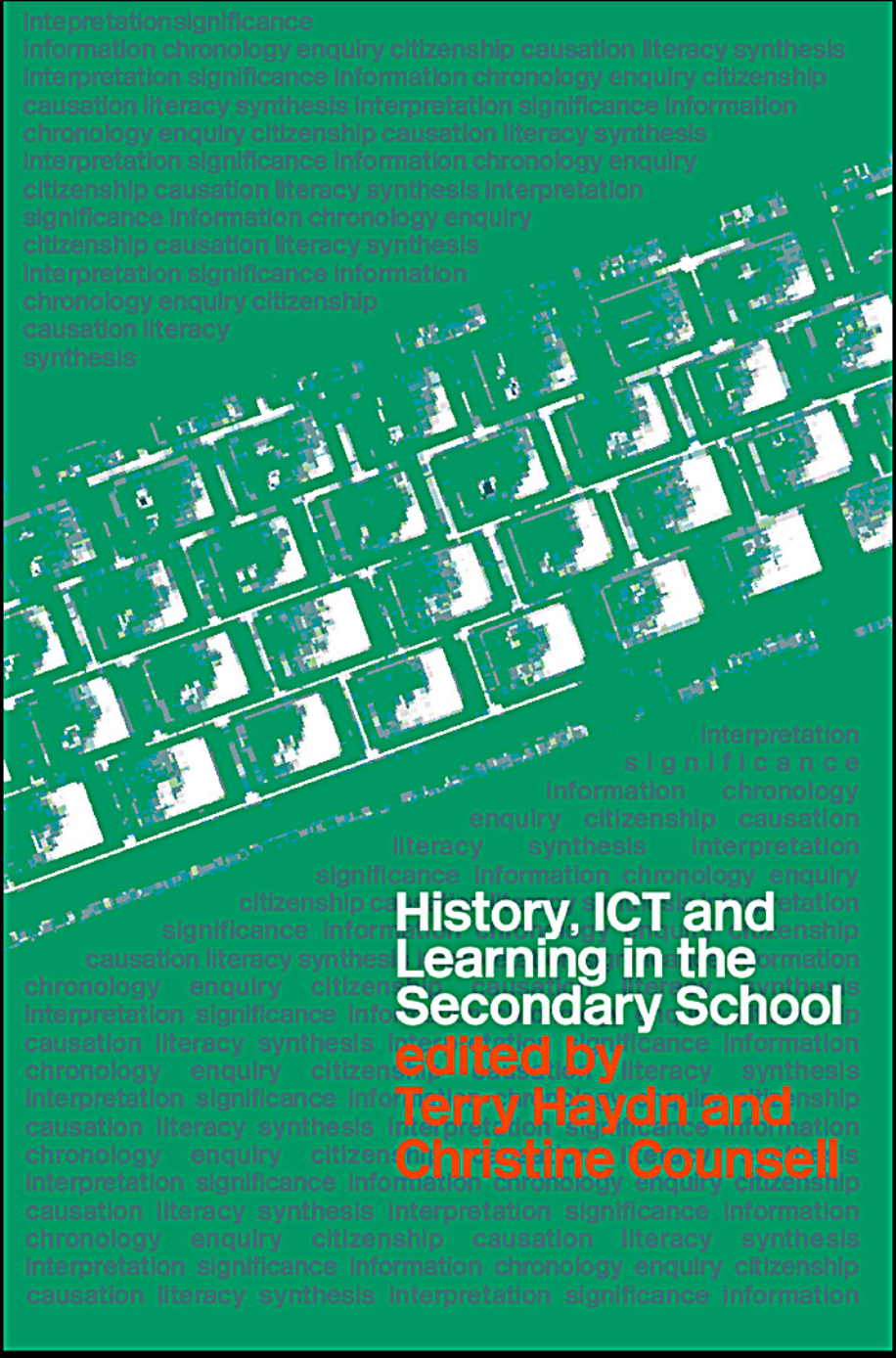


Also available as a printed book
see title verso for ISBN details

History, ICT and Learning in the Secondary School

Despite the high profile of ICT in education, finding practical and meaningful ways to integrate ICT with lessons can be a difficult and overwhelming task. This book explores the current use and the potential of ICT in the secondary history curriculum, and offers sound theory and practical advice to help secondary history teachers use ICT effectively.

Key areas covered are:

- Getting started in ICT and history
- Short, medium and long-term planning
- Using ICT to develop historical understanding and skills
- Data handling in the history classroom
- ICT and maps
- Integrating virtual resources with the real world of teaching and learning

With contributions from leading academics and practitioners in history education, this book will be important reading for all secondary history teachers and trainee teachers, and will also be of interest to upper primary school teachers.

Terry Haydn is a senior lecturer in education at the University of East Anglia. **Christine Counsell** is a lecturer in education at the University of Cambridge.

History, ICT and Learning in the Secondary School

Edited by
Terry Haydn and
Christine Counsell

RoutledgeFalmer
Taylor & Francis Group
LONDON AND NEW YORK

First published 2003
by RoutledgeFalmer
11 New Fetter Lane, London EC4P 4EE

Simultaneously published in the USA and Canada
by RoutledgeFalmer
29 West 35th Street, New York, NY 10001

This edition published in the Taylor & Francis e-Library, 2004.

RoutledgeFalmer is an imprint of the Taylor & Francis Group

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data
A catalog record for this book has been requested

ISBN 0-203-22228-8 Master e-book ISBN

ISBN 0-203-27678-7 (Adobe eReader Format)
ISBN 0–415–26349–2 (pbk)
ISBN 0–415–30531–4 (hbk)

Contents

Illustrations

Figures

Tables

Introduction

Terry Haydn

An important question

How history teachers should respond to the development of new technology in their teaching is an important question – for history teachers and trainee teachers, for their pupils, and for the health and vitality of history in the school curriculum.

Over the past several years, ICT has developed an increasingly high profile as an issue in the teaching of history, and in education generally. As recently as 1993, 50 per cent of a cohort of trainee history teachers reported that they had never used a computer in their teaching because 'the thought did not occur' (Downes 1993). It is difficult to imagine today's trainee history teachers providing a similar response, given the requirements for Qualified Teacher Status in England and Wales (DfEE 1998), the pressures on history departments to incorporate ICT into schemes of work and the high profile of ICT in the education media. The use of computers for teaching history is also one of the most common topics for questions at job interviews for new history teachers in the UK: a recent survey found that a question on the use of ICT featured in 93 per cent of interviews for posts as Newly Qualified Teachers of History. In the same survey, many heads of history acknowledged that they felt 'under pressure' to develop the use of ICT in their departments, and some expressed concern that if ICT was not seen to be an integral feature of schemes of work this would reflect unfavourably in an Ofsted (Office for Standards in Education) inspection of their department (Haydn 2001). One recent British survey on teachers' use of ICT found that a main reason given by teachers for using computers in their teaching was that they felt they ought to. (Cox *et al.* 1999.)

Developments in new technology have not come, therefore, as an unalloyed benefit for history teachers and history teacher-trainees: they have also become, in a sense, a concern and a pressure. Part of the

purpose of this book is to focus on the positive facets of new technology for history teaching, and the ways in which exploring recent developments in ICT can be an interesting, enjoyable and professionally fulfilling aspect of history teachers' work.

The importance of a critical and open-minded approach

In spite of the massive claims made for the use of computers in education, it is now widely acknowledged that there is a 'rhetoric–reality' gap (Trend *et al.* 1999) between many of the claims made and what is actually being delivered in schools in the United Kingdom (see Chapter 1). In terms of the impact of new technology on the educational process, the television and video-recorder have had more impact on the classroom practice of history teachers in the UK than has the computer (Haydn, 2001).

It is worth noting that not all countries have invested in ICT with the same enthusiasm and largesse as the UK: as Behre (1998: 58) points out, 'Compared to Sweden, most countries in Europe go easy, or even very easy, in computerising their schools. The question is whether they are so conservative that they have not grasped the idea, or whether they are smart, having understood that the school has more important things to do.'

British politicians (of all parties) have tended towards enthusiastic espousal of ICT in education, with Tony Blair (interviewed on *A Week in Politics*, C4, 18 February 1995) proclaiming that 'the future lies in the marriage of education and technology. The knowledge race has begun. The pace of technological change means the task is urgent. Knowledge is power. Information is opportunity . . .'; and Charles Clarke, as minister of state for the Department for Education and Employment, elevating new technology above even literacy and numeracy in declaring: 'Familiarity with ICT is the most vital life skill for the generation now going through school' (quoted in the *Guardian*, 9 March 1999). Political enthusiasm has been matched by financial investment; Britain comes fairly near the top of the international league table in terms of computer–pupil ratios, and school connection to the Internet. (Abbott 2001; OECD 2000; Research Machines 1997). Japan, by comparison, has far fewer computers per pupil, and has not placed investment in ICT at the top of its list of educational priorities.

Nor is there a universal consensus over 'the digital divide': the worry that there will be an 'information underclass' who lack ICT access and skills, and who will be thereby disadvantaged in the labour market – and

in life generally. Although the DfEE (1997) and the OECD (2000) have expressed such concerns, others have argued that 'the privileged may well be the unplugged' (*Technonerds*, C4, 19 March 1996), and that investment in computers may be disadvantaging pupils by reducing expenditure on the more cost-effective and higher quality resource of books (see, for example, Howson 1999; Johnson 1999). As for the question of which attitudes to new technology in education are the most helpful, it is, as Chou En-Lai said of the significance of the French Revolution, too early to say. We should, however, keep in mind that twenty years ago the use of television in the history classroom, which many history teachers now find an invaluable asset, was not as effectively embedded into classroom practice as is now the case.

The position of the contributors to this book is not that of techno-fundamentalists who are arguing for the use of ICT in history as best practice *per se*; nor are they suggesting that the more ICT is used, the better an education in history it will be. It is rather that, given what ICT can do, and given also the relationship between ICT and the discipline of history, it seems unlikely that there will be no opportunities presented for improving teaching and learning in history, and that if we do not explore these opportunities there is a danger that we will be doing our pupils a disservice, and limiting the ways in which they learn and benefit from a historical education. Given the pace of technological change over the past few years (and the huge administrative and initiative burdens placed on teachers), it is reasonable to suggest that history teachers have had neither the time nor the facilities to explore fully the potential of new developments in ICT, and incorporate them into their schemes of work and classroom practice. If your department is not at the 'cutting edge' in terms of the deployment of new technology, you can draw re-assurance from the consideration that you are not on your own, and that many other departments are wrestling with the question of how to make full and best use of ICT, given the limitations on both time and access. The book draws on the experience of a range of people with experience of working with and observing teachers and departments who have found helpful and effective ways of enhancing teaching and learning in history through the use of ICT.

Most of the contributors to the book are members of HABET, the Historical Association's advisory body on educational technology. Members of the group have a shared interest in the ways in which new technology might impact on teaching and learning in history. They are not 'techno-fundamentalists' (see Chapter 1); the role of the committee over the past several years has been to explore recent developments in ICT which might be of use and interest to history teachers.

The DfEE's assertion (quoted in Cohen 1999) that 'there is no place for scepticism' about the role of new technology in education sits uneasily with the historian's ideas about judgements having to be based on evidence and experience. Among the proclaimed benefits of the study of history are that it enables people to develop skills of critical evaluation, an ability to analyse problems and questions, and to make informed judgements on the basis of evidence (DES 1985).

Three propositions

(a) The need to think carefully about exactly what ICT can and cannot do

One of the propositions advanced in the book is that if we are to address the gap between the claims made for ICT in history education and what is currently being delivered, there is a need to think carefully about what ICT can and can not offer teachers and learners in history, and to refrain from accepting claims at face value. This includes an appreciation of the drawbacks and limitations of some facets of new technology. If computers are so wonderful why isn't everybody using them as a routine part of their teaching? Understanding this is part of finding ways forward. Many of the wilder claims for the potential of ICT come from those who work at some distance from the classroom, or who are making money from selling technology to schools. Careful scrutiny of the views and experience of teachers, and of those with experience of instructional design in ICT, reveals that the latter are more cautious and circumspect in the claims they make. In spite of the inchoate enthusiasm of some politicians, ICT is not an unproblematic educational miracle, and there is a need to think through exactly what benefits (and dangers) particular applications offer.

(b) The need to take account of ideas about how children learn

A second proposition is that the use of ICT in the teaching and learning of history needs to take account of ideas about learning and about the difference between information and knowledge. Most teachers are aware that 'just because you've taught it doesn't mean that they have learned it', and that a simple transmission model does not operate in education. (In how many lessons do all the pupils learn everything that the teacher is trying to teach?) In spite of this, there has been a tendency on the part of some proponents of the educational uses of ICT to assume that providing access to information is the equivalent of learning.

Ihalainen (1995) points out that instructional technology does not operate in isolation:

> Its application is governed by learning theory, and it is greatly affected by infrastructure issues like room design and connectivity. In short, information technology is part of an educational system and is therefore interdependent with all the other components of instruction.

This means thinking not just about new technology in the context of how children learn in general, but thinking about how it 'fits' with the nature of the particular subject discipline being taught.

(c) The need to examine the relationship between ICT, the discipline of history and the purposes of school history

A third proposition is that we need to think hard about the nature of history as a subject discipline, and the ways in which ideas about school history have changed over the past 30 years, if we are to make the most effective use of ICT. Most history teachers now accept that teaching the subject requires going beyond 'the simple transmission of consensual narratives' (Britt *et al.* 2000: 437), and into issues of interpretation, significance and the testing of the reliability of claims. New technology offers the possibility of presenting and exploring such issues in a variety of ways. In a society which is now frequently described as 'The Information Society', teaching young people how to handle information intelligently is an important part of education for citizenship and adult life in general. The head of history at Durham University, David Rollison (1998), argued that 'history now is about learning to manage complex subjects and manipulate data'. Given what computers do, it would be surprising if they were not able to make helpful contributions to these aims.

Much of the discourse and debate about ICT and education has been non-subject specific. There is a sort of blanket assumption that ICT applications are helpful in promoting learning irrespective of the subject discipline to which they are applied. This flies in the face of the classroom experience of teachers who have been developing the use of new technology over the past twenty to thirty years. Although there are applications that have possible uses in all subjects (for example, the Internet), there are those which have more potential for enhancing learning in some subjects than in others. Data-logging software is invaluable to the science teacher, but is of no use or interest to the history teacher. The CD-Rom facility for animation offers particular

opportunities to science teachers, in terms of modelling reactions; digital cameras are particularly helpful in subjects which are involved in fieldwork and site visits; integrated learning systems appear to have the potential to help children to make progress in maths, but do not seem to 'work' in history. Sharp's study (1995) of the use of the television and video recorder in British schools found that whereas the overwhelming majority of history and geography teachers made regular use of television and video, only 15 per cent of maths teachers did so. There is therefore a need to look at ICT applications, in terms not just of what they offer for teaching and learning in general, but of how they fit in with the sorts of learning tasks which are specific to individual subjects.

Nor is there any necessary correlation between the sophistication of the technology, and its utility in particular subjects. Word-processing is not 'cutting edge' compared to voice recognition software, but it is used much more commonly in history teaching as a tool to help pupils to organise, classify and deploy information. As Walsh (1999) has pointed out, 'blunt edge' and low-level ICT can make significant contributions to children's learning in history.

The structure of the book

The first chapter draws on research into the use of computers in history teaching over the past twenty years, and provides an overview of the recent use of computers in the history classroom in the UK. This includes some consideration of the experiences and perceptions of practising history teachers, and their perspectives both on the factors which have militated against the use of computers in the history classroom and on some of the ways forward which have emerged, in terms of interesting and effective work in history and ICT.

In Chapter 2, Scott Harrison, HMI, provides a summary of the recent Ofsted inspection of National Opportunities Fund (NOF) ICT training in history in secondary schools, pointing to some of the 'green shoots' emerging in terms of good practice and successful work with ICT, and also pointing out some of the inevitable mistakes and 'dead ends' from which history teachers might learn. The chapter is particularly helpful in making the point that just putting more computers in schools will not in itself provide all the answers: there is a need to think carefully about the impact of new technology on the learning process in history, and to keep in mind all the criteria for a good lesson which would obtain even if computers were not being used. The chapter also might serve to reassure departments struggling to integrate computers into regular departmental practice that they are not on their own.

In Chapter 3, Christine Counsell explores some of the planning issues that have implications for choice, positioning and deployment of ICT resources within a history scheme of work. Drawing on examples of short-, medium- and long-term planning, the chapter argues that the precision and appropriateness of the professional thinking that goes into both a single lesson and a series of lessons underpins the achievement of genuine and worthwhile gains in pupils' historical understanding. Planning for progression across a Key Stage or Stages (long term), the structuring of an enquiry or a sequence of lessons (medium term) and the detailed patterning of teacher interventions within a single lesson (short term) are all illustrated with examples. Even without the use of ICT, any high-quality planning that attends to pupils' progression in historical knowledge and understanding across different time scales will require careful professional thought, discussion and liaison. Therefore, where the peculiar contributions and concerns of ICT aims and practices *overlap* with history's distinctive aims and practices, mutual under-standing *between* subject professionals – not just history and ICT personnel, but those responsible for language, literacy, values or curriculum coordination – is increasingly essential. The chapter builds a vision for the future character of professional understanding and professional knowledge creation within and across subject departments. If the full benefits of ICT are to be secured for particular curriculum areas, then shared deep curricular and pedagogic understanding need to be nurtured and enabled by whole-school structures, systems and core values.

Ben Walsh's discussion, 'Building learning packages' (Chapter 4), develops one of the most important themes of the book. The chapter explores ways in which various strands of new technology can make incremental but sustained contributions to the quality of teaching and learning in history. The emphasis is on the use of new technology as a contributory and often minor component of lessons as against 'special occasion' set-piece lessons: the 'all-singing-all-dancing' once or twice a year lesson where the pupils are marched down to the network room to 'get ICT ticked off'. The change in thinking towards ICT, as just one more resource to help enrich and improve the quality of some history lessons – along with video extracts, newspaper articles and other 'bits and pieces' – might be one of the more important contributions to bridging the 'rhetoric–reality gap' that has been a feature of the role of computers in education over the past twenty to thirty years.

Dave Martin's consideration of the part that data handling can play in relating the general to the particular (Chapter 5) points to a feature of ICT that has particular resonance for the discipline of history. In

addition to the potential of data handling for making connections between 'depth' and 'overview', the examples make the point that history is about real people, who lived, suffered and died, as well as about statistics and graphs which point out patterns in the past and which enable pupils to test out ideas and hypotheses about the past, and about the validity of claims made about the past. This facet of ICT can also be of particular help in leading in to genuinely historical questions about the past, as against recall and comprehension questions.

In Chapter 6, Lez Smart explains the ways in which digital technology has revolutionised the production and accessibility of various types of historical map, some of which can be valuable and powerful resources for teachers of history. The use of maps in history lessons has perhaps been a neglected aspect of school history in recent years: I rarely see maps used by my trainees in their teaching. Smart's chapter may help to redress this neglect: for those who do use maps in their teaching, it may help to develop the range of strategies for deploying them. Working with Miriam Norton, Lez also describes a case study where the use of ICT and maps was effective in helping less-able pupils to enjoy and make progress in history.

In Chapter 7, drawing on her extensive experience of working with history teachers, Isobel Randall focuses on aspects of the National Curriculum which require pupils to undertake historical enquiries and communicate their findings, and suggests ways in which new technology can help pupils to structure and organise their work effectively, with exemplification from a range of topic areas.

Chapter 8 (Terry Haydn) examines the claims made for 'interactivity' as a proclaimed benefit of the use of computers in history. At one level, this can amount to no more than the interactivity which comes from being able to change screens by pressing a mouse button or television remote-control panel. Even in the form of 'interactive' quizzes, helpful and engaging though they may be, it is a limited interactivity compared to what is possible with a group of learners meeting face to face. Focusing predominantly on the use of CD-Roms and the Internet, the chapter explores recent developments in the area of interactivity, and considers other ways in which new technology can help to persuade pupils of the relevance and importance of historical perspectives, and provide 'depth' rather than superficial coverage of historical events, people and ideas.

In Chapter 9, Alf Wilkinson focuses on the particular challenges faced by departments and teachers who are starting from a low base of familiarity, confidence and expertise in ICT. What strategies are most helpful in making progress in integrating ICT with the fabric of departmental practice, and how do departments prioritise in such a vast and compar-

atively uncharted area, where limited deployment of ICT is the norm rather than the exception?

In Chapter 10, Terry Haydn and Christine Counsell draw together some of the central strands emerging from recent practice and research in history and ICT in a way which attempts to provide a helpful agenda for history teachers and departments who are keen to explore the potential of ICT for improving teaching and learning in history.

The aim of this book

Britain is not the only country where there is a 'rhetoric–reality gap' between the claims made for the educational use of ICT and what is being delivered in practice. McKenzie (1995) warns that even in some technology-rich teaching environments in the USA, the 'authentic' integration of computers with classroom use remains 'peripheral and tangential at best', and some school districts are 'finding out with considerable pain that they must do more than simply install a network and log on to the Internet'. Just shoving more computers into schools, making trainees sit 'basic skills' online ICT tests, and putting pressure on teachers to develop ICT capability will not necessarily move us on from teachers using computers 'because they feel they ought to'. The main aim of this book is to provide suggestions, guidance and research evidence for the consideration of history teachers that will lead to the use of ICT because it improves the quality of teaching and learning in history.

The way forward is to encourage teachers to explore the use of ICT in conjunction with their understanding of how their pupils learn, how classrooms work and how ICT relates to the nature of history as a subject discipline. Only when investment to improve access to new technology is linked to clear thinking in these matters will we move towards a situation where history teachers use computers in their teaching because it offers improved learning opportunities for their pupils, more enjoyable, stimulating and effective lessons, and better history in general. ICT will then be used even when no one is looking.

References

Abbott, C. (2001) *ICT: Changing Education*, London, RoutledgeFalmer.

Behre, G. (1998) 'Information technology or history textbooks – the survival of the fittest?' *Journal of the International Society for History Didactics*, Vol. 19, No. 1: 57–63.

Britt, A., Perfetti, C., Van Dyke, J. and Gabrys, G. (2000) 'The sourcer's apprentice', in P. Stearns, P. Seixas and S. Wineburg (eds) *Knowing, Teaching and Learning History*, New York, New York University Press, 437–75.

Cohen, M. (1999) 'Turning teacher into a computer', *Guardian*, 12 October.

Cox, M., Preston, C. and Cox, K. (1999) 'What factors support or prevent teachers from using ICT in their classrooms?' Paper presented at the BERA Conference, University of Sussex, 2–5 September.

DES (Department of Education and Science) (1985) *History in the Primary and Secondary Years: An HMI View*, London, HMSO.

DfEE (1997) *Connecting the Learning Society*, London, Department for Education and Employment.

—— (1998) *Teaching: High Status, High Standards: Requirements for the Award of Qualified Teacher Status*, Circular 4/98, London, DfEE.

Downes, T. (1993) 'Student-teachers' experiences in using computers during teaching practice', *Journal of Computer Assisted Learning*, Vol. 9, No. 1: 17–33.

Haydn, T. (2001) 'Subject discipline dimensions of ICT and learning: history – a case study', *International Journal of Historical Learning, Teaching and Research*, Vol. 2, No. 1. Available online: www.ex.ac.uk/historyresource/journal3/haydn.pdf

Howson, J. (1999) 'Have schools got the balance right?' *Times Educational Supplement*, 2 July.

Ihalainen, P. (1995) 'Historian in the middle of the information revolution', Jyvaskyla University Library Information Service. Available online: www.jyu.fi/~library/tieteenalat/hum/His-in-Inf-Rev.html

Johnson, M. (1999) 'The declining use of books in schools: implications for effective teaching and learning', *Forum*, Vol. 41, No. 3: 115–18.

McKenzie, J. (1995) Crossing the great divide: adult learning for integrative use of technologies with students', *Educational Technology Journal*, Vol. 5, No.1. Available online: http://Fromnowon.org/Fnosept95.html#Cutting

OECD (Organisation for Economic Cooperation and Development) (2000) *Bridging the Digital Divide*, Paris, OECD.

Research Machines (1997) *Computer Provision in G7 Schools*, Slough, Research Machines.

Rollison, D. (1998) *Daily Telegraph*, 29 October.

Sharp, C. (1995) *Viewing, Listening, Learning: The Use and Impact of Schools' Broadcasts*, Slough, National Foundation for Educational Research.

Stevenson Committee (1997) *Independent Commission into Information and Communications Technology in Secondary Schools*, London, DfEE.

Trend, R., Davis, N. and Loveless, A. (1999) *QTS: Information and Communications Technology*, London, Letts.

Walsh, B. (1999) 'Why Gerry likes history now: the power of the word processor', *Teaching History*, No. 93: 6–15.

1 Computers and history

Rhetoric, reality and the lessons of the past

Terry Haydn

> Every technology is both a burden and a blessing; not either–or, but this-and-that.
>
> (Postman 1993: 5)

The aim of the chapter

This chapter focuses on historical perspectives on the role of ICT in the teaching of history. Although the educational use of computers is a fairly recent development, it already has its own 'history' (see for example, Abbott 2001; Molnar 1997), including contributions which focus more specifically on the role of computers in the teaching of history (Batho 1985; Dickinson 1998; Martin *et al.* 1997; Rykken 2000). What can we learn from this brief history?

As with other facets of history, the value of examining 'the historical record' of computers in the teaching of history will depend on the questions we ask of it. The first section of the chapter is based on the proposition that it is helpful to understand why there is a gap between the claims made for computers in education and what they have contributed in practice.

The Department for Education and Employment recently advocated that teachers take a 'leap of faith' with the use of computers (DfEE 1997). This sits uneasily with the historian's belief that we should examine the reliability of claims on the basis of the evidence available. This might mean going back to first principles and asking uncomfortable questions about ICT, rather than accepting its proclaimed virtues at face value. It is important to 'tell the truth' about history and ICT. This should include an acknowledgement that, in spite of the formidable advantages and opportunities that various ICT applications can offer, they do not in themselves guarantee 'better learning'. Recent research suggests that there are some things that computers do not do well in relation to

learning, and some ways in which their use has had a negative influence on learning. Kay (1995) uses the term 'junk learning' to describe the tendency in the USA to use ICT as a form of 'sugar coating' to make the 'bitter pill' of education more palatable, and to eschew difficulty, complexity and challenge. Brosnan (1998) and Healy (1998) suggest that learners' attention spans may be shortened by using computer-based materials. Britt *et al.* (2000) found that the 'bells and whistles' of many multimedia packages 'interfered with or were irrelevant to learning'; and McFarlane (1996: 4) noted that teachers find it much more difficult and time consuming to assess the scope and quality of multimedia resources than 'picking up and flicking through a book'.

This is not to suggest that teachers shouldn't use ICT, but that, as Postman claims, they should recognise that computers have strengths and limitations – and an awareness of both of these is more helpful to teachers than 'blind faith'.

The great computer delusion

It would be difficult to examine the recent history of computers in education without concluding that they have not had the transformational effects that were hoped for, either in the UK or elsewhere (see, for instance, Abbott 2001; DfEE 1998; McKenzie 1995; Stevenson Committee 1997; Trend *et al.* 1999). In spite of some of the claims made by 'techno-fundamentalists', suggesting that computers would obviate the need for schools to exist as centres of learning, and that teachers unable to use the new technology would have to be 'culled' from the profession, many schools and classrooms do not function in ways radically different from those of the BT (before technology) era. Although some institutions, such as banks and newspaper publishers, might find it difficult to function without their ICT networks, it is difficult to think of many schools or history departments which would be similarly incapacitated or which would have to send all the children home because 'the network was down'. It should be emphasised that the 'rhetoric–reality gap' (Trend *et al.* 1999) is not limited to the UK. Strommen (2000) claims that even in the USA, which has one of the highest computer to pupil ratios in the world (Research Machines 1997), 'the technological changes that have swept through society have left the educational system largely unchanged'. This would suggest that although access to ICT in schools might be part of the problem, there is more to it than simply whether there are enough computers to go round. One of the most recent surveys of the use of ICT in English and Welsh schools (DfEE 1998) found that in spite of the substantial increase in the

number of computers in schools, a declining percentage of headteachers reported them as having made a substantial contribution to teaching and learning; the figure falling to well under 20 per cent of schools surveyed. Instead of asking teachers to take a 'leap of faith', it would be more helpful to consider *why* computers have not had the impact on schools, and on the teaching of history, they have had elsewhere, and to listen to what teachers have to say in answer to that question.

The general enthusiasm for new technology in some quarters has perhaps led to the assumption that because ICT is good for booking holidays, sending messages and formulating accounts, it is equally good for teaching and learning (in all subjects), without looking closely at what it has to offer, both for learning in general and in relation to particular subject disciplines. One of the reasons for the 'rhetoric–reality gap' is that politicians and policy makers have radically different ideas about what computers are *for* in education.

ICT and education: what are computers for?

The most enthusiastic proponents of computers in education in recent years have been politicians and those selling new technology to schools. Those closer to the educational process have been more circumspect about claims made, particularly those who have a background in education *and* ICT. Bill Clinton's declaration that 'the goal of education in the twenty first century is to have a laptop computer on every student's desk' (quoted in Postman 1996) is an example of the idea that just putting more computers into schools, *per se*, will in some way make education better. From Kenneth Baker's commitment to provide a computer for every school in the 1980s (see Baker 1993) to Tony Blair's pledge to connect all schools to the Internet (DfEE 1997), it is difficult to find examples of politicians expressing reservations about the value of computers in education.

Closer examination of politicians' statements about ICT and education reveals a concern to create a technologically literate workforce, which will enhance economic performance (see, for instance, Hunt 1995; DfEE 1997). Noss and Pachler (1999: 198) characterise much government policy in the area of ICT and education as the 'fetishization of ICT for its own sake and an endless succession of injunctions to teachers about the need to introduce children to technology for the good of the nation's economic well-being'.

The effect of this rationale for the role of ICT in education has inevitably had an influence on the form in which ICT has developed in schools, with an emphasis on 'hands-on' experience for pupils, and the

development of generic ICT capabilities. In terms of investment in ICT, there has been a concentration on networked computer suites in providing these experiences. ICT policies have been insufficiently guided by the insights of subject teachers, and the dominance of the 'network room' paradigm has imposed a straitjacket on teachers' use of computers.

'Helping our businesses to compete', supporting a vibrant British software industry and creating the most ICT-skilled workforce in the world (Blair, DfEE 1997) may be legitimate concerns of politicians, but they are not at the forefront of teachers' thinking about ICT. The main concern of teachers in relation to new technology is whether it will help them to teach their subject effectively. Research by Cox *et al.* (1999) suggests that two of the main factors influencing teachers' use or non-use of new technology are whether they felt that it would help them to teach their subject more effectively *and* whether or not it was easy to use. The move towards specialised network rooms, with the need to move the pupils to the room, to book the room in advance and to take account of the limitations on the availability of networked computer suites mean that for most teachers the second criterion is often difficult to fulfil. Apart from providing the necessary machines, networked computer suites are often not best suited to other aspects of classroom teaching, with their fixed terminals and furniture, and pupils often facing away from the teacher and towards the walls. Moreover, lessons typically consist of several components or sections, rather than one activity which lasts right through the lesson. Given the moves towards the *integrated* use of ICT (see Chapter 10), networked suites that are unconducive to non-ICT based activities may become 'dinosaur' rooms. Among the reasons most frequently given by history teachers for using television and video more than computers in their teaching have been convenience, flexibility and the facility of using short extracts as 'components' of a lesson in a way not possible with computers without whole class projection facilities (Haydn 2002).

Although much of the above might seem to teachers so obvious as to be hardly worth saying, it is perhaps less apparent to those who do not work in classrooms. The early emphasis on 'hands-on' experience for pupils deflected attention from the full *range* of ways in which ICT may support teaching and learning. There is emerging research evidence to suggest that whole-class projection facilities are changing teacher attitudes to computers, and providing the opportunities for 'day to day' integration of computers with teaching, as against 'one-off' special occasion expeditions to the network room (see Chapters 2 and 3). At present, only a minority of history departments have ready access to both whole-

class projection facilities for ICT *and* substantial numbers of computers (Haydn 2002), so that they can use ICT in the full range of ways suggested elsewhere in this book. It remains to be seen to what extent New Opportunities Fund investment in ICT equipment will provide such access for subject departments. One of the main proposals of this chapter is that history departments should aim to have whole-class projection facilities in at least one teaching room, even if this is in the form of a computer with a lead to a large television, rather than the more expensive option of a data projector. This can make it much easier to integrate regular 'bits and pieces', or contributory components of ICT, with day-to day teaching, rather than relying on occasional expeditions to the network room. It puts ICT on the same footing as television and video in terms of ease of use. Television did not make a major impact on teaching and learning in schools until the advent of the video-recorder. It is possible that the development of whole-class projection facilities for ICT will have a similar effect on the use of computers in the classroom.

ICT and learning

As well as having differing perspectives about the 'value-added' contribution which computers might make to education, politicians' comments on ICT and learning reveals differences in their ideas about what 'learning' is, and how it takes place, compared to the views of practising teachers. ICT's capacity to transmit information has elicited the enthusiasm of politicians, who see it as a way of exponentially increasing the volume of information which can be transmitted across the educational 'system'. In *Connecting the Learning Society*, the National Grid for Learning is described as 'a mosaic of interconnecting networks and education services based on the Internet, which will support teaching, learning, training and administration in schools, colleges, universities, libraries, the workplace and homes' (DfEE 1997: 3). As Noss and Pachler (1999: 197–8) point out, the vision of learning that is outlined throughout the DfEE document is clear:

> Teachers will be linked to the centres of power; the DfEE will be able to communicate directly with schools and issue its latest instructions; schools will be able to send performance data directly to each other and to the DfEE; and an aspect with increasingly high profile in the media recently, teachers will be able to download worksheets directly into their classrooms.

One of the dominant metaphors of this document as elsewhere is 'delivery' (Blunkett 2001, DfEE 1997: 5), and, at one level, ICT *is* very good at delivering things. Those who teach are, however, more aware that 'delivery' does not guarantee 'learning'. The idea that there is a necessary correlation between the volume of information available and the amount of learning that takes place can also be detected in politicians' ideas about the educational potential of the Internet for pupils (see, for instance, Tony Blair in the *Guardian*, 7 November 1998). In the words of John Naughton (*Observer*, 22 March 1998): 'It's not every day that you encounter a member of the government who appears to understand the Net. Most politicians (Clinton, Blair, Blunkett, to name just three) see it as a kind of pipe for pumping things into schools and schoolchildren.'

