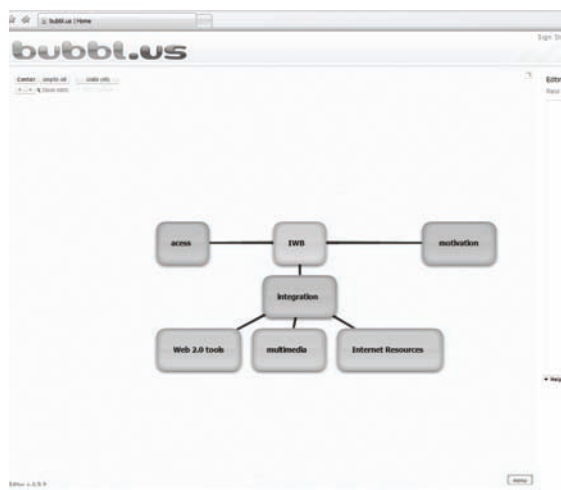


maps constructed by the class during the lesson can then be expanded by the pupils as homework and accessed in subsequent lessons for analysis and improvement. Some of these applications, such as *skrbl*, incorporate features that facilitate their use in combination with the IWB during the lesson, namely a) freehand writing and drawing, as the teacher can use IWB electronic pen to write directly on this web-based application and b) “drag and drop” tools. The document can then be “published” and the link can be placed on a class blog for pupil access. Alternatively, teachers can also add *skrbl* whiteboard code snippets to the class blog, where pupils can initiate mind maps which can be further expanded during the lessons. Although these multi-user web-based whiteboards still offer limited capabilities for online collaboration at the present time, their functionality will certainly improve as their use becomes more mainstream.

THE IWB AS A PLATFORM FOR SHARING STUDENT-GENERATED CONTENT

All teachers pointed out in the interviews that the IWBs were mainly used by the pupils in the

Figure 3. *Bubbl.us* interface



presentation phase of the lessons. Therefore, pupils were given plenty of opportunities to use the technology as a means of expressing themselves and sharing their knowledge with their classmates. In fact, most of the teachers investigated stated that the availability of this technology raised pupils’ motivation to do the presentations, since they could draw on a great variety of multimedia resources. Another clear advantage of using IWB for ICT-based presentations is the possibility to draw upon a variety of IWB software tools, such as a) highlighter, b) reveal tool, c) spotlight (see Figure 5), d) eraser (by using the whiteout effect) and e) annotation tools and various colors in order to engage the other pupils and bring more excitement to the activity. The White-Out effect consists of using a thick pen on white to hide words or pictures. The eraser tool is then used to reveal the text or image again (see Figure 4). These tools can also help pupils to further the development of questioning skills.

In the same way as pupils could employ IWB software tools to enhance interactivity during their PowerPoint or flipchart presentations, they could also create Web 2.0 content, which contain interactive elements that can be exploited during the lessons with the use of IWB technology.

Figure 4. White-Out Effect

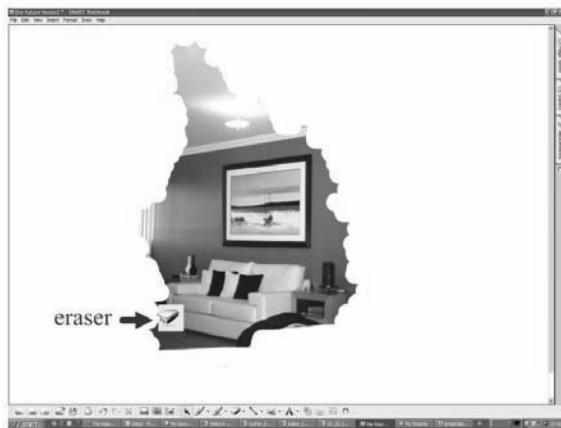
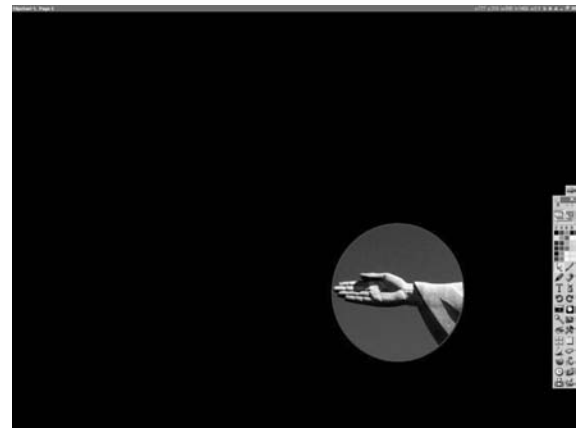


Figure 5. Spotlight Tool



One possible scenario would be: pupils embedding interactive games into their wiki pages and “testing” their classmates’ language or content knowledge during the lessons. *Quizlet* is an example of Web 2.0 tools that enables the creation of such exercises.

Since *Quizlet* supports the design of “drag and drop” interactive exercises (scatters), for instance, its use overlaps well with IWB use. Another possibility would be the combination of pupil-generated quizzes with the use of learner response systems during the lessons.

In the context investigated, PowerPoint was the technology most frequently used by the pupils, as this seemed to be the computer application that they were more familiar with. In the lessons investigated, there were no examples of Web 2.0 tools being used by pupils in their presentations. One of the pedagogical tasks described in the previous section consisted of pupils writing a dialogue between themselves and a homeless person reaching out for help. In that lesson, the pupils made use of Microsoft Word technology for their writing. However, they could also have made use of a variety of Web 2.0 platforms which support the creation of dialogues through the incorporation of visual and audio media, such as *Dvolver Moviemaker* and *Makebeliecomix*. Apart from enabling the design of more engag-

ing and exciting presentations, the use of these platforms would allow learners to access their classmates’ work outside the classroom and even comment on them (if they are posted on a class blog, for instance).

Teachers in that school gave pupils access to IWB technology for sharing their work, thoughts and ideas. This was seen as the main step taken by those teachers so far in the realization of the transformative potential of this technology. The next step would be to explore other tools, which are already being used by the pupils in their every day lives, such as: *YouTube*, *Voicethread* and *Slideshare* in order to maximize their involvement and enhance their motivation to communicate in the target language.

As already pointed out, the transformative potential of IWB technology lies in its potential for supporting technology use as an integral part of the teaching and learning process, and not a discrete activity to be undertaken in isolation of the rest of the learning (e.g. Cuthel, 2005, Cutrim Schmid, 2008b). Since the IWB technology functions mainly as a platform for integrating different types of ICT in the classroom, the technology types and technology-related skills that will be exploited in the classroom will depend not only on the pedagogical approaches teachers employ, but also on their knowledge of new media in

general. Even teachers who already subscribe to the principles of constructivism, and employ for instance, project-based approaches to their teaching, will not automatically identify the potential of the IWB technology to support and enhance their practice. Before they can become proficient “constructivist” IWB users, they need to go through a process of technology development that goes beyond the familiarization with IWB presentation tools.

This leads us to the next topic to be discussed in this chapter, which is the role played by teachers in the realization of the transformative potential of IWB.

THE ROLE OF TEACHERS IN THE TRANSFORMATIVE POTENTIAL OF IWB

Throughout the research, the teachers were encouraged to reflect about their experiences with the IWB. Individual interviews were conducted in the initial and final stages of the project (referred to here as *first and second interviews*). At the beginning of the project, two of the teachers used the following statements to define their experiences with the IWB:

It's like having a Porsche in the backyard and you only drive on the first gear, you think you could do so much with it, but you don't know how to do it. (Teacher 1 – first interview data)

It has some advantages, but so far... I would miss it if it's not there, but I think we are working, we have something like a Porsche, but driving to the corner. I think it's a medium which is certainly very good, but we are not able to use all its potential to profit from it. (Teacher 2 – first interview data)

Although these teachers had been using IWB technology for quite some time, they used the technology either simply as a “high-tech chalk-

board” or as a “projection screen” for showing digital pictures and MS Word documents. In the initial stage of the project, the teachers also lacked the knowledge of basic IWB software tools, such as: annotation tools; handwriting recognition, spotlight; blind; screen capture; text editor; bank of ready made images/animations and so on. In the statements above, teachers expressed their frustration for having access to an expensive piece of technology without knowing how to exploit it to its full potential.

As already pointed out, the teachers in question had limited access to technology training. Although they had been introduced to the basic functions of IWBs at the initial stage of technology use, they were not provided with further training to upgrade their skills. Lack of time was a factor mentioned by all teachers as an obstacle for self-training and hands-on experimentation with the technology. Another key issue to consider in that context was the implementation of a technology program that caused teachers to skip important stages in their professional development as ICT users. Some teachers, who still struggled with simple clipboard operations (e.g. copy and paste content from the Internet into their flipcharts), perceived the full integration of IWB technology into their teaching as an overwhelming task.

In fact, other studies have shown that an evolution of ICT-related pedagogy is necessary to optimize the use of IWBs. Slaya, Siebörger and Hodgkinson-Williams (2008), for instance, point out that teachers' low level of media literacy was one of the obstacles for the successful adoption and integration of IWB technology in the South African context. Because teachers were forced to skip essential stages of their technology development, they failed to acknowledge the potential benefits of the technology. This example contrasts with the successful implementation of IWB technology (Costinhas, 2007), which took place in Cultura English language schools in Brazil. Teachers' familiarity with new technologies and the availability of a bank of multimedia resources

easily accessible by them were seen as the main factors that facilitated technology integration and maximized the educational benefit of IWBs in that context.

Sandholtz, Ringstaff and Dwyer (1997) identified five evolutionary stages that teachers go through as they integrate technology into their teaching. In their research, teachers went through various stages, namely: *entry, adoption, adaptation and appropriation*, before they reached the *invention stage*, in which new technologies were seen as having a transformative effect on education. In terms of IWB research more specifically, researchers reached similar conclusions. Burden (2002) and Walker (2003), after analysing findings from the Review Project, stated that teachers often go through three different phases in the process of integrating IWB technology into the curriculum. Walker (2003), for instance, describes how teachers go from using the IWB as a “large board” for operating software that they already used before (in phase 1) to discovering and exploiting the specific features of the technology (in phase 2) to using it as a platform for collaboration and by having students coming to the board and presenting material or participating on a regular basis (in phase 3).

Betcher (2007) used an interesting metaphor to explain the way IWB technology works. He described this technology as a “Trojan Horse,” as teachers usually start the IWB usage as a simply “high-tech chalkboard” or projector and gradually develop an understanding of the potential of the technology for enabling broader technology use in a “subtle, subversive way.” Wegner (2007) provided a short and accurate summary of Betcher’s thoughts on his blog:

The teacher starts off with the focus on the default software (Notebook or ActivStudio) and uses it to digitise the current pedagogy. But then over time, as skill levels and confidence grows, the IWB becomes a focus for something bigger - the concept of the “digital hub” when media, the

web and other computer applications are part of a seamless learning environment. IWB usages, such as the use of Google maps, illustrate how the broader technology Trojans emerge from the IWB horse. (Wegner, 2007)

In my view, the “Trojan Horse” metaphor provides a good way to understand the various stages teachers go through as they integrate IWB technology into their teaching. Although most teachers in this research exploited the technology at a very basic level, some of them had already started to perceive some of the potential affordances of the IWB as having a transformative effect on their practice. For instance, two of the teachers described how the availability of IWB allowed them to add more flexibility to their lessons, as they could draw on Internet resources to “go off-trail” in order to respond to pupils’ needs as they arose. They point out:

Once I realized that the pupils didn’t know much about places in Europe, so I quickly searched for a Quiz on Europe and we did that at the end of the lesson for 5 minutes. In the end they were surprised about how little they knew. It was motivating, it’s a game, it’s fun, and they are learning something. (Teacher 3 - first interview data)

You can ask the pupils to check the pronunciation of words in real time, by using Leo or other online dictionary, for instance. You don’t need to tell the students, I will look it up in the dictionary and tell you next time, you can do it on the spot. In one of the lessons, you talk about a person ... but what does he look like? Then you go to Google image, you show the picture. You can use this as a topic of conversation. Does he look like the way you expected him to look? (Teacher 4 - first interview data)

These findings illustrate how these teachers were gradually grasping the idea of the IWB as a “digital hub” and expanding their use of the

technology. During the technology training sessions, which were provided at the second stage of the research project, the teachers showed great enthusiasm and interest in learning new ways of exploiting their IWBs pedagogically. In these sessions, teachers were especially interested in how IWB software tools could be used to enhance interactivity in their lessons. This seemed to constitute the next stage of technology development that they needed to undergo before they could be introduced to other more challenging computer applications, as for instance the Web 2.0 tools mentioned above.

At a broader level, the pedagogical development in IWB use that has taken place in UK secondary and primary schools is also a good illustration of the various stages that teachers need to go through in the process of technology implementation. Earlier research on the IWB use in British primary schools (Goodison, 2003; Hall & Higgins, 2005) revealed that classroom uses of this technology often supported a transmission model of learning, in which the technology was simply used as a presentation device. In Hall and Higgin's (2005) research, for instance, the pupils interviewed revealed that, although they felt that they did get access to the IWB, this access was always teacher-directed, i.e., on the basis of what the teacher wanted to show the whole class, rather than independent and autonomous.