The inchoate enthusiasm of politicians for all things technological has led them to underestimate the complexity of the learning process, and the difference between 'information' and 'knowledge'. One example of this is the quaint belief that cramming to pass an online basic skills test in numeracy will equip trainee teachers with a robust lifelong facility for mental arithmetic. Another is the belief that sending things out 'over the wires' saves time for those at the receiving end. As Tim O'Shea, master of Birkbeck College, said of the project to put the Maastricht Treaty on disk: 'It isn't enough to have the wires, you have got to be using the technology in a meaningful way, simply putting a book on a CD-Rom can be gormless' (quoted in the *Guardian*, 10 March 1998).

The idea that the transmission of information is the same thing as learning comes at a time when teachers are moving away from behaviourist and 'transmission' understandings of learning, and becoming increasingly aware of their limitations. (One of the most powerful examples here is Philip Sadler's research, which found that pupils' understanding of basic scientific concepts was significantly worse *after* teaching than before: for a brief summary of this research, see Dickinson 1998: 17–19.)

The nature of the processes involved in learning has implications for the role of computers in education. When assessing the contribution that ICT might make, we need to ask the same questions which we would ask of other learning experiences.

The list in Figure 1.1 gives some of the features which have been identified as being helpful in enabling learning to take place in the context of a lecture (Northedge 1992).

Although this list may not be definitive, it provides some criteria for thinking about the factors which influence the process of learning. It would be unusual for the computing elements of lessons to excel in

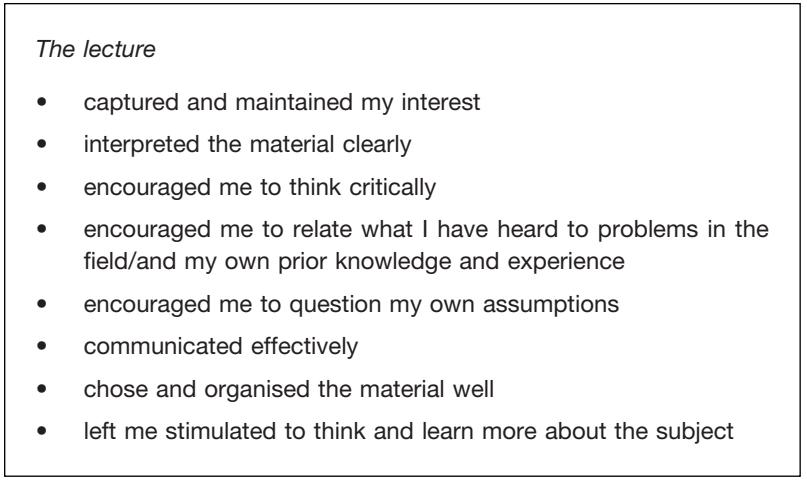


Figure 1.1 Features identified as enabling learning during lectures

relation to all items on the list, which is why the quality of teacher planning, intervention and handling of the non-ICT elements of the lesson are the main determinants of the effectiveness of the overall process. This is why attempts to *prove* the value-added benefits of using ICT are so problematical: learning is such a complex process that it is difficult to isolate a piece of software as the key variable in the process. Keeping the list in mind when using ICT can be helpful in gaining insight into the facets of learning for which computers *are* helpful – and where they are of limited value.

Christopher Dede (1995: 12, italics added) provides a helpful summary of the constructivist 'case' on learning, and makes the important point that providing access to information is often only a first step in learning:

> We have found that learner investigation and collaboration and construction of knowledge are vital, and these things don't follow teaching by telling, and learning by listening. It isn't that assimilation of knowledge isn't a good place to start, because it is hard to investigate something unless you know a bit about it. But assimilation is a terrible place to stop. The excitement about access to information is that it is the first step to expertise, to knowledge construction. *Only if access to data is seen as a first step – rather than as an end in itself, will it be useful.*

We must be careful not to overstate this position, as there are times when it is possible to learn from simply receiving information, as when we learn from reading books. This also means that it can be a 'legitimate' task to download information from the Internet for pupils to read. But we must also be aware that the 'rhetoric–reality gap' in education and ICT is not just a bandwidth problem, or an access problem: it is, in part, about what learners (and teachers) are to do with all this information when they have received it, and the skill with which the ICT elements of learning are integrated with other learning resources. One of Microsoft's more famous adverts asked 'Where do you want to go to today?' Schick (2000a: 15) makes the point that often not enough thought has been given to whether learners are going to do anything useful when they get there.

History and ICT

Much of what has been written about learning and ICT over the past thirty years has been in general terms rather than related to specific subject disciplines, in spite of the fact that particular ICT applications offer different advantages to different subjects. Integrated learning systems (ILS), or 'drill and skill' exercises, for example, where pupils repeat similar tasks before moving to the next level, appear to offer opportunities for modern foreign language and maths teaching, but do not appear to work for teaching history. The word-processor on the other hand, of marginal interest to the physics teacher, 'can search, annotate, organise, classify, draft, reorganise, redraft and save that fundamental of the historian, the printed word. . . . It is not a typewriter, it is an awesome tool for handling information' (Walsh 1998: 6). It is only over the past four to five years, however, that word-processing has been widely used in history classrooms to address high-order thinking and conceptual understanding, rather than to get pupils to 'copy up in neat' their handwritten work. (NCET–HA 1997) Research and practice over the past thirty years, not least the experience of classroom practitioners, have helped to develop understanding of how the various attributes of ICT link in with what we are trying to do in school history. It can also point out mistakes, dead-ends and things to avoid.

Recent developments

It is easy to forget some of the prosaic advantages which new technology has brought to history teachers. As Ben Walsh (1999) remarked: 'We no longer have to give pupils work sheets that look like ransom notes'; we

no longer have to write and post a letter with a stamped–addressed envelope inside whenever we want to get information from other agencies, and we can revise and amend materials without having to retype them. Five years ago, many history CD-Roms were little better than 'coffee-table' information: colourful and attractive, but difficult to use. The Internet was an information jungle, 'opening doors to millions of empty rooms', and a guaranteed way to waste time. Only a year ago, the National Grid for Learning was a fairly skeletal creature, more notable for its 'black holes' than for the richness of its history resources.

What follows is an attempt to point to some of the recent developments which have impacted on ICT's relevance and usefulness to history teachers, and some of the questions they pose for history teachers.

Adjusting to the information-rich history classroom

Scott Harrison (Chapter 2) states that the Internet offers 'an extraordinary supplement to the resources normally available for the study of history'. This has implications for both teachers and pupils. Whereas the exponential increase in the accessibility of historical information has generally been a blessing for the professional historian, it is more double-edged for those working in schools, and needs careful handling if it is not to cause more harm than good. As Bonnet (1997: 155) notes:

> Volume of content does not equate with richness of experience. . . . One of the chief dangers of information overload is that it can, at one and the same time, inhibit authentic thinking, and seduce us into believing that all we need to solve problems is yet more information.

Counsell (1998a) suggests that one of the things which many pupils find difficult about history is that it is so vast and seemingly unmanageable. Some pupils are already confused by the volume of information which they are having to cope with; giving them access to 'more stuff' may be the last thing they need.

In spite of the danger that poor teaching will result in pupils accumulating information uncritically, the availability of such information-rich sources also offers opportunities. The drastic increase in the amount of historical information available to pupils demands different skills of them. Sifting and selecting, organising and classifying, prioritising and discarding, synthesising and marshalling information are high-order skills compared to simply accumulating information, and they are skills which will be more useful to them in life after school.

For the teacher, the challenge is to move pupils beyond the 'hunter–gatherer' mentality (Counsell 1998a) and towards the marshalling and deployment of information to address a particular historical question. Part of the challenge for the teacher is to select, from the mountain of resources now available, materials which will enable them to exercise these information-handling skills in the context of worthwhile historical enquiry. It also requires skilful judgement about the amount of information to make available, and the amount of support and guidance to give to pupils of differing abilities in their use of it. Word-processing packages have several facilities which enable pupils to sort, order, merge and discard information quickly, without laborious and time-consuming transcription, and *PowerPoint*, with its limits on how much information can be inserted on each slide, can be a useful tool in helping pupils to discriminate between essential and tangential information (see Chapter 8). In 'The Information Society', learning to handle information intelligently is an important skill, and given the nature of history as a subject discipline, and the attributes of ICT, few, if any subjects are better placed to equip pupils with this skill.

The danger of 'leaving the learning until later'

This is another effect of 'information overload' in education. John Elliott (2001) uses the phrase 'leaving the learning until later' to describe the behaviour of pupils who take copious notes throughout a lesson, and when asked why they did so reply that they would 'leave the learning until later'. They admitted that they rarely referred back to the notes later, or were unable to make much sense of them. The facility to photocopy, download or cut and paste information, rather than laboriously transcribe it, has added to the temptation to 'leave the learning until later'.

This is a habit that can afflict pupils *and* teachers. With pupils, it often manifests itself in what Ben Walsh (1998: 8) has termed '*Encarta* syndrome', where pupils print off large chunks of digital resources without reading and assimilating the content.

With teachers, it can take the form of accumulating resources, photocopying articles and newspaper extracts, video-recording television programmes, buying CD-Roms and noting down or bookmarking web addresses, without subsequently digesting them and translating them into worthwhile learning experiences for pupils. I cannot be the only teacher who has a pile of dusty CD-Roms, reams of web addresses and skips full of videos and photocopied articles which I have not got round to 'processing' for teaching purposes ('I haven't got time to read that now,

I'll photocopy it and read it later'). It can be salutary for teachers to look at all the resources which they have acquired, and think about what percentage of them have been fully explored and used. Given the pressures on teachers' time, it is easy to think that in building up a pile of resources we are making progress, but most resources require an investment of time and thought to deploy most resources effectively. John Naughton (*Observer*, 10 January 1999) suggests that one of the consequences of the information revolution is that when we die 'the phrase "so much information, so little time" will be found engraved on our hearts'. The key 'life-skill' today, for pupils and teachers, is not accessing information, but learning to use it efficiently and effectively. Some thought needs to be given to finding a balance between building up resources to make progress in history and ICT, and translating them into helpful learning activities and experiences with pupils. The NCET–HA resources on *History Using IT* (1997, 1998), referred to elsewhere in this book, sold in large numbers to schools; but, whereas in some schools they enabled the history department to make significant progress in integrating ICT with schemes of work (Counsell 1998b), in others the book may not have been opened. The ease and speed with which information can now be accessed has increased the temptation to 'leave the learning until later', for teachers as well as pupils.

The 'emancipatory' role of ICT

One of the most frequently claimed benefits of ICT is that it helps learners to do many 'low-order' tasks much more quickly, so that they have time to focus on 'authentic', higher order, historical thinking. Data-handling packages mean that pupils do not have to add up tallies, or draw graphs manually: they simply press a button, and it is done in an instant. Word-processing means that they do not have to laboriously transcribe amended drafts: they can simply cut and paste, 'drag and drop', or delete information.

Although ICT does offer these advantages, it does not follow that the time saved is automatically transferred into time spent on more difficult, higher order, thinking. Much American research suggests that students simply acquire a taste for eschewing difficulty, and try to look for quick and easy solutions to other aspects of learning, looking for 'shortcuts' to the right answer, or simply guessing, in order to 'get a result', and be able to proceed to the next stage of the exercise (Britt *et al.* 2000; Healy 1998; Schick 1995). In this country, Prior and John (2000: 32) note the propensity of pupils to simply 'phrase-spot' rather than engaging fully with the difficulties which the given information presents. This

corresponds with my own experience of observing learners using history simulation packages such as *1914*, *Wall Street Crash* and *Attack on the Somme*, where even Masters' students tended to make choices before reading all the information available, in order to 'get on with the game'.

Christine Counsell (2000: 2) makes the point that the issue is not just about technology replacing effort, but about getting the emancipatory facets of technology to persuade learners that difficult and challenging activities are worth persevering with:

> I do not want my Year 7s to spend an hour typing in data: I do want them to see the historical relationship between two ideas. I do not want them to search for yet more information: I do want them to select items, to convert them into causes or consequences, and to experiment with language for doing so. I don't want them to fuss over box size on a leaflet design: I do want them to choose or reject alternative field headings in a database. I don't want them to do low-level word matching or phrase-spotting: I do want them to be so motivated to read for meaning, that they pause, and think and ponder and reconsider – and ask *why*. I want to clear away the clutter and to get pupils to focus on the interesting historical puzzle. I want to slow them down.

The essence of making the most of the 'emancipatory' potential of ICT is in the quality of the questions posed, the teacher's introductory and supporting exposition, and the 'instructional design' (or quality of planning) of the enquiry. But ICT *can* help to persuade some learners to engage and persevere with historical activities, particularly if they struggle with conventional individual written work. Some pupils with learning difficulties seem to be able to concentrate and sustain their efforts for longer periods when working on the Internet, or using desktop publishing. I have observed my postgraduate students wrestling patiently and determinedly with html procedures and presentation software, because the nature of the task has made them want to achieve a good finished product. We must be careful not to be too doctrinaire about time spent on presentation and Internet searching: for some pupils it can be the hook that draws them into engaging with history. For all the research evidence about reading from a screen being more difficult than reading a book (Kay 1995; McFarlane 1996), there are many pupils who used the BBC's GCSE 'Bitesize' revision site who would not have spent equivalent time revising from a text book. In spite of all this, we must not assume that time saved by the emancipatory attributes of ICT will automatically be converted to higher order thinking in history.

There is research evidence to suggest that pupils thrive in 'high challenge–low threat' learning environments, and, with careful thought, ICT can sometimes provide this in history. In the words of one pupil, 'We had a lot of fun, but it was *hard* fun' (quoted in Walker 2001).

'Mature' use of the Internet

Recent inspection evidence shows that school history has enabled some younger pupils to develop into mature users of the Internet (see Chapter 2), but there is also evidence that many older pupils have a poor understanding of the value and status of information on the Internet (see Chapter 8).

Given its significance, it would be a dereliction of responsibility not to consider how school history might contribute to the nurturing of school leavers who can use the Internet intelligently. As Parkhill (1996) remarks in his online publication *The Historian and the Internet*:

> The Internet is history; history happening, and a significant development in its own right. Additionally the net is a vehicle for the dissemination of history, history in the form of archival materials to great historical works to an individual's thoughts on historical issues.

Mature use of the Internet is not just a question of being able to search efficiently to locate information, helpful though this skill is. It is also about helping pupils to develop the 'media literacy' which is an important facet of education for citizenship. The vast, confusing and contradictory range of sources of information on the Internet can be an invaluable asset in developing in pupils what Wineburg terms 'a historical cast of mind' (Wineburg 1997: 260), by requiring pupils to think about which procedures a historian would use to try and 'get at the truth' in the face of such difficulties. In the era of spin doctors, media manipulation, soundbite politics and information overload,

> We must use the internet. There is no way out. The Internet is not a passing trend. Our young people will use it in their daily lives, no matter what they choose to do with them. And on the Internet, they will continue to confront interpretations and representations of history. All adults, no matter what they do with their lives, need to be able to see how and why the historical interpretations that bombard them were constructed. Otherwise, they are prey to propaganda and manipulation, not to mention cynicism or a lack of regard for the truth.
>
> (Moore 2000: 35)

One of the questions which history departments might ask, therefore, is to what extent, after 9, 11 or 13 years of school history, their pupils are mature users of the Internet.

Order brought to the Internet

Whereas five years ago it might have been reasonable to claim that the Internet was not a time-effective way to search for historical information, it has become increasingly difficult to sustain that claim, given the effort which has gone into making it navigable and well organised. The development of history 'portals', or 'gateway' sites, user-friendly searching techniques and 'page ranking' to prioritise the most helpful and popular sites (see www.google.com) mean that it does not take long for either teachers or pupils to become mature users, at least in terms of searching expertise. (See www.2learn.ca/mapset/mapset.html for a range of tutorials on searching the web.) During the same period, substantial efforts have also been made to make sites useful to history teachers by the development of suggested activities for using the historical information in teaching contexts (see for example: the Public Record Office's 'Learning Curve' site at http://learningcurve.pro.gov.uk; the British Library's 'Education' site at www.education.bl.uk; the 'Spartacus' site at http://spartacus.schoolnet.co.uk; R. J. Tarr's site at www.activehistory.co.uk; the resources for history teachers at http://schoolshistory.org.uk, or 'School History' at www.schoolhistory.co.uk). There is also the QCA–BECTa history and ICT exemplification site, which aims to provide guidance and case studies drawing on successful practice in history and ICT (www.becta.org.uk).

In a sense, it doesn't matter which of these sites you frequent: the danger is in simply amassing more and more sites and not making use of them. What all of them have to offer is some 'bits and pieces' which can incrementally add to the richness of what Ben Walsh (Chapter 4) terms 'the learning package' for a particular historical topic. Using the Internet some of my students had been able, within about ten minutes, to put together interesting visual and written sources about the use of detention camps in the Boer War, the Second World War, and the aftermath of 11 September, in ways that laid the ground for an interesting exercise on interpretations.

Another important facet of the development of the Internet over the past five years is the increasing depth and degree of specialisation which it now offers to history teachers. Instead of flitting across a vast number of superficial, shallow sites, it is increasingly possible to operate with smaller number of specialised sites created by organisations or subject

specialists. Thus there is a specialised site for the use of historical fiction in history teaching (www.dorset-lea.org.uk/projects/each), and others for accessing images which might be of use (http://images.google.com/ and http://altavista.com/images). Some history portals also have a developing archive of images which history teachers can draw on to supplement the limited range available in text books. There are sites for teachers who are new to the Internet and who want to learn how to use it (www.2learn.ca/mapset/new2net/new2netmain.html), for history teachers interested in teaching about time and chronology (www.uea.ac.uk/~m242/historypgce/time), or for teachers or older pupils who want to pursue an in-depth exploration of particular historical topics (for instance, http://chss.montclair.edu/english/furr/vietnam.html – a gateway site for the Vietnam War – and www.hc.cc.tx.us/library/histnc.htm – for the Norman Conquest). Often, these sites have spent a great deal of time and money filtering out less helpful resources and 'cherry-picking' the most helpful materials for particular age groups. This is where the Internet can save teachers' time, rather than wasting it. The Internet can now be an effective way for trainee history teachers to augment their subject knowledge, and for post-16 students to undertake personal study projects for public examinations. Some sites have undertaken 'wide trawls' of the Internet to select useful history resources (see for instance the BBC's 'Webguide' for history at www.bbc.co.uk/education/webguide); others have looked at the material for particular topics and selected the six most appropriate for a specified age-range (www.learn.co.uk). More recent publications on history and ICT have also given thought to the worthwhile activities which learners might undertake with history websites: Kathleen Craver's *Using Internet Primary Sources to Teach Critical Thinking Skills in History* (1999) being a good example.

Not all such 'trawled-for' sites are well chosen; not all the suggested activities work well or are worthwhile; but it is becoming increasingly difficult to claim that there is nothing of value on the Internet for history teachers, or that it is impossible to find.

Developments in technology

As well as general advances in speed, power and reliability, and in the ease with which learners can switch between different applications, and 'cut and paste' information, the facility to create hypertext or 'embedded' links, between applications, has streamlined the process of moving between different web addresses. Pupils can be given a word-processing file with embedded links which directs them through a pre-planned series of web addresses. One head of history remarked to me that,

together with the use of a data projector to use the computer with the whole class, this had transformed the utility of the Internet:

> For the first time it felt better than the classroom, the embedded links take them very quickly and efficiently through the 'pathway' that you want them to go through, there was far less 'fire-fighting', far less wasted time. For the first time, I thought that it's got real potential. There are things you can do with this that you couldn't do as well with a conventional approach. . . . The text book just isn't as good.

(For an example of the way in which embedded links can speed up the process of moving between Internet sites, see www.uea.ac.uk/~m242/historypgce/ict/websites.htm – a page designed to show the different ways in which the Internet can offer opportunities for history teaching.)

Another attribute of ICT which some history teachers have found helpful is the 'Comment' button on the 'Insert' menu of *Word*, which can be used to embed in a piece of work the answers to questions posed, as a 'mouseover' (the answer appears when the pupil moves the mouse pointer over the comment box). This is much quicker than the pupil having to open up a different file to access the answers or further explanatory teacher comment. As well as saving teachers' time, pupils can sometimes be given more detailed feedback by this method, as the teacher is not having to make comments on thirty or so different exercise books (for an example, see 'Using ICT for assessment' at www.uea.ac.uk/~m242/historypgce/ict). Schick (2000b: 17–19) points out that this feature can also be used to enable pupils to 'interact' with documents and sources by inserting a critical or explanatory commentary at key points using the 'Insert Comment' button.

An emancipating development which has improved the usefulness of the Internet is the ease and speed with which webpages can now be edited or annotated. Research by Watson *et al.* (2000) has demonstrated the potential of the 'Insert Hyperlink' option in *Word* for enabling pupils to streamline and structure historical enquiries from a range of sources. The digital camera has proved to be a helpful resource in enhancing fieldwork and museum visits, and the scanner has made it much easier to incorporate historical and contemporary images which help to develop pupils' 'visual literacy'. We have moved a long way from rolling out cyclostyled maps into pupils' exercise books, but how many of us fully exploit the potential of historical maps in our teaching? As Lez Smart demonstrates (Chapter 6), recent developments have made it much easier to adapt and integrate historical maps into teaching.

The development of educational networks

The past five years have also seen significant progress in the development of a network of interlinking education sites useful to history teachers, not just in the form of the National Grid for Learning (http://ngfl.gov.uk and the Virtual Teachers' Centre at http://vtc.ngfl.gov.uk/vtc/curriculum/history/resources.html), but in the form of contacts with a wide range of organisations which have, in some way or another, a link to school history. Web addresses for those mentioned here are given at the end of the chapter.

I taught in schools for about twenty years, and never once used the Public Record Office in my teaching. I now find it a very useful site for helping to teach about using sources, particularly pictorial ones. It is a good example of a site where careful thought has gone into making potentially inaccessible resources useful to teachers. Many other national museums have made major efforts to think how they can adapt their collections for virtual access, and sites which were quite ordinary a year or so ago have improved out of all recognition (the 'gateway' site for museums, libraries and archives is www.24hourmuseum.org.uk). As Ben Walsh notes in Chapter 4, many of the major public asset holders in the UK have rapidly followed the lead of the BBC, the Public Record Office and others.

Not surprisingly, in terms of quality and utility, the development of the educational network for history has been uneven. There are still many sites which provide little more than unmediated access to less filtered content – links to more links. For pupils and teachers, learning which sites are genuinely helpful rather than 'more baggage' is part of becoming a mature Internet user. Many other sites which had limited content or value only two to three years ago now have much more depth and substance, and have learned how to adapt resources to make them more useful: for instance, going beyond 'quizzes' to the provision of model answers, and the 'problematising' of the past. History subscription sites have also become more sophisticated and attuned to providing materials which complement what can be done in the classroom, and which support structured enquiry and thinking, rather than just providing 'more stuff'.

Examination boards have also begun to make increasing use of the Internet to provide supporting materials for teachers, although not as extensively (at the time of writing) in history as compared to English, maths and science. The Historical Association (HA), history journals, the Schools History Project (SHP), and the British Educational Communications and Technology Agency (BECTa), all offer resources which can

help history teachers. More than half of the schools surveyed have made some use of the history schemes of work provided online by the DfES's 'Standards Site' (Bracey 2001), and the provision of examples of pupils' work in history should help to extend the usefulness of the site with regard to assessment in history. The use of newspaper articles is discussed in Chapter 8; their accessibility has been transformed by the Internet, now that many newspapers archive their materials on the web in the form of searchable databases. 'The Paperboy' is a gateway site which provides access to online newspaper resources worldwide (although sadly it is no longer a free site).

Very few of these sites offer 'off-the-peg' formulas for set-piece lessons in the computer suite which will work in all contexts. Even where there are suggested ICT activities, these often need refinement and re-working (Counsell 1998b: 29; Imison and Taylor 2001: 101) What they do offer is a wide variety of resources, information and ideas which help to improve the 'learning packages' (see Chapter 4) which teachers develop in order to teach topics effectively.

Presenting multiple perspectives on the past

It is now generally accepted that there is more to progression in school history than the accumulation of depth and breadth of historical knowledge, in the form of 'given' or uncontested and unproblematical narratives and explanations of the past. Both in this country and in the USA, there has been an increased emphasis on developing pupils' ability to compare and analyse differing interpretations of the past, and to assess the significance of individuals and events in the past (DfEE–QCA 1999: 20; NCHS 1996: 2). Surveys of Grade 12 pupils in the USA estimated that only 10 per cent were felt to be proficient in these skills, and that many pupils had limited experience of learning by reading multiple texts and discussing controversies of interpretation and significance (NAEP, 1996; Ravitch and Finn 1987: 194).

Given the constraints of space in conventional text books, ICT has increased opportunities for incorporating differing perspectives on the past and presenting history as 'contested', problematic, and 'above all else, an argument' (Arnold 2000: 13).

The massive increase in the range of sources, opinions and interpretations available through the Internet has made it possible to link depth and overview, the general and the particular (see Chapter 5), and to present pupils with a range of interpretations of the past, and different views on the significance of individuals and events. Collections of particularly interesting, useful and appropriate resources have been put

together to help history teachers to teach topics in a way that can save them the time of hunting down sources themselves (see Chapter 8). I still probably use the television and video-recorder more than the computer in my teaching, but I find that the percentage of ICT-based resources is gradually increasing. The development of DVD technology may well accelerate this tendency.

Extending 'learning time' in history

History generally has a meagre time allocation on school timetables. ICT has the potential to get pupils to do history outside of the history timetable. Slatta (2001) cites a range of ways that a history class which has access to ICT both in the classroom and outside it can 'add in' opportunities to dedicate more time to learning, both between teacher and pupils, and pupils themselves. This includes providing pre-course and pre-session information, inter-sessional and group tasks, peer support through weekends and holiday periods, support for writing, more time-effective feedback, and a higher quality of class discussion and presentation. Slatta claims that once the history classroom is equipped to use ICT, and the pupils, between them, have access to ICT, at home or elsewhere, he is 'able to get more out of them', in a way which also increases their engagement with the course and their enjoyment of history:

> Technology is not a magic elixir that resolves all pre-existing teaching problems, nor is it something that one simply adds to a course. It is not an add-on; it is an essential ingredient. Technology should be embedded into the fabric, the philosophy, and the objectives of a course. By thinking about technological options as one designs and revises a course, an instructor ensures that the whole package makes sense – historically and pedagogically.
>
> (Slatta 2001: 27)

Although many history classes in the UK are not yet in a situation which meets the preconditions for Slatta's 'integrated' approach to ICT, when asked about the potential of ICT for improving teaching and learning in history, many British teachers cited the extension of 'learning time' as a benefit of new technology. In addition to the popularity of the BBC's 'Bitesize' revision facility for GCSE examinations (taken by 16-year-olds), some departments are already moving towards putting substantial sections of departmental resources on the school's *intranet*, so that pupils can learn history outside the confines of timetabled teaching periods (Martin 2001). Others use a combination of downloaded

handouts, 'cells' of pupils working cooperatively, and generous time scales and deadlines to work round access problems. Given continued investment in ICT in schools, and the growth in Internet access, domestically and in the community (see Facer *et al.* 2002), it seems likely that there will continue to be an increase in the number of history classes where in-class and out-of-class access to ICT can be planned into schemes of work.

Teachers and ICT

If the government is to bridge the 'rhetoric–reality' gap, and move towards its vision of an education system transformed by the power of new technology, it will have to listen to what teachers say about ICT, rather than relying principally on its 'delivery' metaphor, and the belief that the 'top–down' transmission of information from 'the centre' can effect change.

The most recent DfEE biennial surveys on ICT use suggest that simply putting more money into hardware and training, and stiffening ICT 'entry requirements' to the profession will not in themselves transform the present situation (DfEE 1998, 2000). A survey of history teachers' views on ICT revealed that, although most of them were broadly positive about the potential of ICT, they were either unaware of or had found 'unhelpful' many of the materials designed to promote the use of ICT in subject teaching. 'Lack of time to plan how to integrate computers into classroom use' emerged as one of the most commonly cited factors for not using computers more often (Haydn 2002).

In contrast to Abbott's assertion that 'UK schools may be approaching optimum numbers of computers in classrooms' (2000: 46), many history teachers reported that access to networked computer suites was difficult, and that their history classrooms often did not contain any computers, let alone provision for whole-class projection from a computer. When asked what investment would be most helpful in enabling them to make better use of ICT in their teaching, two of the most prevalent answers were the provision of large monitors or data projectors for whole-class display, so that the computer could be used in the same way as video and television, and more time for departmental development of ICT (Haydn 2002).

Access and facilities are still a problem for many history teachers, but in addition to providing laptops for teachers, whole-class projection facilities and at least some computers in history classrooms, history teachers need *time* to explore the ways in which ICT can link in to what we are trying to achieve in history, and to integrate digital resources with their 'learning packages' (see Chapter 4). Time is also needed for history

teachers to meet and talk as history 'communities', in order to share and develop ideas, experience and insights.

Making progress in history and ICT is not cost-free in terms of teachers' time, and those departments which have made progress are often those which, in spite of the many other pressures on teachers' time, have managed to dedicate individual and departmental time to thinking about ICT and history (Abbott 2000; Counsell 1998b; Imison and Taylor 2001).

Summary and key points

Looking at the recent history of computers and the history classroom, it is not difficult to see why it has not delivered all that its advocates hoped for:

- Too much faith has been invested in ICT's ability to increase the volume of information in the education system. In addition to creating unhelpful 'information overload' for teachers, it has been part of policy makers' tendency to underestimate the complexity of the processes involved in learning, and to overvalue ICT's role in learning, as against the quality of the learning tasks that are undertaken using ICT.
- Not enough thought has been given to the nature of history as a subject discipline, and how ICT relates to it, to how classrooms work and how history teachers construct lessons.
- Investment in ICT has not yet made it easy for most history teachers to use computers as a routine component of lessons.
- 'Teachers' time' has become an increasingly precious resource in recent years. Lack of time to think through what ICT can offer history and to consider how it can be integrated with schemes of work is cited by history teachers as one of the main obstacles to making progress in history and ICT.

In spite of these difficulties, continued investment is helping to address some of the problems of access to ICT. Some history departments have managed to make effective use of ICT, and there is an increasing body of research and case-study evidence to suggest ways forward, and to help to avoid previous mistakes:

- In spite of the pressures on teachers' time, some departments have been determined to 'make time' for ICT. Accepting that ICT is not a 'quick fix', they have invested time in thinking how to make good

use of it, in the form of individual exploration and experimentation, departmental discussion and development. Research suggests that 'one-off' in-service training sessions are of limited value (NCET 1994); it needs sustained interest and effort, and to be part of the day-to-day professional dialogue and work of the department. This includes talking to people outside the department.

- Heads of history, and ICT and history coordinators in primary schools need to give careful thought to how the time invested in ICT is spent, and to ensure that it does not become threatening, negative or bureaucratically top-heavy. It need not be a chore; or a defensive and heavy-hearted response to an impending Ofsted visit. Well handled, utilising ICT can be an interesting and enjoyable facet of history teachers' work.
- As several of the chapters in this book indicate, a big step forward in terms of making ICT a flexible and easy to use part of teaching is to try to have at least one history room which has the facility for whole-class projection. This can help departments to move from the idea of ICT as a 'special' lesson, to ICT being a common component of 'ordinary' lessons, with both teachers and pupils getting used to using it on a regular basis.
- Thought needs to be given to how to develop the potential of ICT for getting pupils to do history outside the classroom.
- Some departments have accumulated more ICT materials than they have had time to assimilate into classroom practice. It can be helpful to keep an eye on the balance between 'getting more stuff' and making effective use of what one already has.
- 'Initiative with resources' is one of the attributes of good teachers. In a sense, history teachers have to be 'scavengers', and ICT has provided a new dimension to the scavenge for resources. Some departments have made good use of ICT to augment their teaching resources, so that there is a steady incremental improvement in the quality of the 'learning packages' (see Chapter 4) which they use to teach particular historical topics.
- As with the use of text books and television programmes, thought needs to be given to what pupils will do with information once they have accessed it. The quality of the questions asked and of the tasks devised is often what determines the quality of the learning that occurs. This includes using ICT to help pupils to understand that doing history goes beyond getting hold of information, using ICT to get pupils to engage in activities which are challenging, difficult and worthwhile, and using ICT to problematise the past, so that pupils have to think rather than simply remember and recall (see Chapter 8).

In an era of 'targets, 'testing', 'levels' and 'standards' there is a dimension of history and ICT that has not featured prominently in recent research literature, but which I feel is worth noting.

In 1989, Jeffrey Richards, then reader in history at Lancaster University, outlined in the *Independent* (8 April) the following benefits of learning history:

> My own subject, history, teaches many useful skills – information handling, problem solving, the public presentation of arguments and assessments. But that should be secondary to the broader objectives of discovering how we were, and how we got to where we are. It is not my aim to turn out tunnel-visioned computer operators concerned only about where their next Porsche is coming from. I seek to awaken in my students an open minded broad visioned humanity, informed by a love of learning, a love of ideas, a love of books, a love of argument and debate.

The use of ICT in history can help to persuade pupils that history is important, useful and relevant to the lives they will lead when they leave school. Skilfully deployed, it can have a beneficent influence on pupils' attitude to history – and to learning in general. If I did not believe that it had the potential to contribute to all the items on Richards' list, I would not have written this chapter.

Web addresses

British Educational Communications and Technology Agency (BECTa): www.becta.org.uk
Department for Education and Skills (DfES) Standards Site, with exemplar schemes of work: www.standards.dfes.gov.uk/schemes
Examples of assessed work by pupils: www.ncaction.org.uk

Examination boards

OCR: www.ocr.org.uk
AQA: www.aqa.org.uk
Edexcel: www.edexcel.org.uk
Historical Association: www.history.org

Journals and magazines

The Historian: www.history.org/HTML/historian.htm
History Today and *History Review*: www.historytoday.com

Teaching History: www.history.org/HTML/teachMag.htm
Primary History: www.history.org/HTML/primaryMag.htm

Other websites

'The Paperboy': http://paperboy.com (unfortunately this site has recently imposed a small subscription charge)
Public Record Office: http://pro.gov.uk
Schools History Project: www.tasc.ac.uk/shp
The Video Studio: http://rutc.ac.uk

References

Abbott, C. (2001) *ICT: Changing Education*, London, RoutledgeFalmer.
Arnold, J. (2000) *History: A Very Short Introduction*, Oxford, Oxford University Press.
Baker, K. (1993) *The Turbulent Years: My Life in Politics*, London, Faber & Faber.
Batho, G. (1985) Foreword in J. Wilkes (ed.) *Exploring History with Microcomputers*, Newcastle, Council for Educational Technology: 8–10.
Blunkett, D. (2001) Address to Institute for Public Policy Research, 1 May.
Bonnet, M. (1997) 'Computers in the classroom: some values issues', in A. McFarlane (ed.) *Information Technology and Authentic Learning: Realising the Potential of Computers in the Primary Classroom*, London, Routledge.
Bracey, P. (2001) 'The implications of National Curriculum 2000 for initial teacher education: a primary perspective', in P. Goalen and C. O'Neill (eds) Curriculum Change and History Teacher Education, Lancaster, HTEN: 23–30.
Britt, A., Perfetti, C., Van Dyke, J. and Gabrys, G. (2000) 'The sourcer's apprentice: a tool for document-supported instruction', in P. Stearns, P. Seixas and S. Wineburg (eds) *Knowing, Teaching and Learning History*, New York, New York University Press.
Brosnan, M. (1998) *Technophobia: The Psychological Impact of Information Technology*, London, Routledge.
Cox, M., Preston, C. and Cox, K. (1999) 'What factors support or prevent teachers from using ICT in their classrooms?' Paper presented at the British Educational Research Association Conference, University of Sussex, 2–5 September.
Counsell, C. (1998) *Defining Effectiveness in History Using IT: Approaches to Successful Practice*, London, BECTa–Historical Association.
—— (1999a) Address at the History Teacher Education Network Conference, Keele, July 1999.
—— (2000) Editorial, *Teaching History*, No. 101: 2.
Craver, K. (1999) *Using Internet Primary Sources to Teach Critical Thinking Skills in History*, Westport, CT, Greenwood Press.
Dede, C. (1995) Quoted in 'Technology schools', *Educational Leadership* (USA), ASDC, October: 7–12.

DfEE (1997) *Connecting the Learning Society*, Foreword by Tony Blair, London, DfEE.

—— (1998) *Survey of Information and Communications Technology in Schools 1998*, London, DfEE.

—— (2000) *Survey of Information and Communications Technology in Schools 2000*, London, DfEE.

DfEE–QCA (1999) *History: The National Curriculum for England*, London, DfEE – QCA.

Dickinson, A. (1998) 'History using information technology: past, present and future', *Teaching History*, No. 93: 16–20.

Elliott, J. (2001) Plenary address, Norwich Area Schools Consortium Conference, Norwich, 26 April.

Facerr, K., Sutherland, R. Furlong, R. and Furlong, J. (2002) 'What's the point of using computers? The development of young people's computer expertise in the home', *New Media and Society* (forthcoming).

Haydn, T. (2001) 'Subject discipline dimensions of ICT and learning: history, a case study', *International Journal of Historical Learning, Teaching and Research*, Vol. 2, No. 1. Available online: www.ex.ac.uk/historyresource/journal3/haydn.pdf.

Healy, J. (1998) *Failure to Connect*, New York, Simon & Shuster.

Hunt, D. (1995) 'It should be cool to compute', *Times Higher Educational Supplement*, 17 February.

Imison, T. and Taylor, P. (2001) *Managing ICT in the Secondary School*, Oxford, Heinemann.

Kay, A. (1995) 'Computers, networks and education' in 'The Computer in the 21st Century', special issue of *Scientific American*: 148–55.

McFarlane, A. (1996) 'Blessings in disguise', Times Educational Supplement, 'Computers update', June 28: 4.

Martin, A., Smart, L. and Yeomans, D. (eds) (1997) *Information Technology and the Teaching of History: International Perspectives*, Amsterdam, Harcourt.

Martin, D. (2001) Making effective decisions about the use of ICT in history: case study. Online, www.becta.org.uk

McKenzie, J. (1995) 'Crossing the great divide: adult learning for integrative use of technologies with students', *Educational Technology Journal*, Vol. 5, No. 1. Available online: http://Fromnowon.org?Fnosept95.html#Cutting

Molnar, A. (1997) 'Computers in education: a brief history', *Technical Horizons in Education*, June. Available online: www.thejournal.com/magazine/vault/A1681.cfm

Moore, R. (2000) 'Using the internet to teach about interpretations in Years 9 and 12', *Teaching History*, No. 101: 35–9.

NAEP (1996) *US History Report Card: Findings from the National Assessment of Educational Progress*, Princeton, NJ, National Assessment of Educational Progress.

NCET (1994) *What Works in IT?*, Coventry, National Council for Educational Technology.

NCET–HA (1997) *History Using IT: Improving Students' Writing Using Wordprocessing*, Coventry, National Council for Educational Technology – Historical Association.

—— (1998) *History Using IT: Searching for Patterns in the Past Using Databases and Spreadsheets*, Coventry, National Council for Educational Technology – Historical Association.

NCHS (1996) *National Standards for United States History: Evaluating the American Experience*, Los Angeles, CA, National Centre for History in the Schools.

Northedge, A. (1992) Induction course for new lecturers, Institute of Education, University of London, September.

Noss, R. and Pachler, N. (1999) 'The challenge of new technologies: doing old things in a new way or doing new things?' in P. Mortimore (ed.) *Understanding Pedagogy and its Impact on Learning*, London, Paul Chapman Publishing: 195–211.

Parkhill, L. (1996) *The Historian and the Internet*. Available online: http://pages.wooster.edu/parkhillj

Postman, N. (1993) *Technopoly*: *The Surrender of Culture to Technology*, New York, Random House.

Postman, N. (1996) 'School's out forever', *Guardian*, 31 December.

Prior, J. and John, P. (2000) 'From anecdote to argument: using the word processor to connect knowledge and opinion through revelatory writing', *Teaching History*, No. 101: 31–34.

Ravitch, D. and Finn, C. (1987) *What Do Our 17 Year Olds Know? A Report on the First National Assessment of History and Literature*, New York, New York University Press.

Research Machines (1997) *Computer Provision in G7 Schools*, Slough, Research Machines.

Rykken, P. (2000) 'Teaching history in the information age'. Available online: www.cssjournal.com/rykken.html

Schick, J. (1995) 'On being interactive: rethinking the learning equation', *History Computer Review*, Vol. 11, No. 1: 9–25.

Schick, J. (2000a) 'Building a better "mouse" trap: Schick's taxonomy of interactivity', *History Computer Review*, Vol. 16, No. 1: 15–28.

Schick, J. (2000b) 'Interaction: examples and possibilities', *History Computer Review*, Vol. 16, No. 2: 15–42.

Slatta, R. (2001) 'Connecting learning goals with technology', *History Computer Review*, Vol. 17, No. 1: 19–29.

Sparrowhawk, A. (1995) 'Information technology in the primary school', BBC Education Conference Address, Manchester, 28 March.

Stevenson Committee (1997) *Independent Commission into Information and Communications Technology in Secondary Schools*, London, DfEE.

Strommen, E. (2000) 'Constructivism, technology and the future of classroom learning', *Institute for Learning Technologies of Columbia University*: Available online: www.ilt.columbia.edu/ilt/papers/construct.html

Trend, R., Davis, N., and Loveless, A. (1999) *QTS: Information and Communications Technology*, London, Letts.

Walker, R. (2001) *Hathway Primary School: A Multimedia Case Study*, quoted in 'Using visual evidence', Paper given at University of East Anglia conference *Opening up Classrooms: Teachers Talking Research*, 29 September.

Walsh, B. (1998) 'Why Gerry likes history now: the power of the word processor', *Teaching History*, No. 93: 6–15.

Walsh, B. (1999) Address to the Historical Association Conference, York, September.

Watson, K., O'Connell, K. and Brough, D. (2001) 'Hyperlink: a generic tool for exploratory and expressive teaching and learning in history', *International Journal of Historical Learning, Teaching and Research*, Vol. 1, No. 1: 97–110.

Wineburg, S. (1997) 'Beyond "breadth and depth": subject matter knowledge and assessment', *Theory into Practice*, Vol. 36, No. 4: 255–61.

2 The use of ICT for teaching history: slow growth, some green shoots

Findings of HMI inspection, 1999–2001

Scott Harrison

During the last two school years HMI and Additional Inspectors recruited by Ofsted have been undertaking a programme of visits to schools to evaluate the impact of governmental ICT initiatives. (Ofsted 2001) As part of this survey, history specialists inspected approaching fifty secondary-school history departments to look at work using ICT. Background information on these schools and on ICT in history was obtained from Section 10 reports. Schools were selected because they had received a significant proportion of their National Grid for Learning grant and had been approved as suitable recipients of New Opportunities Fund training in ICT. They did not, therefore, constitute a stratified sample of schools or history departments: indeed, inspection revealed that most of the schools in the sample have history departments that are at least sound, and some are good or very good.

Findings

The main findings from the survey are summarised below.

- In only a small minority of schools is there regular coherent use of ICT to support learning in history.
- Some pupils experience productive ICT-rich activity in history lessons, and many more choose to work using ICT in their own time when the opportunity arises.
- The ICT capability of teachers within and between departments remains variable. As proportions of the total lessons seen, there were fewer good lessons and more unsatisfactory lessons using ICT than was the case for history lessons as a whole. Too often objectives are unclear and lessons are insufficiently prepared for.

- The expectations of teachers and pupils in some history lessons using ICT are too low, and often there is an emphasis on product at the expense of the important processes which promote historical thinking.
- The main use of ICT is in the location and selection of information and in the manipulation of text using word-processing. Some constructive use is made of databases and spreadsheets, and of presentation software.
- Many departments have some limited involvement in ICT use with opportunities identified in schemes of work, but most often pupils' experience is erratic and there is no entitlement to work in history using ICT.
- In some schools there is improving access to accommodation, but often this is not the case as overall demand outstrips supply.
- Many history teachers are now competent personal users of ICT, but some remain reluctant, and do not see the potential benefits of ICT for history.
- There have been difficulties in the early stages of training, but increasingly teachers are using training materials for experiment in the classroom and transferring ideas from the training to new situations.

The use of ICT in history

This survey identifies a number of obstacles to the successful introduction of ICT by history departments. Even so, when ICT is well used it can make a significant contribution to pupils' progress in history. For example, in schools where the use of ICT in history is furthest forward, in some lessons and series of lessons pupils are able to combine ICT functions so that there is integrated activity bearing on each stage of a process of knowledge acquisition, historical investigation and communication. In one such good lesson pupils used information and illustrative material obtained from the Internet and CD-Roms alongside other sources, selecting, combining and structuring the material using *Word* and producing a *PowerPoint* presentation on conflicting attitudes of native Americans and settlers towards land use.

Sustained ICT use of this sort is still quite rare, but some departments have now satisfied themselves that ICT, well used, is an effective tool in meeting specific objectives in the study of history.

ICT has the potential to develop and reinforce pupils' *knowledge* and *understanding* of history, providing, as it can, an extraordinary supplement to the resources normally available for the study of history. CD-Roms

and the Internet are increasingly employed in historical studies, and at best pupils are able to use different sites to locate and download information, using it critically to pursue an investigation. Some GCSE pupils make effective use of revision sites. Where pupils are mature Internet users they remain focused, ignoring the inevitable distractions which confront them. However, for too many pupils the locating of information remains an end in itself, and what they find they then re-present unprocessed. Some pupils make little progress where they are confronted by information which is either too difficult or simply too extensive for them to work with readily. For example, pupils confronted with a large number of 'hits' have not developed the skills to enable them to refine the search, or to establish which of the hits are most useful for the purposes of their enquiry. Less frequently, some higher attaining pupils are frustrated by the limitations placed on their searches.

In some effective lessons pupils make good progress in organising, categorising or prioritising material in order to address a particular question or to develop and illustrate ideas and information around a key question. There was some evidence of pupils using pre-prepared texts for analysis or as skeleton writing frames, and where this was successful it promoted higher attainment. However, in this area, as in use of other electronic information, there is a danger that pupils merely sort information without internalising the knowledge and understanding involved.

In a few good lessons pupils' knowledge and understanding were significantly enhanced through the use of databases or spreadsheets, for example where they understood more clearly the scale of a problem or observed patterns which helped to explain a hypothesis, such as the origins and extent of a cholera outbreak. Databases can also open up quite complex material to analysis. For example, pupils using 'rulers' from the BECTa data-handling pack analysed the underlying problems facing rulers across the early modern period. Often, however, use of datafiles is at low level. Thus, for example, pupils who were asked to rank order and score the relative significance of different causes of the Reformation gave very little thought to their weightings before entering and graphing the data. Some datafiles failed to support progress because they were limited either in size or scope. A broader problem is that in the majority of cases where datafiles were in use pupils did not demonstrate transfer of prior learning from the use of databases in other subjects, or they were being introduced to them for the first time. A further danger of databases that may be more particular to history is that they can tend to support the uncritical acceptance of the data provided as correct.

The use of simulations can be beneficial in developing knowledge and understanding, but here too the potential of the programme can be lost. For example, pupils using *Attack on the Somme* worked through the programme mechanistically in order to reach a conclusion rather than thinking about the consequences of the decisions made by the 'generals' in the campaign.

In a minority of the schools in the survey, pupils were able to take forward the information available to them using ICT and other sources and apply their critical skills in *historical enquiry* and *investigation*. For example, in one school pupils used a database prepared by the history department using War Graves Commission records. Pupils were able to identify the street of origin, the age, the regiment and the fate of the local men who died in the First World War. Preliminary work in answer to closed questions subsequently gave way to an extended enquiry into the background of particular individuals, but the progress that pupils made in getting to grips with the information in the database served as an important foundation and stimulus for further work.

Many pupils now have the opportunity to research material on CD-Rom or the Internet to serve an enquiry. A continuing issue is that, more often than not, information is downloaded uncritically. Pupils fail to apply their skills of analysis and evaluation to sources obtained via ICT in the way that they would do with books. Sometimes this arises because of the volume of material available, but more significantly for historians, it is due to poor referencing on electronic sources: it is vital that pupils have full details of the provenance of sources. In better lessons, source provenance is discussed explicitly with pupils as a way of moving them towards mature use of the Internet.

ICT-based source material has the potential to support work in *interpretations* of history. In the sample of schools in this survey there was little evidence of such use, although in one school higher attaining Year 10 pupils understood that sites on Martin Luther King and the civil rights movement were in themselves interpretations, and treated them accordingly. As is found with historical enquiry, there is a danger that pupils fail to apply the skills that they apply as a norm to paper-based sources when using ICT. In one lesson, for example, the work of David Irving was being used uncritically by GCSE candidates, and in the absence of any contextual knowledge of the provenance of the work for information about the Third Reich.

The most common ICT use in history continues to be word-processing with the objective of *communicating* knowledge and understanding more effectively. This capability is exploited with different degrees of success. In some schools teachers can do no more than exhort

pupils to use school computers outside of school hours or to use computers at home. In a minority of schools pupils use ICT tools to compose or augment text, to organise ideas or improve their drafts, for example in making a case to Henry VIII to persuade him to close the monasteries. Word-processing provides pupils with a tool with which to tackle writing tasks more effectively because improvements in structure and detail can be incorporated more easily on screen than in written texts. This capability is particularly utilised by older pupils, including those doing GCSE or A Level coursework. In some schools it is a requirement that coursework is word-processed.

Pupils with special educational needs (SEN), particularly when they have individual support, often make more progress than other pupils because they are guided to improve their work by using computers, and see immediate benefits in terms of presentation, quantity, structure and accuracy. More broadly, many pupils, but particularly lower attainers and boys, find it easier to come to grips with extended writing through use of ICT. A general characteristic of ICT use is that it is highly motivating. Where this motivation is well directed and served by the equipment available, it is likely to promote positive attitudes to the work. One inspector noted that 'pupils take longer to complete tasks using ICT than they would with pen and paper. However the quality of their selection for relevance and the clarity of their communication [are] enhanced.'

Too often, however, pupils do not so much word-process as copy type, adding little or no value to handwritten drafts or print. Some pupils demonstrate very weak ICT capability in basic word-processing, being unable to use the tools provided to improve their work. Desktop publishing sometimes limits achievement because pupils write within the tight confines of the given 'slots'. Some pupils waste time by experimenting with fonts and other tools: in one school this problem was anticipated by a rule which forbade such wasting of time, so ensuring that pupils moved rapidly to the planned ICT-based task that required pupils to think about history.

Some pupils make good progress in the oral communication of history supported by PowerPoint presentations, which become the tangible focus of the preparatory work. This occurred in a Year 7 class, in which pupils incorporated visual material from CD-Rom and websites into their *PowerPoint* presentation, manipulating the images to use them more effectively to communicate historical ideas. *PowerPoint* can also be used to enable a class to work together to analyse sources such as large visual images. However, in several lessons, use of *PowerPoint* is characterised by an emphasis on product rather than process, and this occurred at the

expense of historical thinking. For example, in one lesson pupils wasted an inordinate amount of time experimenting with fonts and clip art. Similarly, where graphics packages were used, thinking in history was at a very low level and the objective of the exercise was lost in a lesson where, for example, pupils drew fantastic castles with no link to historical reality.

In some history lessons, as well as achieving learning objectives, pupils make progress in ICT capability. This happens where there has been coordination between the ICT and history departments, and where history teachers have the knowledge and confidence to extend pupils' skills, for example by teaching the use of the 'tables' function of the word-processor to organise and classify information. Here, teachers are going beyond the familiar territory of historical objectives to ask themselves 'To what extent are we making the best use of this application?'

In the course of this survey, examples of good history teaching using ICT were seen across a range of applications. Some lessons that were in other ways satisfactory failed to achieve all that had been planned because of factors such as the inexperience of the teacher with a particular application, for example in (commendably) taking risks in trying out software recently encountered in the NOF training. However, some lessons were misconceived in their planning, were unsatisfactory in aspects such as classroom management, or suffered from problems with the computers or the software. Overall, teaching was judged to be unsatisfactory in around half of lessons, a far worse position than that in history lessons where ICT is not used. Furthermore, although some history lessons using ICT in particular schools were good or very good, this quality was often not replicated in other lessons using ICT, reflecting wide differences in the ICT competence of colleagues in the same department.

Planning

Good lessons in history using ICT need thorough *planning* and *preparation*. Among the most successful lessons were those where word-processing was used to restructure, modify or enhance an existing text, ultimately to draw on source material or a narrative to construct an historical argument. For example, teachers in one school made effective use of pre-prepared material to cut out low-level work and get pupils more rapidly to grips with historical thinking, using a writing frame to write an analysis of the sources of the revolution of 1688.

Planning is equally important in lessons using the Internet. In one good example the teacher had prepared by thoroughly exploring a limited number of specific sites and devising suitable routes through the

investigation. The pupils, in their turn, knew from this information what the site could and could not help them with. Where school intranets provide selected sites, including good quality local materials, they give teachers a higher degree of control and greater reliability of access, as well as faster access which contributes to the good pace of lessons.

Other lessons that benefited from good planning included the use of *PowerPoint* to teach the methodology of research, using a presentation that made links to CD-Rom and the Internet. Another well prepared activity used *Excel* to interrogate burial records, reporting the results using *Word* or *Publisher*, and using graphing to explore patterns. More broadly, history teachers are increasingly using ICT to plan for and resource lessons. This includes the provision of differentiated worksheets devised by teachers using ICT, presented to pupils on paper or on screen.

Conversely, weaker lessons can often be attributed to poor planning. In some history lessons objectives were unclear and were not communicated to pupils, as in the use of databases where pupils were not given a clear explanation of what it was that they were intended to find, or the significance of those findings. In a few cases the low expectations were set by the teacher through their instructions or worksheets – some very good looking worksheets were poor in terms of historical learning. A key problem in these circumstances was the teacher's lack of understanding of the potential benefits for learning and progress in history using ICT. In some lessons ICT use seemed to be an end in itself, for example in gathering information without applying any critical skills. At worst, some lessons were fundamentally misconceived, with teachers not having made the correct decision as to whether ICT should or should not be used for a particular purpose. In a few lessons using the Internet, teachers failed to provide guidance on selection of sites and to look at recommended sites before the lesson to check their suitability. A small number of lessons failed entirely because ICT applications had not been checked in advance, and for lack of any subsequent access to technical support. For example, in two lessons where the learning intentions were negated by problems with ICT, it would have been better to abandon the plan and restart using conventional resources, or to resort to a 'plan B'.

Teacher intervention

In good lessons, history teachers are clear on their role both in *introducing* and *summing up*, and in *intervention* while pupils are at work on computers. This is particularly important in order to promote historical

thinking rather than, for example, the simple transfer of information. Thus in one lesson using a *Making of the UK* CD-Rom, one-to-one intervention by the teacher was important in ensuring that pupils selected and made notes from different sources, beginning to develop hypotheses on the origins of the English Civil War. In another lesson, using census returns, pupils were stimulated by a lively exposition using a small data file which illustrated the principle of the value of a census. Pupils were then moved from a low-level activity of using the datafile to quite complex hypothesis testing. At first this was demonstrated by the teacher, but then pupils were encouraged to raise questions of their own. This very good intervention allowed pupils to gain mastery of the ICT, slowing the pace of the learning, but in so doing deepening pupils' understanding of the value of a census as a source for the historian, using ICT to structure information and considering how to use it in hypothesis testing. In a few cases, introductions and interventions made use of projection equipment so that pupils could see a demonstration of the application they were using, or so that a teacher could take the whole class through a sequence of the lesson where a common problem had been identified.

Some lessons that were 'satisfactory' could easily have been 'good' if the teacher had intervened more effectively. For example, pupils using a programme downloaded from the Internet were asked to analyse reasons for and consequences of Becket's death. The computer offered examples that gave both factors and reasons; in their own answers, some pupils, especially boys, were satisfied with brief responses which, although correct, did not demonstrate their historical thinking. Here the teacher's intervention was necessary to prompt the pupils towards greater depth, and to dissuade them from a view that finishing the activities was sufficient in itself, and the quicker the better. Where computers are used it is important that teachers do not allow pupils to work through procedures to come up with a 'product' at the expense of quality of process, and in particular at the expense of historical thinking. Similarly, weaknesses were apparent where the teacher failed to engage pupils in answering a valid historical question, leaving tasks open ended and thus lacking in clear purpose.

In some weaker lessons the teachers' failure to intervene reflected uncertainty and low expectations of pupils' historical skills, knowledge and understanding using ICT. For example, some teachers were tolerant of poor practice by pupils, allowing them to download uncritically (and on occasion even praising them for this), to copy type, or to use cut and paste without any direct intervention by the pupil in the accumulating text, and without any gains in historical understanding.

Sometimes teachers miscalculated pupils' ICT capability, pitching the levels of work too low or too high. In general, teachers have difficulty in coping with the wide range of ICT capability in the class, and in some cases they are insufficiently confident to make good use of the pupil expertise available to them. In some lessons teachers simply failed to transfer their expert pedagogical skills to the new environment of the computer room, for example by confronting and resolving the problem that a computer is likely to be a source of distraction during teacher-led plenary sessions. Some teachers had access to ICT equipment such as computers with projection facilities for whole-class teaching, but did not know how to use them.

In a number of classes poor use was made of the time available, and often the pace at the start of the lesson was slow. Much teacher time was taken up with the needs of particular pupils, either those with low ICT capability or the lower attaining pupils. Sometimes pupils were allowed to spend significant time on low-level activities. Teacher time in some lessons was dominated by the need to solve technical problems or unforeseen problems with computer applications for the task. Often, therefore, pupil–teacher discussion was about the ICT rather than the history. In each of these cases it seemed that the teacher was lacking in confidence about what to do with ICT.

Some of the most successful lessons had good access to *technical* and *learning support assistants*. For example, in a school where the history and the ICT teachers work very closely together, history was used as a context for the development of skills in word-processing. The ICT teacher was aware of history objectives, and pupils made good progress; and in another lesson where pupils used word-processing software the coordinator intervened to improve skills. Learning support assistants have also been seen to make good interventions, dealing with particular pupils and so freeing up the class teacher.

The varying role of ICT within the history curriculum

In only a minority of schools does ICT have a secure place in the history curriculum. Most, but not all, departments in this survey have attempted to make reference to ICT use in their scheme of work, sometimes in response to their last Ofsted inspection. In the majority, however, curriculum planning for ICT use is limited in some respects. Most typically, ICT is indicated as a possible 'opportunity', and thus subject to the availability of computers and the staff's disposition. Furthermore, such opportunities are often rare. Some schools have built in a sustained

amount of time using ICT at a particular time of year, usually in the last half-term of the school year when access to computer classrooms becomes easier. Such concentrated experiences can have a significant pay-off. In others, there is no sustained access of this sort, nor is there regular access in shorter bursts: time for pupils using ICT is restricted to irregular and limited experiences which fail to support progress in history or to transfer ICT capability.

In a small but growing number of schools ICT is provided for specifically and regularly in history as an entitlement for pupils. In one school, for example, all pupils had two activities per year based on work involving ICT, and in another all pupils engaged in one DTP task in Year 7. In a few schools where history has been regarded as the vanguard for ICT development, there is closer integration between the history and the ICT department, with the potential for improvement in ICT capability through subject teaching. In one school, history is responsible for the delivery of ICT capability in Year 7, and work includes word-processing, spreadsheets, databases and CD-Rom searches.

Such a level of integration is rare. Often there is little evidence of a co-ordinated approach to ICT use which ensures progression in ICT capability as well as in history: so, for example, in more than one school pupils in all years used the same ICT activity in different historical contexts. In some schools misunderstandings about roles persist. In one school where the ICT co-ordinator held responsibility for cross-curricular planning the history department was barred from low-level ICT use, which had a high pay-off for historical thinking. In other schools activities imposed on history departments by the ICT coordinator were inappropriate.

Facilities and access

Although in most schools the availability of ICT facilities for history lessons is improving, this is not always the case. Where schools, through use of central funding or on their own devices, have increased the overall capacity available, growing and competitive demand from other departments, and particularly from GCSE and GNVQ subjects with high usage, mean that historians can by no means depend on higher access than in the past. In over half of the schools in the sample teachers report that access to computer suites is difficult. In around half of the schools, teachers reported that with good planning they could gain periodic access to suitable rooms, but in some of these access to the Internet was problematic. In very few schools can departments get regular repeat access at times that meet the planning in their scheme of work: in one

good example, such access was planned centrally to ensure that all subjects had a guaranteed amount of time on computers, with timetabled access to accommodation. Some departments manage to provide access to pupils by making good use of a smaller number of machines within the department, and by occasional use of a learning resource centre. This can be effective where teachers take appropriately flexible approaches to learning. Often, however, departments are uncertain whether and how to use single or small numbers of computers other than for the teachers' own preparation and administration. In schools where history has taken a lead in ICT, time in computer suites may be diminishing as other departments catch up.

There has been a significant impact on ICT use where teachers have been provided with or purchased their own computer. This has a strongly beneficial effect on teacher confidence, and encourages them to try out a wider range of applications.

Whatever the equipment available, it is a severe disincentive to teachers when loading and running programmes are unreliable. Poor Internet links, lack of common networks, software which is incompatible with some machines in the school, old machines and inexplicable crashes were all found in schools in this sample. Such problems are, of course, compounded where technical support is absent. Only in about one-quarter of the schools in the sample were the accommodation and resources impressive. For example, in one school all departments have a bookable room, every teacher has a PC, a single network runs through the school, and access to the Internet is instant and trouble free. In another, all subjects have a guaranteed amount of time on computers, with timetabled access to accommodation.

The impact of governmental ICT initiatives

At the time of this survey the New Opportunities Fund training of history teachers is at an early stage, and only in those schools visited in the autumn of 2000 and the spring of 2001 terms had programmes begun. In some cases the training was delayed because of difficulties in establishing links with a mentor or in accessing materials, some of which were not ready on time, because of building problems, because of difficulties with needs identification, and because the provided software would not load. In several schools where training had begun the trainer's needs analysis had insufficiently established starting points for different teachers in the department. In some schools staff embarked on the training reluctantly, particularly because of the significant commitment of time that it involves, or because the documentation associated with

the training was found to be intimidating, or simply because they were not convinced of the value of ICT to history teaching. Such reluctance has sometimes been reinforced where the training has been generic, so that subject applications have not been demonstrated, nor matters of pedagogy explored, to encourage the reluctant ICT user to have a go.

Once the training had begun, some teachers reported difficulty in maintaining the significant commitment of time to subsequent study. For lack of either short-term targets or longer term goals, and where there are no internal procedures or structures to maintain the momentum, 'drift' can take place. In several history departments, including those containing ICT enthusiasts, the training has stalled. In some cases this may be because individuals had not understood the significant time commitment required if ICT is to be understood, practised and successfully applied in the classroom.

Within this generally depressing picture, there *are* some bright spots. In one school where training has started successfully, the school is itself the accredited trainer. In several schools heads of department were in a good position to introduce the training, one being a part-time advisory teacher, another an accredited 'platinum' trainer, and a third having already been trained in a wide range of applications, including *PowerPoint* and use of digital cameras. In several schools history teachers were highly motivated by the initial full day of face-to-face training provided by the approved training provider.

At this relatively early stage, some discernible impact can be seen on teaching in about half of the departments where training had started at the time of inspection. In some of these departments such development is particularly encouraging because their predisposition towards ICT was negative. Where training has had the most impact, it is often due to good use of existing experience in the department, or where the history teacher is well supported by a good ICT coordinator or ICT technical support. Success has also resulted from the trainer's close knowledge of training needs, and where the head of department or an expert teacher can apply and build upon generic training in a history context. Thus, one head of department has carried out an audit, written a course for pupils, and trained colleagues in its use. This training in the use of practicable course materials is likely to have a good pay-off.

Some good examples were seen of the transfer of training experience to the classroom. In several departments teachers have experimented with applications which they learned themselves as part of the training. Thus, in one department teachers felt sufficiently confident to try desktop publishing. In several schools there were immediate tangible gains from teachers' enhanced awareness of resources on the Internet.

Although in some cases their use was unsophisticated, it did add a new dimension to ICT work in history. In a department that leaned towards didactic teaching and knowledge acquisition, and with relatively narrow pedagogic range, the first forays into ICT use have been in interrogation of sources from CD-Rom or the Internet.

Some departments are moving forward cautiously using the specific resources provided with the training package. Thus, use of basic word-processing tools in one school, a matching, sorting and comparing activity in another, and use of a spreadsheet in a third. Teachers offered the view that this was building confidence and providing them with experience that they could evaluate in order to improve in subsequent sessions. Some schools are also beginning to make use of resources from the Virtual Teachers' Centre (http://vtc.ngfl.gov.uk), for example creating a commemorative poster. Training has also had an impact in terms of planning for future work. One department, for example, has planned for Year 9 pupils to carry out individual research into one of a range of historical sources, providing a commentary and categorising the source, but also using 'hyperlink' to link their source to others as part of a whole-class presentation on the Second World War.

In the other departments where there is no clear evidence of progress, key problems remain: teachers have not satisfied themselves on fundamental issues of the place of ICT in history, or are unable to apply what they have learned because of lack of access to computer classrooms.

In summary, progress is sometimes limited and patchy, but there are encouraging signs of departments coming to terms with the benefits of ICT for history, enjoying the additional range and depth which it can provide, and using it to raise standards in history. One such department had no ICT use four years ago; now the use of ICT for certain mandatory tasks is built into its schemes of work, and others are optional. At school level, access to accommodation has been provided equitably, and the work of the department using ICT is known to the ICT coordinator, who uses the subject as a context for teaching ICT capability. The head of department has improved her personal ICT skills, and taken useful material from the NOF training for incorporation into lessons. She has also researched a range of sites in order to identify suitable material for use in classrooms. Such use is evaluated and improved upon. These developments have added an important dimension to the work of the department, which is confident of its impact in terms of teaching, learning and, ultimately, standards of work in history.

References

Ofsted (2001) *ICT in Schools: The Impact of Government Initiatives. An Interim Report*, London, Office for Standards in Education.

3 The forgotten games kit

Putting historical thinking first in long-, medium- and short-term planning

Christine Counsell

Introduction

Why is there a problem in current ICT practice?

In Chapter 2 of this volume, on the basis of the most wide-ranging empirical study of its kind, Scott Harrison paints an honest picture of widespread poor practice in the use of ICT in school history teaching. For those of us who have worked extensively in this area, as teachers, as managers, as advisers, as trainers – initial and in-service – and as researchers, this does not come as a surprise. In fact, it is welcome. It confirms the extent of the problem and goes some way towards an analysis of it.

If we are to address some of the problems inherent in unsatisfactory use of ICT in history we will not get far if we look only at ICT. We need to look at rationales for history teaching and how these manifest themselves at the level of teachers' planning. This ought really to be obvious. If we were analysing the reasons for poor history practice and inadequate historical learning generally we would not examine in detail the pens and books, tables and televisions that teachers use. We would look at the hidden connections in the lesson, at teachers' links and emphases between ideas, at the reasons for fluctuation in pupil motivation across different historical activities. We would look at the quality of pupils' historical thinking and how it connected – or otherwise – with teacher conceptions. Puzzlingly, there is a tendency not to do this with ICT. Instead, the DfES sometimes seems to behave as though the holy grail lies in yet more software evaluations ('If only we could get those programmes and packages right . . . !') or yet more official guidance and example. But I doubt that such teacher-proof solutions are out there.

The fundamental questions about securing quality historical learning for pupils can only really be tackled through an emphasis on:

- establishing what progression means, or what we want it to mean (long-term planning)
- identifying and structuring the best enquiries for sustaining historical rigour and securing pupil motivation (medium-term planning); and
- examining closely how the best history teachers turn that rationale into reality in individual lessons (short-term planning).

These three scales of planning form the structure of this chapter.