However, more recent research points towards a more optimistic scenario where the potential affordances of IWB technology are used to support constructivist practice (Gillen et al, 2007; Hennessy et al, 2007). These new research findings indicate that as teachers develop a better understanding of the affordances of the technology, they start exploiting it in a way the may transform learning. Gillen et al (2007), for instance, describe classroom activities in which the IWB affordances were used to enhance the level of pedagogic interactivity by encouraging more interactive and non-authoritative dialogue. Hennessy et al (2007) also identified several strate-

gies used by primary school teachers to exploit the potential affordances of the technology to foster the cognitive, social and physical participation of learners in whole class activity.

These new research findings reveal the significant steps UK teachers have already taken in exploiting the potential affordances of IWB technology to support constructivist practice. It is important to highlight that the strong investment in teacher training and support that has been made in the UK played a very important role in preparing and qualifying teachers for an evolution of IWB-supported pedagogy in that context. On the other hand, issues of experimentation and exploration should not be neglected, as teachers need time to develop their own understanding of the technology on a trial and error basis, experiencing all the different stages of technology integration in order to take ownership of the technology and its use.

CONCLUSION AND SUGGESTIONS FOR FURTHERWORK

This chapter was written as a response to the critics of IWBs, who argue that this technology a) tends to reinforce the dominance of the front of the room and b) constitutes a step backwards in the process of breaking down the walls of the classroom. Several pedagogical usages of IWB technology in the language classroom have been described in order to show that the IWB has the potential to support the implementation of a constructivist approach to language teaching with the use of Web 2.0 tools. More specifically, the IWB has been described as a digital platform for a) modeling ICT skills, b) collaboration and c) sharing ICT-based pupil-generated work.

The chapter has also emphasised the importance of teacher training and support for the realization of the potential of IWB technology. As the research data indicate, even teachers who already subscribe to the principles of constructiv-

ism will not automatically identify the potential of the IWB technology to support and enhance their practice. Before they can become proficient “constructivist” IWB users, they need to go through a process of technology development that goes beyond the familiarization with IWB presentation tools. As IWB technology gradually find its way into language classrooms in many parts of the world, the need for good quality training on the pedagogical use of this technology becomes increasingly important.

An interesting topic for further research is the investigation of how the implementation of the training workshops impacted the teachers’ pedagogical use of IWB technology in the context investigated. Another possible topic would be the investigation of other language classrooms, in which IWB technology is already being used in conjunction with Web 2.0 tools to support constructivist practice, in order to evaluate the effects of these teaching approaches on students’ learning outcomes. In my view, there should also be a strong focus on identifying ways in which the IWB may be brought into the classroom environment as a useful tool to enhance learning. This is best accomplished through the examination of pedagogical practice and in close collaboration with teachers.

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KEY TERMS

ActivStudio: This is a software application produced by Promethean that allows the screen on an interactive whiteboard to become a digital textbook or flipchart. Teachers and students can produce their own multimedia flipcharts or use commercially available textbooks which incorporate video, images and audio.

Electronic Flipcharts: Design area, or blank pages for creating teaching materials to be used with an IWB. The number of pages that can be used is unlimited. Flipcharts can be prepared

before a lesson or they can be generated during the course of the lesson.

Graphic Slate: A5 graphic tablet which operates remotely with the IWB, enabling teachers and students to take control of the IWB from anywhere in the class.

IWB Software: Software used in conjunction with an IWB. It enables activities such as handwriting recognition, web browsing, window annotation, dragging and dropping, and so on.

IWB Software Resource Library: IWB software tool that is used to access a wide range of resources, such as: stock annotations, saved flipchart pages, images, sound files, web links, background tiles or templates and so on, which can be clicked and then dragged onto the page in one movement.

Learner Response System: Wireless response system enabling students to respond to assessment and other questions. Results can then be displayed immediately on the IWB in graphical format.

Online Multi-User Whiteboards: Online whiteboards, such as: *skrbl*, *skriblink*, and *bubbl.us*, which allow users to sketch, plan, and collaborate online in real time.

Chapter XXVII

Interactive Whiteboards in the Web 2.0 Classroom

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ABSTRACT

This chapter summarizes the work underway to chart, critically evaluate, and systematize the introduction of interactive whiteboards (IWB) into modern foreign language classrooms in England. It is suggested that there is a developmental cycle whereby teachers take some time to understand the technology and become competent in its use. They then look to its advantages in presentation and the motivation of students before becoming aware of its pedagogical value and develop a changed classroom practice. This cycle is based upon enhanced teacher understanding of the nature of interactivity and the potential offered by the IWB in meeting a variety of learning needs. The relationship between IWB use and Web 2.0 arises from the potential of both to add impetus for teachers to structure lesson development and enhance activity. It is supported by teacher understanding of questioning techniques, and increasingly, by consideration of the use of gestures at the IWB. While IWBs are not a solution to all learning problems, it is suggested that they offers scope for greater student involvement and understanding in the learning process.

INTRODUCTION

The interactive whiteboard (IWB) is part of the growing variety of equipment used in conjunction with a computer and data projector to incorporate software, Internet links and data equipment

for whole class use. Increasingly schools are equipping each subject area, and in many cases every classroom, with an interactive whiteboard to supplement or replace traditional white or blackboards. This is happening in many parts of the world, for example in Mexico there has been

a focus on IWB installation and use, wherever possible, to ensure that the full potential of the equipment and associated software can underpin quality lessons to be taught on the widest possible scale. This shows a fundamental belief that IWB technology and pedagogy can make a difference across a range of subjects (Hennessey, Wishart & Whitelock, 2007; Belli, 2005; McFarlane, 2005). Research shows that this may be true for certain young people and for a period of time but that fundamental changes promoting continued educational achievement are only possible where teachers recognize the significance of the word “interactive” and develop their approaches to teaching to promote this. Such approaches are concerned with driving student involvement and increasing understanding. They are based on the recognition of students’ differing learning needs in order to ensure conceptual understanding and cognitive development (Armstrong et al., 2005; Hall & Higgins, 2005; Kent, 2006; Smith et al., 2005; Sturcke, 2004; Jones, 2004).

Glover and Miller (2003) have traced the pattern of increasing use in terms of the influence of “missioners, tentatives and luddites” within schools. More importantly they have demonstrated that teachers need to be helped through a three-stage development process so that they can move from traditional to increasingly more interactive approaches, specified as:

- a. *Supported didactic*, where the teacher makes some use of the IWB but only as a visual support to the lesson and not as integral to conceptual development.
- b. *Interactive*, where the teacher makes some use of the potential of the IWB to stimulate student responses from time to time in the lesson and to demonstrate some concepts.
- c. *Enhanced interactivity*, where the teacher develops the materials so that the students focus upon the IWB as a means of prompting, explaining, developing and testing concepts for most of the lesson.

It is only at the third stage that the potential of the board as the focus of learning based upon a new understanding of the learning process, is recognized and realized by the teacher (Miller & Glover, 2004; Ziolkowski, 2004; Watson, 2006). The capacity to use the equipment in this way is dependent upon both technical fluency in the use of the equipment and associated software, and pedagogic understanding and flexibility to exploit the possibility of interactivity between teacher and student, and student and student. To achieve this has much in common with the educational development of all ICT and reflects a move, whether recognized or not, to the use of the Web 2.0 platform (Belshaw, 2007). Web 2.0 is here understood to be related to a focus on learning through concentration on multimedia use, age and ability linked group and individualized learning, and an awareness of variations in personal learning styles (Xhakli, 2008). This brings with it a change of emphasis from the teacher centered transmissive approach to learning to one characterized by interactivity, collaboration, user-generated content and immediacy of feedback. This is based on short attention switches from the teacher to the IWB as a mediating agency allowing access to other ICT technology within the classroom.

In a sense the IWB presents a new meta-language for classroom use. It certainly has developed its own vocabulary, which offers new technical terms. These become part of the basic language from initial training sessions with phrases such as “calibration,” “drag and drop,” and “hide and reveal” being early concepts for the user to understand. With the use of the interactive potential, phrases such as “virtual manipulatives” (Weiss, 2005) signify understanding of both process and pedagogic possibility, and as the integration of technology and pedagogy becomes better understood teachers and learners become aware of associated words from subject specific areas such as “the use of artifacts,” which in both mathematics and modern languages has its own significance within the IWB focused classroom.

Language, however, is more than vocabulary, and IWB users become aware of the use of intonation, whereby the same word or phrase used in a different way signifies another meaning. This can be illustrated by considering the word “interactive” which is seen to operate at three levels — as indicating that there is a relationship between the technology and the user whereby a physical action leads to changes in the visual content on the boards; as an instruction to a user when using the board; or to one planning the sequence of conceptual developments and seeking a process by which movement on the board can lead to action in the brain of the recipient and subsequent action in the classroom.

This argument suggests that teaching and learning is limited by what occurs on the desk or the board but there is an intermediary in the process. This is the teacher, however defined; who acts as a mediator in the process of learning and who, we have noticed, develops a set of gestures as the non-verbal aspect of language. While not all users have the same hand and face gestures for similar aspects of mediation, research shows that users make consistent use of the same non-verbal expressions as lessons proceed (Miller & Glover, 2006).

This chapter concentrates on the outcomes of research that has been centered on the way in which IWB users, both teachers and learners, have developed their use of hardware and software to enhance teaching and learning in modern foreign language teaching. Our work was based on recent research and practice publications that highlighted the way in which IWBs could be a support in target language teaching. Research has also highlighted the role of ICT in language teaching and directed teachers to the use of the Internet, streaming videos and downloaded resources as a stimulant to interest in the classroom. Interactivity, however, is a feature of the Web 2.0 philosophy and this may extend beyond the classroom to include e-mail correspondence, blogging, and the use of *realia*. These are shown in the developing

shareware from the Teacher Resource Exchange in England (tre.ngfl.gov.uk/server.php). As yet, though, there is very little modern language and IWB specific research. Glover et al., (2007) deal with the research outlined below in more detail and Gray et al., (2007) examine the integration of the IWB with teaching in the lower secondary school. Both are however, reporting on the need to move from didactic to more interactive approaches.

Our illustrations are taken from research into the learning of modern foreign languages within ten schools in England in 2004. These schools were all at an early stage of technology use and the experience of teachers in these schools accords with that of all new learners in that they have had to gain both competence and confidence in working with technology in enhancing pedagogy.

IWB AND MODERN LANGUAGE TEACHING

The selected schools were known to have previously good OfSTED (national inspection service) reports and were therefore likely to be showing good practice. Overall 13 lessons were video-recorded for subsequent analysis according to the following framework:

- The timeline and activity sequence in each lesson. This usually included a revision starter, and then moved through vocabulary use to sentence construction and grammatical understanding.
- Classroom management issues. These included the way in which the room was set out for the lesson, the nature of the environment to favor or inhibit IWB use for all students in the room, the integration of the IWB with traditional textbooks and other resources and the use of student groupings for learning activities.

- Enhancement from IWB use was sought within a framework of revision of past work, establishing new principles and data, sequencing of information and learning, as well as the demonstration of processes and reinforcement of learning through recall and the use of examples.
- The contribution of IWB use to cognitive development was assessed through the establishment of aims, the use of varied learning styles, stepped learning sequences with revision as needed, problem solving, and recall and discussion as a bridge to further learning.
- The contribution of IWB use to the conceptual development of discrete elements in the lesson through the identification of processes, manipulation of data, and review to ensure understanding and application as part of cognitive development.
- The nature of IWB techniques used within the lesson and the way in which these are perceived by students.
- An assessment of the teaching style used in the lesson.
- Identification of practical and pedagogical issues arising from the use of IWB technology in its contribution to effective learning.
- Measurement of the percentage of the lesson when the IWB was the focus of teaching and learning.

Structured interviews were also undertaken with ten teachers to probe aspects of their understanding of presentational, motivational and pedagogical issues inherent in technology use. The interviewers attempted to identify the reasons why, and how, teachers felt that the IWB made a difference to learning. Two groups of ten students each were interviewed in two schools to gain some triangulation with teacher opinion. There appears to be a run-in period of between eighteen months and two years while teachers develop competence in handling the technology, in developing fluency

in its use and in establishing a battery of basic screens to support their teaching. Whilst teachers may have developed these skills their practice could still be grounded in older styles of teaching — or these styles may emerge in some lessons but not in others according to the needs of the topic and the class context.

PRESENTATION

During the lesson observation notes were made of the techniques used in the presentation of materials. In some lessons teachers used several techniques, in others they used just two or three but exploited them to the full as a further spur to learning. Overall, the frequency of use was as shown in Table 1.

Observation and interview evidence was also used to explore the processes by which IWB use promoted interactivity as understood by teachers in the lessons. In using techniques the four most common methods of securing interactivity were:

- Drag and drop, matching a response to a stimulant.
- Hide and reveal, opening a hidden response when the stimulant was understood.
- Matching equivalent terms, e.g. vocabulary in different languages.
- Movement, to demonstrate principles, e.g. sentence construction.

Students were also observed writing (and replacing) words, e.g. as they explained a story in a village mapped from the IWB, and shading e.g. to show rooms in a house where one would watch TV. In all of these the aim of the teachers was to: “have a number of children working at the board so that they could gain competence and confidence and to get others involved especially where we were using competitive approaches to

Table 1. Use of techniques in IWB focused teaching

Techniques	Example	No of lessons (n=13)
Movement and animation	Cycle route on map	11
Drag and drop	Vocabulary	10
Overwriting of screen	Verb endings	10
Verbal and visual linkage	Sounds and objects	10
Superimposition	Labeling	10
Hide and reveal	Sentence construction	10
Shading	Comprehension	5
Imported sound	Clip	4
Gap infilling	Sentence construction	4
Internet access	Life in village	4
Highlighting	Parts of speech	4
Automatic responses	Vocabulary	4
Applet development	Describing actions	3
Tools	Connecting lines	2

keep them all involved” (Male teacher, Spanish lesson).

Teachers made use of superimposition by moving phrases or words and putting them alongside vocabulary or in sentences, and considerable use of matched verbal and visual representation of vocabulary. They made use of the coloring potential for parts of speech, and shading, to mark parts of a sentence as construction developed.

Nine of the teachers made some comment about higher standards of presentation as a result of the use of IWB software and in each of the student groups there were three references to the way in which writing on the board had improved. According to teachers, it was “sort of professional looking” and “much easier to read than the writing we used to have.”

At the same time both teachers and students spoke of the problems of “over-writing” where teachers made notes on diagrams on the board, and where “the writing looks odd, sort of angular.” This is partly due to the level of fluency developed in the use of the pen on the IWB, but also related to the precision generated by the software.

Although increasing, at the time there were few commercial or professional programs specifically designed for teaching modern languages using the IWB. As a result practitioners speak of the need to develop their own materials often through electronically scanning textbooks, or from downloaded Internet material. In three of the lessons characterized as “supported didactic” a page of sketches had been scanned from a textbook and this lacked the movement, color and vitality of comparable material built up by the teacher from clipart collections, but given interest through attaching sounds. This incorporation of sound was a feature of half the lessons observed in modern languages. Four of the 13 lessons also made use of passages from the Internet as the basis of a comprehension activity and in two lessons students working with laptops were asked to pursue this at a higher level while the others in the class worked at the IWB.

Observation suggests that the use of the presentational aspects of the IWB varies as students get older. Year seven students (aged 11-12) showed enthusiasm and interest when filling in missing

words in a competitive situation — the capacity for the IWB to have associated sounds for success and failure added to this. By year nine (aged 13-14), however, it appears that students are less willing to participate in either volunteering to write on the board unless all students are involved, or as a member of a small group at the board; completing “hide and reveal” type statements or hazarded answers, and demonstrating verbal relationships to the rest of the class. Indeed, there is some evidence that by this stage students will attempt to subvert some of the presentational advantages through spotting wrong results so that they incur the “noise of failure,” or give the wrong answer to “appear to be one of the gang.”

One skilled teacher pointed out, however, that this does not mean that students have outgrown the board. Rather they expect the teacher to be fluent in its use and to lead their learning in such a way that their consolidation takes place individually in their exercise books following teacher use of IWB materials. Discussion showed that even to age 16 students appreciate its value when the IWB is a source of further material for comprehension, or when it is used to demonstrate grammatical rules in action.

Consideration of the content and approach of the observed lessons indicates that the more didactic teaching was in lessons where there were fewer activities in the lesson period, where the pace was more limited and where there were longer periods of textbook or exercise work. In these lessons there were also fewer techniques used and teachers tended to make use of “drag and drop” or “hide and reveal” more than in lessons that used movement, automation (manipulatives) and color changes. In the lessons characterized by enhanced interactivity there was a tendency to use more activities with several techniques and a combination of commercially or professionally produced materials with those developed by the teacher. These lessons had greater pace and tended to use the IWB as the focus of all activity including board-based exercises and extension work.

A year nine group learning German followed a three minute revision starter with three activities building vocabulary through highlighting, drag and drop and hide and reveal; building phrases through pair work drawing upon matching of vocabulary, gender and translation, to sentence construction based on an Internet activity. The lesson concluded with revisiting screens and the use of color highlighting to identify rules for case and gender agreement.

Teachers commented on, and used, color highlighting and arrows to indicate movement and positioning for parts of speech and to indicate verb endings. Over half the lessons observed made some use of associated sound, imported pictorial material and “real” newspaper or magazine extracts as a basis for comprehension work and the application of vocabulary. It was agreed that this was the greatest presentational advantage in that pre-prepared materials could be highlighted, expanded, developed and analyzed by over-written comment. In discussion respondents also considered the issues of “savability.” All except two participants had a battery of screens that they used as they prepared their lessons. The general view was that although it took time to prepare lessons for IWB use they could then be stored and used in three ways:

1. Catalogued by topic and then drawn out as each lesson was prepared.
2. Catalogued by lesson and then copied if the same screen was to be used in another lesson.
3. Catalogued by intended year group and then developed with further material if being used in a different context.

Teachers were less ready to regularly link their presentation to the printer so that materials could be made available for students. In 9 of the 13 observed lessons there was an element of copying from the IWB at some stage in the lesson. Table 2 shows the results of an analysis of the copying used in observed lessons:

Some copied activity characterizes all the teaching described as “modified didacticism,” but also occurs in the other styles of IWB use. It seems that teachers are less willing to explore or use the copying facility than is claimed by the promoters of IWB technology. The more positive view emerges from a linguist who commented on the time saved by being able to print off materials for those needing extra help.

- The stepped learning that characterizes much IWB teaching offering constant challenges with frequent assessment of achievement as a stimulant to further involvement.
- The particular advantages for slower learning students or those who need reinforcement through the presentation of data or processes with more than one learning style (i.e. the ability of the board to allow material to be presented or represented in a variety of ways.

MOTIVATION

In all the discussions with teachers it has been difficult to sort out the motivational factors from the presentational or pedagogic in the successful use of the IWB. Seven of the teachers made reference to the intuitive use of the technology as a feature in the everyday lives of students and felt that the schools should be offering a high level of presentation and attractiveness so that “what happens in school should not be seen as a poor relation to what they see on TV and computer screens.”

Our evidence suggests that the major features that encourage student motivation are as follows:

- The intrinsic stimulation provided by the combination of the visual, kinesthetic and auditory paths to learning.
- Those aspects of classroom management that lead to a focus on the IWB with linked desk activities throughout the lesson.

The observed lessons show, however, that older and more able students gain from the IWB because they appreciate the visualization of structures more readily than through verbally dominated approaches. A German lesson for 15-16 year olds exploited the IWB to build up and then analyze sentences in terms of constituent vocabulary, constructional frameworks and comprehension alongside continuous and enthusiastic encouragement from the member of staff who constantly referred them back to earlier screens. It was not simply the IWB, but also the way in which it had become integrated into the teaching method in a highly personal way combining visualization and encouragement of all students, that enhanced learning.

Another factor in the motivation of students stemmed from the way in which teachers exploited a “different type of contact with the lesson in the student’s hands.” Good practice obviously builds upon knowledge of particular groups and of individuals within the groups and a realistic

Table 2. Analysis of copying activity during observed lessons (multiple activities possible)

Nature of copying activity	Number of language lessons (n=9)
Examples for exercises	6
Rules of grammar or process	4
Copied screen as a record	2
Aims of the lesson	1
Homework material	3

assessment was that “the IWB still doesn’t mean that we shall have a lesson where all the students are paying attention all the time.” Boys, for example, are generally more ready to demonstrate or complete work at the IWB than girls of the same age. Older boys were more ready to demonstrate in part because it provides an opportunity for them to show their superiority in technological fields when teachers comment upon inadequacies of programs or available tools, while girls were more concerned about “being right” before they would commit themselves to the board. Evidence from the two student groups showed that they thought that “lessons had less wasted time” and that “they moved with more pace so that they didn’t want them to come to an end.” If there is one single motivational factor during lessons it appears to be that the immediacy of response ensures maintained interest. Seven of the teachers refer to the enhanced engagement in lessons and four referred to the ways in which the use of the IWB encouraged participation.

Although there was general agreement that teachers needed to consider aspects of lighting, student seating arrangements, sight lines, and the area of the board in use by students considering their physical characteristics, the observed lessons highlighted continuing issues. In four of the 13 lessons tables were organized in such a way that students were in rows at right angles to the board, or at grouped tables where half of the students naturally had their backs to the board. This problem is not subject specific but is related to the size of the room, access problems and the need for teachers to move around while desk work is in progress. In three classrooms light infiltration rendered vision difficult for those seated at the near front of the sides of the rooms. Amelioration was achieved in one school by using laptops with the same screen program so that vision was achieved and in another by breaking the lesson up in such a way that board activity was distinct from grouped activity. The latter was dependent upon group work using laptops and linked audio

material while one group worked with the IWB and then groups moved to different activities in a subsequent lesson.

When the student groups were asked to identify why lessons were of greater interest than in traditional teaching they identified:

- The inherent interest of color, shading, dynamics, hide and reveal and demonstration.
- The sequential development of ideas and exemplars resulting from pre-prepared and commercial software.
- The availability of games that support learning, require responses that can be immediately assessed and then linked to a scoring system with team races or noughts and crosses.
- The “fun” arising from the use of pictorial matter and the immediacy of any processing built into the programs.
- The opportunity to revisit earlier concepts and examples in underpinning understanding.

Where lessons have such a dynamism and attraction it is likely that they will offer interest and challenge. This supports both revision of earlier work and enhanced understanding of new work. Above all as one teacher commented this offers “credible media for a new age.” Teachers were conscious, however, of the time demands for preparation even when using commercial materials, and four referred to the problems of technology that could inhibit slick use of the IWB.

These data show that those lessons characterized by enhanced interactivity focused on the board for a greater proportion of the lesson, while those where the board was a support for more didactic approaches used the board for a significantly more limited period. For linguists more of the lesson may have to take place away from the board, e.g. in practicing vocabulary use, constructing sentences, and repeating words and phrases. The most interactive lessons were those where these activities were linked to the board.

In four of the 13 lessons this led to a combination of choral reading, repetition of phrases and word completion using sentences from the board. Overall time on task is greater when the IWB is the focus of teaching and learning.

There was considerable concern that there could be a novelty value in the use of the new technology, “but we have to remember that students are used to this at home” and “that they think advanced technology now.” One teacher commented “there is now danger that if we don’t use the technology we will be seen as lacking in some way.” All the respondents accept this but it is clear that teachers have developed strategies to ensure that there should be a continuing upward progression in learning and attainment. In a year seven French lesson the teacher used an introductory activity based upon naming colors, then moved to five vocabulary development exercises and finished with a learning check linked to boys versus girls scoring to ensure that momentum was maintained, that all the students were taking part and that visual stimulation was used to the full with a total of ten screens during the 35 minute lesson. That said, the dynamism of the teacher was important in supporting continuing learning — even broken with a two minute march to the French alphabet to stimulate renewed activity.

While it would be easy to claim great advantages for the IWB in motivating students at all ages it is evident that it is the quality of the teaching that ensures progress. Comparison was made of two lessons of vocabulary development with year seven groups. In one there were seven screens used in the course of the lesson but these were interspersed with pair work, a brief exercise and a discussion about rooms in the house. The students were animated throughout. In a comparable lesson, again with seven screens used, the teaching approach was much more didactic, there was little variation in activity from stage to stage in the lesson and the inter-relationship between teacher and learners was authoritarian and defensive. In such circumstances the lesson

could not have the vigor, and “fun” element shown with a different teacher.

But there is another subtle influence noted by four of the respondents. This is because the constant progression in an interactive situation absorbs those who might otherwise become fidgety in a traditional classroom situation. They, in turn are less “nagged” during the lesson, enjoyment increases and motivation is supported: “It enhances collaborative work. This may just take the form of kids shouting out, correcting each other, say in a multiple-choice selection. This is very noticeable. As the teacher you too are working in a community, where you are visible. It does give a sense of competition, of expectation, the idea of can you beat it?” (male teacher, Spanish lesson).

PEDAGOGY

It was clear that teachers were using the learning of concepts as a basis for cognitive understanding. As a result in all but two of the 13 lessons there were discernible cognitive aims and a series of activities to explore, develop, explain and reinforce subsequent understanding. This was summed up one teacher as follows: “Sustained learner interest works in a number of different levels. It is not just a gimmick ... the interaction is important, like kids coming out to the board, having choices, e.g. they can decide on the verb ending, find the stem and match up the right pronoun. It makes concrete in their minds how the language works” (male teacher, German lesson).

There was a high level of understanding that students learn in different ways. This was seen where a pattern of viewing pictures, learning associated vocabulary, repeating its use in sentence construction, and then undertaking written or spoken group work ensured that: “we both enjoy teaching and learning more ... you can give clearer examples which are more interesting because of access to color and clip art. It’s more aesthetically

pleasing and is good for visual and kinesthetic learners and it's useful in that you can jumble up sentences and get them involved in reconstruction" (male teacher, French lesson).

Although there was some use of commercially developed activities, such as a short color recognition program — "we have developed our own materials from a number of sources, including download from the net, magazine and picture scanning and my own extensive library of clip art images" — this was seen to have advantages in that what was developed was meeting specific needs. Two teachers, however, expressed reservations — one about the time taken to produce good professional looking materials, and the other about "the danger of getting too structured and then unable to work flexibly if a problem occurs in the learning process for a particular topic" (female teacher, French lesson).