Having been involved, on and off, in the construction of policy and non-statutory guidance in this area, it is interesting to stand back and observe how guidance appears not to have helped or has simply failed to reach the majority of teachers. I remember spending hours in think-tanks for the School Curriculum and Assessment Authority (SCAA), for the National Council for Educational Technology (NCET) and for the Teacher Training Agency (TTA) in the 1990s, preparing guidance leaflets, sample materials and so on. It is staggering how few history teachers have even come across such centrally produced and 'official' guidance. Such institutions or their successors continue to pour forth both guidance and practical exemplification, on websites and on paper. They do so for the best of reasons, and much of the guidance seems excellent. So why on earth is there a problem?

Studying such guidance closely now, it is striking to reflect upon how sound the principles still appear to be, and upon how pointless it is to continue to disseminate them in this fashion. Instead, it seems increasingly clear to me that we need to think about how professional knowledge is constructed, how it develops, gets tested and changes. We need to celebrate, analyse and support that knowledge construction process. Few teachers actually read guidance documents from quangos. Even fewer *transform their practice* by reading a guidance document from a quango. This chapter therefore emphasises another important theme alongside that of planning: the importance of professional discussion, debate and reflection and the urgent need for managers, leaders and policy makers to value and support that bottom-up learning process. If knowledge does not, in some measure, come *from* the profession (and from all of it, not just the tiny handful of us who end up as advisors or consultants), we are sunk.

A measure of the problem that confronts us is that it is still relatively common to come across history teachers who ask whether or not an ICT activity 'works'. While this might be an appropriate question if one were examining whether or not the focus of the activity is historically sound or rigorous (i.e. does it 'work' historically) any attempt to relate

it to generic effectiveness with all learners is bound to be rather meaningless. Surely this is the wrong question to ask. Too much is dependent on how the teacher implements it and in what planning context it is deployed. It is hard for an ICT activity to be 'good' or 'bad' in its own right.

This chapter is based on three assumptions. The first assumption is that pupils' intellects and imaginations can be stimulated by historical study. The second is that the vast majority working in or with the profession are passionately committed to extending the benefits and delights of that historical study to the full ability range. For teenagers to acquire historical consciousness is no luxury. A third assumption is that we all need constantly to put more effort into defining what we mean by 'historical thinking' by devising better paths towards securing it and that the more we do so collectively, scrutinising and debating each other's practice, the better.

The chapter argues that high-quality ICT use is dependent on our own clarity about the kind of historical thinking and historical knowledge we want to develop in pupils. Our willingness to keep up debate and exploration concerning its categories and distinctions is therefore key. The chapter further argues that blanket references to something called 'ICT' are unhelpful, sometimes even damaging. The activities that take place under the umbrella of ICT are now so diverse as to defy generalisations about it.

This chapter focuses upon the secondary age range and chiefly upon Key Stage 3. This is because the 11–14 age range is the last phase (in England and in Wales at least) in which entitlement to a historical education is presently guaranteed.

A certain kind of rigour

In November 2000, in a special issue of *Teaching History* dedicated to history and ICT, Reuben Moore wrote:

> Whose idea was it that we should teach history through ICT? The answer is that it should have been ours. The skills, approaches and attitudes that we teach in history are the vital ones for teaching pupils to use the Internet. No one else teaches them as directly, as systematically, and with such attention to progression across Years 7 to 13, as we do. Yes, if you are teaching National Curriculum Key Elements 3 and 4 well, and if you are building on their equivalents in the 14 to 19 curriculum, *then you are doing it already*. This is the point. The Internet has increased the opportunity through its scope

> and its resources but its proper use demands a certain kind of rigour that is already evident in the professional practices, language and debates of history teachers – and has been for over twenty years.
>
> (Moore 2000: 35)

While not the first teacher to make the point, Reuben Moore's *cri de coeur* was to resonate powerfully with any history teacher who had ever felt a mixture of frustration and *déjà vu* at some of the messages that the ICT curriculum world seemed to be sending out. Such messages can sound infuriatingly naive and basic to the history specialist, not because they are wrong, still less because they are unnecessary, but because they are phrased as though they were something new. Warnings about bias, about the reliability of web sites, about the provenance of material on the web and so on, as though these were new problems – indeed, as though these were *problems*, rather than the object of study – are finally too much to take. It is not that the history education community has necessarily taught these things particularly well; much of the time, it hasn't. It is rather that questions of reliability, bias, source, provenance and interpretation, have got well beyond the fringe, exploration and early enthusiasm stage of the 1970s (I am thinking of the seminal Schools Council History Project, later the Schools History Project) and were, in the late 1980s and 1990s, enshrined in establishment orthodoxy. Far from being new to the history education community, such issues have found a place in prescribed history curricula, first in the GCSE criteria of 1985 and its first examination in 1988, and then in the 1991 National Curriculum itself (DES 1985 and 1990).

Moore's emphatic 'point' ('This is the point') is neatly made: the Internet does not demand that we apply a new theory of knowledge nor that we find a new intellectual structure. History's intellectual structure – in its requirements to think evidentially about provenance, to find layers of meaning in a text, to make reasoning patterns within messy human data rarely created for history's purposes – prepares pupils to read and think 'between the lines'. Pupils must learn to look for hidden meaning and message, to deal with impossibly vast yet often incomplete sources, to assume provisionality in any conclusion and, above all, always to problematise the idea of evidence. While it is true that all disciplines might deal with the evidential, the provisional and the tricky status of texts within their proper fields of enquiry, it is nonetheless equally true that in their *curricular* manifestations school subjects vary enormously in the extent to which they define these things so directly. Two-fifths of the National Curriculum for history in its English and its Welsh versions (the Key Elements 3 and 4 to which Moore refers, out of a total of five)

address this question directly, and the rest indirectly. Two-thirds of the objectives in current GCSE history specifications – though the assessment weightings are not proportional – address the evidential and interpretations issues that were launched into common professional currency by the SCHP/SHP revolution. Within much of the UK at least, critical reflection upon evidentiality and upon the construction of interpretation form substantial compulsory agendas from age 11 onwards, and with preparatory work in these named areas from age 5. In history, evidentiality and interpretation (along with central second-order concepts such as time, periodisation, change, causation and significance) are more than just themes: they are a framework.

When history teachers such as Reuben Moore talk about rigour, they are alluding to this framework. They mean the package of concepts, processes and conventions that define history as a discipline, that prevent history from being random fact-grubbing about the past and that turn it into a distinctive disciplined mode of enquiry, with a particular end-product – distinctive in that its verification practices and truth-claims are not the same as, say, those of science or mathematics. They are also alluding to the manifestations of this framework in *school* history; in other words, in curriculum rubric and in teaching and learning practices documented by the professional community. Such professional accounts by history teachers show the extent to which, for all its many faults and unevenness, a focus upon the 'how' of history, upon history as construct and upon critical historical thinking has been both pivotal and mainstream within professional conceptions of history teaching for over a quarter of a century.

The examples that Moore relates in his article are framed by a particular curricular manifestation of this rigour, peculiar to the Key Stage 3 National Curriculum for history since 1991, namely 'interpretations of history' or, as many history teachers in England and in Wales have known it since 1995, 'Key Element 3'. It is here, Moore argued, that the convergence between learning history and learning to use ICT well (as opposed to merely learning *through* ICT as a medium) is at its sharpest. Moore uses websites and web pages which comment upon the film *Michael Collins*. In these sites, Warner Brothers' depiction of the controversial Irish Republican hero is variously upheld, attacked or simply discussed. Moore makes a case for teaching pupils to understand how and why different websites enshrine contrasting *modern* perspectives on the past.

The precise teaching point emphasised here is subtle but important. Moore was *not* asking pupils to 'find out' about Michael Collins using websites; in other words there was no question of his using websites

merely 'as information'. But nor was he asking pupils to evaluate them as sources, to weigh their reliability and make judgements on their accuracy. Instead, he was concentrating on pupils' learning about 'interpretations of history' (Key Element 3). In other words he was concentrating upon that aspect of historical learning where pupils analyse the construction of interpretation and representation *in the period subsequent to the events being described or analysed*. It is an exercise in deconstruction, in both the technical and general senses of that term. Pupils look at film, at theme parks, at modern novels (or any novels written long after the period they describe), at scholarly accounts, at Internet discussions, at school textbooks, at museums or at managed historical sites (McAleavy 1993; Wrenn 1998, 1999a, 1999b). The interpreter(s) themselves – the impact of their values, assumptions, intentions, audience and context upon the form and message of the interpretation – become the focus of pupils' analysis. Whether or not the interpretation is 'right' or 'accurate' is absolutely not the point here (though it might well be in a totally different sort of activity with entirely different learning objectives).

Moore's point, working from this framework, is that websites have introduced a whole new category into the scope of historical interpretations available for school history study. This is not merely because of the scope of interpretations on offer nor because of their easy accessibility but because:

- the *transparency* of message and intention in a website – from self-advertisement to blatant propaganda; from personal moral conviction to major educative enterprise – makes it relatively easy to help pupils to understand and to think about construction process and intent;
- the Internet contains 'interpretations' that would never be published and so it is a unique window into how today's population is interpreting history.

In other words, types and styles of 'interpretations of history' can be found on the Internet that are unique to it.

In Moore's example, pupils first examine suitable short clips from the film *Michael Collins*, considering the way in which the director sought to manipulate the audience's sympathies through factual choice, through narrative emphasis or through visual or audio effect. His Year 9 pupils build upon earlier work in Key Stage 3 in order to extend their historical thinking about how impressions of the past are created and conveyed.

To treat a film as an 'interpretation of history' is to teach pupils how the filmgoer and the film maker shape and transmit the historical stories that reach us. The teacher might use strings of questions or small activities to lead pupils towards questions such as: Why might the targeted audience want to see Liam Neeson portray Collins in that way? How far can the film maker go in using imaginative interpretation within a factual framework while retaining the film's credibility as history? These are questions about the construction process: how and why it happens and why it happens so differently and with such different outcomes in different settings.

Many history teachers have identified that good interpretation work helps pupils to see transferable principles across different media (Rudham 2001, e.g. p. 37). Moore exploits this not only by moving on to websites on Collins, but (cleverly) by directing pupils to websites *about the film* (historical interpretations of historical interpretations, if you like). Extracts from the three websites that he uses are shown in Figure 3.1 and it is easy to see how well-targeted activities and discussion drawing upon the most basic of conventional history–literacy work could lead even 'low-ability' pupils who struggle with text into fascinating analyses of these websites as interpretations.

Such analysis simultaneously secures a focus upon an aspect of the National Curriculum Programme of Study for ICT. Moore's pupils are, in effect, examining the distinctive role of ICT in creating and spreading historical discourse of a particular kind: 'Pupils should be taught to share their views and experiences of ICT, considering the range of its uses and talking about its significance to individuals, to communities and to society' (DfE–QCA 1999: 21).

The now well-established practice of analysing 'interpretations of history' at Key Stage 3 happens to be a very good way of reflecting upon the significance of ICT to individuals, to communities and to society. Not only is the use of ICT very well contextualised within a subject learning programme, but also there is coincidence of learning objectives between ICT and history as different curriculum areas.

Moore argues that thinking about interpretations – together with skills such as period source evaluation and evidential reasoning – is so central and so familiar to the history classroom that it really is a mystery how so many pupils and, worse, history teachers seem to forget all about it when using the Internet. Certainly this seems to have happened in some of the more alarming examples cited by Harrison in this volume (Chapter 2). Moore sees these history skills and dispositions as a kind of 'forgotten games kit' that pupils seem to leave behind in the history classroom as though it were not relevant to the ICT lab. His implication is

Roger Ebert, *Chicago Sun Times*
http://www.suntimes.com/ebert/ebert_reviews/1996/10/102509.html

'History will record the greatness of Michael Collins', the Irish President Eamon De Valera said, 'and it will be recorded at my expense'. Yes, and perhaps justly so, be even De Valera could hardly have imagined this film of Collins, which portrays De Valera as a weak, snivelling prima donna whose actions led to decades of unnecessary bloodshed in and over Ireland.

Michael Collins paints a heroic picture of the Irish military leader. He comes across in the film as a clear thinking leader who signed a treaty saying it was the best we could hope for at this time.

Was De Valera really responsible for all these tragic consequences? Some argue so but others will find *Michael Collins* in need of an Irish villain to balance the British enemy. The film makes De Valera into a much more devious man than he was. The film suggests that De Valera was aware of the plot that Collins was to be killed.

Warner Brothers
http://michaelcollins.warnerbros.com/cmp/welcome.html

Neil Jordan's epic portrayal of the life of Michael Collins has won the Venice Festival's Golden Lion Award.

In Ireland, where national pride is a passion close to religion and romantic love, one man became a legend for his fierce devotion to his land and its indedependence. Liam Neeson stars as Michael Collins in a story about the real life patriot whose bravery and dedication to the Irish people changed history as it made him into a legend. It would cost him his life but would make him a hero of the ages.

http://www.geocities.com/CapitolHill/Lobby/5598/

In 1996 the movie *Michael Collins* was released. A very fine picture in many respects, we believe it was seriously flawed by the inaccurate and unfair portrayal of the great Irish leader, Eamon De Valera.

De Valera was one of the greatest leaders of this century: a man who stuck to his faith, a man of principle, a man dedicated to peace and justice, a soldier who fought for freedom, a man who followed his conscience.

Figure 3.1 Three extracts from different websites commenting on the film *Michael Collins*

that history teachers themselves seem to forget about it, too. After commenting upon pupils' annoying habit of assuming that anything written down has an air of legitimacy, Moore leads up to his 'games kit' point:

> We dispel such myths every day in our teaching when we stress that history is not a body of knowledge to be handed down untouched but a dynamic artefact to be constructed and reconstructed through continual weighing of evidence, and to be filtered and deconstructed through critical appreciation of interpretation. This is not to dispute the core of facts that are incontestable (pupils certainly do not need to 'discover' afresh that the Battle of Hastings was fought in 1066), but pupils do need to understand the process of construction and, where appropriate, to attempt some construction for themselves. We history teachers, collectively, have a wealth of experience of giving pupils strategies and criteria for reaching their own historically valid decisions. We must teach our students to bring these skills to the ICT lab, instead of leaving them festering in the history classroom like forgotten games kit.
>
> (Moore 2000: 37).

Long-term planning for progression in history

'Progressive use' of ICT – what does this mean?

Moore stresses at the outset, almost in passing, as though it were obvious, that such work must build upon planned progression in this particular learning area. In other words, there should be long-term planning across the Key Stage. Indeed, his entire article is a tacit indication of *very* long-term planning for progression, for he explores the teaching of the same concept in Years 9 and 12. He assumes that websites are being studied as interpretations, not in some sort of vacuum, but as part of a planned journey, enabling pupils to gain maximum value from the experience by positioning this activity sequence carefully in a very long-term plan for similar learning about interpretations. It is possible for Moore to think about long-term planning in this way because he is so completely clear in his own professional head about the area of historical learning or thinking he is trying to secure. He has a well-worked and personalised understanding of 'interpretations of history' ('Key Element 3') and he has thought about how to take it forward and extend it into the 14–19 curriculum. He is certainly not dependent upon curriculum rubric and examination specifications for this; rather, it

appears that he thinks holistically about what it means to get better at this, first across the detail of 11–14 planning, and, more widely, as pupils continually revisit the idea, aged 11–19.

So much for the history. Can there be anything special to say about progression in ICT within this all-important context of progression in history? Some might say not. After all, one might be tempted to stop right here and go to some literature or research on progression in history, to some tried and tested principles for history planning, to one's own cumulative professional experience of history teaching or to any other source for thinking about progression or about learning paths in history. For what else needs to be said? Analysing the type of historical learning and locating it in a planned journey is surely something that any history teacher does all the time, with any resource or activity. In other words, is there anything either *additional* or *essentially different* to be said about effective deployment of ICT in history that is *not* said by the various progression models and descriptions of learning paths that history teachers or researchers have generated in the last thirty years? Is there anything that needs to be stated *over and above the general principles for progression* in history?

I would argue that in some instances there is. But it is not straightforward because the idea of 'ICT' cannot be taken as a unity for this purpose. There is probably no such thing as 'progression in ICT within history'. One reading of a comment by Ofsted, might give the impression that there is, however:

> Departments make effective use of ICT more often when they show good awareness of the range of applications of ICT in history, have them built into the scheme of work, and exploit these regularly for progressive use for research, analysis, and communication.
>
> (Ofsted 2000)

When Ofsted makes the case for regular and progressive use of ICT in history it suggests that there must be some special skills, approaches or attitudes that need to be introduced incrementally, to be reinforced or extended over time, and that while such skills may not be peculiar to history, nonetheless pupils should experience such regular and progressive use *within* history. The need for regular and progressive use of ICT generally is not in doubt, but why should it be necessary, additionally, *within history*?

History teachers already have useful categories for talking about progression in history. One history teacher might say, for example, that across Years 7–9 pupils need 'regular and progressive' work with causal

reasoning, with framing enquiry questions to do with change, with evidential understanding, with using visual sources critically, with constructing certain types of historical argument or causal explanation, or with increasingly complex or problematical interpretations. In another history department the teachers might say that across Years 7–9 pupils need to visit words like 'political' or 'power' or 'parliament' again and again, building new meanings, revising old ones, linking them up to different types of historical story so that they become fluent, critical and confident users, capable of making use of the analytic power of these words. In yet another history department, we might hear teachers arguing that cumulative understanding occurs through a Rogers-type (1987) 'frame of reference' with teachers frequently helping pupils to see how a new period makes sense in the light of references to social, cultural or political structures and values in earlier periods. These are just three examples of thinking about progression in history, some emphasising process over knowledge, some emphasising knowledge over process, some able to theorise a blending of the two (Counsell 2000a). We do *not* (usually) say that pupils need regular and progressive use of pens and paper, of televisions or even of textbooks. This is not because it is not possible to get better in these respects; it is because they are not helpful categories for defining historical learning.

We *would* say, perhaps, that pupils need to get better across Years 7–9 at using film or at using documentary as an historical interpretation. But we would not (generally) say that they need to 'get better' at using television. The distinction is that one is a meaningful category for thinking about progress in historical thinking and learning and the other is too generalised to be helpful in this respect.

But ICT is just such a generalised category. Indeed, it is much more general than (and arguably even inclusive of) 'televisions'. So what on earth does Ofsted mean by 'progressive' use of ICT in history? Must all types of ICT used regularly in history elicit some hierarchy of progress in skill? Obviously they cannot mean this. ICT is too wide a category. To say that pupils need regular and progressive use of ICT in history is therefore at best rather imprecise and, at worst, misleading. The range of technological applications that come under the umbrella of ICT, even under the umbrella of common computer use, is far too wide.

It is much more likely that there are some aspects of ICT-history use in which pupils do, *as part of historical study*, need regular progressive training; and that there are others where the ICT activity might be extremely valuable if pulled in to support some aspect of historical learning, but it is not intrinsic to history's purposes. Here, to look for progression within the activity type, *per se*, rather misses the point.

For the rest of this chapter I shall call these type A and type B. How are we to tell the difference?

Working out where regular and progressive use is necessary for long-term planning

Reuben Moore's teaching approach using websites in the context of historical interpretations arguably falls into the first of the two types introduced above (type A). The historical learning focus that he is trying to secure is totally dependent on the specific ICT resource. It is dependent on it for two reasons. First, a website is a distinctive type of 'interpretation of history'; second, the Internet's existence has enormous implications for how 'interpretations of history' are constructed and used in today's society. Therefore, it is not just a remarkably good extra 'opportunity' for teaching 'Key Element 3' in the same way that a National Trust tea-towel or a Sealed Knot re-enactment or a new piece of scholarship or a politician exploiting the past might prove to be. It is a type of 'interpretation' peculiar to ICT. Pupils need time to develop focused reflection and criteria for analysing that 'type' and exploring its impact. Progressive use makes sense. The convergence between history's distinctive purposes (in this case those defined by 'Key Element 3') and ICT's distinctive content and processes is very high.

By contrast, in another kind of ICT history, which I am calling type B, the convergence may not be so high. This is not to derogate the value of such an activity; far from it. It is rather to suggest that 'regular and progressive use' *in the ICT activity* would miss the point. In type B, the ICT has been pulled in as a very good way of teaching something. Perhaps a particular set of circumstances has made the teacher judge it the *best* way, for *those* pupils, at *this* moment. Nonetheless, there is nothing inevitable about the choice of ICT for this purpose.

A good example of type B is the BECTa word-processing activity sequence on the Civil War (NCET–HA 1997). This special package was created to allow pupils to arrange and rearrange their ideas in order to think about the different ways in which they might construct a causal argument. It is a straightforward use of word-processing involving a simple table, lots of manipulation of factors and different types of highlighting. Produced at a time when NCET (BECTa's former name) needed to help teachers who were not so confident with ICT, it is so simple that many teachers now design their own versions using the most basic of word-processing functions and some simple pre-prepared causes of their own. Such an activity has been carefully created with a specific historical–pedagogical purpose. It is a kind of 'card-sort' on screen,

although arguably with the added advantage of allowing pupils to move on to convert their arrangement into a piece of prose by using their chosen classification as a skeleton essay plan. Used well, and properly understood, it is an excellent way of doing what ICT does so well: it sharpens up a learning focus. It speeds up the things you don't want pupils to be distracted by (the mechanical act of arranging and rearranging) and allows pupils to spend longer on the things you want them to dwell on (thinking about overlap, problematising categories and getting into the organisational problem).

The contrast with Reuben Moore's high-convergence activity is clear. Pupils do not (necessarily) need to get better at arranging statements in little boxes on a screen. In fact, it would not matter two hoots if they never did this. Pupils *do* need to get better, however, at the historical thinking behind it. They need to get better at choosing their own organising ideas, at inventing their own headings, at understanding the explanatory power of classification, at using all this to create an oral or written causal argument and at thinking about how and how well they did all this. A teacher might make a judgement that an ICT activity using little boxes is, in a particular set of circumstances, *the best* way of developing pupils in this area. Indeed, it offers special advantages as pupils can 'save' stages in their thinking for later scrutiny – a type of meta-thinking much valued in certain types of 'thinking skills' strategies in the humanities (e.g. Leat 1998) – but history teachers would be unlikely to kid themselves that pupils need to 'get better' at cutting and pasting things into little boxes. Indeed, the moment pupils seem to think that that is all they *are* doing, the teacher knows that the activity has gone badly wrong. The functions of ICT enable but are far from being either necessary or intrinsic to the learning focus.

This is a low-convergence activity. ICT is brought in as a learning tool but the history teacher does not want the pupil distracted by direct reflection upon its functions or characteristics. A low-convergence activity can be just as valuable as a high-convergence activity but the point is that pupils do not need 'regular and progressive use' in it in the context of history. The ICT is a learning tool – and, well chosen, well positioned, well implemented, it might be the perfect learning tool – but its peculiar ICT properties are not the main object of study.

Developing principles for ICT-dependent and non-ICT-dependent planning for progression in history

The distinction set out above is developed further in Figures 3.2 and 3.3. In each of the examples in Figure 3.2, the ICT doubles up as being

TYPE A: ICT-DEPENDENT HISTORICAL LEARNING	
Examples of areas of historical thinking and learning	*Type of ICT use in which regular and progressive use is desirable*
1. Explaining and evaluating interpretations of history	Websites form a distinctive subset of 'interpretations of history' with some common characteristics peculiar to the Internet e.g. Reuben Moore's work on *Michael Collins* websites.
2. Framing and testing questions and hypotheses using numerical or part-numerical data	Large datafiles require the speed and functions of ICT both for analysis and display of findings (e.g. using a census to establish patterns of change or diversity).
3. Experimenting with the wording of an historical argument in order to improve its conceptual focus, its line of argument or its evidential substantiation	There is a limit to how much experimentation and drafting is possible on paper. Moreover it is not possible to see the quality of the revised text and to discuss, evaluate and revisit it. Making good use of the functions of a word-processor, pupils can work on the fine detail of their wording in such a way that refines and enhances their historical thinking about the historical problem involved.
4. Locating relevant source material for substantial or open-ended enquiries	While learning to *evaluate* historical sources is not ICT-dependent, the art of *finding* historical material on the Internet or on very large databases that is relevant to a question takes on a distinctive and technical character when discriminating and informed use of search engines and websites is necessary (direct and systematic work on 1, above, might be essential for some pupils to climb into 4, successfully).

Figure 3.2 Progression in essential historical learning that may be ICT-dependent (type A[a])

Note:
[a] This requires regular and progressive use of ICT because ICT is itself the object of study, for specific historical purposes. In other words, it is not a distraction from the historical learning objectives to think directly about the functions or properties of ICT.

the object of historical study. In other words, in the interests of *history*, pupils need continually to revisit this type of ICT. There is therefore a need for 'regular and progressive use'. In these examples there is also minimal danger of the ICT functions becoming a distraction from learning. In fact, in some cases, to reflect upon the content, structure or functions of the ICT resources is also to reflect on historical questions and problems. It is this potential for deliberate and integrated reflection on ICT that distinguishes the type A examples in Figure 3.2.

In Figure 3.3, there are examples of essential historical learning areas that are non-ICT-dependent. An ICT application or learning package might well enhance, improve or provide extra access to one of these historical learning areas but it is not the *only* way of teaching it. Regular and progressive work in these areas of historical thinking is undoubtedly essential, but regular and progressive use of the types of ICT shown here are not critical to it.

It is particularly important to stress that I am in no way derogating Figure 3.3 (type B) examples as less valuable or less important that than those shown in Figure 3.2 (type A). Figure 3.3 is full of examples of ICT-based approaches that expert teachers use skilfully as temporary learning tools. Some are examples of a kind of legitimate, occasionally quite artificial, use of ICT (artificial in the sense that is designed for pedagogy only) to push a particular history focus. These have a distinctly non-real-world quality to them, being designed specifically for teenage learners. Equally, others involve very 'real-world' and even state-of-the-art technology. In some cases the examples are those which a teacher might use with some pupils and not with others, or even offer for pupil choice. But the applications and processes do not necessarily need to be revisited for the sake of historical learning. It would be meaningless to talk of 'regular and progressive use' of this type of ICT for *history*'s purposes (although one might be interested to plot its use across subjects) any more than than one would talk of 'regular and progressive use' of chairs and tables. There is no necessary relationship between the specific CD navigation skills involved in using the excellent British Library CD (i.e. specific to that CD) and the development of source evaluation. The former simply happens to be a good way of providing access to some material and activities useful for the latter. There is no necessary relationship between designing a 'virtual visit' to a castle using a multi-media authoring package with a digital camera and developing skills of using physical evidence or communicating history. In many instances, construction of or reflection upon such a virtual visit works well. Equally, pupils would not suffer historically without it. There is certainly no necessary relationship between a lively quiz or interactive exercise

TYPE B: NON-ICT-DEPENDENT HISTORICAL LEARNING. ICT MIGHT BE ONE USEFUL METHOD BUT IS IN NO WAY *ESSENTIAL*	
Examples of areas of historical thinking and learning	*Type of ICT use that might support such thinking and learning*
Selecting, sorting, classifying and arranging ideas or examples of possible evidence in order to construct an historical analysis e.g. an essay built around a *causation* problem, a diagram showing relative *significance* or a speech arguing for *continuity* over *change* across an historical period.	e.g. use of specially designed packages to manipulate and experiment with the arrangement of either pre-prepared idea units/evidence examples or items they have input themselves (e.g. BECTa materials or similar) using cleargrids, charts, headings or diagrams (either supplied or modelled).
Constructing and presenting history for a specific audience and purpose	Examples might include a powerpoint presentation with key issues separated into bullets in order to support a short lecture; a full-multi-media documentary incorporating sound or moving images; a 'virtual visit' to an historic site designed for a prospective heritage bidder and constructed using photographs taken with a digital camera;
Evaluating and using sources historically	A wide range of sources, way beyond what is available in textbooks and library, can be found in websites. Pupils need to subject these to the same processes of evaluation and questioning that they would when encountering them elsewhere. e.g. British Library CD-Rom, Sources in History: The Making of the United Kingdom: Crowns, Parliaments and Peoples, 1500-1700
Using and comparing museums and historic sites	'Virtual visits' are now possible with many sites and museums. Whilst these cannot replace a real visit they allow pupils to compare, analyse and appraise more sites than might normally be possible and also help pupils to taste the 'feel' of a place and perhaps to raise questions more effectively than a mere description and photographs would allow.
Simulating or reconstructing past scenarios	
Quizzes and games	

Figure 3.3 Progression in essential historical learning that is non-ICT-dependent (type B[a])

Note:
[a]An ICT application or learning package might enhance or provide extra access to a historical learning focus. But it is not the only way of teaching it. Regular and progressive work in these areas of historical thinking is essential, but regular and progressive use of the types of ICT shown here is not (necessarily) critical to it.

designed for Year 7 or Year 12 pupils to use on their own and their ability to build historical knowledge independently. The latter may be helped greatly by this facility, particularly for some; but pupils do not have to use, let along become skilful at using, this particular device.

By contrast, the database work included as an example in Figure 3.2 and developed in Figure 3.4 needs to be returned to regularly. Pupils need gradually to develop a sense of the kinds of questions and hypotheses that are suggested by the huge census datafile and to refine and test their searches**.** Pupils need to develop a sense of the kinds of historical questions to which this part of the datafile gives rise and to link them to historical problems of causation, significance or change. Over time they must learn to articulate the relative value of these data *vis-à-vis* other data on, say, public health in the period**.** Here the use of the speed and functions of the application merge with the thinking about historical purpose. The teacher's job is to ensure that it does. The pupil needs to engage in more than procedure and to link routines with reflection. If Year 9 pupils are working skilfully, it is reasonable to assume that their skill consists in more than mere procedural confidence with different types of searching. Underpinning it will be the development of a habit of reflection upon distinctively historical processes and conclusions. This will not come quickly or cheaply. It is likely to emerge only if we see a direct relationship between the incremental stages in a Roman emperors or castles datafile activities in Year 7, different types of database and spreadsheet work in Year 8 and some culminating enquiries using census material or leisure statistics in Year 9.

The database example is a particularly good illustration of the convergence of ICT and history objectives alluded to in type A above. If pupils reflect on the value and best use of searching, sorting, graphing and presenting, this is not going to distract them from thinking about the historical problem. It is part of it. The published work of history teachers such as Alfano (2000) and Atkin (2000) exemplifies this complete integration of learning focus. Describing a lesson sequence in which Year 9 pupils used local parish data to develop an understanding of the provisional character of historical research and conclusions, Alfano writes:

> Various theories have been suggested by different population historians about how to estimate population from parish records. Cox suggests multiplying average annual baptism by 30 while Razzell suggests multiplying average annual marriages by 125. These theories can be modelled by students using spreadsheets. Population estimation is fraught with problems such as non-conformity (wide-

Year	Growing historical knowledge	Progression in using computer databases and spreadsheets (ICT progression in its own right)	Progression in framing and testing hypotheses about the past, using all kinds of historical sources
7		Pupils are shown how to use a simple datafile as part of their attempt to solve a problem concerning change, continuity and turning points in the ruling of the Roman Empire: ***When did the Roman Empire start to decline?*** Pupils followed some teacher-prepared lines of interrogation and some of their own, as they become more confident with the techniques. Strong teaching emphasis on what *kinds* of questions and hypotheses about the emperors might be historically helpful (e.g. When was there a sharp increase in unnatural causes of emperor deaths? Is there a correlation between number of emperors in a century and WHERE in the empire most emperors spent their lives? What kinds of hypotheses might we draw from this?). Pupils are then supported in discussion about the scope and limits of the datafile for this enquiry and how they might have improved it.	
8		Pupils use data-handling software to tackle enquiry question: ***Were all Indian nations the same?*** Pupils discuss with their teacher possible field headings for their own database. Pupils enter their own data from their own researches into the Hopi, the Lakota and the Mandans. Pupils examine patterns and incorporate pertinent graphs into presentations challenging stereotypes of native American peoples. Pupils then review the way in which they chose to construct the data file. Had they chosen the best field titles? How could they have organised the data differently in order to answer more searching historical questions about past diversity?	
9		Pupils use census data to answer enquiry question involving local study of the Poor Law in the 1860s: ***Why was the experience of people in Atcham different from the experience of people in West Derby?*** Having framed hypotheses about why documentary sources suggest a general difference in the experience of paupers in each Poor Law Union, pupils then go to the census database of 1861 to test these. Having recapped on techniques for interrogating a database used in Years 7 and 8, pupils use contextual historical knowledge to work out that they need to calculate the proportion of the adult male population involved in agriculture. (A casual glance at the 1861 Census might lead one to think that agriculture was slightly more important in providing employment in West Derby than in Atcham. An interrogation of the data reveals, however, that 5.9% of men in West Derby but 55.4% of those in Atcham were employed in agriculture.) Pupils then use the Census data itself to frame and test further hypotheses about contrasting experiences.	
10		By Year 10 pupils can: • explore numerical and part-numerical data to frame and test historical hypotheses and assertions • comment on the role and judge the value of datahandling software and particular datafiles for examining historical patterns and relationships • recognise the scope and limits of different types of datahandling for certain types of historical question	

Figure 3.4 An example of long-term planning to secure regular and progressive use of databases and spreadsheets across Key Stage 3 and GCSE (type A example)[a]

Note:
[a]This aspect of learning is supported by wider areas of learning, especially use of sources to frame and test hypotheses and growing historical knowledge, but it also constitutes an ICT progression journey in its own right.

> spread in Wellington), priests cashing in on marriages for people unconnected to the area, and other such issues. By examining these problems, however, the provisional nature of some historical enquiries can be examined.
>
> The lesson started with some photocopies of real parish records in the classroom and some brainstorming on what 'Big Questions' we could ask of them. After some thought and prompting, some ideas were developed. Some discussion took place about how population and family size could be estimated. This intrigued a number of students and led to some interesting suggestions.
>
> Moving to the computer room, the spreadsheet containing parish record figures for each year between 1683 and 1782 was loaded up and four hypotheses were then suggested to the students. . . . A warm-up activity got students to use a simple formula to add up all the baptisms and then the students were asked to test the hypothesis to prove or disprove them (using further guidance on formulas).
>
> (Alfano 2000: 45–6)

It is worth quoting at length from Alfano, as his work reveals two characteristics of the kind of work that I am suggesting fits type A: first, constant interplay of the procedural *and* the reflective (*both* how do I do this? *and* what sort of historical conclusions can I get from this type of resource and procedure?); and, second, the implication that earlier work of a comparable kind would make a difference in securing increasingly independent and informed use.

Earlier work of a comparable kind is central to any notion of planned progression. By 'planned progression' I do not mean a quest for incremental increases in difficulty. It would be very hard, and perhaps unhelpfully mechanistic, to try to achieve this. A more flexible and helpful way of thinking about progression is the deliberate creation of 'readiness'. Figures 3.4 and 3.5 flesh out what planned progression might look like in order to secure, by Year 10, confident and independent use of databases or spreadsheets and of websites as 'historical interpretations', respectively. In Figure 3.5, a learning path is illustrated which would mean that students arrived at the Michael Collins work discussed above, *ready* to be sophisticated in their reflections and capable of independent criticism, enquiry and integration.

Long-term planning is a way of making learning bigger than the sum of its parts. Its goal is surely the creation of truly independent learners. This is a popular but rarely realised mantra. Perhaps a better way of putting it, one that captures something of the professional effort required, is to say that the goal of long-term planning is the *transformation* of those

Year		Progression in using websites as interpretations (ICT progression in its own right)	
7	Growing historical knowledge	Pupils analyse small pieces of text on two websites on King John as part of their interpretations enquiry: ***Why does everyone disagree about King John?*** Pupils compare the impression of King John in Walt Disney's film, two teacher-chosen websites and a 1930s school textbook. Pupils use techniques for analysing persuasive, information and explanation texts, drawing upon National Literacy Strategy work at Key Stage 3. Pupils explain WHY the two websites were constructed and choose language from the sites to suggest different types of intent. Teacher uses this as part of accessible introduction to historical scholarship and debate. [See Cunningham, R. (2001) 'Teaching pupils how history works' *Teaching History 102* for examples of successful attempts to do this in Year 8 in a school in Portsmouth.]	Progression in analysing and deconstructing all kinds of interpretations of history
8		Pupils use a range of websites (amount and type differentiated to support ability range; limited adapted extracts on school intranet to support very low-attainers) to tackle the enquiry question: ***Who cares about Charles I?*** Pupils build an analysis of why there is so much interest in Charles I, Cromwell and the Civil War today. They look at how different groups such as the Sealed Knot and the Cromwell Society, scholars and members of the public use the Internet to argue and present their views. Very able, gifted and talented pupils discuss how the Internet might be *altering* historical debate and/or changing its audience.	
9		Pupils use a range of websites to construct, pursue, evaluate and review their own examination of the enquiry question: ***Why do people today still get worked up about Michael Collins?*** See Moore, R. (2000) 'Using the Internet to teach about interpretations in Years 9 and 12' T*eaching History, 101, History and ICT edition*.	
10		By Year 10 pupils can: • discuss the social and cultural impact of the Internet upon society, • consider the changing place of historical consciousness in modern society, • analyse websites as interpretations of history	

Figure 3.5 An example of long-term planning to secure regular and progressive use of websites as interpretations across Key Stage 3 and GCSE (type A example)[a]

Note:
[a]This aspect of learning is supported by wider areas of learning, notably work on interpretations of history and growing historical knowledge, but it also constitutes an ICT progression journey in its own right.

pupils who are reluctant or afraid to take responsibility for their own learning.

Focusing professional reflection on the problem of long-term planning

There is always a danger of being too mechanistic about long-term planning. Pupils forever surprise us with the things that motivate them at different stages. Equally, not to attend to long-term planning is to suggest that learning is random and that we can dump any old learning anywhere. It is true that many able pupils seem to survive despite precisely such planning; there will always be pupils who scramble through with mere exposure rather than teaching. But if we are serious about lifting all of the ability range into higher levels of knowledge, understanding and motivation, we almost certainly need to be more systematic. Continued weaknesses in history teachers' use of ICT suggest that tighter thinking about principles for long-term planning is now essential. But on what kinds of planning models should professional reflection be focused?

There is a necessary artificiality about planning models. We can so easily overdo the construction of models, especially those within just one area of historical learning. It is likely that pupils arrive at a sophisticated understanding or skill as a result of benefiting from a complicated mix of experiences and interlocking journeys. Taking Reuben Moore's *Michael Collins* website activities as an example, a wide range of earlier experiences might have helped Year 9 pupils to be 'ready' for this sophistication. Such pupils are likely to benefit not only from earlier planned work on the types of historical interpretation that are likely to be found on the Internet, but from earlier work on historical interpretations in general and earlier work on related knowledge areas (such as aspects of political and social history of Britain in the nineteenth and early twentieth centuries). Plenty of non-ICT-based work might have led to this readiness. Moreover, historical learning is an intricate mix of knowledge and process (or 'thinking' or 'skill'). It can seem artificial to pluck out pupils' learning about 'interpretations' as an area needing a model of progression, let alone the narrower aspect of 'interpretations through ICT'.

On the other hand, if we view such models as professional devices, as ways of shining a spotlight on an issue for the purposes of evaluating it, and if we avoid confusing such models with complete descriptions of progression or a full long-term learning plan, then they can be professionally useful. Sometimes it is valuable for history teachers or

departments to 'unpack' a particular aspect of its long-term planning, to establish where their assumptions about securing progression lie, and to test out and challenge those assumptions.

Working with a history department recently which had invited me to review its schemes of work, we attempted just such an analysis of departmental ICT use. A dissatisfaction with the quality of Year 9's use of ICT in history occasioned the review. Compared with earlier work (in Year 7), there appeared to be no obvious improvement in the quality of the historical questions Year 9 pupils were posing when working with statistics. Pupils still seemed ill-equipped to *choose* particular applications to solve specific problems and too many pupils, from across the ability range, were using the Internet inefficiently and uncritically, despite having used it extensively for enquiries since Year 7. This was a history department that had no problem with professional confidence in use of ICT and where use of ICT with pupils was extensive. ICT learning opportunities were actively planned into the work schemes. Key Stage 3 was clearly ICT-rich. Historical thinking in many areas was impressive by Year 9. The department was confident that aspects of ICT had contributed to this, although staff had not theorised exactly how. In some ICT activities, however, historical thinking, as well as recall and application of historical knowledge, was strikingly poor, and possibly worse than it was in similar non-ICT-based activities. How was the department to analyse what was going wrong?

It was in this instance that the distinction between type A and type B planning proved extremely useful for working out what had gone wrong. For many of the planned ICT activities there appeared to be no ICT-specific rationale at all in terms of planned progression. Nor was any such rationale necessary. These were examples of type B ICT use – simply pulled in order to serve a planned learning path governed by other considerations such as pupils' development of causal thinking, growth in knowledge or practice in seeing the shapes in an argument. Sometimes CD-Roms or websites were used just to provide access to a richer cultural variety or better quality of resources. There was no need to change any of this. The quality of ICT use was able to stand or fall on the quality of the wider historical and pedagogic considerations for long-term planning. In these respects there were many signs that the department was strong – discussion about progression in such matters as pupils' causal reasoning and the interplay of knowledge and skill was sophisticated. It was therefore not surprising that good judgements were being made about when and where to pull in ICT. The department was quickly critical of ICT that had no discernible effect on progress in history.

Where there were type A examples, however, there were clearly problems. Our attempt to plot the incidence and pattern of ICT use in the manner of Figures 3.4 and 3.5 revealed problems. There appeared to be no systematic attempt to create readiness for the sophisticated use that the department had judged as its goal by Year 9. As well as its own (already impressive) thinking about progression in historical learning, the department needed further ICT-specific models of planned progression. Creating such plans for progression proved to be an invaluable evaluation tool. It was possible to work out *why* some work on databases had been less than satisfactory, why pupils' Internet use was still patchy and unfocused by Year 9 and why other shortfalls in Year 9 standards – all of which had occasioned the review – had occurred. Identifying an ICT seam or strand in a planned progression model for history was therefore highly worthwhile. But it was worthwhile as a temporary professional analytic device.

This example comes from an unusually successful history department, sophisticated and self-critical in its thinking about progression, collaborative and reflective in approach and ICT-rich. Yet the story is nonetheless instructive for all of us at whatever stage. It shows, as does Scott Harrison (Chapter 2), that exposure to a great deal of ICT is no guarantee of better historical learning. Something more is required. Yet it is too simple to say that the 'something more' is 'regular and progressive use'.

What is needed is the ability to discern where, when and in what respects regular and progressive use is necessary. A type A–type B distinction can be a useful framework. For an even more common and more serious problem arises when history teachers attempt to create 'regular and progressive use' of type B activities for their own sake. This is a misplaced emphasis on the ICT at the expense of the history. In one school, teachers required pupils to use several of the BECTa-style word-processing activities and did so repeatedly on the assumption that pupils would 'get better at them'. What happened was that pupils *did* get better at them: they became highly skilled at low-level word matching, bypassing any attempt at reflection or making meaning. They became faster and faster at jigsawing bits of text together which they thought were 'linked' and plonking them into writing frames afterwards. The pupils were bored – not because the ICT activity was inherently weak but because it had been rendered meaningless by weak professional grasp of its purpose. The pupils were learning nothing about classification, about causation or about explanatory argument. A distorted emphasis on the enabling features of the ICT meant that the ICT had completely replaced the historical thinking that it was designed to release.

Another way of looking at the distinction is to say that when we seek effective use of ICT in historical learning, we can mean two very different things. Sometimes 'effective' means that by Year 9 or by the end of GCSE, or whatever, pupils are more knowledgable and skilful, curious and independent in their historical learning, and that ICT has played very varied but significant roles somewhere along the line in securing that. The ICT has been invaluable, but incidental (type B). Sometimes, however, we mean that by Year 9 or by the end of GCSE pupils are clearly independent, critical and discerning users of ICT in its distinctive role as unique or uniquely presented historical source, historical interpretation or historical method. There was no avoiding the ICT as it was integral to the historical learning objectives (type A).

Professional instinct and subject sensitivity

The distinction between type A and type B is a conceptual distinction, not an absolute or a physical one. Of course, in practice, examples from both types might be used concurrently. Of course, in effect, they might overlap. But even where this happens, the distinction remains helpful in clarifying the object of learning. It is not a question of a rigid distinction, it is a case of teacher instinct as to where to place the learning emphasis so that pupils' time is well used. Such an instinct needs to be informed by deep subject understanding of history's concepts and processes.

One example of this instinct at work can be seen in the sorts of judgements teachers must make when they use the Internet for conventional history source work or work with evidence. While Moore (2000) chooses to illustrate his point from the current, curricular idea of 'interpretations of history', he does not ignore the potential of websites for more conventional evidential work. Websites often *include* many extracts from period-derived sources, whether written sources, newsreel, paintings or whatever. Many websites now offer access to major databases of raw contemporary data (e.g. directories, census material or photograph collections). Websites are repositories of sources and these can be analysed in the traditional history classroom way: weighed for reliability and utility, cross-referenced and used to tackle constructive enquiries. Websites offer a far wider range than can normally be accessed and in interesting collections.

But so far we are in pure 'type B' territory. To have pupils use such sources for classic history learning purposes – i.e. critical evidential thinking – is to render the ICT useful, but incidental. The learning focus itself is not ICT dependent. It might be handy to have the Michelangelo

or the Raphael on screen; it might help the teacher to use time and other resources more efficiently because it can be accessed so easily; but as far as the focus of historical learning for the pupils is concerned, it could just as easily be in the textbook or the museum. The point is that as far as *source evaluation* is concerned, the ICT has not necessarily transformed the type or the level of intellectual demand for the pupil.

Source evaluation is a very different activity from that which Reuben Moore describes in detail, namely the 'website as historical interpretation' work described above. With Moore's activities, the learning focus was on the ICT as a cultural artefact. The teacher would be asking very different sorts of questions, and focus will be heavily on the present day and the world that has created or is transforming the website.

On the other hand, there *is* potential overlap here. As soon as we start to get pupils to look at pre-prepared *collections* of sources, as opposed to individual sources, the learning focus changes. The hidden hand of the website creator will have affected the choice of sources, and therefore the pupil might need to be reflective concerning the sources *as a collection*, in the same way that one would encourage pupils to be thoughtful about the selection of sources they are presented with in a textbook or a museum. There can be bias in the collection. Thus, weighing up the choice of the website creators, we start to overlap with 'interpretations' again – analysing the conscious act of a certain kind of modern interpreter.

The teacher who is clear about the distinction is probably the one who is most likely to move effectively between the two types, distinguishing between them or integrating them, in a way that moves pupils forwards. Conversely, it is likely that a lack of professional clarity about the distinction will be one of the root causes of sloppy, unfocused use of the Internet in history lessons. I have seen plenty of examples of pupils appearing to move backwards in their historical thinking, some more serious than those Harrison describes, where lack of clarity about the relative status of source or website seems to be the root cause. The worst howlers include:

- pupils reaching a judgement about a historical debate on the basis of a collection of sources that were clearly selected in the first place (by the website creators) to push a particular viewpoint within that debate;
- pupils in Year 9 trying to assess the historical value of a painting by the Venetian artist Giovanni Bellini as a source for the growing interest in landscape in the fifteenth century, only to pronounce it 'unreliable' just because it was featured on a modern website; and,

- perhaps most worryingly of all, pupils treating websites themselves as though they were period 'sources' and judging them as unreliable because they were produced so long after the events described – a common enough error in the lower secondary years but odd to see it disappear in Year 7 only to resurface in Year 9 in the context of ICT.

These pupils were confusing authenticity with reliability, and websites with sources. Their teachers were confusing research skills with source evaluation skills. Arguably, one ought to be a subset of the other but this just was not happening because the pupils misunderstood the status or distorted the significance of the ICT medium in the context of their enquiries. In the case of the work on Bellini, the ICT context should have had no significance at that stage in the pupils' thinking; in the case of the pupils working on the pre-selected sources, the ICT context was pivotal.

The first is an example of type B, the second type A. As teachers, we need a subject sensitivity, a professional instinct informed by the discipline, as to when pupils are right to dwell on the ICT itself as a unique cultural artefact, and when it is irrelevant to the historical choices under student scrutiny.

Two qualifications on the type A–type B distinction

As with any model, the distinction needs to be used with caution. I have two brief qualifications to make concerning the distinction developed above.

The first qualification about the type A–type B distinction concerns one of the features I identified earlier as characteristic of type B. I argued that there are many instances where we actually do not want pupils to be distracted by unfocused experimentation with or reflection on the functions of ICT. We need to avoid the dissipation of pupil effort by clearing away clutter:

> Here lies the hidden power of ICT. What its speed allows is precision of teaching focus. I don't want my Year 7s to spend an hour typing in data; I do want them to see the relationship between two ideas. I don't want them to search for yet more information; I do want them to select items, to convert them into causes (or consequences) and to experiment with the language for doing so. I don't want them to fuss over box size on a leaflet design; I do want them to choose or reject alternative field headings in a database. I don't want them to do low-level word matching or phrase-spotting; I do

> want them to be so motivated to read for meaning, that they pause, and think and ponder and reconsider – and ask why. I want to clear away the clutter and to get pupils to focus on the interesting historical puzzle. I want to slow them down.
>
> (Counsell 2000b – editorial)

When pupils are learning, different things become clutter in different places. The characteristics I have attached to type B include the danger that aspects of the ICT itself can become the 'clutter'. Because my chief concern is the vast majority of pupils who do not find academic success easy, the removal of 'clutter' is important. Very able pupils often do not need to be channelled so closely, but if we are genuinely to change the intellectual abilities of the majority and to harness the power of ICT in doing so, we need to help channel the focus of pupils' thinking. But once again there is an exception. The instance I am thinking of manifests itself in some strands of the current fashion for 'thinking skills'. For example, in the development of thinking skills centred on Newcastle University, pupils are encouraged to reflect on an activity after its completion, to engage in 'meta-thinking' or a very direct metacognition in order to consider in what ways and how well they tackled a problem (see e.g. Leat 1998). Some stables of 'thinking skills' or 'teaching thinking' insist that this should be done in a dedicated part of the lesson designated a 'debrief'. For others, the purposes of such a debrief are often fulfilled during the course of a lesson as teachers ask good questions integrated with the activity itself.

If pupils were to reflect on their chosen methods and particular moves in a type B activity, they might want to refer to the functions of ICT. In such a situation it might well be the case, particularly in BECTa-style word-processing activities, that pupils would talk about how they moved text about to classify causes or why they changed the size of a box to accommodate more ideas. This could be part of the meta-thinking that might emerge either in a post-activity debrief or in teacher-prompted discussion during the lesson. To argue that we need to be clear about when best to avoid focusing too much on the procedural aspects of the ICT is not to preclude that discussion if it does form part of pupils' general reflection on thinking and learning processes.

A second qualification to the type A–type B distinction is that these types are not outcomes; they are ways of looking at learning journeys. The paradox of teaching and learning is that we break things down in order to build things up. The Key Elements of the National Curriculum for history reflect that tension – some tending more towards strands of historical learning, some suggesting the full enquiry process. By the time

pupils are tackling AS or A2 (and, ideally, much of GCSE) one might hope that little exercises designated 'interpretations' or specific activities designed to get pupils to rearrange and sort some pre-prepared statements or highly directed searching and sorting activities using a database or spreadsheet will be much less necessary. Pupils should be independent enquirers using a wide range of ICT functions and applications discerningly and sometimes concurrently, frequently moving away from the ICT when they judge it irrelevant, coming back to it where its specific functions enhance an aspect of investigation or communication.

One might hope that pupils engaged on their own independent enquiries would therefore be blending type A and type B activities with ease. For example, an enquiry question for Year 11 coursework on gardens, paintings and architecture of the gentry in a locality might be: 'From where did the Somerset and Wiltshire eighteenth-century gentry get their ideas?' A Year 12 enquiry question on economic and social change in the nineteenth century might be: 'Who gained and who lost from the Liverpool–Manchester railway?' Among many other activities students might be locating relevant sources, choosing sources, evaluating sources, examining modern accounts, selecting material for integration into an argument, shaping and reshaping an argument, asking new questions of data used earlier, weighing the value of one type of source material *vis-à-vis* another and organising their case to present to an audience. ICT might be relevant to many parts of that process and earlier ICT learning might play an indirect part in shaping all kinds of good decisions. For example, a deep understanding of the range of uses to which websites can be put (arising from earlier work on 'interpretations') might cause a student to be cautious and to ask the right questions before assuming that its collection of sources was either comprehensive or balanced. The earlier focused activities have played their part, but the teacher was not under the illusion that these were an end in themselves. Teachers sometimes break things down, so that ultimately their pupils can build them up again.

Teaching is not about replicating the final goal, about leaving pupils to be 'independent' just because being 'independent' is what is required in the end. It is about devising and evaluating multiple ways to ensure that pupils of all types eventually get there. What happens on the journey may little resemble the final outcome. This is why type B activities are likely to remain important. Teachers who know their pupils well are constantly analytic as to why pupils get stuck. Sometimes they need to devise learning activities that remove a blockage, or illuminate an issue or give practice in a thinking routine, even though that activity may little resemble the full independence that is ultimately deployed.

Other categories for thinking about long-term planning

There are other ways of thinking about this. We could start with a different type of classification. Figure 3.6 summarises another classification, one that I have found useful in the context of initial teacher education, particularly where a trainee has not only manifested stubborn weaknesses in ICT practice but, importantly, appears unable to analyse why pupils are not learning. Sometimes a trainee is capable of noticing that pupils seemed unfocused, off-task, reliant on uncritical cut-and-paste or bored, but is apparently unable to say why, other than to make vague appeal to the practical difficulties and logistics of managing an ICT lesson. Where a trainee finds the type A and type B categories too demanding or unhelpful (usually because they are not yet secure in thinking about types of historical learning related to history's underlying concepts), the rather different classification shown in Figure 3.6 can speed up the quality of the trainee's professional learning in the meantime.

The three categories shown in Figure 3.6 form no hierarchy of value. They also cut right across the very different classification discussed above. By 'artificial-pedagogic' I mean those activities where the boundaries of learning have been deliberately limited in some way for the child or teenage learner and where this takes precedence over any attempt to replicate 'real-world' ICT use. Pupils tackle the quiz, engage in the online worksheet, search in a limited way on a CD-Rom specifically designed for school pupils, use the teacher-authored website to structure their research, adapt a writing frame or sort pre-prepared ideas into boxes or categories. Because any such activity has been pre-limited for the purposes of pupil learning, the object of teacher reflection often needs to be: has it been over-limited or is it not limited enough? For example, the options and choices available in a sorting activity might be too closed to engage the learner for long; whereas, in other cases, limitation has been inadequate, the task is too open-ended and the pupil is hunting or manipulating wildly and making little meaning out of the exercise. By classifying such an activity as 'pedagogic-artificial' the trainee teacher acknowledges the activity as deliberately constructed to secure learning and so is inclined to engage with the artificiality and to alter the task or the instructions accordingly.

The other two types I have called 'generic-real' and 'content-real'. The examples in Figure 3.6 make the basis of these categories self-evident. Here the pupil-learner is wrestling with the potentially unlimited. If the trainee teacher can see that the object of pupil study is to *engage with the unlimited* then teaching will focus on that. Ranging across the examples shown, the kinds of teacher interventions one might expect to hear at the starts of lessons or during mid-lesson plenaries might include:

Content-real	**Generic-real**
Examples	**Examples**
Internet/intranet websites	Word-processing
Datafiles/data sets	Databases
CD-Roms for reference	Spreadsheets
	Multi-media authoring packages
	Digital cameras
	Video-editing
	Some mind-mapping or coding software
	Such as that used by qualitative researchers
	Project-management tools (e.g. critical path analysis)

Artificial-pedagogic
Examples
Simulations
Quizzes
CD Roms specially designed for school history activities
Structured word-processing activities involving pre-prepared content chunks and designed for certain styles of manipulation
Datafiles designed for pupils' use
School intranets
On-line worksheets and activities designed for pupils
Some teacher-authored websites
Some mind-mapping software designed for younger or less able pupils
ILS

Figure 3.6 An alternative classification of ICT use for the purposes of evaluating long-term planning: content-real, generic-real and artificial-pedagogic.

- 'When you are looking for your website what characteristics will you be looking for?'
- 'How will you know when . . . ?'
- 'What other correlations might you look for and what kinds of graphs will help you?'
- 'During which parts of the documentary might you choose to use that function?'
- 'When we integrated our new system for analysing the eighteenth-century food riots with Excel, how *exactly* did it help our enquiry?'
- 'How are you trying to influence the viewer by putting this image/this music next to that text/speech?'

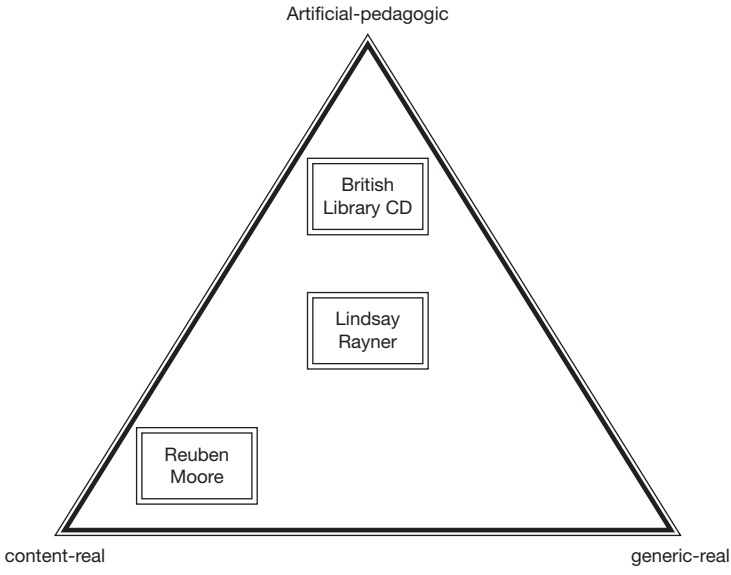
It might seem as though this is a matter for the short-term planning issue of 'teacher interventions', discussed later (see pp. 100–3). However,

without a grasp of the role of such an activity in the context of long-term planning for progression, it is hard to focus such interventions on significant or recurring historical issues and associated learning problems. Interventions remain hit and miss. Professional reflection on long-term planning is critical for teachers' short-term effectiveness in classroom performance.

Of course, as ever, such distinctions are not absolute. Some 'pedagogic-artificial' applications and programmes are designed to *almost* replicate the real world. So, for example, a kit of clips, images, sound and text, together with multimedia authoring software designed to support pupils in constructing their own documentaries or mini-films with a particular bias might be placed in the middle of the triangle in Figure 3.7. But the categories remain helpful. By placing it in the middle the trainee teacher has theorised about the role of the activity in pupils' learning. The 'artificial' elements (e.g. the prepared elements that can be reconfigured) are a form of scaffold designed to keep the pupils' thinking within certain defined choices, rather than distracting him with completely limitless possibilities which might cause some (especially low-attaining) pupils to veer off into gathering material indiscriminately.

By contrast, the British Library's CD-Rom, *The Making of the UK* (Walsh and Brookfield 1998) belongs squarely in the artificial-pedagogic corner and is no less valuable for it. Here, working among a rich array of visual and text-based sources, together with much mediating material such as narrative and questions, pupils can pursue little investigations, simply answer questions or organise reflective response into pre-prepared tables. It is an astonishly good resource, and little has surpassed it. I argued in 1998 that its strength was the fact that the material had been intelligently 'limited' in the fullest sense described above:

> Many CD-ROMs have not quite made the grade. They are lovely. They are beautiful in their array of visual and audio goodies. They give access to a wide range of sources and commentary. . . . They have jolly and stimulating little activities. The departmental dosh stays in the pocket, however, because of anxiety about 'access' (most of the sources are unreadable by 80% of the ability range). . . . More importantly, however, there is a deeper concern that the volume of 'stuff' is not really the point. Sammy and Sanjit are not stuck because they lack 'stuff'. They are stuck because there is *too much* of it. They lack contextual knowledge with which to interpret. They lack the discipline and the sophisticated evidence-handling skills to own the structure of a search or an investigation. Their grasp of



Lindsay Rayner integrates all three types. Her work (1999) is an example of a learning package where one kind of ICT is used in order to modify the learning demands of another. She designed a website to support pupils' investigation into an in-depth theme. Her website creates a context for pupils' work on other websites such as that of British Nuclear Fuels. Pupils use word-processing to shape their final answers. Moore (2000), however, in his work for Year 9 on Michael Collins, provided other kinds of non-ICT scaffolding to help his pupils analyse a series of websites.

Figure 3.7 Positioning different ICT-history activities using the classification of Figure 3.6.

> 'interpretation' is, as yet, too mechanistic, too ill-formed. For 80% of the ability range in Year 8, the very last thing you want is 'more stuff'. . . .
>
> [The British Library CD ROM] is . . . based on a discernible, theoretical rationale about what goes wrong for pupils when the 'stuff' is impenetrable.
>
> (Counsell 1998: 48)

This 'limiting' creates a paradox. By definition, ICT is about the unlimited. Sometimes it seems counter-intuitive to place limits on a resource that many celebrate for its breaking down of knowledge boundaries. But

this is not so contradictory. Sometimes we need to supply structure in order to help pupils to make the most of independence.

It is in this context that the influential work of Lindsay Rayner should be appraised (Rayner 1999). One way of looking at Rayner's work is to explore the way in which she integrates examples of the artificial-pedagogic, the content-real and the generic-real – not categories that Rayner uses herself – in one learning sequence. But she uses one of these to unleash the learning potential of the others – which is the same as saying that she uses one to 'limit' the others. In her article 'Weighing a century with a website: teaching Year 9 to be critical' she showed how she got her Year 9 pupils to use different websites on nuclear energy. One of these, produced by British Nuclear Fuels, had a substantial historical dimension. It was an ideal site for the work on 'interpretations of history' that would later be advocated by Moore. This was the 'content-real' dimension. Her goal was the construction of an extended analytical-critical essay, through which critical thinking and contextual knowledge would be developed and demonstrated. She exploited the full potential of the department's earlier work on essay writing (big points and little points, sorting and classifying and so on) by requiring pupils to play with the arrangement and wording of their essays on a word-processor (the 'generic-real' dimension). But the journey into this within her medium-term plan was utterly dependent on a third dimension – the 'artificial-pedagogic'. This was a teacher-authored website through which pupils were taken on a structured research journey by making choices in the research process (stage 1: brainstorm; stage 2: spot patterns in your brainstorm; stage 3: find a conceptual focus in your reading; stage 4: find information from a range of sources . . .). At each stage pupils could click on a range of options for further support and ideas, enabling them to gather as much or as little structure as they needed to pursue an independent enquiry.

The acclaim that Rayner has received for this work is justified, but the strengths of her work have not been fully analysed and explained. Rayner's piece appeared in an edition of *Teaching History* not devoted to ICT at all and over a year before the second – dedicated ICT – edition emerged. Perhaps for that reason her practice was not scrutinised by commentators or discussed in teacher circles as fully as is starting to happen now. Rayner theorised using the concept of overview and depth in long-term history planning. She described how she built upon Riley's concept of overview and depth or big questions and little questions in a sequence of learning aimed at developing Year 9's research skills and critical thinking (Riley 1997; Banham 1998). What is striking in the journey she creates for her pupils is her wish to make the idea of

overview and depth explicit to the pupils. To do this, she invents a mad professor who has to fit the in-depth themes (jigsaw pieces) together to see the big picture:

> Sometimes the crazy professor concentrates so much on one small piece that they cannot see the whole picture. So they grab the telescope to allow them to see the big questions from a distance and like a 3D picture the smaller themes also come into focus. . . . Good historians swap from the telescope to the microscope enabling them to see the connections between the big picture and the small picture.
> (Rayner 1999: 14)

During the research the pupils were constantly made aware that they were trying to make big broad judgements about a whole century and that to do this they would have to pause and dig deeply into a number of in-depth themes, only to climb out of them again. Thus, the overview–depth tension moved out of teacher theorising and into pupil theorising. A superficial view of her teacher-authored website might praise it for being attractive, easy to follow, full of choices for the pupil and designed to foster independent research. We need a more developed professional analysis of it than that – one that relates it to long- and medium-term planning for historical learning. Its strength lies in the skill with which it builds on Years 7 and 8 work in historical writing and research.

Because of this earlier work, Rayner was able to open up the use of some 'content-real' ICT resources – a range of challenging websites, each manipulative of its users in different ways – and to encourage pupils to use the power of word-processing to the full in their critical essays. This is why I place Rayner's work in the middle of the triangle in Figure 3.7 – it is the integration of the content-real, the generic-real and the artificial-pedagogic. The third serves the first two.

Long-term history planning and departmental discussion

Why is it so important that we sort out and articulate our professional thinking about the positioning of ICT within long-term planning for progression? It is important because without uncovering such assumptions we cannot communicate with each other as professionals. The alternative is a Tower of Babel. Picture an unfocused departmental discussion. In one history teacher's mind, regular and progressive use of ICT means giving pupils more independence in their enquiries (whatever that means). In another's, it means temporarily removing some of that freedom in order to develop a particular historical skill. In another

teacher's mind, it involves pupils locating information for themselves. In yet another's, it involves designing more quizzes or interactive self-monitoring activities; no awareness of the distinction between this and, say, using a datafile, has even been cultivated. This is a hopeless muddle. Even where values or views about *outcomes* are shared, the means and ends can be confused. Two judgements about the precise learning point of an activity can differ so much as to be fundamentally opposed.

This is not to say that the above two classifications (types A and B and the threefold classification that followed) are necessarily the 'right' ones. It is rather the process of classifying that is professionally helpful. Working out where planned progression is necessary, and where it is not, and then working out whether that progression will be secured through incremental difficulty or simply through repetition is the heart of professional engagement with pupils' learning in a subject. To borrow another's classifications is stimulating and helpful, but only as a starting point for critical engagement or uncovering one's own assumptions.

For example, straying into geography for a moment, I find Taylor's classifications are illuminating as a starting point. She writes of 'finding geography', 'communicating geography' and 'exploring geography'. Just as with the classifications above, Taylor is careful to emphasise that these are conceptual distinctions only and that in many good geographical enquiries two or even all three of these types will be present concurrently and will often (as in the Rayner history example) be mutually dependent.

For example, by undertaking an e-mail link with a school in Japan, a class may be finding geography by receiving information, exploring it by questioning their e-mail partner and re-examining their own preconceptions, and communicating, both to their partner and to their friends, about what they have learned (Taylor 2001: 2).

In terms of planning for progression, a geography department might be helped by such a received classification as it acts as an audit tool and a way of considering whether each of these strands needs equal or progressive attention. Alternatively, the department might decide that this classification is useful for some purposes but not for a consideration of long-term progression. I found it interesting to try to transplant it into history but not ultimately helpful in trying to distinguish between those areas of historical learning that needed regular or progressive attention. It is the process of framing the classification itself that is helpful.

What bears this out is that fresh classifications often evolve from a training or professional development problem. The regular training feature 'Move me on' featured in *Teaching History*, in which history mentors attempt to solve each other's problems in moving a beginner

teacher forward, is an interesting testament to the value of fresh classification in teacher learning. As the trainee teacher flounders around, discouraged by this, failing in that, the problem-solving mentor coming to the rescue will often suggest a 'sorting-out' exercise. 'In which ICT activities did you notice . . . ? In which did you fail to see . . . ?'; 'Look at our workschemes: which enquiries are designed to . . . ? and which are designed to . . . ?' Such professional exercises always transcend the obvious or surface classifications and force the beginning teacher to reflect on new reaches of pupil thinking. Everything is always amenable to yet more classification; sometimes, we just need to find our own. How else are we to make our own meaning out of what is otherwise a very loosely grouped collection of activities that have absolutely nothing in common with each other, except for the pretty superficial characteristic that they happen to be performed on a computer?

Long-term history planning and whole-staff understanding

If such improvement of shared discourse and greater depth of professional analysis are necessary within a department, how much more necessary they are across subject areas and particularly between the subject professional and the ICT specialist or ICT coordinator. One of the striking characteristics of the professional debates and relationships at Hampstead High (Counsell 1999) was the way in which the ICT coordinator was a curricular thinker who saw it as his job to work out how other subjects worked:

> At one stage I was always trying to get the history teachers to incorporate graphics into the outcomes students were to produce. The history teachers said that this was not necessary and was even sometimes a big distraction. They have a particular thing that they are trying to get over, a particular historical skill in each lesson, and it is important not to water this down.
>
> (Phil Taylor, IT coordinator at Hampstead High School, speaking in interview in 1997 and quoted in Counsell 1999: 18)

An ICT coordinator is unlikely to be helped in this task if the history department lacks theoretical or conceptual clarity about its own long-term goals or its perceptions of means towards those goals. This ICT coordinator (Phil Taylor) clearly saw it as his role to work out where ICT helped and hindered history. But the history department helped him in fulfilling that role as a curricular thinker. This was the coming together of two ideal circumstances: an ICT coordinator who was

prepared to address the demands of subject learning, and a history department who knew that they had to share their conceptions of subject learning with him: 'If we invite him to a history department meeting, he will come' (Andrea Smith, Head of History at Hampstead School, speaking in interview in 1997 and quoted in Counsell 1999: 18).