Teachers were all conscious of the need to maximize interactivity between themselves, the students and the learning materials. This is achieved through developing the opportunity to use "visual manipulation" so that concepts can be illustrated and worked upon by the students; the growth of shared evaluation of resources and the use of shared materials developed within subject areas, and exploitation of immediacy of feedback either through programmed software or through the use of presentational tools as with the colors program in French, or with right and wrong answer symbols. These programs are most effective as starters or for work with the least able when rapid responses and moving on enhance word manipulation.

There was also much debate about the place of traditional textbooks, exercise books, homework and other data sources in teaching. Over-writing was seen to offer scope for assisting cognitive development by "showing the same thing in different ways." Much of the Internet use was to download games and activities that did just this by underpinning learning of vocabulary and phrase development, or even with some audio

links to check pronunciation. Most importantly, however, were the ways in which the IWB was being used to underpin lesson structure and to enhance cognitive development. Teachers variously appear to use a structure of:

- Setting objectives with or without revisiting earlier IWB slides.
- Using a bright and lively starter including "drag and drop," "hide and reveal" and multiple answers to stimulate interest, to offer a chance for brainstorming as a bridge to the main part of the lesson, and to revise necessary associated learning.
- Proceeding to the main part of the lesson where the IWB is the focus of much activity being used for illustration, explanation, sequenced ideas and the development of main principles. The progression was through the use of vocabulary and its application in sentences reinforced by practice and comprehension. During this section of the work the approach was distinguished by challenged responses with the emphasis on understanding and then using language correctly — with practice in the completion of sentences on the IWB reinforced by group activities. In this way, as one teacher commented, "you move the students with you." Interview respondents identified a tension between those who thought that time taken in managing the students' use of the IWB while others were watching could be seen as a loss to active learning but in eight language lessons students were given tasks alongside the work being illustrated on the board so that all the students were active.
- Concluding with a plenary session involving the use of recall, examples and previously worked material to ensure understanding and to act as the basis for extension work. This section of the lesson was more usually concerned with revisiting vocabulary and structures and then looking at an associated

screen requiring comprehension or conversation as a consolidation for the lesson.

Awareness of the need for cognitive development and the place of concepts within this was shown in the frequent reference to sequencing of ideas, the availability of a range of pre-prepared examples appropriate “to age and ability,” adaptability of materials to allow for “alternative approaches and the use of different ways of learning.” This was through vocabulary understanding and pronunciation, and through phrase and sentence construction to use in verbal and aural comprehension. Three linguists outlined the use of supportive materials from the net or other sources, and three referred to the need to help students understand the technology e.g. in the use of pens and programs, so that they could become fluent in the interactivity required if whole class participation was to be assured.

There were comments that dependence on sequenced slides in some pre-prepared materials in PowerPoint and Excel, as well as in some of the commercial materials, could inhibit flexibility in revisiting ideas and in offering alternative explanations appropriate to “whether they can learn verbally or not.” This was not seen to be a problem in the observed lessons because of the technological fluency shown in accessing screens. There was a general view amongst those interviewed that when the staff have the time to develop their materials and access to appropriate technological support it was possible to use the IWB to generate faster and more effective learning, with tighter planning and the implementation of lesson plans according to the need to cover the prepared material.

There was frequent reference in the interviews to the need to match materials to the needs of the students and that some differentiation of task, activity or outcome required teachers to be flexible, adaptable, and “aware of the ways in which consolidation can occur without going back to old fashioned practices such as copying.” This

was illustrated in a comparison between two groups learning and applying clothing vocabulary showing that the more able group moved on to determine the difference between summer and winter clothing while using similar screens of information.

In pedagogic review the teachers also drew attention to the clear match of objectives to activities and the understanding of these by students so that they could use the board to help in their evaluation of progress. They showed an awareness of what the IWB could offer and in the two most stimulating lessons Web 2.0 approaches were integrated into the teaching. In one lesson there were five groups working at their own level in differing learning situations. These included the use of an interactive software program at the IWB, access to the net by a group using a laptop, randomized questioning in pairs with an interactive program on a desktop, and the preparation of a presentation by a group working with PowerPoint. It is possible that all these approaches can exist individually without being specifically labeled as Web 2.0 but they are now being used to shift the emphasis from teacher to student, from lecture to learning.

THE DEVELOPING AGENDA

Arising from the agenda it appears that there are two pedagogic areas for further investigation. The first is the relationship between the teacher, the student and the materials involved. For enhanced interactivity to occur this has to be understood as a chain reaction where the IWB is a means of mediation between learners and learning. There are four elements in this process:

- a. *Teaching approach.* Ernest (1994) suggests a simple scale for the approach used by teachers. At the lowest level the teacher is an “instructor” concerned with the presentation of concepts as rules followed by practice. At the higher level the teacher is “facilitator”

offering approaches that enhance understanding, and at the highest level the teacher is a “mediator” bridging between student understanding and development. In their use of the interactive whiteboards the instructor is concerned with elements of presentation. Conversely the mediator deals with issues arising from questions and thereby regards the interactive whiteboard as a vehicle for interaction with students.

- b. *The use of the interactive whiteboard.* In both the approaches discussed above, it is evident that the interactive whiteboard enhances the role of the teacher regardless of where s/he is on the spectrum. The teacher-as-instructor will be working with prepared material, to be presented in a logical sequence, and often with a PowerPoint sequence as the basis of the teaching. The material is likely to be focused on statements of facts and definitions, headings etc. but there will also be examples to be copied and exercises to be completed. Such material is likely to be organized, clear and monotone. On the other hand, the teacher-as-mediator will be concerned with how the IWB can support the features of mediation such as modeling and coaching in relation to the topic under consideration. In collaborative classrooms, modeling serves to share with students not only what one is thinking about the content to be learned, but also the process of communication and collaborative learning. Modelling may involve thinking aloud (sharing thoughts about something) or demonstrating (showing students how to do something in a step-by-step fashion). Coaching involves giving hints or cues, providing feedback, redirecting students' efforts, and helping them use a strategy. A major principle of coaching is to provide the right amount of help when students need it — neither too much nor too little so that students retain as much responsibility as

possible for their own learning (Tinzmann et al., 1990). This can be seen in the selection of appropriate adjectives or in the search for word meanings. Miller, Glover and Averis (2005) have suggested that as competence improves teachers become more ready to develop and use manipulatives as the basis of interaction. This is seen to particularly good effect in consideration of the accommodation available at differing costs within a French holiday town where the input of so many Euros into a slot machine then produced a range of menus for description and selection. It is our contention that the use of particular manipulations might be used effectively to support the role of teacher-as-mediator (Miller, Glover, Averis & Door, 2005).

- c. *Questioning.* Experienced and effective teachers use questioning intuitively. They probably think little about the nature or level of the question but proceed as they think fit. Inexperienced and poor teachers appear not to have such skills. Much has been written about the nature of questions and the art of questioning. Mason (2000), in his commentary on the work of many in this field, clearly demonstrates the complexities of the process and relates questioning to both conceptual and cognitive development. Analysis of the video recorded lessons suggests that open and closed questions and those focusing on product or process are frequently used but are only partially helpful in developing higher order learning.
- d. *Learning Models.* The fourth element in developing interactivity stems from the learning model espoused by the teacher. Observations have been made on the way in which teachers use the constructivist and social-constructivist views of learning as defined by Piaget (Piaget & Inhelder, 1974) and Vygotsky (1978). Students construct concepts and meaning, as a solo activity, based on their own experience. Associated

with this model is the notion of “cognitive conflict” whereby children are exposed to something that is different from (conflicts with) their currently perceived models. From Vygotsky, the focus is on the social-constructivist view of language and the extent to which it is linked with the formation of knowledge. Furthermore, all knowledge is a social construction and based on shared views and images. In language teaching the social context of much learning offers scope for constructivist learning to be enhanced. The opportunity to call on a vast range of Internet resources helps when technological fluency allows access.

GESTURE

In the introduction to this chapter we spoke of the impact of intonation on language understanding and we return to this in considering the way in which teachers, and indeed board-using students, gesture while mediating between board and class.

There is an increasing awareness that teaching is a multi-modal activity drawing upon a range of communicatory activity including verbal, visual and interpersonal communication, as well as associated technology. Jewett (2004) has shown that knowledge of multi-modal perception and pedagogy can support both teachers and taught. Abrahamson (2003) outlines the role of artifacts or bridging tools, including gesture in that learning process. Watson and De Geest (2005) outline the need for consideration of all aspects of communication in teaching and learning, and Rasmussen et al (2004) explore the use of consistent gesture as part of these multi-modal approaches. Goldin-Meadow and Wagner (2005) take these patterns of gesture further and consider the impact of these on both learners and their learning environment through reflection of the state of knowledge and subsequent change through cognitive understanding.

There is considerable evidence of the way in which the teachers using enhanced interactive approaches were constantly using recognizable gesture patterns. One female teacher used all-embracing movements to secure attention at the start of most lessons almost sweeping the students along with her as she summed up her aims and then moved towards the IWB. During starter periods her hands were used in a quick to and fro movement linking students to the IWB but ensuring that the pace of the lesson was maintained. In the main section of the lesson her movements were slower, often indicating building or process stages, and then opened in an invitational way as explanation was returned to the students for consolidation. There was then a return to quicker, pointing and sequencing gestures as stages were revisited in the plenary section of the lesson. When asked about the pattern of interaction the teacher referred to “the need to keep them on their toes, but to feel that we were learning together.”

Ferscha et al., (2005) attempt to extend the gesture typology with three families of gestures — hand gestures, gestures of an artifact held permanently (e.g. an IWB pen) and gestures that are detached from the hand and manipulated occasionally (e.g. change of software). All of these convey messages by the way in which they are used. While such a system is of potential value for user interface computer technology development it does not offer the sort of vocabulary of gestures that match the instinctive activity by teacher and student in the classroom. However, it is the basis of gesture sensing devices and could well offer an insight into a typology because it may be that students read more into body language, as shown when recall of an IWB screen fails and frustration is indicated, or when invitations are issued for students to work at the IWB and they respond with acceptance gestures.

In our analysis of video-recorded lessons it was possible to ascertain the reliance on gesture by both teacher and students and the combination of gesture as explanation, indication and invitation.

The IWB both encourages and reinforces learning through the use of visual as well as more transitory gestures that offer shapes in the air. During this lesson gestures were used and emulated in an often involuntary manner, in all three areas of gesture; hand, software and artifact. The hand movements that mediated technology and learning through movements were:

- *Invitational*, with the use of movement linking students to the IWB, offering the pen for use, showing a step and offering an opportunity for participation – often encouraged with IWB software.
- *Displaying*, with hand gestures pointing to material on the IWB and then using movement, highlighting or overwriting to indicate content or process.
- *Blocking*, with hand gestures putting a barrier between the students and the IWB as a result of mistakes or the need to re-think a process and then followed by an invitational reinforcement of process and use of drag and drop and over-writing to support this.
- *Sequencing*, with the gestures to indicate progression and using gestures to pose a question and then to work through sequences of example questions.

It would seem that students learn not only because of the difference in presentation but also because the IWB offers additional modes of gesturing that support verbal and visual explanation. It may be that this kinaesthetic quality will meet the needs of those who cannot readily learn with didactic approaches. Our observations suggest that where teachers are using enhanced interactivity with the IWB they are employing considerable gesturing to great advantage

ACHIEVING INTERACTIVITY

The starting point for the effective use of IWB technology has to be in teacher training. Nev-

ertheless, the move from traditional didactic approaches to changed pedagogy is complex. It has been recognized that although UK student teachers are required to have a basic knowledge of computer use as a requirement for certification many already have a high degree of computer literacy and technological understanding. Whether this can be harnessed to enhance teaching appears to be related to other factors including the nature of curriculum development programs, school technology resource levels, and individual teachers' planning and reflection. Kennewell (2001) suggests that effective evaluation of ICT use will prompt more awareness of, and adaptation to, the complexity of influences in the classroom. More pessimistically, Robertson (2003) argues that despite the potential impact of ICT on teaching and learning it remains a marginal influence on student attainment. He argues that other significant changes have been more willingly achieved in education and that the slow pace of change in ICT may be related to social, anthropological and cultural aspects of the human and computer interaction. Kirschner and Selinger (2003) point to the disparate technological competence of teachers and the children they teach and argue that if ICT is to be a core technology then teachers need to recognize not only how to use the different technologies but also follow through a five stage development from pre-novice through novice, apprentice, and practitioner to expert user. The elements of this stage are the ability to reflect, evaluate and adapt both content and approach to address student needs. If this is to be achieved, then the work of teacher educators takes on a major role extending beyond the "how to" to the "why" of ICT and the use of interactive whiteboards (Sturkle, 2004).

This requires understanding of the potential of Web 2.0 tools in association with IWB use to change the way in which teachers encourage learning. Interactivity may be a matter of question and answer but Web 2.0 approaches in modern language teaching may open the way for

the use of interactive software, as for example in vocabulary extension work; for the use of the net in developing comprehension; for the use of search engines in preparing presentations, and for enhanced understanding of the cultural context. In this way presentation spurs motivation and this, in turn, promotes higher attainment. This is especially so where collaborative group work has been developed to meet differing learning styles. Web 2.0 tools provide the means of both conceptual and cognitive development.

However at the time of the investigation it was not possible to podcast and share videos. These technologies offer considerable opportunities (and threats) for teachers and pupils. The possibilities will undoubtedly be constrained by the technical, pedagogical and attitudinal backgrounds of the teachers. Further limiting factors will be the way in which uses of some Web 2.0 technologies are “censored” and restricted by school firewalls.