To put the demands of subject learning first can create a cross-curricular tension. If there is a pressure to develop higher-order ICT skills for the sake of progression in ICT, and if subject departments are pressured to take this on, their own subject progression – where convergence with the ICT is low – can get distorted. The ICT coordinator at Hampstead High did not allow this to happen. He had a very clear understanding of the distinction between low-convergence and high-convergence activities and he never appeared to derogate the former. His role was to make ICT a learning tool, to use it to improve learning across the curriculum. It was therefore absurd to force the history department to use some whizzy graphics, to fuss about fonts or to integrate applications if this had nothing to do with the thinking that the ICT use was designed to procure. He saw the point of using some precisely targeted low-level ICT just to support some focused aspect of historical learning, even if the ICT pay-off was not significant in terms of degree of 'ICT difficulty'. Equally, his growing knowledge and understanding of history's concepts and processes meant that he was ready to help spot where there was strong convergence between direct reflection on sophisticated ICT use and sophisticated history.

The Hampstead experience suggests that a serious attempt at conceptual and theoretical clarity is important if we are to persist in the quest for better quality of cross-curricular discussion and wider professional debate about learning. And the quest for the latter is no luxury. Long-term planning for progression within in a subject area cannot happen in splendid isolation. Subject professionals' discourse needs to be uncovered if resource managers are to take subjects seriously.

Medium-term planning

The idea of an 'enquiry'

The history education community is increasingly defining 'medium-term planning' as a sequence of lessons structured around a specific historical problem, a 'big question' or an 'enquiry'. The challenge of ensuring that an enquiry has real subject validity as well as potential for pupil fascination has recently engaged teachers afresh (e.g. Byrom 1999; Riley 2000; Hier 2001). History teachers have commented variously that

the enquiry question must have historical rigour as well as pith and punch, that it must drive the lesson sequence explicitly (Riley 2000), and that the various activities of the sequence should culminate in one substantial, significant activity that allows pupils to attempt some genuine, if tentative, resolution of the 'big question':

> When planning a sequence of lessons, it is important to make sure that the learning journey 'goes somewhere'. Each enquiry . . . concludes with an activity which has a significant and worthwhile outcome. Pupils need the satisfaction of knowing that they have completed a substantial meaningful activity.
>
> (Byrom 1999:1–2)

Such criteria have helped history teachers to distinguish between questions that are impoverished either motivationally or historically (such as 'What was middle-class life like?' 'What was medieval town life like?' 'What did the peasants feel at different stages in the Peasants' Revolt?') and questions that define the conceptual learning focus more sharply, that invite genuine response and that are likely to intrigue and motivate (such as 'Was there a 'middle class' in the first half of the nineteenth century?' 'Did the towns make people free?' 'Why are the peasants' motives difficult to establish?'). Clarity about the basis for historical rigour and about potential for genuine pupil engagement is a prerequisite for choice or deployment of resources and activities.

All this might suggest that as far as ICT is concerned, medium-term planning is significant but not distinctively so. However, while this ought *ultimately* to be the case, until ICT can be drawn upon as freely and readily as the television, pen, book or teacher voice, special circumstances do pertain. I say 'ultimately' for it is conceivable that in the future we will see ICT access being permanently available, with pupils having instant access to mini-powerbooks or their future equivalents, online access being unproblematical and keyboard skills as common as wielding a pen. If this happens sooner rather than later, then this section on medium-term planning will be the one that is rendered obsolete first, whereas the distinctive principles surrounding long-term and short-term planning for 'ICT in history' are probably the more enduring. For the moment, however, the problem of access to ICT creates peculiar problems requiring peculiar medium-term solutions if pupils' historical thinking is to be prioritised.

For although ICT can be pulled in at almost any stage of an enquiry in order to serve the learning journey, the chosen stage matters. Having set up the enquiry in lessons 1 or 2 of an eight-lesson sequence, the

teacher might decide to let some or all pupils begin some exploratory hypothesis framing and testing using a database. It might be essential that this happens in lesson 3 of the sequence. The remainder of the lessons might then refer back to this but the rest of the work can be done away from the computer. In another enquiry, say, on the role or impact of Soviet propaganda, the teacher might want pupils to have access to computers in the penultimate lesson of a six-lesson enquiry in order to experiment with creating, adapting or annotating some visually based Soviet propaganda.

The final lesson might then be devoted to reflection and analysis as pupils attempt to answer an enquiry such as 'Why was Soviet propaganda effective?' or 'Was Soviet propaganda effective?' or 'Whom did Soviet propaganda affect the most?'

In the first example, ICT is used for analytic purposes and involves data-handling. In the second example, ICT is used for a different sort of exploratory purpose requiring a more wide-ranging reflection afterwards. In both cases, what happens before and after the ICT is pivotal in securing its effectiveness.

This leads to a delicate balancing act for teachers – the medium-term plan needs to built carefully around the ICT opportunity and availability, yet it must not be governed by it; the rigour and flow of the historical learning must come first. On some future day when ICT can be pulled in more naturally, and easily, perhaps even on the basis of pupil choice, it will be possible to integrate it more effectively without the distortions in planning that are sometimes currently necessary.

Figures 3.8 and 3.9 offer further examples of ICT being carefully deployed to serve historical learning. In Figure 3.8 ICT is used to support the learning needs of some pupils only. This is one way of making a virtue of limited access to hardware.

Conceptualising the place of ICT resources and activities in the context of medium-term planning is analytically helpful because it is at this level that gratuitous use of ICT is most exposed. The bolted-on ICT activity that has no role in the enquiry, the activity that is not followed up, the activity that pupils are simply not ready for because they lack contextual knowledge or fail to see its point in a historical investigation are all culprits of the kind of poor use that Scott Harrison identifies. It is interesting that the Teacher Training Agency's guidance for history teachers emphasised the importance of training the teacher when not to use ICT and on more than one occasion cited this informed rejection of ICT as a positive professional attribute (TTA 1999).

Enquiry question: How significant was the Great Fire of London?	
Lesson 1	*All pupils* Introduce Great Fire. Use modern textbooks and extracts in tabloids in 1994 criticising the National Curriculum for supposedly not requiring it to be taught. Pupils speculate as to the Great Fire's significance. Then cultivate fascination with the Fire and sense of period using contemporary prints of London, other visual material and extracts from Samuel Pepys diary. Conclude lesson with clip of modern documentary on Great Fire. All pupils frame their own hypothesis as to its significance
Lesson 2	*All pupils* Recap and discuss pupils' earlier enquiries (Years 7 and 8) that related to 'historical significance' (Key Element 2e of the National Curriculum). Discuss possible criteria for significance. Relate to Great Fire through activities that gradually introduce consequences: e.g. images of Wren's London and of influences on Wren from abroad, contemporary accounts of law and order or social problems at the time of the Fire, laws about building and so on.
Lesson 3	*All pupils* In pairs, pupils construct their own classification of consequences by making and arranging cards into their own consequence diagrams. *Four pupils with literacy and concentration difficulties* These pupils arrange pre-prepared list of consequences of Great Fire on computers. Consequences are arranged on and around a large image of Visscher's panoramic view of London. All pupils present their classifications to the whole class, including *the four pupils* who use their computer-generated display to support a Power Point presentation using data projector. *Whole class* discussion of the classifications
Lesson 4	*All pupils* *Whole class* brainstorms, discusses and then uses possible *criteria for significance* in order to defend or challenge the place of the Great Fire of London in the National Curriculum or in a modern textbook. Teacher modelling of writing conventions and/or some preliminary, whole-class 'shared writing', using single computer and data projector
Lessons 5 and 6	*All pupils* Pupils construct letter to the press and/or letter to a publisher arguing or challenging the case for the inclusion of the historical significance of the Great Fire in the National Curriculum or a school textbook. Pupils draw upon their card arrangements or presentations in Lesson 3 for writing structure, and upon modelling of stylistic conventions in Lesson 4. *Very able and talented pupils* work on computers selecting from additional, very demanding sources and interpretations, including scholarly and journalistic commentaries placed on departmental section of school intranet for this purpose

Figure 3.8 An example of medium-term planning from a history department (developed and first used in 2001) in which ICT is used by some pupils only.[a]

Note:

[a]In this example, mixed ability Year 8 pupils are tackling the difficult concept of significance (Hunt 2000; Phillips 2002), linking it to earlier thinking in Year 7 about the difference between short- and long-term consequences. Three computers in the classroom are used early on in the enquiry. They are used to extend two very able and talented pupils and to support some pupils with learning difficulties.

Enquiry question: How much can Hogarth tell us?	
Lesson 1	Activities to help pupils recap on • political and social change 1750 – 1900, positioning Hogarth chronologically and culturally • earlier enquiries where pupils developed evidential understanding through critical use of sources
Lesson 2	Using four Hogarth examples, pupils make 'layers of inference diagrams' (Riley 1999) to raise problems and opportunities in using Hogarth. Teacher then focuses on enquiry question – speculation as to possible outcomes. Homework: pupils prepare 'research plan' ready for Lesson 3 on computers
Lesson 3	Teacher leads discussion on pupils' research plans, refining and adapting these so that pupils use time effectively. Pupils move to networked suite of 16 computers where they can work in pairs to research further examples of Hogarth's work, commentaries on Hogarth and similar contemporary work, and further contextual, period knowledge, relevant to their research plan
Lesson 4	Pupils share and compare their research
Lessons 5 and 6	Pupils in role as research assistants for an imaginary historian. Half the class make 'Little Books', and the other half prepare an oral presentation. Complete for homework. Pupils must focus on scope and limitations of Hogarth's work for different types of historical enquiry. Teacher later assesses work against departmental criteria for progress in i) specificity, relevance, accuracy and deployment of factual detail ii) evidential understanding with a particular emphasis upon utility, reliability and typicality iii) independent and speculative thinking, especially concerning messages conveyed by Hogarth

Figure 3.9 An example of medium-term planning from a history department, where all pupils move to a networked suite of computers in just one lesson[a]

Note:
[a]The lesson is carefully positioned in the enquiry on the journey towards the resolution of the 'big question'. This enquiry was designed for a large top set of 32 Year 9 pupils of above average ability and would be positioned at the end of their work on the unit: Britain 1750–1900. In contrast to Figure 3.8, the historical learning focus is evidential understanding (National Curriculum Key Element 4).

In this extract from that document, note the tacit assumption of a lesson sequence pursuing an enquiry ('ready for next lesson') and the strong emphasis on the trainee's ability to *reject* the gratuitous use of ICT.

> [T]rainees need to be able to explain why they have used ICT. Trainees should avoid using ICT for . . . routine tasks. . . . For example, a trainee might decide to use word processing software to

> create a table which pupils can then use to analyse e.g. the consequences of the Great Fire of London, having rejected the option of asking pupils to design and create a table for themselves on the grounds that the teaching objective was for pupils to analyse the types of consequences ready for the next lesson, and not to spend time making columns, rows and headers from scratch.
>
> (TTA 1999: 11)

So many history teachers have now described and analysed their ICT practice in some detail (e.g. Martin 1998; Rayner 1999; Atkin 2000; Laffin 2000a and 2000b; Mountford 2001) that it is possible to see more deeply into the interplay of aspects of learning that make ICT deployment effective. Mountford, in a long article outlining her approach to teaching the Holocaust, especially to 'low-ability' pupils and reluctant readers, brings in ICT almost incidentally. It would be impossible to appraise Mountford's use of ICT without considering such issues as the rigour of the enquiry question, the flow of the lessons and the attention to particular learning needs of groups of pupils as they work through them:

> Much has rightly been written about the dangers of ineffective ICT in history but the trick for success is the quality of the planning, the lead-up, the context for the ICT use. We bring ICT into our final two lessons (of the enquiry) where prior knowledge of the Holocaust helps pupils to use our chosen ICT resources more judiciously, more critically than they otherwise would.
>
> (Mountford 2001: 33)

Any attempt to evaluate the usefulness of those ICT resources would be rather meaningless without seeing them in the context of Mountford's history department's conceptions of medium-term planning. Likewise, to return to Alfano (2000), for example, his commentary on the use of databases and spreadsheets is particularly instructive in its constant reference to the role of other non-ICT-based source material and also to pupils gradually developing substantive knowledge across the lesson sequence. Alfano combines many types of data in his work with his students, sometimes going beyond the database and requiring students to use documentary sources in order to raise new questions about the datafiles they are using. Pupils need to draw on much contextual knowledge in order to make informed judgements about what kinds of data might reveal information on, for example, the significance of patterns of disease and death or the extent of change over time in disease

and death. In turn, their detailed work with the data is used to lead pupils to think directly about the big concepts that typically shape history's questions:

- Could these data tell us about *change* over a 100-year period?
- Or are they more likely to tell us about *social diversity*?
- Why?

(See Gatley and Ell (2001) for an interesting resource with which to explore such questions.)

The limitations of software evaluation unrelated to planning

It would be rather meaningless to pluck out either Alfano's or Mountford's activities, or their resources, and pronounce them 'good' or 'bad' in isolation. This exposes a key flaw in a stubbornly persistent priority of the DfES and its predecessors: the quest for the Holy Grail of the best software for subject-specific use. What is the point of pouring money into evaluating subject software when this is patently not the critical factor in securing effectiveness? The development of criteria for types and scales of planning, the encouraging of focused teacher reflection on pupils' learning and shared practice, considerations of historical rigour and validity, and, as the next section will illustrate, the role of teacher interventions and the understandings that underpin them, are key. How else can we explain such widely differing outcomes of effectiveness with identical software or resources?

Prior and John (2000), for example, report extremely unsatisfactory outcomes from use of some of the early BECTa word-processing materials, the very same materials that were used so effectively at Hampstead High and that others (e.g. Walsh 1998) have used to tackle stubborn problems of weak literacy or low motivation. Each story is entirely credible. Each story is extremely useful for the construction of wider professional knowledge – not because one is right and one is wrong but because each articulates transferable principles for planning that can help others to reflect on rationales for their practice.

The medium-term plan – its historical rigour, its pedagogic explicitness, its relationship with each stage of learning activity across a lesson sequence – is bound to be a key factor in realising the potential of long-term planning for progression in particular learning areas. Medium-term planning is, in turn, dependent for its effective realisation on short-term planning, including in-lesson decision-making, to which we must now turn.

Short-term planning

Precision or flexibility?

A return to the motif of Reuben Moore's practice takes us into short-term planning as surely as it does medium and long. Even in Moore's short article, it becomes obvious that creative, purposeful, whole-class teacher interventions are critical in making learning happen and that he plans for, or at least imagines, these in advance. For example, Moore discusses how he reads some of the text of the Warner Brothers' website aloud in a phoney American accent in order to help pupils to contextualise the form and purpose of the website.

Short-term planning is the hardest area for professionals to analyse and, in the context of ICT, the most paradoxical.

It is the hardest because it is where individual and personal qualities are most manifest. Stretching types of planning across a continuum of professional activity from collaborative to individual, it is more likely that long- and medium-term planning will sit at the collaborative end and that the short-term planning will be the area where most individual teacher judgement is allowed or encouraged. Only the individual teacher really knows the particular pupils in the class. Reacting to the quality of pupil response in one lesson, a teacher might make quite drastic changes to the plan for the next lesson, at very short notice, in order to motivate or enable a group of struggling pupils. The teacher also responds intuitively to his or her own shifting fascinations, enthusiasms and points of intellectual curiosity. Without this massive personal investment, it is hard to teach with the necessary passion or to make one's own curiosity and delight infectious.

It is the most paradoxical area because a tightly detailed attention to the sequence of learning in a lesson *could* be judged as antithetical to what ICT is all about. If ICT, ultimately, should enable independent learning and foster intrinsic motivation, how can the teacher's precise moves be so critical? Might it not be dangerous for the pupils to be so dependent upon teacher intervention and detailed advance planning? But this is to confuse means and ends**.** In order to secure independence, pupils need experience of structures and support in structuring.

Good lesson planning in history is not about being minutely scripted and rigidly fixed. It is about wrestling with conceptual precision, with interplay of knowledge and skill, and it involves anticipation of pupils' response. No wonder it takes a long time. No wonder we cannot just borrow other people's lesson plans! It needs to be intellectually owned. It is well-known that trainee teachers take for ever to plan a lesson. Indeed even experienced teachers sometimes wrestle at length

with conceptualising the learning journey and picturing or imagining what pupils need to do to make it happen. It is hard to capture lesson planning in technical terms (unless you mean completely technical, basic and procedural things like: 'make sure there is a plenary', 'allocate enough time for instructions', etc.). It is an intellectual activity and a creative activity.

This final section will focus on two features of short-term planning that illustrate principles for integrating ICT into history teaching: the framing of lesson objectives and the use of teacher interventions.

The importance of lesson objectives

An examination of learning objectives or lesson objectives that teachers or trainee teachers specify on their plans can take us into the heart of some of the problems that Scott Harrison identifies. I define 'objectives' here as descriptions of the types of historical learning that are likely to result from the planned lesson activities.

A common confusion for trainees when they begin using objectives is simply to restate the activity in the lesson, rather than to tackle the much more demanding task of specifying the learning they hope will result and which can be monitored by looking at what pupils say, write or do. Thus, if a trainee wrote:

> By the end of the lesson pupils will have
>
> - completed the ICT activity
> - carried out source exercise 6
> - written an essay

he or she will not have stated learning objectives at all, merely listed learning activities.

Good 'command' words help with objectives, such as those listed in Figure 3.10. Professional discussion within and across subjects might usefully focus on the incidence and value of these words in defining different types of learning. If, however, senior managers confuse lesson objectives with statements about 'getting things done' and encourage teachers to list mere activities such as those above, then such professional thinking is unlikely to happen. In history, lesson objectives are necessarily complicated as the teacher needs to think carefully about how both knowledge and skill will develop.

Framing lesson objectives

- Does it define a learning outcome?
- Will it help you to decide withere the pupils have learned anything at the end of the lesson?
- Is it something you will be able to hear, see or read? (i.e. you must have a way of checking you have MET your objectives).

Some useful words and phrases that will give you the precision you need in a learning objective:

By the end of the lesson pupils will be able to:
select …
extract …
give examples of …
relate …
choose …
connect …
link …
explain …
illustrate …
show the relationship between …
explain the relationship between …
comment upon …
remember …
recall …
ask questions about …
choose questions that …
prioritise …
create headings …
refine headings …
justify …
justify their thinking concerning …
explain their thinking concerning …
compare …
contrast …
define …
analyse …
join up …
shape …
organise …
reconsider …
reflect …
support …
support a view that …
evaluate …
weigh up …
create …
construct …

Figure 3.10 Extract from guidance on lesson objectives given to trainees and mentors in the Faculty of Education PGCE at Cambridge (last updated 2001)

Here is an impressive and useful set of objectives from a good history trainee teaching an hour's lesson to a middle-ability Year 8 set towards the end of a PGCE course.

> By the end of the lesson pupils will be able to:
>
> - identify possible short-term causes from within the narrative of 1787–9 in France;
> - suggest groupings for these causes and experiment with wording;
> - make one link and one contrast with the 1640s in England.

These are not necessarily intended to correspond with activities. Each is the net result of two or three activities – some activities yielding more than one objective – and acts as a professional device to help the teacher discern whether learning has taken place and so to evaluate the lesson.

A framework or set of principles concerning objectives, such as those outlined above, is necessary if we are to determine what sometimes goes wrong with ICT. Consider what might be wrong with the following objectives, the first from a trainee teacher in his second term on a PGCE in 2001–2 at Cambridge University Faculty of Education and the second in published guidance from BECTa to history teachers:

> By the end of the lessons pupils will have:
>
> 1 made a diagram of the causes of the survival of Weimar 1919–24
> 2 recalled key facts concerning the Weimar Republic
> 3 practised their ICT skills.
>
> (PGCE trainee 2001–2)

> The learning objectives were to enable the pupils to produce a presentation assessing and evaluating the significance of their individual using a simple multimedia package.
>
> (BECTa 2002)

In the first example, the trainee betrays a tendency to 'bolt-on' the ICT. He has not thought through the precise function of the ICT in securing knowledge of Weimar and the historical thinking about causation. In fact, he was using mind-mapping software, entirely appropriate for this purpose. He had based his ideas on the useful BECTa publication (2002) on using multimedia and the Internet in history. But he had not thought about the direct value of the ICT in supporting objectives 1 and 2. As a result, objective 3 is unassessable. We are left with the assumption that it is simply 'a good thing' to be doing some ICT – a very

dangerous assumption. There is no stated intention to get the pupils to use ICT to further their causal thinking or knowledge construction, let alone to get them to reflect on the value of ICT for this purpose.

The second example I have taken from the same publication that the trainee used. It illustrates how easy it is – even for very useful publications – to slip into sloppy wording about objectives. To begin with, the production of a presentation is not a learning objective: it is an activity. There are possible objectives lurking within the reference to assessing and evaluating the role of an individual but much clarification is needed if we are to know with what specificity and in relation to what knowledge. Most seriously of all, however, what is the function of the multimedia package in securing all this? What are we looking for in the pupils' use of it? What distinctive added value to pupils' historical learning is secured by it? A teacher would need to think much harder about the role of the multimedia package in helping pupils to assess and evaluate significance and to anticipate how the use of the package might genuinely enhance some aspect of historical learning.

Contrast these with the learning objectives shown in Figure 3.11. Notice how this young teacher (in her second year of teaching in a Bristol comprehensive school) is concerned not only to identify the distinctive learning that ICT enables, but also to get the pupil to reflect on the value of the ICT in achieving aspects of the enquiry. The enquiry was a fascinating one, focusing upon immigration and the resulting social, cultural and religious practices. By the end of the enquiry pupils were ready to produce a radio documentary, interviewing imaginary historians arguing about the nature and extent of local changes. This was the concluding activity of the enquiry (for which a few pupils made further use of ICT, according to availability). Lesson 3, however, was crucial in the journey towards that end. In the final activity pupils were able to demonstrate that it is difficult to generalise about the changes that resulted because in fact there were complex blends of sudden change and enduring continuity.

Objectives such as those in Figure 3.11 indicate particularly well the tensions between structure and flexibility in one lesson. Here was an activity in which pupils needed quite a bit of freedom to try out lines of enquiry, to experiment, to fail and to try again. Not all of this could be tightly teacher directed, and to do so would remove the point of the speedy and productive experimentation and problem solving that ICT will allow. On the other hand, without tight parameters and clear conceptualisation by the teacher ('tight' planning of a different sort) such experimentation could swiftly become unfocused and unsatisfying. Pupils could slither into off-task or disruptive activity.

Enquiry question (governing the six lessons):
How quickly did our part of Bristol change?

Lesson 3: learning objectives

By the end of the lesson pupils will have:

1 *Explored the kinds of historical questions that the speed and functions of a database will allow*
2 *Discerned patterns in size of family and household make-up*
3 *Selected, compared and adapted graphing options for showing variation in household structure across a district*
4 *Hypothesised concerning the historical significance of variation in household structure.*

Objective 1 sounds ambitious for one lesson but it amounted to revision of Year 8 history work and recall of recent work in geography. The teacher assessed learning in this area from an initial oral discussion and also from pupils' handling of the activities throughout the lesson.

Figure 3.11 A set of objectives for an hour's Year 9 mixed-ability lesson using census data for a locality (the lesson is the third in a sequence of six and the only one in the sequence using ICT)

The importance of teacher interventions

Careful observation of successful history teachers using ICT suggests that there are principles to draw out concerning the kinds of interventions that keep pupils focused, enthused and reflecting upon relevant historical considerations (Counsell 1999).

The idea that a teacher might need to intervene, regularly and emphatically, in an ICT-based lesson, and that many of these interventions might need to be whole-class interventions, seems to come as a big surprise to trainee teachers – and sometimes to experienced teachers. It is as though there is an assumption that technology is about getting machines to do things for you, and that you can slope off into the background and then just wait and see if 'it works'. Yet it is rather obvious that interventions *should* be necessary – in fact even more obvious than with other forms of teaching. We forget the human dimension of teaching that is always there – the pupils who need to be re-motivated or re-focused in a variety of ways, the role of relationship building and the modelling of human curiosity and drive that makes the teacher so important. It seems rather odd to screen out that vital dimension just because a computer is being used.

In the very different settings of Calder High and Hampstead High schools I identified six broad ways in which teacher interventions helped to make historical learning effective:

1 Teachers 'warmed up' students' prior knowledge.
2 Teachers challenged students to think historically.
3 Teachers ensured that the IT helped rather than hindered (i.e. hindered by allowing mere procedural issues and technical matters to get in the way of learning).
4 Teachers took action to avoid short cuts to answers.
5 Teachers encouraged reflection on the function and value of IT.
6 Teachers intervened constantly to praise and motivate.

(Counsell 1999)

Detailed illustrations and explanation of these are published elsewhere. I want, here, to give an example from only the fourth of these – *4 Teachers took action to avoid short cuts to answers*. It happens to exemplify the other five points at the same time.

One of the challenges for a history teacher using ICT is that a superficial judgement that a pupil is on-task is not enough to establish that learning is taking place. Problems with the pupil's ICT capability are relatively easy to detect. Pupils will pester every available adult for help and make a nuisance of themselves until they get it. More commonly, however, the very competence and facility with ICT masks the pupils' underachievement in history. Teacher awareness of this danger can make an important difference. At Hampstead High, for example, the history teachers knew that pupils were capable of doing complicated things with the movement of items of information about the Civil War, and as a result were in danger of making this their goal. Pupils' skill in ICT can disguise weak or undeveloped historical thinking. It can feed their desire for the wrong sort of short cut. To offset this, the history teachers at Hampstead actively sought and detected those pupils who seemed distracted by the manipulative power of ICT. This did not in any way make the pupils over-dependent on teacher intervention. Rather, it seemed likely to encourage good habits. It was designed, deliberately, to slow their work down so that their *thinking* would develop.

In the following example, the teacher spots that low-level word matching is taking the place of thinking:

Teacher: Hold on a minute. Why have you only put two boxes in there?
Student A: Because we've got to put all the things to do with religion in the religion box.

Teacher: How did you know it was to do with religion?
Student A: Because it says . . . Look . . .
Teacher: Might some of these other things be connected with religion? Think about it? What about that one?
Student B: But it's to do with money. Look . . .
Teacher: I agree and I'm sure you were right to put it in the money column. But look, what do you know about this? Why were people annoyed at the time?
Student A: They thought that kind of religion was wrong. Too posh and fussy and that.
Student B: Archbishop Laud annoyed them.
Teacher: Yes! Well done. Now think. This layout helps you to show that it is to do with religion and money.
Student A: So we could put it in two places on the screen.
Teacher: Yes, that's the whole point. It starts to show how complicated it all was.

(Counsell 1999: 44)

Sometimes teachers rely on one-to-one interventions that are highly responsive to the learning that they observe. Sometimes pre-planned whole-class interventions can play a critical role in obviating confusions, creating collective energy and securing a clear historical focus in ensuing independent work. The lesson plan that ensued from the objectives shown in Figure 3.11 consisted almost entirely of a series of planned interventions that would challenge and re-focus pupils, enabling them to learn from the wider experience of the class and, in a complicated and demanding lesson, ensuring that no one accidentally drifted off the point. The lesson began with the introduction reproduced below. This is a verbatim account of the teacher's first words in the lesson. The lively energy and variety of the delivery is lost, but something of the power of this first intervention and the underpinning clarity of the teacher's thinking about short-, medium- and long-term planning is readily discernible:

Teacher (smiling): Right. Eyes to me, eyes to me everyone. Lovely, thank you, Sam, thank you, Carianne. Well done! (*All pupils quiet and focused on teacher. Teacher drops voice dramatically.*) What a test we have today. We're not in our usual classroom so you can't see our enquiry question on the wall, but I'd be pretty horrified and dismayed if you couldn't remember it. Hands up – quick reminder – what's our enquiry question? (*Most hands go up.*)

Pupil: How quickly did our area of Bristol change?

Teacher: Yes, how quickly, how quickly? What *possibilities* have we discovered so far? What *possibilities*?
(*Pupils give a range of responses – reinforced or discussed by teacher.*)
What *problems* have we discovered so far? (*More responses from pupils, reinforced or discussed by teacher.*) Yes, we realised that there were lots of things we still didn't know – that we could only guess at . . . we could only guess at. We needed to work out, didn't we, whether lots of new people really did move into this part of the city or whether it was only a few and Matthew asked, didn't you, Matthew, Matthew wondered if it was people from the country who moved in to find work or if it was . . . what did Matthew say, Leanne?

Pupil: If it was people from the country, people from Ireland or people from the colonies.

Teacher: Yes, and that was just one set of possibilities, wasn't it? Just one. Now, you tell me – how could using computers help us with that? Think back to our work on the Roman emperors database. Remember the datafile you made on 'men and armour' on the Civil War? Remember how we used the cholera figures in Tewkesbury? Yes? Remember? *Of course you remember!* You've got an extract from a census in front of you. Two minutes, everyone. Just *two minutes* and then we brainstorm together, how, *how on earth* is this going to help you? I want possibilities, I want problems, I want questions. Pairs! Look at it. Discuss. Then back to me and I'll get you going on the next stage. *Go!*

Conclusion

Historical thinking and learning: our chief guide

There is no automatic 'good' in using ICT in history. Scott Harrison's research confirms this. While some history teachers have developed sophisticated criteria for ICT use that will genuinely improve historical learning, others are still imagining that ICT is something that they simply must do more of, apparently for its own sake.

If the problem is one of professional understanding, at least part of the solution must involve the cultivation of individual and collective professional knowledge – a determination to invest in it and make it explicit. Quality use or appropriate adaptation of an activity cannot be

achieved without sustained, subject-specific reflection by the professionals concerned. The best, most suitable and cheaply available history software packages in the world will not instantly produce the deep knowledge necessary to structure a rigorous historical enquiry or the trained gaze that discerns exactly what pupils are and are not learning as opposed to whether they are merely able to complete a task.

Such knowledge clothes a teacher, over time. There is no quick fix. It comes from a rich mixture of training, experience, experimentation, reading, practice, debate. It is not going to be acquired through neatly digested routines and recipes.

One focus for such professional reflection must be a better, and more subject-sensitive, classification of the properties of ICT for learning. Given the diversity of activities and approaches that now make up 'ICT', bland overarching principles for effective planning of ICT in history are likely to provide us with only limited help.

There are, however, some things that all effective ICT-based history lessons have in common. What makes Moore's work or Rayner's work or the work of Hampstead High or Calder High, or the Bristol lesson in Figure 3.11 effective and engaging for pupils is the focus on pupils' historical thinking. The acid test, as with any choice or design of any activity or resource, must be:

> *What type of historical thinking and learning am I trying to secure at this particular stage in my long-term planning for progression, for these pupils? Will this ICT activity make these pupils' historical thinking and learning better?*

If the answer is 'yes' (and there is nothing wrong with its being 'no') then this might give rise to sub-questions such as:

- How does it build upon or prepare for other learning of a similar type?
- Where shall I position it in the enquiry (lesson sequence) and why?
- What do I need to do to this ICT activity (how shall I adapt it) in order to optimise its potential for developing that type of historical thinking?
- Which pupils might need particular adaptation, particular interventions or even a different activity in order to receive appropriate challenge or access?

To be concerned with subject rigour is to be neither inward-looking nor arcane. In fact, clarity about subject boundaries is a good starting

point for thinking about worthwhile cross-curricularity. By rigour, a subject community means intellectual clarity – first, understanding the field of enquiry, its distinctive practices and truth claims; second, shared terms of reference about the way we divide and integrate these properties for the purposes of teaching and learning.

Without subject rigour, it is not possible to see why the weak lesson is weak. It is Wednesday afternoon. Pupils are engaged, the lesson is structured, the objectives are met, the teacher's questions meet generic criteria of excellence. So why are pupils' responses undeveloped and low level? On closer examination, the teacher's questions are not good at all. This is perhaps because the role of the lesson in the wider enquiry is unclear. Is the focus on 'Why was Becket murdered?' or is it really 'Why was it hard for medieval kings to control the Church?' If it were on the interesting difference between the two, this would be ambitious and exciting but we cannot pretend this is the intention. The pupils are historically confused. The quality of their responses suggests that they are moving backwards from earlier causation work. Superficially, they are engaged, but their comments are reductive and their lines of enquiry are stabs in the dark. Moreover, the activity moves uneasily between source evaluation and causation. Is this deliberate? Are we supposed to be looking at the limitations of certain types of source material in relation to a causation enquiry? If so, no reference to the enquiry question has made this clear. The lesson is superficially impressive, but takes us back to well-documented mistakes of early 1990s practice.

For a consultant or manager to promote such a lesson as a model of pupil engagement would not just be failure to apply subject rigour. It would be a failure to use and extend the explicit knowledge – such as it is – of a subject education community. Each of the problems in that little cameo above has been explored, substantially addressed, recorded and discussed in the literature of the history subject community – much of it written by practising teachers – in recent years. When managing the encounter of a subject with ICT (or with literacy, or even with generic issues of pedagogy), we waste ten years of work if we fail to start from an informed perspective on the achievements and debates, the known strengths and weaknesses and the terms of reference of a subject community.

History must be changed and yet not changed by its encounter with ICT. ICT can make historical learning better. It could create a breathtaking transformation. It offers new routes for enquiry, additional means for testing truth-claims, new kinds of learning community, new solutions to learning problems. Yet it changes nothing fundamental. The rigour of the practice of history remains our surest guide and goal.

All classroom history teachers, and all subject professionals who work with them, are keepers of that subject rigour. We are responsible for it. And it is not a living property unless we continually define it, develop it and declare it. The history department at Hampstead High School was a model in this. In dialogue with their non-historian ICT coordinator, the history teachers' subject sensitivity was pivotal to their innovative work. They took history's rigour beyond history's walls. History has a games kit. Let's not leave it behind.

References

Alfano, R. (2000) 'Databases, spreadsheets and historical enquiry at Key Stage 3', *Teaching History*, No. 101 (History and ICT issue).

Atkin, D. (2000) 'How can I improve my use of ICT? Put history first!', *Teaching History*, No. 99 (Curriculum planning issue).

Banham, D. (1998) 'Getting ready for the Grand Prix: learning how to build a substantiated argument in Year 7', *Teaching History*, No. 92 (Explanation and argument issue).

BECTa (2002) *History Using ICT – Multimedia and the Internet in Secondary History: a Print and On-line Publication for History Teachers*, London, BECTa.

British Library (1998) *Sources in History: the Making of the United Kingdom Crowns, Parliaments and Peoples 1500–1750*, London, British Library Board.

Byrom, J. (1999) *Minds and Machines: Britain 1750–1900 Teachers Book. Britain 1750–1900*, Harlow, Longman.

Counsell, C. (1997) *Analytical and Discursive Writing at Key Stage 3*, London, Historical Association.

—— (1998) '*Sources in History: The Making of the United Kingdom: Crowns, Parliaments and People*, 1500–1700': Reviews, *Teaching History*, No. 93 (History and ICT issue).

—— (1999) *Defining Effectiveness in History Using IT: Approaches to Successful Practice*, London, BECTa/Historical Association.

—— (2000a) 'Historical knowledge and historical skill: the distracting dichotomy', in J. Arthur and R. Phillips (eds) (2000) *Issues in History Teaching,* London, Routledge.

—— (2000b) Editorial, *Teaching History*, No. 101 (History and ICT issue).

Cunningham, R. (2001) 'Teaching pupils how history works', *Teaching History*, No. 102.

DES (1985) *GCSE National Criteria*, London, HMSO.

—— *History Working Group Final Report,* April 1990, London, HMSO.

DfEE–QCA (1999) *History. The National Curriculum for England*, London, DfEE–QCA.

Gatley, D.A. and Ell, P.S. (2001) *Counting Heads: Britain and Ireland 1801–1871 – an ICT Resource Pack.* Bishops Stortford, Statistics for Education Ltd. (Includes CD-ROM which contains statistical and textual data of value to those teaching at all levels of the school curriculum from lower secondary

school to university level and beyond, an introductory booklet, 'Counting Heads: an Introduction to the Census, Poor Law data and vital registration. A teacher's guide'. Available online: www.statsed.co.uk.

Hier, T. (2001) 'How Michael moved us on: transforming Key Stage 3 through peer review' *Teaching History*, No. 103 (Puzzling history issue).

Hunt, M. (2000) 'Teaching historical significance', in J. Arthur and R. Phillips (eds) *Issues in History Teaching*, London, Routledge.

Laffin, D. (2000a) 'My essays could go on for ever: using Key Stage 3 to improve performance at GCSE', *Teaching History*, No. 99 (Defining progression issue).

—— (2000b) 'A poodle with bite: using ICT to make AS Level more rigorous', *Teaching History*, No. 101 (History and ICT issue).

Leat, D. (1998) *Thinking Through Geography*, Cambridge, Chris Kington Publishing.

Martin, D. (1998) 'The Hopi is different from the Pawnee: using a datafile to explore pattern and diversity', *Teaching History*, No. 93 (History and ICT issue).

McAleavy, T. (1993) 'Using the attainment targets in Key Stage 3: Attainment target 2: interpretations of history', *Teaching History*, No. 72.

Moore, R. (2000) 'Using the internet to teach about interpretations in Years 9 and 12', *Teaching History*, No. 101 (History and ICT issue).

Mountford, P. (2001) 'Working as a team to teach the Holocaust well: a language-centred approach', *Teaching History*, No. 104, (Teaching the Holocaust issue).

NCET–HA (1997) *History Using IT: Improving Students' Writing in History Using Word Processing*, Coventry, NCET.

Ofsted (2000) *Subject Reports 1999–2000: Information Technology*, London, Ofsted.

Phillips, R. (2002) 'The forgotten key element: teaching historical significance', *Teaching History*, No. 106 (Citizens and communities issue).

Prior, J. and John, P. (2000) 'From anecdote to argument: using the word-processor to connect knowledge and opinion through revelatory writing', *Teaching History*, No. 101 (History and ICT issue).

Rayner, L. (1999) 'Weighing a century with a website: teaching Year 9 to be critical', *Teaching History*, No. 96 (Citizenship and identity issue).

Riley, M. (1997) 'Big stories and big pictures: making outlines and overviews interesting', *Teaching History*, No. 88.

—— (2000) 'Into the Key Stage 3 history garden: choosing and planting your enquiry questions', *Teaching History*, No. 99 (Curriculum planning issue).

Rogers, R. (1987) 'The past as a frame of reference', in C. Portal (ed.) *The History Curriculum for Teachers,* Falmer.

Rudham, R. (2001) 'A noisy classroom is a thinking classroom: speaking and listening in Year 7 history', *Teaching History*, No. 105 (Talking history issue).

Taylor, E. (2001) *ICT in Geography*, Cambridge, Pearson Publishing.

Teacher Training Agency (1999) *Using Information and Communications Technology to Meet Teaching Objectives in History: Initial Teacher Training. Secondary*, London, TTA.

Walsh, B. (1998) 'Why Gerry likes history now: the power of the word-processor' *Teaching History*, No. 93 (History and ICT issue).

Walsh, B. and Brookfield, K. (1998) Making of the United Kingdom (CD-Rom), London, British Library.

Wrenn, A. (1998) 'Emotional response or objective enquiry? Using shared stories and a sense of place in the study of interpretations for GCSE', *Teaching History*, No. 91 (Evidence and interpretation issue).

—— (1999a) 'Build it in, don't bolt it on: history's opportunity to support critical citizenship' *Teaching History*, No. 96 (Citizenship and identity issue).

—— (1999b) 'Substantial sculptures or sad little plaques? Making interpretations matter to Year 9', *Teaching History*, No. 97 (Visual history issue).

4 Building learning packages

Integrating virtual resources with the real world of teaching and learning

Ben Walsh

From software solutions to learning packages

At the time of writing, in late 2001, it is possible to say with some confidence that history teachers all over the UK are thinking about how to use ICT in their lessons. No longer is ICT the preserve of a minority of skilful pioneers and enthusiasts. Whether through external coercion and the imperatives of a development plan, through guilt and resignation or through genuine enthusiasm and curiosity, history teachers everywhere are aware that ICT can no longer be ignored as a major player in making pupils' historical learning happen. The changing work and priorities of the secondary committee of the Historical Association are evidence of this. Ten years ago, the Historical Association advisory body for educational technology (HABET) did pioneering work and produced some seminal publications (e.g. HABET 1992), but many teachers had not heard of HABET and were unaware of these publications. Now, entire issues of *Teaching History*, the HA's journal for secondary teachers, are regularly devoted to ICT. Even in the non-ICT issues references to computers and related technology abound in over half the articles. This is happening because teachers communicate with their subject association to say what they want. More teachers now want to know what the pioneers have been up to and how the experienced ICT users are integrating the latest technology with history's other teaching and learning agendas.

They are also flocking to hands-on professional development sessions. Again, what is interesting is that it is now the novices who are arriving at these training sessions – not just the keen classroom computer users. Few teachers now are novices in the use of ICT itself, but very many are novices in getting *pupils* to use it for some specific learning purpose within planned history lessons (Bardwell and Easdown 1999). In other words, they want to know how it can be used within a teaching

situation. Not surprisingly, on almost every history and ICT training course or seminar that I lead, the question teachers most commonly ask (apart from the one about getting hold of census data) is: Where do I start?

This is a good question, and absolutely the right one. Unfortunately, it is a very difficult question to answer because so many teachers have in mind a software-based solution to the problem of 'getting some ICT into the history curriculum'. They (or the head of department who has sent them) imagine that a couple of bits of software, some know-how about creating a departmental website and some datafiles, perhaps, just need to be got through the door of the history department. But that is rarely the solution. Where schools or history departments have found a solution that works for them it is not a single solution such as particular piece of software. The solution is usually a complex and sophisticated package.

What does this package consist of? It is a combination of intricately structured history activities, of multiple software applications, of more 'normal' resources (such as textbooks, fieldwork, TV programmes, paper and pen), of detailed planning for pupils' learning around substantial, motivating, historical 'enquiries' (Riley 2000), and of new classroom teaching skills, preferably discussed, practised and shared. There is strong qualitative evidence that such a package will be most effective if it is built up with close co-ordination between the ICT and history departments (Counsell 1998; Ofsted 2000a). By creating and developing such packages, many schools have found solutions to the problem of where to start *and* have gone considerably beyond that.

For the purposes of this chapter, I have called this package a 'learning package'. The rest of this chapter makes a case to history departments, to senior curriculum or resource managers and to consultants, advisers and trainers that departments should consider developing their ideas about ICT and history in the direction of such learning packages. In particular, those departments setting out for the *first time* would be well-advised to develop one or two such packages, in order to develop their professional teaching skill, to share and evaluate more effectively within the department, and to make purchased software and training into a real investment in terms of new professional understanding. To think in terms of a learning package *from the outset* is to get history departments off to a much swifter start and to foster more embedded, owned and high-quality use of ICT.

The first half of this chapter draws on the writings of policy makers, researchers and, above all, the growing body of practitioner–author works by teachers themselves. A rationale for the learning package is

presented and illustrated from recent literature in the field. The second half of this chapter goes on to examine and illustrate four such learning packages.

Integrating multiple applications with medium- and long-term history planning

Ofsted has identified some of the characteristics of effective ICT use in history departments: 'Departments make effective use of ICT more often when they show good awareness of the range of applications of ICT in history, have them built into the scheme of work, and exploit these regularly for progressive use for research, analysis, and communication' (Ofsted 2000b: 4–5). Each element within this statement is worth examining and amplifying:

Departments making effective use of ICT 'show good awareness of the range of applications of ICT in history'

ICT resources come in many forms. The Ofsted statement might be taken to mean, in a straightforward interpretation, that successful departments know about and use the full range of relevant ICT applications. As well as the wide range of content-based resources such as encyclopaedia CD-Roms and websites, the effective department will, presumably, use generic or productivity software. But what the Ofsted statement does not make explicit is the way in which the successful department gets the best out of this diversity of form and medium. My experience is that they do this through planned *integration* of forms. It is the combination of generic software with content-based software that can lead to some of the most skilful teaching and carefully targeted learning:

- If websites were being used in tandem with a word-processor in the context of a lesson or lessons on interpretations of history, the elements being analysed in discussion could be copied into a word-processor file and those sections indicating the purpose, audience or bias of the website could be highlighted by pupils using the relevant word-processing functions. The speed, efficiency and presentational clarity of ICT has thus been used to focus class discussion and debate, and to foster more detailed analysis of how website creators construct particular interpretations of the past (selecting their facts, choosing their language) for specific audiences.
- If pupils are interested by the statistical data on a website about the Battle of the Atlantic, they are likely to be switched on further by

the prospect of copying those data into a spreadsheet and analysing the patterns revealed by the graphing functions of the spreadsheet. Just asking pupils 'to find out about' or answer questions on the Battle of the Atlantic is weak history teaching, anyway, and poor use of the available ICT. But the generic software allows the skilful department to direct pupils' enquiries and to strengthen their growing independence in framing worthwhile historical questions. The successful department might show them how to analyse the data for specific historical purposes using a spreadsheet.

- If pupils view a digital video clip accompanied by a commentary that is inaccurate or misleading they are generally keen to right the wrong. How much more motivation could be gained from taking the clip and recording a commentary that they judge to be more suitable? The effective department will be aware that it is only by actually attempting to do this, perhaps several times, that many pupils come to understand that it is almost impossible to produce a commentary which is viewed by everyone as balanced or accurate. Indeed, the effective department might well have deliberately planned and agreed to carry out such exercises in Years 7 and 8, so that pupils can carry out more advanced work with documentaries, films and websites in Years 9 and 10. The rationale would be that only by *attempting* to construct 'balanced' interpretations in Years 7 and 8 can pupils be ready for more sophisticated work on interpretations later, where they analyse how factors such as audience, purpose, form and provenance led the website creator, documentary maker, museum designer or film director to select and arrange their data, thereby profoundly affecting even an honest intention to be balanced.

In each of these cases the integration of ICT applications turns individual software applications into a package that promotes learning. The website provides the basis for discussion about interpretations, but adding the word-processor allows pupils to create a new product. In the second example the spreadsheet is of little value without the data, while the value of the data is enhanced by the use of the spreadsheet. Similarly, the presentation or editing software that allows pupils to edit the video resource is useless without the video itself. Likewise the video alone, while invaluable as a resource, becomes much more powerful as a learning tool if pupils are required to re-structure or re-direct the mix of sound and picture. The decision to *combine* applications, is informed, in the third case, by the need to create a memorable motivating experience that can be drawn on, more critically, later.

Effective departments ensure that a range of ICT applications is 'built into the scheme of work'

All teachers know that the quality of what happens in the history classroom is largely determined by the planning that takes place behind the scenes. Of course there are brilliant ideas that occur on the spur of the moment, and *ad hoc* flashes of inspiration have enlightened every teacher's career. The trouble with too much work involving ICT in history is that *ad hoc* inspiration seems to be the main source of ICT-based work. It is not really surprising that Ofsted concludes that around 40 per cent of otherwise good departments fail to make good use of ICT in history. Brilliant off-the-cuff ideas involving ICT will not move history departments forward *en masse*. Teaching is a process that requires *consistent* excellence. Teaching using ICT is no different. Ofsted's observations recognise that the effective use of ICT resources occurs when the broad direction and aims of the teaching and learning have been thought through and planned. Even the examples above, illustrating the interplay of applications, come into their own only if they are planned into a scheme of work by the whole department, and implemented by teachers with their function in the department's long-term progression in mind.

This is not the place to explore in detail the principles of constructing effective schemes of work. This is discussed in detail in Chapter 3 of this book. Rationales for schemes of work that draw on key shifts in best practice in the last five years have now been enshrined in recent mainstream literature (e.g. Banham 2000; Laffin 2000a, 2000b; Riley 2000). But it is impossible to explore the idea of a learning package in ICT without reference to good schemes of work. For example, where a scheme of work for Year 9 includes an enquiry that would pass the Riley test of rigour (historical validity) and motivation (pupil interest) – for example, in the question 'How democratic was Victorian Britain?' – decisions about where and how to deploy ICT get off to a good start. The medium-term planning (the enquiry) is already built around a challenging question that pupils can realistically answer in a historical way at the end of the lesson sequence. If the question were less effective – for example, 'How fair was the Victorian political system?', requiring anachronistic judgement and dodgy retrospective moral analysis – it would be tricky to make the ICT work well. With the first question, however, a key aspect of the early lessons in the sequence might be the creation of criteria for forming a historical judgement, with class discussion and teacher clarification used to make sure that pupils approached datafiles, CD-Roms or websites with a very clear sense of direction, perhaps staging structured activities to scaffold the early stages of their enquiry.

But while a good scheme of work is a prerequisite for a worthwhile learning package, it is not enough in itself. The ICT must be well integrated with the scheme. Bad use of ICT is still possible within good enquiry questions. Decisions about resources – which to choose, where and how to deploy them – are an essential part the planning process. Why should ICT resources be any different? ICT resources will work effectively when the scheme of work makes clear how and why ICT resources will make an effective contribution.

Use of the Internet provides the most common illustration of both problems and opportunities in this area. The Internet can be a useful research tool, but it can actually hinder pupil progress because searches throw up a bewildering array of websites, many of which contain inappropriate or inadequate information. Experienced departments have begun to see that with the Internet, in particular, there is content and content. Some websites provide narratives or timelines, or perhaps collections of statistical data. Others provide overwhelmingly detailed analyses at the academic level. Yet the latter are not necessarily unusable, even with younger pupils. With the criteria explained, analytic tools modelled by the teacher and plenty of teacher-directed practice examples (in other words, good planning), quality collections of original source material might be used by pupils as the basis on which to construct their own accounts of an important event. Without good planning by the department, manifesting itself in carefully sequenced activities, many pupils will give up in frustration early, or else produce low-quality work.

Other kinds of Internet problems can become opportunities in their own right. Some websites provide superficial outlines at a lesser level of detail than does the average textbook. Many provide crass and wholly unreliable accounts of historical events. None of these resources is intrinsically useful or useless. Their value is determined by the purpose for which they are used and the skill of the teacher in getting pupils to appreciate this fact. Their value is determined by the work scheme. For the whole point of substantial sections of the history curricula – as defined in the National Curriculum for England and Wales since 1991, and in 14+ and 16+ examinations since the late 1980s – is to weigh and critique both sources and interpretations. Sometimes, seriously biased sources, or websites that are puzzlingly strange *collections* of items become the perfect tool for the history department wanting to illustrate a point about bias or about provenance very starkly and clearly. A biased or incomplete web page could be used to kickstart a discussion on interpretations of particular events. Moreover, the Internet genuinely adds value in these areas. Ofsted's statement that ICT should be 'built into' a

scheme of work suggests it should be 'built in' where it makes some learning happen *better* than it would without it. The many examples of incomplete, inaccurate or crassly distorted views of historical events that are to be found on the Internet are probably unavailable anywhere else. They provide pupils with loose statements, falsehoods and errors that can be used to channel pupil outrage to good effect and actually boost pupils' self-confidence as they challenge and correct the 'published' view.

But let us remember that it is not the Internet that has achieved this learning. It is the historically rigorous scheme of work that has turned unreliable information on websites, or the website construction process itself, into a learning opportunity.

Effective use of ICT requires regular and progressive use

The aim of using the Internet in the example above is that pupils should become aware of the nature of historical interpretations and thereby develop a questioning and critical approach to modern media. Such realisations are not an event: they are *outcomes of thinking processes that develop*. These realisations will not be there after carrying out one example of the kind of activity described. Pupils need to use the Internet routinely in history, and routinely to reflect on it, critically and historically.

The same is true for the other functions that ICT offers history. As one-off exercises once a year, or even once a term, exercises involving ICT in history will remain as nice, interesting, unusual and fun activities to motivate students. But they will achieve little in the way of consistent progression. They may even undermine progress in history as time is spent reinforcing or even introducing particular ICT skills that were taught some time ago in discrete ICT lessons – or have yet to be tackled in those lessons.

Regular and progressive use of ICT raises the inevitable practical question of access to equipment for history departments. There is no doubt that in some schools access to equipment is a problem, but this is often symptomatic of wider difficulties. For some ICT coordinators, history is far from the first-choice subject for access to ICT equipment. ICT coordinators are often given the statutory responsibility to deliver the National Curriculum for ICT. As a result, they have shown an understandable reluctance to delegate the responsibility for that delivery to other subject areas, let alone to those subjects they do not fully understand. The exceptionally strong connection between ICT and history is not immediately obvious to non-historians: an ICT coordinator might, mistakenly, see it as merely another subject that seeks out 'information',

and not understand its peculiar concern for evaluative work or the construction of interpretation.

But it is not the sole responsibility of ICT coordinators to resolve all the issues. History departments must be aware of what they need to contribute in order to address these issues. Ofsted comments: 'In some (history departments), regular access to ICT as a planned part of the curriculum is not physically possible, although lack of training and negative attitudes towards the use of ICT on the part of teachers can also be important factors' (Ofsted 2000b: 4).

A study by Staffordshire LEA and Keele University surveyed a significant number of history teachers. It sheds an interesting light on the nature of these 'negative attitudes':

> Even though the quantitative data showed that 52% of the history teachers reported fairly positive personal attitudes to computers, they also reported anxieties about their use of ICT in the classroom. These anxieties fell into two main categories, (a) school level factors, such as time, resources and training, and (b) subject ideology.
>
> The issue of resourcing and training appeared in many responses, comments such as 'We do not have many resources in school', '*a*ccess is always a problem', 'Enormous possibilities but . . . lack of sustained training makes me wary of ICT as a regular contributor to history programmes of study' were typical.
>
> The second category related to the teaching, nature and identity of history as a subject. A dominant theme in the data was an anxiety about the influence of ICT and the perceived implications of this influence for the teaching of history. There was an anxiety that ICT was, in some way, going to take over and become the only approach to teaching and learning. Respondents were insistent that ICT should be seen as one approach amongst a range rather than the only approach. Comments such as 'ICT should be seen only as one of many resources if variety within the classroom is to be ensured and that the focus remains on learning history via ICT, and not vice-versa' and 'Computers are very useful tools if their use arises from the historical enquiry rather than the other way round' exemplify this group of responses.
>
> (Bardwell and Easdown 1999: 3)

The observations made by these history teachers seem right and proper: history must come first, and unless historical considerations are at the forefront the use of the ICT will certainly be gratuitous, and quite possibly poor. But the comments are also essentially defensive and

negative. They are not the comments of history teachers being proactive and persuasive. History teachers need to convince ICT coordinators that history is an important subject that will not only make good use of ICT but will also deliver some progressive improvement in pupils' ICT skills. The wariness of history teachers about the danger of history becoming simply a delivery vehicle for ICT skills is understandable, but ultimately self-defeating. If history teachers wish to prevent this they must gain ownership and direction of the integration process. To do this, they need to be clear about how history's peculiar contribution directly supports the teaching agenda for ICT itself.

There is a significant convergence of skills and processes between history and ICT. The examples above of the use of websites to examine historical interpretations could easily be a vehicle to meet one of Ofsted's key areas for development in the use of IT:

> It is not sufficient to teach the mechanics of activating a search engine and obtaining lists of hits. Pupils should be aware of the advantages of browsing initially in conventional materials for basic information before deciding what exactly they want from a web search. The terms to be used for searching need to be discussed. Pupils should be shown how different search engines and combinations of search strings can yield different relevant hits; how to detect from the address of a hit the nature of the source; and how the presentation and interpretation of information provided depend on the author.
>
> (Ofsted 2000a: 4)

The convergence has great potential to be exploited in the 14–19 age-range. The *Key Skills Specifications* for ICT demonstrates the common ground between history and ICT (www.qca.org.uk/nq/ks/com_app_it2.asp), as shown by the text in Figure 4.1.

Persuading the ICT coordinator or department that history deserves a substantial share of access to computers is thus as much the responsibility of the history department as it is that of the ICT coordinator. It is a task involving the sharing of curricular knowledge and understanding across the curriculum. There is no reason why ICT coordinators should automatically understand what historians do. If regular and progressive use of ICT in the context of history is to be secured, it requires practical demonstration and curricular argument from one set of professionals to another.

To win the battle of access alone is not enough. It is quite possible to have very good access to computer equipment and to find that 'regular and progressive use' is still elusive. This can be a result of issues such as:

- The *physical arrangement of equipment*: equipment is often concentrated in serried ranks in ICT rooms. Many history teachers would prefer clusters of machines, allowing better teacher movement and teacher–pupil discussion of work. It might be that history, and other subjects, could make better use of ICT if equipment were more widely spread in clustered work stations of six to eight machines.
- The *choice of software*: a common problem for history departments is that spreadsheet and data-handling software are not well suited to the types of operation which departments wish to perform, particularly the graphical representation of data which are text based.
- *Relative progression*: another common problem is that pupils' skills in particular ICT fields do not match up with what history teachers want to do in their particular history lessons. An obvious case would be a teacher wanting pupils to analyse a visual source using presentation software, and discovering in the lesson that pupils have not yet covered the use of that software in their ICT studies.

All these things need to be taken account of in any learning package that a history department creates. The steady growth of mutual understanding

Level 1	*Level 2*	*Level 3*
You must be able to: • find, enter, explore and develop relevant information; • present information, including text, images and numbers, using appropriate layouts and save information	*You must be able to:* • identify suitable sources, carry out effective searches and select relevant information; • bring together, explore and develop information, and derive new information; • present combined information, including text, images and numbers, in a consistent way	*You must be able to:* • plan and carry through a substantial activity that requires you to: • plan and use different sources and appropriate techniques to search for and select information, based on judgements of relevance and quality; • use automated routines to enter and bring together information, and create and use appropriate methods to explore, develop and exchange information; • develop the structure and content of your presentation, using others' views to guide refinements, and information from different source

Figure 4.1 Key skills for IT

between ICT and history specialists cannot be bypassed. And we should not minimise the difficulty for some history departments. In many schools ICT coordination is not seen, fundamentally, as a curricular issue. Many ICT coordinators are experts on hardware, software and ICT skills, but are not curricular and pedagogic thinkers. It is not surprising that it is sometimes hard to have worthwhile dialogue.

But surely these problems are not insoluble? Evidence from Ofsted suggests that ICT coordinators can and regularly do solve these problems with joined-up thinking which starts with the curriculum as the priority: 'Schools that comply with statutory requirements in IT usually have effective strategic planning and management, most often separating the curricular responsibility for teaching IT from the management of the hardware and telecommunications' (Ofsted 2000a:3). The significant point here is 'curricular responsibility'. Someone must take that responsibility. It is not always the case, however, as OFSTED suggest, that 'separating [it] . . . from the management of hardware' is the solution. The outstanding and influential examples of Calder High School and Hampstead School – particularly the work of Phil Taylor, ICT coordinator in the latter – shows that some ICT coordinators can be profound and effective curricular thinkers, and that the history department can be proactive in supporting the ICT department in this curriculum role (Counsell 1998).

The rest of this chapter explores the notion of the 'learning package'. I use it as a term of reference that helps to describe something larger than a software solution or isolated history–ICT activity. It is a complex relationship between effective history planning, new skill in teaching, and decisions about deployment and integration of ICT and other resources that will convert a software solution from a 'nice activity' into a means of effective historical learning.

The emergence of learning packages

Is this learning package a pipe-dream, to be achieved in some Nirvana where history and ICT teachers collaborate daily and where machines never break down? The evidence on the ground suggests not. A good illustration of the progress from *ad hoc* to more 'packaged' approaches can be seen in the pages of the HA's journal for teachers *Teaching History*.

In November 1998, the editor devoted an entire issue to the question of ICT. Exactly two years later, the corresponding edition was also devoted to ICT. One of the many interesting features of comparison between the two was the progression in the examples and ideas.

The 1998 issue illustrated some of the thinking current at the time. My own article looked at how the word-processor could be used to help a reluctant learner improve his ability to research, shape his findings to a particular investigation and organise his findings into something approaching a coherent argument (Walsh 1998). The ideas in that article centred on small-scale *ad hoc* activities designed to help learners cope with the high-level literacy demands imposed by post-16 examination courses in England and Wales. If Gerry (the eponymous reluctant learner) was switched off by reading a text, give it to him in a word-processor file and let him cut bits out and store them in another file. Gerry was struggling to express the relative importance of particular causes of an event, until the word-processor allowed him to express his opinions by representing the different causes in blocks of different sizes and colours. A writing frame then gave him the vocabulary tools to explain why and how the blocks were different. The article was actually about making access to difficult historical ideas *the same thing* as securing more highly developed literacy. It was an early example of the convergence of literacy and thinking skills in history that is now much more common (e.g. Hammond 1998, 2001; Mountford 2001).

But the article espoused the imperatives of the moment: to have a clear history teaching aim and see where and how the technology could be used to realise that aim. It was full of fully rationalised but nonetheless isolated examples of activities. Other articles trod a broadly similar path. Dave Martin analysed the ways in which data-handling software could enable pupils to see diversity and difference within past societies. Thus, Martin (1998) wanted pupils to see that the indigenous peoples of North America were many and widely different. He found that data-handling software could teach pupils to understand and express through visual means difficult concepts like diversity.

In the same issue, Lez Smart looked at the potential of maps in history. His starting point was a long-held and passionate enthusiasm for maps. He had always used paper maps in his teaching, but he found that digitised maps unleashed new possibilities in terms of pupils' ability to see change over time (Smart 1998). He also discovered that the software tools which came with the digitised maps, published by the Ordnance Survey, allowed pupils to create their own software products, and this added their own interpretations of the maps and, more importantly, stimulated the pupils to think about the questions which could and could not be asked of the maps.

In retrospect, the November 1998 issue is resonant with pioneer spirit. Two years later it was clear that changes were taking place. The November 2000 issue showed practice moving beyond the trail-blazing stage. The practice described in this issue might be characterised more as an attempt to consolidate the ground staked out by the pioneers and then to advance on broader fronts.

Diana Laffin's article was a classic example. She was working with students on a post-16 history course for the new AS Level for which pupils, for the first time, began preparing in September 1999, the first examinations being held the following summer. She was using ICT to help students bridge the gap between the GCSE and the AS course by using the Internet to extend the scope and level of their work on support for Nazism in Germany in the 1930s. As well as using the Internet for research purposes, her students were carrying out tasks that helped them to achieve their 'Key Skills' in ICT. Being a skilful practitioner, Laffin turned this rather prosaic-sounding process into a lively activity. Year 12 students had to produce materials for Year 9 and Year 12 audiences. The Year 9 pupils provided feedback, again via e-mail, over the school network. It was not long before pupils from different year-groups and even different schools were sharing their work and ideas with each other by e-mail. Laffin's own description brings out the complex and imaginative package of Internet research, e-mail discussion, reflection on the audience of a historical interpretation, analysis of sources and the changing role of the latter in both the Key Stage 3 and the post-16 history curriculum. Moreover, all this was rationalised through the all-important matter of pupil confidence and self esteem:

> The . . . requirement of the IT Key Skills – to exchange, share and develop information – offers lots of good opportunities for peer marking and building links between year groups. The added bonus is that young people love e-mail and, in those tender teenage years, rate their friends' opinion and approval highly. This idea works very well in partnership with another school as it builds up useful links and gives the project a slightly more serious, competitive edge.
>
> (Laffin 2000b: 9)

Other articles demonstrated the movement towards the use of ICT as part of a package of teaching and learning strategies, plans and resources. Rob Alfano described a fascinating investigation into a local history topic using data on a spreadsheet. What is most striking about the process described by Alfano is that his activities would have made

excellent manuals for learning the intricacies of spreadsheet functions (including those terrible formulae). The activities were in the form that we all would wish manuals to be, though they never are: they had a purpose and a meaningful context. Even more impressive, Alfano's exercise on the development of the town of Wellington managed to develop these high-level ICT skills without losing one jot of the rigour inherent in the original historical investigation (Alfano 2000).

Perhaps the most complete learning package emerged from the article by Jack Pitt (2000). The package described by Pitt involved ICT in as integrated a way as one could conceive. In fact, everything about the whole project was integrated. There was imaginative and ambitious planning. The aim of the exercise was to study slavery in the Roman Empire and in the British Empire and thereby achieve the notoriously difficult feat of linking separate areas of study in pupils' minds. The means chosen was a combination of role play and presentations. Such an approach naturally necessitated research. This is turn was facilitated by use of the school's intranet and Internet facilities. The ICT contributed further in that pupil presentations (usually given by them in period dress) were recorded using a digital camera. The same resource was used to create characters from the relevant periods to whom pupils could address questions via the website. Final conclusions were written up as contributions to a website. The teachers set up the initial web page templates but the option was available for pupils to create html pages of their own, as well as the content which was placed into the pre-prepared templates. To make the whole project more interesting and exciting, it transpired that the teachers chose html as the medium for their work because the school was relatively poorly equipped. Because html uses only small amounts of memory and will run on most platforms easily, the project was able to use the somewhat motley array of machines available in the school.

Whither the learning package?

In which direction will teachers choose to take learning packages now? They will certainly be exciting directions. Many are unpredictable. What we can say is that two types of factor will dramatically influence the way ICT develops within history teaching: first, growing investment in new technology and software; and, second, the growing speed with which teacher expertise is developed and shared.

First, access to original source material in electronic form, including text, photographs, other visual forms and video, is now mushrooming.

We already have access to an extraordinary range of original source material. Electronic publishing of such material makes it easy and inexpensive to access; it is easy to search through large collections and easy to copy and create new products from them. In the USA, the Smithsonian, the Library of Congress and many individual universities are making their archives and collections available. Canada and Australia are taking similar approaches.

The leading asset holders in Britain are not lagging behind. The BBC, C4, the National Maritime Museum, the National Portrait Gallery, the British Museum, the British Library and the Public Record Office are leading the way. A host of local archives and galleries are following suit. One respect in which UK providers are leading the way is in adding value to the materials they make available. That value usually comes in the form of background information on source material and suggestions on how the materials might be deployed in the classroom.

Film and video are still in their relative infancy as ICT resources but also as historical sources. We are starting to see websites and related CD-Rom resources which are addressing this particular medium. Some news agencies are beginning to digitise their archives, whether as subscription services or as free Internet services. British news service ITN (www.newsplayer.com) and the USA's network ABC (www.abc.com) are relatively advanced in this respect. Many of the major film studios also provide clips from latest releases free on their respective web sites. The British charity Film Education has clips and study materials on its website (www.filmeducation.org).

With new technologies, such as digital cameras, multimedia authoring tools and video-editing suites, it will be increasingly possible to convert those sources into learning packages that use a blend of applications. Moreover, increased investment in equipment and technology such as intranets will allow for flexible approaches to the use of ICT and non-ICT resources.

Second, history teachers' experimentation with ICT is not only developing rapidly but is being shared and critiqued more widely and efficiently. It is not just that there is a growing body of subject-specific guidance that is now of high quality – for example, on the use of film in history see the work of the British Film Institute (2000) or Paul Sutton (2001) – but increasingly easy communication links within and between schools all over the world are making it possible for teachers to benefit from others' experimentation, to share the results in their turn, and so to take *collective* professional knowledge forwards.

Examples of learning packages: the adaptation process

Example 1: turning the Great Seal of Elizabeth I into a learning package

The Public Record Office's 'National Archives Learning Curve' (http://learningcurve.pro.gov.uk) has a wide range of sources and investigations. Teachers often react favourably to its many activities. Unlike many similar collections of its type it has been favourably reviewed by users of and experts in the use of historical documents for teaching. To James Turtle (2000: 52) it is a 'treasure-chest'.

One of its treasures is 'Snapshot' on the royal seal of Elizabeth I (see Figure 4.2). As it stands, the snapshot exercise provides a lesson's worth of interesting work on an important source. It provides background information on the seal, a high-resolution electronic copy of which is included, and on the period in general. The questions reveal the influence of curators who know how to interpret a source such as this and of educators who know how to bridge the generation and understanding gap between curators and children. All of these make it a worthy example of the kind of good things our public asset holders are doing.