In language teaching students may find considerable benefits in using (and creating) products that may help them with their study. Generally the technological skills will be within the grasp of learners — but the option to demonstrate and use these skills may be overlooked.

Even at the most basic technological level this may require fundamental changes in aspects of initial teacher education. In simple terms, the assertion that mentoring teachers should be at least competent in ICT use was found wanting by Cuckle and Clarke (2003) who comment on the considerable variation in student support between schools. When that competence occurs for Knezek and Christensen (2002) the focus of subsequent change is determined by evidence that:

as teachers progress from lower level, simple applications toward full integration of technology in the classroom in support of higher cognitive functions, attitudes progress in predictable patterns along with changes in their needs. (p. 375)

Once established as teachers and in continuing professional development there is some evidence that successful one-to-one coaching can be achieved where the technologically adept students are paired with teachers having a much wider pedagogic experience to mutual benefit (Matthew et al., 2002). Mooij (2004) argues that teachers have to be aware not only of the technical aspects of newer technologies but also of the curricular and instructional gains that can be made, and more importantly of the way in which technology and pedagogy can be integrated to achieve flexible and individually sensitive learning situations. Triggs and John (2004) have demonstrated the need for working groups at departmental, whole-school and educational service levels, interconnecting for professional growth through the sharing of technical and pedagogic experience.

The recurrent theme is one of a discrete way of teaching and learning using ICT and Taylor (2004) suggests that this requires a three stage development from personalization to achieve fluency in using the technology, through pedagogic sensitivity to its potential, to the development of contingent thinking to allow responsive and reflective use of materials. In the context of continuing professional development, this requires strong support within teacher training institutions and the schools with whom they work in partnership. This will then help teachers who have been inappropriately, or inadequately, trained in the pedagogy and do not realize the need to develop interactivity through the use of a variety of teaching and learning styles, artefacts and gesture — in short, coping with the affordances of the technology (Conole & Dyke, 2004). Failure to make a significant pedagogic change will, we suggest, lead to wasted opportunities and the danger that equipment with the potential to change understanding, application and the conceptual development of learning will be at worst, unused, and at best a presentational aid.

For this to occur there has to be further consideration of the professional development provided for users. Glazer and Hannafin (2006) building

on Vygotsky's social constructivist approaches suggest that this exploration of what happens in the classroom is best undertaken as a social enterprise where peers rely on the expertise and support of one another to adopt innovative practices: "Reciprocal interactions in a community of practice, where teachers take responsibility for each other's learning and development, may provide an effective means of supporting situated professional learning" (p. 179). Contextual work by Schrum et al. (2005) points to the need for departments to continually refine, reassess and redevelop their teaching approaches. Eekelen et al. (2005) have shown that this process needs to be regulated rather than self-regulated and unstructured — with implications for those responsible for professional development, and Tearle (2003) shows that this is particularly true of learning in technology based contexts where the learning culture is fundamental to teacher involvement and shared experience

CONCLUSION

There appears to be a learning curve for both teachers and students. The former need time to develop their technological fluency, apply pedagogic principles to the available materials or to the development of materials, and then to incorporate the IWB seamlessly into their teaching. Few teachers base all their lesson on the IWB all the time, and over half those interviewed stressed that the IWB has to be seen as part of the equipment available but that there was still a need for the use of texts, exercises and other media. Teachers then appear to become more aware of the nature of interactivity and its stimulation as the basis for conceptual development and cognitive understanding. Students also need to have a range of manipulative skills if they are to take part in lessons without loss of self-esteem as technologically incompetent. Even so good practitioners ensure that all students have access

to the board, and are given help if there are signs of unhappiness with the medium.

It is only when basic technological fluency and pedagogical understanding has been achieved that teachers can then overcome the novelty factor. Our evidence suggests that there is an initial period where interest is stimulated by the cleverness of the technology, but after a period students are more aware of three great gains:

1. Brighter and clearer presentation of material
2. Stepped learning and the ability to recall earlier material
3. Rapid responses to interactive examples so that learning is reinforced or revisited

Where students have reached this stage, they accept the IWB as part of the battery of learning resources offered to them and progress beyond novelty to enhanced learning. At this stage any possible behavioral problems are usually overcome because students are caught up in the sequence and pace of learning and appear to "take off" in their understanding, achievement and consequent self-esteem.

There is evidence that language teaching is being transformed by competent and confident teachers but this is not to suggest that the IWB is a panacea for all ills. As yet, there is only a limited shift in classroom practice and student learning and transformation will require markedly changed teacher understanding. Our evidence suggests that there is a teacher progression from supported didactic to enhanced interactivity in their classroom and pedagogical management. Where there is still reliance on the copying of material, textbook exercises and minimal conceptualization of learning so that it can be interactive, the gains are minimized. Effective learning is inhibited where the IWB is given a novelty value by the teacher so that it becomes something different, where the physical surroundings are not conducive to IWB use and where the lesson lacks pace. It is not sufficient to argue that the use of the

IWB will, of itself, bring the classroom into the Twenty First Century and the visually stimulated environment. Effective teaching requires that the technology and the pedagogy are directed towards enhanced and structured understanding. "I love my board because it gives so much to the kids," as one teacher said, may be the clue that enthusiasm can be regenerated not just in the students but in the staff also.

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KEY TERMS

Artifact (BE Artefact): Artifact is an object or item. However it can also be the on screen representation of an object or an item.

Gesture: This is a term encompassing human actions here associated with the use of the interactive whiteboard e.g. hand and body movements and facial expressions. There is evidence that users develop consistent hand and facial gestures e.g. in seeking responses, rejecting wrong responses and that learners assimilate these as part of the teaching package offered by individual teachers.

Interactive Whiteboard (IWB): An interactive whiteboard consists of a computer linked to a data projector and to a touch sensitive large electronic screen usually fixed to a wall. Images from the computer are then displayed onto the whiteboard by means of the data projector. These images can be manipulated at the electronic screen usually by means of a special pen or a finger (this depends on the properties of the electronic screen). The term interactive whiteboard often refers only to the electronic screen.

Interactivity: Interactivity is an approach to learning in which teacher and learner interact

to ensure understanding, enhance conceptual development and stimulate debate. Learning is stimulated through participation rather than through rote or passive learning which characterises didactic approaches.

Motivation: In this context, is an outcome of presentation because of the greater interest offered to learners and the reinforcing of concepts through learner engagement.

Presentation: Presentation is the use of the software potential of the interactive whiteboard to enhance the way in which words, concepts, ideas and relationships are displayed. Design, color, movement and more complex virtual manipulatives offer a superior way of showing data on an interactive whiteboard with the intention of prompting learner participation. The use of a

variety of means of display may meet the needs of learners with differing learning styles.

Social Constructivist Approaches: These are based upon the complex interaction between teacher and learner, or between learners, and relate to the way in which we learn from each other with greater facility once the social network of the context is known and when the culture of the learning group has been developed.

Virtual Manipulatives: A virtual manipulative is a computer program that represents a piece of equipment on a computer screen. Examples include a cannon that can fire cannon balls, a protractor for measuring angles and a geoboard where you can place and manoeuvre “elastic bands” on a grid on “nails.” Virtual manipulatives are most commonly written in Flash and JavaScript.

Chapter XXVIII

Web 2.0 and CMS for Second Language Learning

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ABSTRACT

The process of technological inclusion begins with an analysis of the features and functions of the specific tool in consideration. Pedagogy should then be evaluated and evolved in the light of possibilities inherent in the new technology. The process is essential because tools are not neutral entities, and they must be integrated in a thoughtful manner consistent with “best practice” standards. This chapter contains an examination of E-Folio, a Web 2.0 application, and a case study focusing on the process of technological inclusion to determine how to promote portfolio creation in the acquisition of second language writing.

INTRODUCTION

Several features separate Web 2.0 from the previous generation of web-based applications and programs. Most noticeable is the emphasis on concepts such as participant-generated production, open-source systems that encourage instructor interaction at the site administrator or developer level (or at least, contact with these involved parties), increased communication and collaboration, and online identity formation (Green, 2004; Lecourt, 2001).

The ubiquitous nature of courseware inclusion in educational environments raises many questions about the tools and interaction with existing pedagogical models (Synder, 2001). A central component of ensuring proper tool selection and effective use is the process of inclusion, involving the evaluation and adaptation of pedagogy. This is essential to make sure pedagogical decisions are being made by the instructor, and will ultimately benefit the students in the desired way (VanDerKlink & Jochems, 2005). This process is so important because these tools aren't neutral entities. Intrinsic to each CMS (Courseware Man-

agement System) are assumptions about teaching and learning. Yet, since they became commercially available in 1997 (Ullman & Rabinowitz, 2004) CMS have been developed and introduced into academia, a venue traditionally slow to change, and embedded into existing curricula at a rapid rate, despite the lack of proven pedagogical models. As Ullman and Rabinowitz (2004, p. 1) indicate:

Given the increased adoption of the CMS as an instructional tool, it's important to address how instructors are to make use of this technology. A review of extant literature shows that many articles have been written comparing the functionality of different systems ... how to incorporate this functionality into an existing course, however, rarely has been addressed.

Very often these are tools that are derived from models outside of academia and for all their much-vaunted possibilities have the potential to disrupt existing curricula and established pedagogical models. Tool inclusion is a process that is best viewed over time, and should be approached with the ideas of longevity and course evaluation uppermost in the developer's mind. When faced with the task of teaching advanced writing instruction in a Japanese university the first year was spent considering aspects of pedagogy and technological integration while preparing to incorporate an online component in my course. My intention is to promote portfolio writing to supplement classroom instruction through guided personal reflection and increased communication between peers and teacher to student (Bridwell, Nancarrow & Ross, 1984). To accomplish these aims the Web 2.0 courseware tool E-folio will be integrated for second language learning through English writing instruction. E-folio makes use of electronic portfolio systems, based on the performance support model adapted from the business world.

E-folio is an example of a Web 2.0 technology because of its teacher-centered design, which encourages teachers to engage with the components of the tool in terms of features and appearance. It is also a prime example of Web 2.0 technology because, while the instructor creates assignments and conversation topics, and sets the parameters for community, scope, and scale, the site is ultimately populated through participant-generated production and content.

WEB 2.0 COURSEWARE MANAGEMENT SYSTEMS

The question these tools and their ubiquitous presence raises is: do Web 2.0 CMS offer the opportunity to radically alter existing pedagogies, or do they afford the chance to make what instructors already do easier? This distinction, in practice, ultimately lies in the method and manner of technological inclusion. A carefully integrated CMS application can help make what instructors already do easier, and offer the chance to expand pedagogy in new and exciting ways that will promote the development of skills necessary for life-long learning, by giving students the tools to process the wealth of information they will uncover on a daily basis.

First, a properly integrated CMS can support the already existing pedagogy of the instructor by helping in a basic way with time consuming administrative details. Secondly, after this process has been initiated, instructors who desire will have the chance to evaluate pedagogical goals in light of new and potential opportunities that exist intrinsic to the capabilities of the CMS. Thirdly, the process of inclusion itself can be the catalyst for the course's evolution to accomplish tasks that support independent learning outside the classroom. In addition, an archive of the semester is created for further review, analysis, and research. Integration is a difficult task as very often there is little time during the academic year for instructors

to explore and familiarize themselves with these tools. Over time, however, as instructors gain comfort with CMS and the process of pedagogical assessment and technological inclusion, effective use can be achieved and new methods explored. As Morgan (2003a, p. 87) has suggested:

As practitioners gain experience, they will likely ... venture to use more CMS features, eventually achieving comfort, if not mastery, with large elements of the system's capabilities. The challenge facing educators and those who manage these enterprise investments is whether and when faculty attention can shift from adapting existing course structures and mastering difficult and newly evolving technology to thoughtful experimentation with customizable pedagogies.

On their own, CMS do little more than assist in administrative affairs like document and course content dissemination. However, some CMS, like E-folio promote ownership and therefore require the instructor at some level to engage with the tool and the concept of technological integration. Regardless of the tool, by virtue of the process, even courseware tools that do not encourage this sort of ownership can ultimately prompt the capable teacher to reflect on course goals, means, and pedagogy. Freed from the burdensome tasks of course management and administrative duties, instructors have time to consider the overall effectiveness of learning tasks, and improve them as they choose. This can lead to better use of class time, a deeper engagement with ideas and concepts, and more active and responsible roles for participants (Ullman & Rabinowitz, 2004). This is one way that technological inclusion, of any sort, can ultimately lead to course evolution and improved teaching practices.

The importance of the qualified instructor has not diminished; if anything, the incorporation of technology increases the need for the guidance and presence of an effective teacher. There is a huge difference between information possession

and information processing. The Internet, web applications, CMS, and instructive software place a wealth of information at the students' disposal, but without a proper pedagogical encasement, the computer is merely a tool that contains information. With all this material at students' fingertips — fingertips that are often more adept at manipulating the technology than the instructor herself — the question can be raised, what role is left for the instructor? Students have to be guided to interact with the material, question, probe and promulgate it, and receive instruction and support when they cannot figure out how to make sense of it. The end result of this process can often root courses in pedagogies that are more student-centered and supportive of diverse learners' individual needs. When implemented in a considerate, reflective manner, technological inclusion offers the opportunity to incorporate and practice well-developed and established educational pedagogies consistent with the individualized theories of Skinner, Gagne and Piaget (Morgan, 2003a).

CMS FEATURES: A COMPARISON OF BLACKBOARD AND E-FOLIO

There are many benefits that the inclusion of technology can offer for students and teachers, however a question the rapid rise of CMS raises is: are they necessary? From an administrative standpoint, they may not be. They make the day-to-day functions of the running of courses easier through online document distribution and improved access to course materials for students, but that does not necessarily imply any degree of change to the content or quality of teaching materials that accompany their inclusion. Most institutions are installing CMS for administrative purposes and uniformity of course management, however instructors engaging with these tools find that they do have a discernible effect on pedagogy. As Morgan (2003b, p. 4) suggests:

Web 2.0 and CMS for Second Language Learning

Faculty using course management systems find that they achieve a number of pedagogical gains. This is something of a paradox given that faculty look to a CMS to provide them with organizational tools. But in the process of using these tools, many faculty members begin to rethink and restructure their courses and ultimately their teaching. The end result is a sort of “accidental pedagogy.” Faculty teaching is improved through the use of a CMS, but this is a side effect of the use of the software rather than a direct result of its use.

The real advantage of a CMS exists in the potential effect inclusion can have on pedagogy, and therefore student interest, motivation, and achievement (Morgan, 2003a). CMS, especially Web 2.0 applications, can do more than make what has been done easier. A properly integrated CMS should create new opportunities for student/teacher interaction, peer-to-peer communication, documented production, individual and group work, and prompt students to make use of the wealth of information that is now at their fingertips. When writing papers, doing projects, or planning presentations students can include appropriate video clips, PowerPoint slideshows, images, or sound files. An open-sourced, teacher-centered application can help an instructor disseminate course documents, create a library, facilitate communication, and be a storehouse for student portfolios. At the same time, it can also offer teachers and students the tools to create, edit, and implement video and other multimedia files, to be used, along with their writing, in a final presentation. The whole process is archived and documented, giving students a chance for meta-analysis and evaluation, of performance, work, and progress. This is the real benefit of Web 2.0 applications, this chance to create, then reflect, analyze, and evaluate, factoring in self-assessment, peer critique, and feedback from instructors and external assessors. This process is what many teachers strive for, particularly language teachers, but it will not happen simply because technology has

been introduced — it has to be nurtured, coaxed, evolved, and developed under the watchful gaze of a professional educator.

Web 2.0 CMS applications are significantly different from previous generations of Internet applications for their open-sourced, user-driven, participant-generated content. They represent a major shift in the types of Internet applications that will be developed in the future and can have a significant impact on educational pedagogy once they are integrated in a thoughtful manner, guided by experienced instructors. This will be especially evidenced in language teaching and second language learning where students will be encouraged to make use of the synchronous and asynchronous communication features for documented discussion, peer review, and collaboration. CMS will not replace such venerable institutions as language labs and self-access learning centers, but will function more as a support for instructors seeking to facilitate individual instruction in large academic courses.

Web 2.0 has the potential to transform learning in conjunction with the modern classroom if it is incorporated within an inclusive pedagogy that makes the most of the features of these applications. Interactivity with the tool is one of the features that separates Web 2.0 from other technology that has been imported into the classroom. The VCR plays a tape that provides information meant to model and instruct. A difference between Web 2.0 and instructive technology like the VCR and CD-Rom is the opportunity for students to process the knowledge they are acquiring in ways that will make the material personal and therefore meaningful and lasting. The language laboratory induces a higher level of participation than videotape because it often includes an interactive component that requires students to practice the material, and makes their own work and voice, the central focus. Effective language labs are ones that have the students record their voices, and use those tapes for review, analysis, and evaluation, then offer students the opportunity

to make corrections. Web 2.0 applications easily have this capacity, but the pedagogy that surrounds their use has to be as firmly established as the language laboratory, before the new ways they can be effectively used are considered.

Previous generations of courseware often fell into the trap of attempting only to make what is already being done easier. While this is helpful, it is by no means revolutionary. What is so different about some Web 2.0 courseware tools, and E-folio in particular, is their teacher-centered approach. While a movie is playing, in some regards, the VCR and TV have replaced the teacher with a pre-recorded instructor teaching an externally derived lesson. Instructive technologies, like CD-Rom, follow this approach by providing complete packaged lessons. These lessons are generated in a different venue and are content-based, leaving the instructor with the role of merely pressing play, or directing the students to turn on their computers. This is detrimental to the effectiveness of the instructor and relegates the student to being an observer.

A criticism that can be broadly applied to CMS is that there is little opportunity for students to be active participants. They have a role in the classroom of course, but how do they interact with the program itself? Blackboard has become a standard tool used by many universities and campuses around the world lately, but for all its vaunted benefits, it does little but centralize the administrative components of a course (Blackboard, 2007). Not many of the features Blackboard possesses encourage students to actively participate beyond downloading syllabi and perhaps making use of the email functions, nor does it engage the instructor in the process of technological integration. In many institutions faculty use of Blackboard is for administrative purposes only and overlooks the importance of course development that can be achieved through technological integration (Boyd, 2001).

Unlike Blackboard, Web 2.0 has the potential to engage instructors to consider the nature of

including an interactive component by allowing them to make decisions regarding design, features, and functions. There is a large divide between traditional, commercially packaged CMS programs like Blackboard, now merged with WebCT, and the new Web 2.0 open-sourced programs like Moodle, Sakai, and E-folio. Conscientious instructors, who regularly review curricula objectives and the efficacy of learning materials, will find the process of inclusion, facilitated by Web 2.0 tools, one that encourages this sort of reflection and evaluation. Before a course begins instructors have to populate the site and make key decisions regarding features, functions, overall appearance, and the level of responsibility for involved parties. After the semester content is archived for review, analysis, and research.

A part of the problem with applications like Blackboard lies in their effort to reach a larger audience with a commercial product. Commercial tools often sacrifice malleability and adjustability and opt instead to attempt to create an industry-wide standard for course and content creation that instructors have to conform to. Some of the options that are sacrificed, like labeling, commenting, and assignment specific notification are especially important for ESL and EFL educators who need to use familiar terms in the target language for meaning recognition, and wish to correct not only the content of submissions, but the grammar and general lexicon in a timely fashion. Arle (2006) criticizes Blackboard in a study that compared it with Moodle. His main points were that Bb has no capability to track student involvement, does not offer the range of flexibility that an open sourced program can, does not support journaling, and does not include an easy way to provide individualized feedback to student assignments.

Much of the recent integration of CMS has utilized commercially based packages for several reasons, despite their apparent drawbacks. Commercially packaged programs come with integrated support systems, site administrators are provided, and there is minimal initial effort,

therefore they can be more readily implemented than a privately derived system. This comes at the cost of outsourcing. Even though most large universities have ITC staff and developers they are often under-utilized and relegated to providing technical support for faculty and are not active in program or application design. The pre-packaged systems appeal to a broader range of customers because they are more general. In return they are less specific to institutions' varying needs and cost more. Three typical areas of concern about commercial CMS have been outlined as follows:

- In exchange for the ease of use, most CMS provide instructors with a limited flexibility in designing courses.
- Limited capability to provide interactive e-learning.
- As the market matures and software publishers add complex features (especially to appeal to the corporate market), prices for CMS have risen sharply in recent years. Although cost has driven some universities to strengthen their commitments to their CMS, it has driven other universities to drop their CMS and provide open source tools that do not carry a lease or purchase cost. (Carliner, 2005, p. 3)

The divide between corporate, commercially derived CMS and open-sourced CMS is deepening despite initial similarities. While the features are different for nearly every tool, CMS do share a similar set of basic functions. A comparison of Blackboard and E-folio elucidates the commonalities, and the differences. Due to its commercially derived, externally supported, student-centered design, Blackboard is a Web 1.0 technology. E-folio's malleable, open-sourced and inclusive approach makes it much more of a Web 2.0 application. A significant part of what defines Web 2.0 applications is their open-sourced nature and focus on user-driven content and production.

What distinguishes Web 2.0 CMS from previous generations of courseware management systems are their feature sets, many of which include the option for plug-ins and user created additions. CMS, in general though, were created in response to institutional need, and are defined and grouped because they do fit a common description (Carliner, 2005). Table 1 outlines the similarities and differences between E-folio and Blackboard. The categories were generated from observations of the features and functions of Blackboard and E-folio, but are modeled around a shared set of functions that CMS possess (Carliner, 2005).

E-folio and Blackboard share many similar features. They both offer tools to increase access to course content and learning materials, have internal communication capability, and allow for uploading of multimedia. However, E-folio, designed to be used in writing instruction, includes the ability to target assignments for certain users and attach comments to submissions for review and self-correction. E-folio's tools and functions afford greater opportunity to discuss assignments with students, and help them self-correct in an effort to elucidate meaning. In a comparative study of native and non-native speakers' writing using CMC, Belz and Thorne (2005) note that the use of a "recast" or "re-posted document" "empowers learners to become active and effective language users, supports a variety of interaction types, and promotes negotiation of meaning" (Belz & Thorne, 2005, p. XIV).

Recasts from students are usually revised through communication with an instructor or peers. Self-editing and self-correction is an important tool for language education. Some features E-folio possesses not often found on many CMS sites, automatically generated confirmation of assignment posting, and notification of comments that have been posted between instructors and students, are helpful in facilitating this process. The comment and notification features of E-folio give instructors easier access to students' work,

Table 1. Courseware management systems' feature sets

CMS Feature Description	BlackBoard Feature Set	E-folio Feature Set
Place course materials online	√	√
Multimedia Presentation capability	√	√
Multimedia editing capability	X	√
Internal authoring	X	√
Assignment targeting	X	√
Track student progress through assessment features	√	Limited
Discussion board	Limited	√
Other communications tools	√	√
Portfolio capability	X	√
Lock box for students	√	√
Presentation tools	Limited	√
Student-use tracking tools	X	√
Cumulative course statistics	√	X

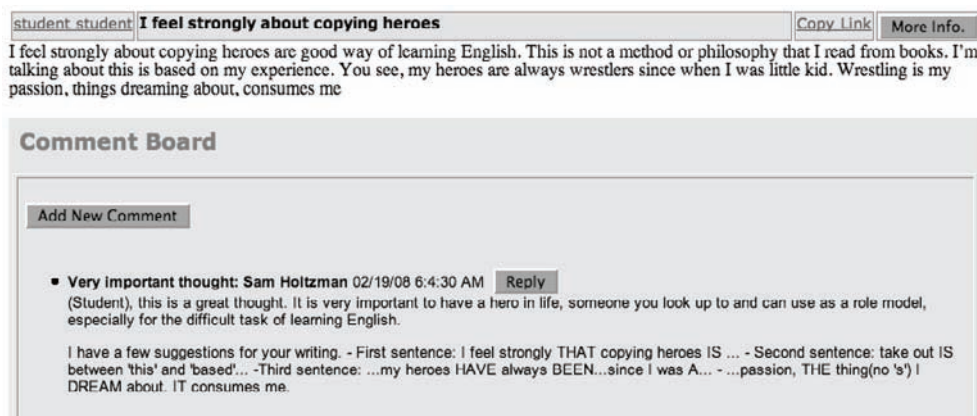
and offer the chance to comment on their thoughts as well as their writing and help them prepare for revisions in a timely and individualized fashion. This is especially important in an atmosphere where students are reluctant to participate and hesitant to give an answer they are unsure of in a classroom setting. Figure 1 captures an interchange where grammatical feedback is being given to a student through the comment feature. The response is separated into two parts, the meaning of the submission, and the specific words and format used.

Through computer mediated communication, feedback can be given without discouraging further efforts, or diminishing the value of contributions, effectively opening courses to different modes and manners of participation. In addition the notification and analysis tools allow instructors to determine who has been on the site and when (during school hours or not) and the time spent engaged with the CMS. This is an important issue when considering the pedagogy of an online course component, as a desire for equity dictates that students should have equal

opportunity to complete course requirements, regardless of Internet access.

Another benefit to E-folio is the manner in which the system databases, document and archive all communication and production for the semester between all involved parties, making it easier to review and evaluate pedagogy, material, and the efficacy of learning tasks. Teacher-centered technology focuses the initial efforts of the instructor on the process of inclusion, and then presents them with an archive for review at the semester's conclusion. Blackboard is a self-identified student-centered technology, which is not a bad thing, but differs in nature from the teacher-centered E-folio. While students are ultimately the recipients of any sort of technology that is integrated into a course, the instructor is the guide, the intermediary, the presenter of this material, and should remain central to the process. The process itself should be guided by the instructor's expertise as a teacher and learner, not by the software itself.

Figure 1. Submission and comment



E-FOLIO TOOL DESCRIPTION, HISTORY, AND PEDAGOGY

Any process of inclusion should begin with a review of pedagogy and an analysis of the tool to be integrated. E-folio is a short name for “electronic portfolio” or “e-portfolio.” E-folio is a courseware management system for instructors designed to facilitate communication, document production, and assist in curriculum evaluation and development. E-folio is designed to support instructors, and by doing so also benefit students as recipients. Firdyiwiek (2005, p. 2) argues that:

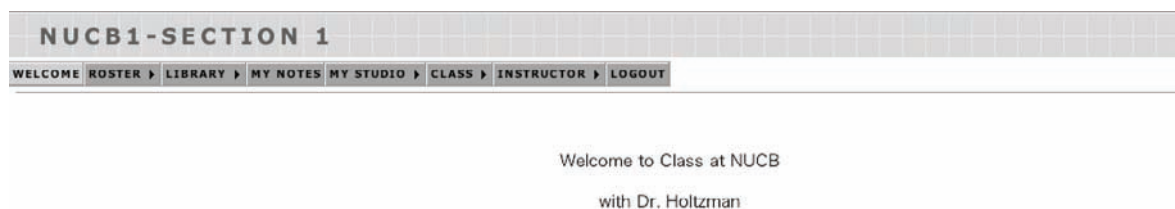
For the instructor, the E-Portfolio relieves some of the burden of document management as well as access to student work. As part of an “integrated” system (IECP), the E-portfolio also improves communication between the instructor and the outside evaluator. At the end of the process, the cumulative data (student work and instructor/evaluator communications) serves as a database for studying and improving the portfolio method even further.

At the student level E-folio functions as a database driven document management system assisting with creating, collating, evaluating, and editing documents. It can be used for one class, or

over the span of a student’s time in that program or institution. The tool possesses additional features to facilitate communication for immediate and post-production assessment and evaluation. There are also several options available for presentation and display of cumulative work in adherence to the goals of the portfolio method of instruction. The basic features available to students upon initial log-in allow users to see a comprehensive list of members’ names, teams, and contact options (ROSTER), a repository of resources (LIBRARY), and areas for creating work, posting work, and reviewing posted productions (MY NOTES, MY STUDIO, CLASS). The following image (Figure 2) is of an instructors’ site, and includes the additional link for the instructor’s tool set.

E-folio was created to meet instructors’ needs in a portfolio-based writing course. Its operating principles are grounded in the performance support model (adapted from the business world), and follow the developer’s belief in teacher-centered design for ownership and malleability. E-folio is a response to writing instructors’ wishes to view multiple course documents from students across an array of classes, in a way that allows for internal and external review and evaluation. As Firdyiwiek (2005, p. 3) indicates, the tool itself has changed over various iterations in response to instructor suggestions generated through classroom use:

Figure 2. Menu options



While E-folio was developed as a tool for enhancing the portfolio method of teaching, successive iterations of its design have incorporated additional tools and processes for the creation of hypertext, multimedia, and multilingual documents, as well as for accommodating other communication devices such as threaded discussions, chats, and external methods of assessment.

The basic functions of the tool support the portfolio system of writing instruction, introduced by Elbow and Belanoff (Firdyiwek, 2005), and also encourage reflective and interactive components. Students not only produce their own work, but also have the option to read peer production and engage in active communication using “comment” features and threaded discussions. The background of the tool’s development suggests that teachers who are seeking to introduce or make use of the portfolio method of instruction should consider integrating or including this tool. Though it is malleable to an amazing degree, there are assumptions about teaching and learning embedded within its design that will make it more effective as a support tool for instructors seeking to use it in a certain way. The tool does possess the capability to operate as a learning management system, however, its specific design, per the intent of the developer, is that it should be used as a courseware management system. On a basic level E-folio can be used for things ranging from content transmission, to grading, assessment and evaluation, however, its primary design is to increase document creation and management (in-

cluding portfolio and presentation development), peer-to-peer, and instructor to student communication, and internal and external review.

An initial foray into an E-folio site requires a password and user ID. Given the potentially sensitive nature of students’ personal writings, it is necessary that the site be protected from unauthorized visitors. The user ID serves a dual purpose. Tool features, assignments, team postings, and menu options are designated by the instructor or site administrator for certain users, which are placed into “Teams” and identified upon login. This allows the lead instructor to determine who has the capacity to alter the site, and the level of interaction. The design choices of E-folio enable the instructor to control not only the appearance of the site, but the functions and options available. The instructor, based on her level of technological proficiency can utilize as many or as few of the embedded tools as they wish. Site configuration options exist to allow the instructor who wishes to enable, and alter almost every aspect of the tool, from log-in options and the wording of greetings to site navigation and text editor choices (see Figure 3). Advanced options allow for the creation and manipulation of multimedia and external URL linking, to levels of interaction, participation, and final presentation formats. The possibility also exists, in accordance with Web 2.0 courseware design, for savvy instructors to link to or encode external tools and information sources.

Once inside the site, menu options appear for the instructor in a similar manner to the students, however, with one mouse click the instructor

Figure 3. Instructor options for site configuration

can be taken “behind the scenes” to adjust and manipulate the “skin” of the site, decide on menu options, and create and target assignments for different users based on their access and team status. Options existing for the instructor range from the ability to target users to submission choices for student productions. Instructors also designate (per assignment) the availability, method, and manner, of commenting, editing capability, multimedia uploading capacity, recipient audience choices, and notification for submitted assignments. Decisions can be made to allow the student to access help menus or other plug-in tools, use editing features like spell check, create a single assignment or presentation, and work in teams or individually. Figure 4 shows the multiple choices instructors have when posting assignments, and gives a sample weekly journal prompt.

This level of interaction with the site prompts instructors to claim ownership over the tool by making conscious decisions at all levels, about the specific assignments, and the method and manner of student access, multimedia use, and submission process. Furthermore, it allows the instructor to modify the language and terms used to make them appropriate for users. This is especially important when considering second language learners who

are gaining proficiency in the target language, but may not be familiar with key terms that seem obvious to the developer:

Following the “user design” principles of electronic performance support systems, E-folio also provides instructors with tools for changing the labels and tags in its interface to reflect the needs of the instructor and the discipline, as well as to better integrate the tool with local institutional infrastructures. (Firdiyewek, 2000, p. 65)

This sort of ownership, prompted by interactivity with the tool over simple issues like language use, then more complex ones, follows the developers’ intentions for use. The expected use of the tool, as determined by the developer, is to function as “performance support,” assisting instructors in course management and course development. The actual use of the tool in an academic course can be varied based on instructors’ pedagogy and need for assistive technology, however, it might be most effective when used in accordance with the prescription for use as intended by the developer. In this case, the developer is remarkably sensitive to instructors needs, and the tool, through interaction, encourages instructors to claim ownership

Figure 4. Instructor options when creating assignments

LIBRARY | MY NOTES | MY STUDIO | CLASS | INSTRUCTOR

Assignments: Edit

Cancel/Release Save

General Allowed Audiences Allowed Attachments Allowed Notification Other

Users: All Due: Comments: On

Title: Journal, Week 06 Status: Finished

Instructions

Due Each Week:

Please write 3 paragraphs (at least 4 sentences each) about a topic of your choosing. You can write about something that happened to you, or about your family, or a news story (local, national, international) etc... In addition, you will read 3 other student's journal entries, and write 1 paragraph comment in response to what they have written.

over it and select the functions that best suit their needs. This open-sourced, user driven design is one of the differentiating features of Web 2.0 technologies that make them unique. When combined with the concept of “performance support,” “electronic performance support systems” for education become tools whose design initiate users in the process of technological integration, but rely on the instructor to provide the pedagogical framework. Such a system of support:

integrates software tools, knowledge and learning experiences to improve business performance by (a) bringing individuals up to speed in their work as quickly as possible and with the minimum of support from other people, and (b) providing an electronic infrastructure to enable organizational learning. (Firidiwek, 2000, p. 67)

Through the process of E-folio inclusion, instructors interact with the tool in a way that encourages the review of pedagogical aims and promotes course development. Performance Support and Electronic Performance Support Systems, designed to help instructors better accomplish their goals by initiating them in the modes and manners of the new technology, encourages

ownership so they can manipulate it and adapt their pedagogy.

In some ways the pedagogical possibilities that Web 2.0 CMS offer are not truly new or unique. Exceptional teachers with far-sighted classroom management techniques and practices that encourage peer-to-peer and group interaction have achieved them. What these CMS offer is a chance to make this type of learning ubiquitous, which, arguably, is essential in this age of technology and access to information. The focus of the modern classroom should be information processing and interaction with learning materials. CMS, like E-folio, which encourage students, and instructors, to reflect on the learning process, documents productions for review and analysis, and offers multivariate possibilities for participation and student-generated presentations can quickly become influential curricular components.

It is difficult to predict the ways pedagogy will change in practice through the process of including Web 2.0 technologies. The term “process” is used when describing technological inclusion because it is a real give and take between the established pedagogy of the instructor, who so often is reluctant to relinquish tried and true methods in favor of packaged instructions and proscriptions

for use that accompany commercial programs. Elucidating the importance of this process, and making it individual is essential. Teachers should not look to technology just as an aide, as an administrative tool whose sole function is to make established tasks easier, they should look at it like a student, asking questions that go beyond “how can this help me do what I already do” and ask instead “what can I do differently that I couldn’t do before.” Teachers are life-long learners. Web 2.0 applications, and specifically E-folio, take this into consideration, relying on instructors to claim ownership over their tools, familiarize themselves with the controls, and steer them in the right direction. A computer is not needed in a language classroom, or any classroom, but if used properly, considerately and consciously, it can be a valuable asset to engage students and offer access to a wealth of information and new ways of processing knowledge.

WEB 2.0 CMS FOR SECOND LANGUAGE LEARNING

There is much potential to be gained from technological inclusion and blended instruction, especially in the area of foreign language education. New developments in Web 2.0 CMS applications go far beyond the traditional capacity and role of technology in second language learning (Belz & Thorne, 2005), offering easy access to diverse, first-hand material, facilitating authentic communication with native speakers, and implementing meta-pragmatic pedagogies. CMS use in second language acquisition benefits from synchronous and asynchronous communication tools and the opportunity for self-editing and revised submissions for writing improvement. The potential also exists to provide a less stressful practice environment to encourage shy or hesitant learners. This is especially important for second language learners and non-native speakers. Computer mediated communication should not be used to replace

face-to-face interaction but to supplement it, and through practice, bolster students’ confidence in an atmosphere that focuses on the words used and meaning constructed and less on the speaker. This has a potentially equalizing effect that can prompt inclusion of students who have previously felt disenfranchised:

Whether there is proof of enhanced student learning through CMC still remains to be seen, and research on the topic is rare and often contradictory ... Despite this, there are a number of advantages to language learners which have been identified in the literature, including motivational increases and reduced anxiety through more anonymous exchanges ... provision of authentic communication ... increased participation ... and an equalising effect for the participants. (Stockwell, 2001, p. 2)

Some of the real potential for CMS use in foreign language education and acquisition lies in the use of communication tools to augment classroom discussion and increase participation from reluctant, hesitant, or shy students. The possibility also exists to link native speakers with non-native speakers for real time or asynchronous interaction. This is especially valuable in the Japanese classroom where students are often hesitant to participate unless sure of the correctness of a response. In an Internet mediated communication environment students can progress from online discussions where they can work at their own pace with the opportunity to self-correct and edit, to real-time communication, once they have achieved a level of comfort.

Use of CMC in a foreign language education course has the potential to encourage participation in a culturally averse setting and open the classroom to diverse types of learners in ways that before were typically difficult to achieve. By giving students access to all materials in an environment that recognizes multiple forms of interaction, the onus is placed on students to

find an appropriate method of participation and develop a personal learning style. Carmean and Haefner (2002, p. 30) argue that:

Non-oral learners have a better chance of absorbing the information that often slips by them in the oral environment. Diverse learners, shy students, and reflective thinkers have new opportunities to post their views in the asynchronous environment of a CMS ... Some students are visual learners whereas others are more verbally oriented, and the CMS can offer learning opportunities for both kinds of students.

In addition CMC provide a neutral environment where participants' submissions are ideally viewed for their content. We live in a stratified society with a multitude of rapidly shifting boundaries. One of the most important things a teacher in the modern classroom can do is help create an atmosphere where students can develop individual opinions in an equitable environment. Computer mediated communication can help create and offer the tools to facilitate such a forum. As Stockwell (2001, p. 3) observed, this has the potential to include previously excluded students who wish to have their views heard:

A study by Warschauer (1996) into student attitudes while involved in electronic discussion when compared with face-to-face discussion showed that the learners reported that they felt they could express their opinions more freely, comfortably and creatively through the electronic discussion, with improved thinking ability and reduced stress.

These communication tools can relieve some of the pressure that exists for non-native speakers in a traditional classroom setting, and provide transcripts of documented conversations for review and correction. The nature of computer mediated communication preserves these interactions (Stockwell, 2001). These archives, obtained in a way that avoids the "observation effect" are

valuable both for students to self-correct, and for the instructor/researcher to review learning achievement and overall pedagogy.

Use of CMS in this manner will not replace class time or reduce face-to-face discussions, but will give students a place to practice and play with the language as a continuation of classroom activities, but within their comfort zone. A criticism of these communication features is that so much of language use is surrounded by gestures and facial expressions, which are lost in computer mediated communication. However, when used as a supplement to classroom discussion in a pedagogically sound way, student's comfort and aptitude with the target language can increase, allowing them to focus on what they want to say, and how they want to say it (Levy, 2007).

CMC is not a replacement for face-to-face communication, but a rehearsal and practice space to enable gains in comfort, confidence, and practical ability. With open access to curricular and course materials motivated students have a venue to achieve and contribute. A Web 2.0 CMS ultimately takes shape and is populated through student-generated production, so the work a student does over the course of a semester becomes central to the learning process. This is an additional benefit of CMS inclusion, as is access to material, and the range of course content that can now be contained in one area, created and uploaded by the instructor, or generated by student research and interests. Most CMS have multimedia uploading and playback capacity, however, others, like E-folio have advanced multimedia capturing and editing capabilities, allowing participants to create presentations using a range of digital, uploaded, and rendered material. In conjunction with the student's own work, the use of these first-hand "cultural artifacts" contribute to student's motivation to learn the language, and are essential to frame the target language in its social and cultural context. Their presence promotes a deeper understanding of the language itself and can often initiate important discussions about

meaning and relevance, particularly in relation to cultural knowledge (Stockwell, 2001, p. 4).

The dual benefit of these cultural conversations is that they prompt the student to define and strengthen their understanding of their own culture while promulgating and probing another, in the target language. An effective pedagogy for second language acquisition could be accomplished by grounding conversations about language and culture with artifacts and examples, supported by discussion, in-class and online, supplemented by guided personal reflection papers or journals for individual processing and self-definition. The technology exists to accomplish this, but the instructor has to be the motivating, organizing force to its use and inclusion. In addition to the difficulty of centering the technology in effective classroom pedagogy, the specifics of its integration still need to be considered and re-evaluated. This refers to the ways technology is used in the classroom, and the expectations for its use outside of the classroom. If a course has a required online component, these factors can include the duration of a student's access to the Internet, and the quality and capacity of their connection.

Internet use and access is a particular concern for foreign language teaching in Japan where extended access to the Internet off campus may be limited, or achieved at an internet café or by cell phone. The pedagogy of Internet use for language education has to be expanded to include these factors, especially in terms of length and type of assignment, regulations for online posting, timeliness and due dates, and requirements for multiple site use (for example reading and responding to multiple pages or documents that require downloading or streaming access).

There is much in blended instruction that the capable and active instructor can make use of, however, in language education, as in any type of teaching and learning activity, all aspects of the course need to be re-evaluated during technological inclusion. This is a lengthy process, but essential in light of the ubiquitous nature of

these tools, their rapid rate of development and instillation, and the depth to which the assumptions about teaching and learning are embedded in them.

CASE STUDY: E-FOLIO AND SECOND LANGUAGE WRITING

When considering integrating any new technology into an existing curriculum it is best to approach the tool with practical considerations (Frechette, 2005). It is helpful to begin by asking questions such as, "What is the tool?" "What features does it possess?" and "What are the expected benefits as a result of its integration?" These answers provide the starting point for curricula adjustments and effective tool integration. To model this process, this section outlines the features and function of E-folio, and explains how it can support pedagogy and help accomplish educational goals.

The context of the study is a 4-year private university with approximately 4,000 students. The average TOEIC score is 426 points. The university runs a 1-to-1 laptop program and the campus was one of the first in Japan to offer wireless Internet access. Blackboard is used as the university's official CMS; however, the tool suite purchased accomplishes little more than administrative duties. To make the most productive use of this environment and to encourage participation and interaction with the target language in and outside the classroom, E-folio is being introduced.

Over the past year the curriculum for the advanced writing program has been slowly adjusted and students prepared for the integration of the E-folio CMS. The goal of the project is to increase student production and communication in the target language. The technology will be used outside the classroom to supplement grammar and content instruction and complete the "practice and play" dichotomy, whereby students are given a space to utilize their newly acquired language in a less confrontational environment

than the traditional classroom. The tool is not being integrated to replace classroom time, but to augment and bolster the classroom experience by providing a forum for students to produce documents and communicate with each other and the instructor in a meaningful way (Firdyiwiek, 2005). This process will also help facilitate the creation and collation of students' 4,000 word written portfolio required for graduation. Inclusion is in accordance with pedagogical goals, and the expected use of the tool.

Recognizing the impact of integrating a new tool into an existing curriculum, the process was approached from two directions. Pedagogical considerations include the method, manner, and means of second language learning and writing instruction. The technological side focuses on how the course can be updated and evolved given the new possibilities inherent in the technology.

Once the initial decision had been made to integrate E-folio into the writing courses, the pedagogy of the course had to be re-considered, the relevant features of the tool selected, and the appearance of the E-folio site manipulated. Language was carefully chosen, reflective of students' ability that would clearly state the goals of each assignment, and on a more basic level, align menu option terminology with key terms introduced in the classroom. The pedagogy and curriculum previously in place focused more on grammar and the use of model sentences, and less on image construction, expression, argument structure, and overall meaning. Student writing lacked personal significance; furthermore macro structure was eschewed for a micro approach. This did not help foster an individual desire to communicate in the target language.

The pedagogical beliefs embedded in E-folio lend themselves well to second language learning practices; increased communication in the target language for students, increased interaction with the instructor in reduced-pressure atmosphere (outside the classroom), and website interaction in the target language. In addition, the portfolio

method, defined by Elbow and Belanoff (Firdyiwiek, 2000), encourages guided personal reflection to make language use meaningful through self-reflection and image construction.

For the students, the portfolio can be a clear measure of their progress by representing a body of work collated over a period of time. At the end of the semester, year, or program of study, both students and instructor can use the accumulated material for reflection and review. For the instructor the portfolio serves the dual purpose of providing them with a record of progress for student achievement, helping determine assessment, and a contained arena to use for evaluating how the pedagogical goals of the course were met through assignments, content, and overall design. A web-based portfolio retains the essence of the portfolio method, adding portability, easier access for review and revision, and a uniform format for presentation (Firdyiwiek, 2005).

E-folio is being included in the upper level writing course to accomplish several specific tasks, which have been consciously aligned with the features of the tool and the curricular pedagogy. E-folio will be used to assist in document collection and portfolio creation for weekly evaluation and ultimately as an overall measure of progress. Its inclusion should increase communication in a meaningful way in the target language, and provide a transcript of these "e-conversations" or "e-interactions" for study, by students, and instructors.

E-folio has been selected for this purpose because of its teacher-centered design, allowing instructors to modify most aspects of the tools appearance, and activate functions that will meet their needs. In second language acquisition this is essential because the instructor, who is familiar with students' ability, is able to choose appropriate and meaningful terms, and word assignments in a way that will facilitate pedagogical goals and basic comprehension.

E-folio was selected to promote written second language acquisition through guided personal

reflection papers or weekly journals, encouraging students to produce documents that are personally meaningful, and to increase peer-to-peer, and teacher to student communication in the target language. The guided personal reflection papers follow the D.A.R.E model (Holtzman, 2006), which asks students to respond to a certain prompt or assigned topic by considering their own experiences. D.A.R.E (Description, Analysis, Reflection, Evaluation) is an acronym for a way of thinking and writing that considers issues of personal significance in a way that promotes self-reflection and analysis, both of the event itself, and the student's reaction to it in a way that suggests moving beyond the concept of validity and right and wrong answers when discussing personal experiences, thoughts, and opinions.

To test the function of E-folio in this environment its initial use was divided between two courses to consider each aspect of its integration

more succinctly. In the smaller classroom setting of a third year tutorial students were encouraged to post short personal reflections to assigned topics. They were divided into teams on the site, and asked to read and respond to their peers' writing each week. This was done in class each week so the process could be observed and instructions, when necessary, given. The intimate nature of this course allowed for discussion with the students about their experience with the tool each week and problems encountered. Pedagogically, the process encouraged students to craft personal statements, and use the language to create meaningful interactions about topics that were individually important. Though students were instructed to post a comment to team members' submissions, it was interesting to note that the comments often initiated responses, creating "conversations." Figure 5 shows the pattern of comment/response and demonstrates "Comment Board" attachment

Figure 5. Weekly submission and responses

The screenshot displays a web interface for a student submission. At the top, there is a title bar for "A Place I like" with "Copy Link" and "More Info." buttons. Below the title, the submission text reads: "A place I like is Gokoku shrine in Miyazima. Because it is very traditional, beautiful place in Japan and there is a Torii which build in the sea. This place is registered as one of World Heritage Site and in Miyazima, it has many historical palces. It is very interesting place and if I have a chance, I want to go there again." Below the submission is a "Comment Board" section with an "Add New Comment" button. The comment board contains a list of replies, each with a date and time, a "Reply" button, and the text of the comment. The replies include: a "history" comment from 05/28/07 2:3:10 AM; a "RE: history" reply from 05/28/07 2:16:43 AM; a "comment" from 05/28/07 2:5:18 AM; a "RE: comment" reply from 05/28/07 2:19:12 AM; a "Hi!" comment from 05/28/07 2:7:21 AM; a "RE: Hi!" reply from 05/28/07 2:21:43 AM; and a "☆" comment from 05/28/07 2:10:01 AM.

to the original work. Student names have been obscured to preserve confidentiality.

Weekly journaling, or written reflections was added to the students' established writing assignments, to get them used to the concept of personal reflection in response to prompts and topics. Following the students' progress in both areas, instructions were devised that met their need for basic use and navigation of the tool in familiar terms and conflicts considered in both pedagogy and practical use that might happen when transitioned to larger groups. Field notes were utilized to track tool adjustments, supplemented by weekly conversations with students about efficacy and pedagogy.

There were several unanticipated concerns and conflicts along the way. The first of these problems was a platform conflict. E-folio functions best when using Mozilla's Firefox with a Macintosh, however, the students using Internet Explorer experienced interrupted access and limited use of features. This was quickly remedied by downloading and installing the appropriate browser. Of primary initial importance were concerns about assignment wording, targeting, and due dates, real-time versus delayed interactions, and how to include these assignments in the evaluation and assessment matrix.

Another problem that arose involved the low value initially assigned to the journals. Several students didn't complete the weekly writings perhaps because they calculated the minimal impact it would have on their final grade. Another concern was how e-assignments would fit into the weekly course and homework schedule. In an effort to achieve equity, timing and due dates began to be a concern. While all students possess laptops, not all students have adequate (or any) connection to the Internet when off campus. Some of these problems could have been anticipated, however, they represent only a few of the myriad issues that can arise when dealing with new technology's integration into an existing course structure. Looking ahead to

next semester, the measures taken to test E-folio will help minimize unanticipated concerns, and maximize educational value.

This testing period, initiated as part of the process of inclusion, allowed me to consider the appearance, design, and function of the tool, and simultaneously, prepare students for the types of assignments and writing they will be employing when using the new program. This type of multi-layered approach allows the instructor to anticipate problems, and prepare in advance for tool integration, leading to effective use and an updated, evolved, pedagogy.

CONCLUSION

The goal of this discussion has been to examine the process of technological inclusion through an analysis of the Web 2.0 courseware tool E-folio and its embedded roots in the principles of portfolio creation and performance support and the efficacy of its integration for second language writing. E-folio, as an example of a Web 2.0 technology, as partly defined by its open-source nature, utilization of participant-generated content, communication and collaboration tools, and the creation of an online "identity" for computer mediated communication, written reflections, and peer review. The pedagogical expectations embedded in E-folio are based on the ideas of performance support and teacher-centered design, which encourage and assist instructors to claim ownership over the tool, first getting "up to speed" in its use, then by gaining mastery over its functions. This process promotes course evolution and returns the power of design and function to the instructor. The process of inclusion itself can lead to reflection and evaluation of pedagogy, but some Web 2.0 CMS actively support, promote, and engage instructors in this process.

A conscious focus on the process of inclusion takes into account the pedagogy of the tool creator, the tool itself, and the desires of the instructor.

This is essential as these tools become ubiquitous. This process promotes “best practice” for effective integration, and also serves to remind instructors to examine assumptions about teaching and learning embedded within the operating procedures and prescription for use of the new technology. The benefits for second language learning are clear, inclusivity and a place to practice with the target language beyond the traditional classroom, however, at every step of this process pedagogy needs to be firmly developed and defined.

For all its touted wonders, technology has the potential to further alienate or disenfranchise learners, and in no way should serve as a replacement for the instructor. It is clear, however, that many educators have concerns about the process of integrating new technologies in the classroom, as issues relating to a “hidden curriculum” or of adequate access to resources, might propagate the disenfranchisement of certain students and groups, and perhaps alienate new ones.

It is important that these tools, whether learning management systems, courseware management systems, or anything of that ilk be included and integrated in existing academic structures with attention to detail at all levels and by all involved parties. Instructors need to make sure that the pedagogical significance of their course and classroom design is not compromised, but continuously evaluated and evolved in the light of new possibilities.

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KEY TERMS

Best Practice: Standards that are often set by the instructor or institution, for effective teaching methods, incorporating curriculum and pedagogy review and evaluation.

D.A.R.E (Description, Analysis, Reflection, Evaluation): A model for guided self-reflection that divides responses into four sections, asking authors to describe an event or experience, analyze its components, reflect on significance, and evaluate effect or impact.

Electronic Performance Support Systems: The electronic version of performance support, EPSS are training programs used to bring participants to a uniform level of knowledge and achievement.

Guided Self-Reflection: A writing process (like journaling) that encourages students to reflect on personal experiences. Often written in response to assigned topics.

Inclusion: The process of technological component integration into existing curricula.

Participant Generated Production/Content: Material students produce through interaction with a CMS or online curricular component. Web 2.0 CMS are primarily populated by student production.

Teacher-Centered Design: Refers to courseware management systems that support instruc-

tors' needs for course and curricular administration, management, and development.

Tool Neutrality: The concept that technology is not neutral or transparent, but comes with embedded assumptions about operating procedures, often derived from a different context.

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