But can we really be content with that? As it stands, this resource is a prime example of the kind of one-off worthy activity that is meeting only some of the needs identified earlier in this chapter. It is not yet a 'learning package'. Its effective use as such a package will happen only through informed teacher adaptation, intelligent positioning within the workscheme, and wider progression and integration with other activities and resources.

How might this exercise be used as part of a wider learning package?

- To begin with, it could be the centre of an interesting enquiry about the nature of the Tudor monarchy and its exercise of power. The seal is a classic example of how messages about power and authority were conveyed in a world which was politically sophisticated but largely illiterate. It would be part of a learning package if the enquiry question were appropriate and if the activity were positioned thoughtfully in relation to other exercises that maximised the potential of pupils' thinking. This is a medium-term planning issue.
- This exercise offers further opportunities to tackle the notoriously difficult challenge of getting pupils to see links between different areas of study. The ways and means by which power and authority were asserted and maintained is a theme which could be used in the

Tasks

1 Can you find:

- mysterious hands holding up Elizabeth's cape?
- a coat of arms?
- a Tudor Rose?
- the motto 'Elizabetha Dei Gracia Anglie Francie Et Hibernie Regina Fidei Defensor'?
- the orb and sceptre?
- a *fleur de lys*?
- a harp?
- a ruff?
- rays of light shining down on Elizabeth?

2 Which of the following words do you think Elizabeth would want people to associate with her:

- majestic?
- foolish?
- powerful?
- warrior?
- fair?
- cruel?
- unfeminine?
- weak?

9 Fill in the table below to show what you found out about Tudor monarchs from this seal.

Looking at Elizabeth's Great Seal ...	
I found out ...	I want to know ...

Figure 4.2 Some of the questions and tasks from the PRO's 'Snapshot' exercise on the Great Seal of Elizabeth I

Source: Adapted from the Public Record Office's online 'National Archives Learning Curve'

study of almost any geographical or chronological area. This is a long-term planning issue.

- There are opportunities to use different resources with this activity, and other ICT applications. Task 3 could be tackled by pupils drawing up their own table on a word-processor and completing it in the word processor file. Pupils could copy the image of the Great Seal provided on the website and paste it into a presentation or desktop publishing software package. Their answers to the questions could be in the form of labels on the seal. The teacher could have his or her own version of this exercise and use a large screen, TV or data projector to carry out the exercise as a whole-class activity. The teacher could use a mixture of these approaches, perhaps the whole-class activity being the core exercise and then homework follow-up to be carried out by pupils in their own choice of format. This is a short-term planning issue.

Example 2: turning fieldwork at Furness Abbey into a learning package

Many departments are now starting to see the possibilities in linking fieldwork and ICT. I was fortunate enough to have laid hands on a digital camera in the early 1990s and to have taken photographs with it at the Imperial War Museum. From that point on, students could prepare for the visit by looking at what they were going to see. They could also 'revisit' the site by looking back over the pictures taken. Today's cameras are smaller, and cheaper, than those I used a decade ago. Moreover, the software tools are awesome. These include packages which can turn still pictures into moving panoramas of sites. They also include packages which allow pupils to create their own multimedia presentations and websites.

Figure 4.3 shows an example of an ICT-rich learning package built around Furness Abbey in Cumbria.

Example 3: turning the British–Canadian Twins Project into a learning package.

The power of the Internet, especially email, is starting to pay dividends in terms of access to a views and perspectives that pupils would otherwise not see. In this example (see Figure 4.4), the major aim was to try to get pupils to consider change over a period of time. A secondary aim was to see aspects of the British Empire from an empire perspective as much as from a British perspective. Although the software usage was relatively simple, the package was quite complex. In order to carry out

Question
Did Furness Abbey really look like this in Medieval times?
Focus
Focus of the activity is on the issues of evidence and interpretation. Students are required to analyse how the artists' reconstructions (interpretations) which are present at the English Heritage site at Furness Abbey were created, and also consider how far the reconstructions really do reconstruct life in the monastery.

Learning objectives	*Process/Activities*		*Resources*	*Outcomes*
Pupils learn that:	*Processes*	*Support/ Differentiation*		*Pupils demonstrate ability to:*
• Interpretations can be visual, written or spoken. All based on evidence in some form but it may be interpreted differently • The evidence from which interpretations are produced is not always complete • Monastic life was 'practical' as well as spiritual – monasteries were important political and economic as well as spiritual institutions	1 Pupils examine artists' reconstructions of Furness Abbey and record the impressions gained from the reconstructions as a series of key points	Teacher-led, with prompts and recording frameworks	English Heritage site: Furness Abbey, near Barrow in Furness, Cumbria British Library CD-Rom *Medieval Realms* Digital cameras Textbooks Library resources Multimedia presentation software	Compare and assess relative value of different types of source Assess ways in which evidence can be complementary or contradictory Use CD-Rom and other resources to exercise research skills and make judgements as to value and relevance of resource materials Reflect upon and speculate concerning how a visual interpretation was constructed using only limited evidence Communicate ideas and conclusions using presentation and/or multimedia software
	2 Pupils are armed with copies of reconstructions and are asked to study the site and look for evidence that the artist used to create reconstructions	Pupils work in pairs or small groups		
	3 Pupils look for areas of the abbey where there does not appear to be evidence for the reconstructed drawings	Make this or previous task optional for some pupils		
	4 Pupils use the exhibits in the Visitor Centre and further research to examine everyday life and work of monks in the Abbey	Recording frameworks with key headings such as Food; Prayer; Income; Learning; Power		
	5 Pupils use CD-ROM resource containing sources on monasteries to carry out further research into life in monasteries. Particular focus on everyday issues not covered by artists reconstructions which are primarily focused on the fabric of the building	Tailor extent of research required and nature of source material to abilities of pupils		
	6 Pupils use presentation or multimedia software to summarise conclusions concerning: a) evidence used by artist b) areas where evidence used by artist is not clear c) aspects of everyday	Allow group presentation for less confident pupils. Tailor limits on length, amount of visual/ text material to support or		

	life in monastaries not featured in reconstructions d) suggestions about the influences on the artist in making up for lack of evidence (e.g. imagination, other interpretations, other sources, audience and purpose of the reconstruction) e) any other points pupils wish to make	challenge pupils appropriately		

Figure 4.3 Part of a work scheme integrating a medieval monastery site visit with a reference CD-Rom and presentation software

British-Canadian Twins Project

You have inherited a time-capsule buried in 1900 of your great-great-great grandfather's papers, who was a twin born in 1796. One twin emigrated to Canada while the other stayed in Britain. The capsule contains their letters, pictures, photographs, newspapers cuttings, insurance policies, bank accounts and even their will and birth certificates from 1796 to the 1880s when they died.

You have to produce and edit these documents and provide excerpts showing glimpses of how their lives and countries changed over the years. It is not a diary. The documents do not tell the whole story and there is no need to fit information on each twin, there can be things that one twin does not tell the other about. The project will be assessed on both twins, so you have to co-operate across the Atlantic using e-mail.

Create a life for your twin.

Start with personal details:
1 Male? Female?
2 Tall? Thin? Hair colour? Eyes? Accent? You decide
3 Married? Widow? Children/child death?
4 Employment (Gardner, builder)
5 Religion? (Most were religious in Victorian times)
6 Likes and dislikes? sports/recreation (remember the times)
7 Health? Unhealthy? Accidents/diseases. Ageing

[a]*Note:* In practice, many of the 'twins' actually abandoned the idea of creating documents and instead recreated a correspondence as though they had been separated early in life and were still in contact. This allowed them to exchange views on what their country was like at particular times and how events such as the Napoleonic Wars affected them in similar or different ways.

Figure 4.4 The original scheme for the British–Canadian Twins Project[a]

Source: Adapted from an original idea of Sam Allison, history teacher at Centennial High School, Brossard, Montreal, Quebec.

the terms of the project, a good deal of research and reference was required. Much of it was carried out in pupils' own time voluntarily. The prospect of waiting for the next email to arrive from another part of the world was more than sufficient motivation.

The format of the Twins Project is highly transferable. The context of the twins could be almost any point in time or place, such as family members divided by the Civil War in Britain in the 1640s. The potential for communication can be developed to help older students develop essay skills and plans. Motivation to explore and experiment can be secured more easily using email to peers than by leaving them to work on their own.

Example 4: turning the peace treaties of 1919–23 into a learning package

This example resulted from a complete inability to access ICT *as a class* due to timetabling and other clashes. Despite this setback, the sequence of lessons looking at the treaties used a lot of ICT in the form of teacher or individual pupil demonstration, individual research and use of word-processors to plan and write up a final summary essay. The process developed in stages, as shown in Figure 4.5. This package would have worked best with regular access to a lab full of computers, but the fact that this was impossible did not actually prevent ICT playing a significant role in this particular piece of work. Moreover, whether or not ICT was used for the final activity in Figure 4.6 is immaterial. It would work very well using word-processing, allowing for editing and encouraging constant reflection and revision; but it would work reasonably well on paper, too. The point is that such a task was *combined with* the earlier activities, and used to tease out the full value of the earlier learning, making the historical analysis more explicit and re-using the memory of multiple images and moving images in a critical exercise.

Conclusion

None of the packages described above is complete, because their full value could only be assessed in the context of the scheme of work and in relation to the particular circumstances of the history department's expertise and the pupils' abilities. But each one illustrates the importance of thinking about planning (long-term with an eye on progression, short-term with an eye on clear historical learning outcomes), about recursive use of ICT designed to build critical thinking incrementally and securely, and about the integration of multiple applications, often with other non-ICT resources too.

Stage 1: The impact of the Great War
Rationale: In this instance pupils had not studied the Great War, so the aim of this initial stage was to get some idea of the scale of the impact of the war.

- The introductory common class activity involved walking to the WW1 memorial immediately outside the College (the work was deliberately scheduled for early November to make the most of the Remembrance Sunday activities).
- Back in the warmth of class there was a discussion about what the memorial suggested was the impact of the war. Pupils were well practised by this stage of the course at asking questions of sources and constructing tentative hypotheses.
- The teacher suggested that some of their ideas about the scale of the war might be tested using the Commonwealth War Graves Commission website. Using a data projector and some web pages previously downloaded, the teacher showed pupils how the site worked.
- The class then studied a war poem about artillery. Using a data projector and some web pages previously downloaded (from *Art of the First World War* http://www.artww1.com/index and from *Photos of the Great War* http://www.ukans.edu/~kansite/ww_one/photos/greatwar) the teacher then showed various paintings and pictures and asked which images would accompany the poem in a WW1 poetry anthology.
- Homework was a choice between researching a selection of surnames on the Commonwealth War Graves site or selecting some images from the other websites shown. All the references were given in an html file on the college intranet. Pupils were given a week to complete the task as they were unable to do this in class time.

Stage 2: the spirit of 1919
Rationale: Stage 1 left pupils with a strong sense of 'never again'. This stage looked at whether such was the view in 1919.

- The class studied a cartoon from 1919 which appeared in their textbook. Using paper copies, groups of pupils labelled up the cartoon. One pupil then transferred labels to a PowerPoint file which was projected in class. The impression developed that the spirit of 1919 was one of harshness and vengeance.
- Pupils then watched a TV programme about the Peace Conference to see whether it supported their current impression. The programme was in the C4 series *What the Papers Said.*
- The TV programme had extensive website support material www.4learning.co.uk/secondary/index As follow-up work, pupils had to copy one item from the site and perform the same operation as had been tackled collaboratively on the British cartoon. This could be as a marked-up printout or in the form of an annotated presentation.

Stage 3: treaties and terms
Rationale: Pupils researched the terms of the treaties with advance warning of the task which they would have to complete in Stage 4.

- Pupils then used their textbooks to research the terms of the treaties and reactions to them. The textbook support materials contained a recording pro forma. For those pupils who preferred, the teacher made the pro forma available as a word processor template on the college intranet.
- As a leavening activity to the research task, pupils could use the teacher's laptop to test themselves on a piece of software which provided an against-the-clock quiz on the terms of the treaties. The software in question came from the Historical Association commercial website 'History Online' (www.historyonline.co.uk)

Stage 4: forming a view
Rationale: Pupils had to reach their own measured view on the treaties using a structured activity.

- This was tackled using a structured worksheet (see Figure 4.6) and textbook resource. As in stage 3, an option to complete the task using a word processor was offered, although it was made clear that this could only be accessed in pupils' own time.

Figure 4.5 A programme of work using ICT in diverse ways to develop knowledge, understanding and critical thinking about the peace treaties of 1919–23.

Focus task: Do you agree with Sir Harold Nicolson that the Treaty of Versailles was 'neither just nor wise'?

Source extract: British diplomat Sir Harold Nicolson writing in his diary in 1919

> The historian, with every justification, will come to the conclusion that we were very stupid men. We arrived determined to get a peace of justice and wisdom. We left the conference feeling that the terms we imposed on our enemies were neither just nor wise.

Sir Harold Nicolson was a leading British diplomat. He sat through most of the Paris Peace Conference. He criticised the treaty in his diary.

- He said it was not *just* – in other words Germany was treated unfairly.
- He said it was not *wise* – in other words the Treaty would cause trouble in the future.

However, he did not have the benefit of *hindsight*, which historians do. *You* are now going to be 'the historian' Sir Harold Nicolson was talking about.

1 Look back at all your work in this chapter.
2 Collect points and evidence to test the view that the Treaty was not just or wise.

As you look and collect, REMEMBER:

- Germany ignored the Fourteen Points when Wilson published them in January 1918.
- Clemenceau wanted the Treaty to be much harsher. He wanted Germany broken up into smaller states. Wilson stopped this happening.

[There were many more points provided for pupils.]

Use this structure

> Point/piece of evidence
> Supports the view that Treaty was not just because …
> Supports the view that Treaty was not wise because …
> This is a strong piece of evidence because ...

3 Now write a paragraph which challenges Sir Harold Nicolson's view. You could organise it in sections like this:

> Germany claimed it was an innocent victim. There is some strong evidence against this. For example ….
> Many of the terms of the Treaty were not unjust or unreasonable. For example …
> There are examples of Germany receiving help, especially from the USA. For example …

Figure 4.6 Worksheet for use with the final stage in Figure 4.5.

References

Alfano, R. (2000) 'Databases, spreadsheets and historical enquiry at Key Stage 3', *Teaching History,* No. 101 History and ICT issue: 42–7.

Banham, D (2000) 'The return of King John: using depth to strengthen overview', *Teaching History,* No. 99 (Curriculum planning issue): 22–31.

Bardwell, S. and Easdown, G. (1999) (Keele University–Staffordshire QLS) *Survey of History Teacher Attitudes to the Use of ICT in History Teaching: Final Report*. Available online: www.sln.org.uk/history

British Film Institute (2000) *Moving Images in the Classroom: A Secondary Teachers' Guide to Using Film and Television*, London, BFI.

Commonwealth War Graves Commission. Available online: www.cwgc.org

Counsell, C. (1998) *Defining Effectiveness in History Using ICT: Approaches to Successful Practice*, Coventry, BECTa–HA.

HABET (1992) *Teaching History Using IT*, London, Historical Association.

Hammond, K. (1998) 'And Joe arrives: stretching the very able pupil in the mixed ability classroom', *Teaching History*, No. 94 (Raising the standard issue): 23–31.

—— (2001) 'From horror to history: teaching pupils to reflect on significance', *Teaching History*, No. 104 (Teaching the Holocaust issue): 15–23.

Laffin, D. (2000a) 'My essays could go on for ever: using Key Stage 3 to improve performance at GCSE', *Teaching History*, No. 98 (Defining progression issue): 14–21.

—— (2000b) 'A poodle with bite: using ICT to make AS Level more rigorous', *Teaching History*, No. 101 (History and ICT issue): 8–16.

Martin, D. (1998) 'The Hopi is different from the Pawnee: using a datafile to explore pattern and diversity', *Teaching History*, No. 93 (History and ICT issue): 22–7.

Mountford, P. (2001) 'Working as a team to teach the Holocaust well: a language-centred approach', *Teaching History*, No. 104 (Teaching the Holocaust issue): 28–33.

Ofsted (2000a) *Subject Reports 1999–2000: Information Technology*, London, Ofsted.

Ofsted (2000b) *Subject Reports 1999–2000: History*, London, Ofsted.

Pitt, J. (2000) 'Computing on a shoestring: extending pupils' historical vision with limited resources', *Teaching History*, No. 101 (History and ICT issue): 25–9.

Public Record Office (PRO) Education site '*Learning Curve*'. Available online: http://learningcurve.pro.gov.uk

Qualifications and Curriculum Authority (2000) *Key Skills Specifications*. Available online: www.qca.org.uk/nq/ks/keyskills_2000.asp

Riley, M. (2000) 'Into the Key Stage 3 history garden: choosing and planting your enquiry questions', *Teaching History*, No. 99 (Curriculum planning issue): 8–13.

Smart, L. (1998) 'Maps, ICT and history: a revolution in learning', *Teaching History*, No. 93 (History and ICT issue): 28–31.

Sutton, P. (2001) 'Preparing for history teaching in the digital age', *Teaching History*, No. 102 (Motivation and inspiration issue): 45–7.

Turtle, J. (2000) 'Serving up documents whole', *Teaching History*, No. 101 (History and ICT issue): 48.

Walsh, B. (1998) 'Why Gerry likes history now: the power of the word processor', *Teaching History*, No. 93 (History and ICT issue): 6–15.

5 Relating the general to the particular

Data handling and historical learning

Dave Martin

One of the trends in professional historical writing since the early 1990s has been the growing focus on telling the big narrative through a multiplicity of smaller narratives. Some of these small stories confirm that big narrative; others contradict it. The success of two bestsellers, *Stalingrad* by Antony Beevor (1998) and *A People's Tragedy* by Orlando Figes (1996), show how popular this approach is with the wider reading public. The question to ask is, why have they sold so well? My answer would be that by concentrating on individuals these historians engage our interest in our fellow human beings. It is the people in the past who we want to know about, to think about and to feel empathy for. Yes, we are interested in understanding the big events but we need to make sense of these in terms of their impact on the lives of ordinary human beings.

This trend has been reflected in developments in school history in England and Wales. In the years following the introduction of the National Curriculum, history teachers felt constrained by its perceived content demands. Those of us working with a wide range of history teachers during that time, remember how often the fear was expressed that history would become a dreary catalogue of people and events with limited explanation of their significance. This was seen as a backward step, especially after the 'skills' and 'evidence' revolution of the 1970s and 1980s, much of which was characterised by a new emphasis on depth. It looked like the return of the dry 'outline' studies of the 1950s. In the 1990s, however, as a result of revisions made to the National Curriculum and history teachers' growing confidence and skill, innovative approaches to handling and overcoming 'content overload' have developed. These initiatives have involved a more positive approach to the 'big' story – or the 'overview' as history teachers now call it – and a greater skill in managing connections between the big stories and the small stories in pupils' learning.

The trend is well described by, and owes much to the work of, Michael Riley (1997, 2000): 'Over the last few years rigorous, challenging and intriguing historical questions have become a sound basis for planning quality learning in history' (Riley 2000: 8). The historical questions he refers to are the overarching enquiry questions that govern a number of history lessons. Sometimes these enquiry questions could be described as overview questions ('big' stories), sometimes depth ('small' stories), and sometimes a deliberate mixture of both. Only if pupils are helped to *relate* the big picture to the smaller details, and vice versa, will they be able to understand what is going on in the past and make sense of the actions of the people they find there. In history, pupils need both the bird's-eye view and the close-up detail. Too much of one without the other can lead to distortion or to knowledge inadequate for effective enquiry. Through in-service training, textbook writing and influential professional writing Riley has developed a rigorous rationale for framing and blending these key questions or 'enquiry questions'. The interplay of overview and depth is critical within that rationale.

It is within this aspect of history planning and teaching that database work makes a direct and unique contribution. This is why the NCET–HA publication on the use of data handling that I co-authored was entitled *Searching for Patterns in the Past* (1998). The use of databases in the history classroom has been slowly growing and many of the documented examples are about the interplay between the big narratives or analyses and the smaller details. Because of the volume of data that a database can store, and the sophistication of its manipulation tools, pupils can be taught to look for worthwhile patterns, to frame hypotheses about 'big stories', to question accepted pictures of the long-term view and to place interesting little details and stories into broader historical contexts that they have set up and tested for themselves.

For example, one of the key questions a history teacher might want to pose of the Roman Empire is: why did it fall? In order to answer that question in a meaningful way, pupils must consider aspects of the reigns of many emperors to find the patterns and trends that, over three centuries, led to the fall. The best way to do that is by using a data file of emperors. Of course, it is interesting for pupils to study an individual Roman emperor in depth, but such a depth study acquires wider historical meaning only if it contributes to the overview, to the resolution of some searching analytical question (BECTa 1998; HABET 1992).

But the overview–depth relation works both ways. Too much concentration on the bald facts and endless figures of a succession of emperors would tend to excessive abstraction. Children and teenagers

need to be motivated by the *human* connection. Data files can take us into the small stories, too, raising fascinating questions for further enquiry at the detailed, or local, level, and helping students to think about the value and function of those questions within a wider picture. This, then, is the special contribution of the data file in history, borne out by much of the most influential and recent practice that has developed within history classrooms: it provides teachers with a rigorous and motivating tool for linking big and small, overview and depth (e.g. Alfano 2000; Atkin 2000). While there are many ways of linking overview and depth in pupils' minds, the speed and functions of ICT support this process in distinctive ways that would be hard to achieve with conventional resources. The following four case studies illustrate this in detail.

What was the experience of the Great War for the people of Dorchester?

At the time of writing, within England and Wales the First World War is invariably taught in Year 9, the last year before examination classes begin. It may also be taught in Year 10, where history departments have chosen it as an option within a GCSE specification, ready for examination at 16+. The Great War 1914–19 is certainly a 'big' event, potentially yielding myriad lines of enquiry. The data file to be found on the Commonwealth War Graves Commission website (www.cwgc.org) provides an ideal opportunity for pupils aged 13–16 both to investigate the lives of individuals and to do so for a clear historical purpose.

This searchable online data file contains information on the 1.7 million members of the Commonwealth's forces who died in the First and Second World Wars. Pupils need a focus to help them to come to grips with this mass of information. This is true of any data file, large or small. In the first place, pupils need guidance on searching. Their directed enquiries will help them to understand what information there is in the data file, which in turn will enable them to devise suitable enquiry questions of their own. It is interesting to note that a growing number of practising history teachers are now describing the teaching techniques necessary for this process to work well. Increasingly, expert teachers are detailing the types of question and hypothesis that they model to their pupils to ensure that those pupils are then able to undertake meaningful enquiries of their own. Dave Atkin, an advanced skills teacher in Gloucestershire, has been particularly helpful and influential within the history education community for articulating the detailed planning and careful teacher interventions that are necessary if pupils are

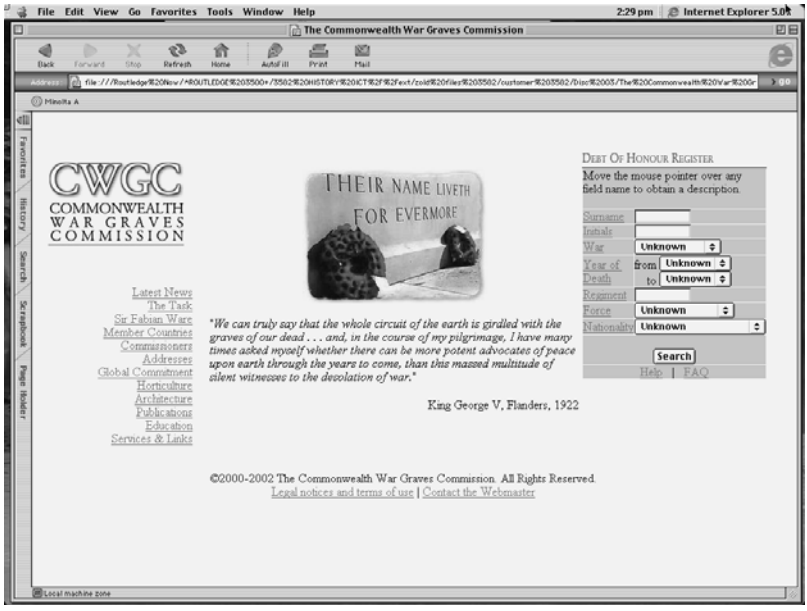


Figure 5.1 The Commonwealth War Graves Commission website

to search and sort effectively, framing and testing genuinely *historical* hypotheses rather than merely hunting for information (Atkin 2000).

Just as Atkin linked his Domesday work in Year 7 with a local area, so, with the Commonwealth War Graves Commission website, one obvious route is to follow the local connection. In so doing, it is possible to meet the current requirement of the National Curriculum for history in England, introduced in 2000, for pupils to carry out an element of local history (DfEE–QCA 1999). Figure 5.2 shows one panel of the St Peter's Church war memorial in Dorchester in Dorset. Figure 5.3 shows another war memorial in the town that commemorates the deaths of the 38 Dorchester men who were part of the parish of Holy Trinity. It is similar to the war memorials to be found in every town and village of the country. It is a relatively straightforward task for the teacher to take photographs of these and to paste them into a word-processing file, either using a digital camera or else using a conventional camera and scanning the resulting photograph. This could then form the basis of a resource sheet for pupils.

Pupils could then be allocated, or ask to pick, an individual, perhaps one who shares the same surname, and then to search for that individual using whatever information the memorial gives them. This will vary

Figure 5.2 Single panel of the war memorial at St Peter's Church, Dorchester, Dorset

from just a name and an initial, as in the case of the St Peter's war memorial, to the much fuller information as in the Holy Trinity war memorial. Together with the Graves Commission website address (www.cwgc.org) and some simple questions and advice, pupils will have the structure they need to work with the mass of information. Whatever additional information pupils find out about the place and manner of an individual's death from the website could be written down or pasted into the pupils' working document.

The pupils' next task might be to find out whatever they can about the events or places listed, using either additional computer resources such as the 'Spartacus' website, the encyclopaedia on the school network, or text and reference books. When all pupils have completed the task they might individually present their findings to the whole class, perhaps in chronological order from the earliest death to the last. What this then gives is a whole-class overview of the Great War. It will not be just a catalogue of the campaigns and great battles, although these will feature. Rather, it will be the very particular experience of war for the people of Dorchester. Pupils will have discovered 'the overview lurking in the depth' (Banham 2000).

Whatever a school's location, its catchment area will contain one or more war memorials, and you can guarantee that the fate of the men listed will contain some surprises for teachers and pupils alike. Consider

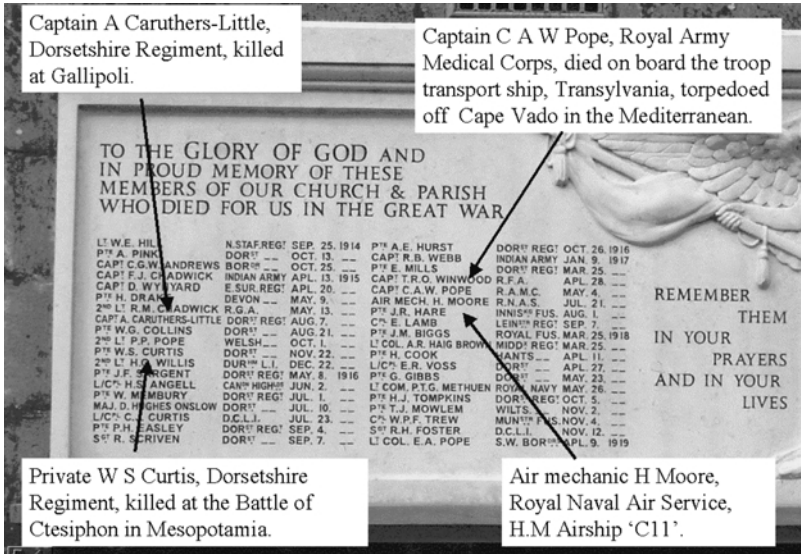


Figure 5.3 Photograph of the war memorial at Holy Trinity Catholic Church in Dorchester

the annotated photograph of the war memorial in Figure 5.3. The Commonwealth War Graves site contains some fascinating detail, as is shown by the four men highlighted. While, unsurprisingly, the majority of the men are recorded as having died in France and Belgium, on the Western Front, other theatres of the war emerge. There are four men killed in Mesopotamia, two at Gallipoli, one in Israel, and another at sea *en route* to the Salonika campaign.

There are possibilities here for the alert teacher to exploit. But the teacher does need to be alert. Without skilful teacher intervention pupils may just narrate what they have found out without considering its significance. What were these Dorchester men doing dying in such far-away places as Gallipoli and Mesopotamia? While the data file provides the pupils with information, it is the teacher's job to help them to understand the historical significance of what they find. Nor is this an *extra*: it is part of the work with the data file itself. The data file is not just information: it is a flexible method of *organising* information. Pupils need to think about their organisational principles if they are to find good leads and develop lines of enquiry that are likely to be historically profitable. This needs discussion and intervention, not abandoning pupils to go on a hunting spree.

What such an enquiry does is to place the individual within the big picture. We might discover that Private W. Membury of the Dorsetshire

Regiment turns out to be one of the 20,000 or more British soldiers killed on the first day of the Battle of the Somme. We might unearth Mr and Mrs Pope, who were parents of eleven boys and four girls. Three of their sons' deaths are recorded here. Research using the data file humanises the big picture. An enquiry entitled 'What was the experience of the Great War for the people of Dorchester?' (or similar) thus enriches pupils' understanding of the Great War beyond the usual big offensives and the trench conditions. The well-prepared teacher will know where the local war memorial is going to lead his or her class and can be ready with appropriate questions to challenge and deepen pupils' understanding and with back-up material on the more obscure but fascinating areas such as the airships of the Royal Naval Air Service.

So, what *did* happen at the Battle of the Little Big Horn?

It is not just the vast data file relating to the vast event that can help the history teacher. Consider the statement about the Battle of the Little Big Horn: 'Custer and all 225 of his command were killed.' This sentence appears in a revision guide for the American West GCSE depth study published in 2000. By writing like this, the authors are reinforcing the popular stereotype that General George Armstrong Custer and the Seventh Cavalry were wiped out at the Battle of the Little Big Horn on 25 June 1876. Compare this with Figure 5.4, a pie chart showing the actual fate of the 858 officers and men of the Seventh Cavalry, as well as of the scouts and civilians accompanying Custer at Little Big Horn.

This, of course, is illustrative of one of the constant difficulties that history teachers face. In order to make the complex events of the past accessible to our pupils we need to simplify things. The danger is that in so doing we actually get those events wrong. All of the men under Custer's immediate command during the battle certainly died with him, but it was not until noon on 25 June 1876 that he split his forces into four parts: those who remained under his immediate command and those commanded by, respectively, Major Reno, Captain Benteen and Captain McDougall. Many of the men with those three officers survived the battle.

Of course, a revision guide is an extreme example of over-simplification. The versions of events in the general textbooks about this battle generally give a fuller and more accurate picture. However, the constraints of classroom time will always lead to teachers and pupils talking in general terms about the battle and the Seventh Cavalry. This

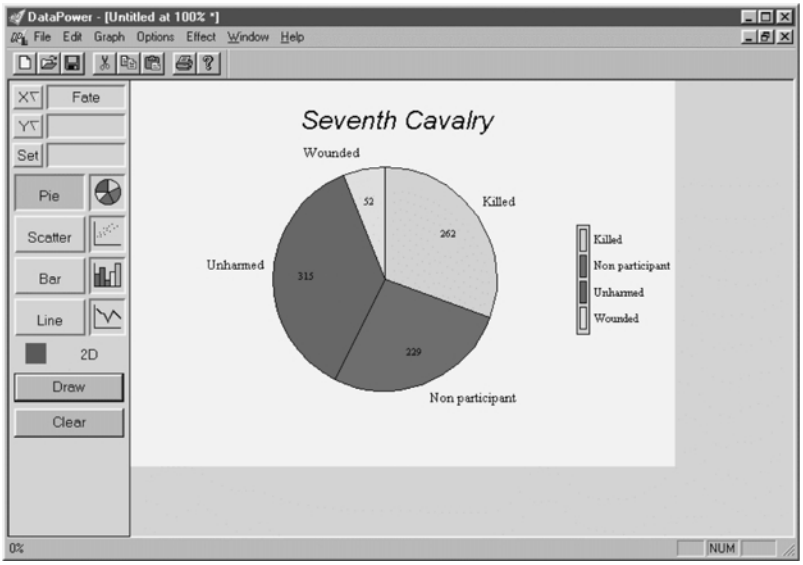


Figure 5.4 Pie chart showing the fate of the men of the Seventh Cavalry, US Army

is exactly the sort of problem where the well-constructed data file can enable pupils and teachers to get beyond the general to the particular.

The data file 'Seventh Cavalry' is based on the muster rolls of the regiment in 1876. Much of it has been taken from *The Little Bighorn, 1876* by Loyd J. Overfield II (1971). Additional material has since been added. It contains details of the 858 officers and men of the Seventh Cavalry plus the accompanying scouts and civilians under a number of headings (see Figure 5.5). A version of it is available on the Schools History Project website (www.tasc.ac.uk/shp).

On paper, the muster roll of the regiment would be very time-consuming to handle but as a computer data file it is swift and easy to manipulate. By training pupils to interrogate the information to extract meaning (again, see Atkin 2000) they are enabled, at a simple level, to check out the generalisations about the battle and to find exactly how many men were killed and wounded. Moreover they can go on to analyse the casualties company by company. It is very simple to allocate different companies to different pupils and then to ask them to find out what happened to the men in that company. Then, in the whole-class situation, away from the computers, the pupils can feed back their findings to produce a whole-class picture. This is the place where the teacher

can help pupils to explore what their findings mean. In this case, they are likely to find that the highest casualties occurred in those companies directly under Custer's command on the afternoon of 25 June, such as Company L. But there is more than that: of the seventy-one officers and men in Company L, twelve were not even at the battle. Instead they could be found in a number of other places, perhaps sick back at Fort Lincoln or in the base camp on the Powder River. Twelve others survived unharmed as they were with the pack train, several because their horses were so tired that they had become stragglers. Just one was wounded; the other forty-six died with Custer.

All of this is helping pupils to find out what actually happened at the battle. But an analysis by company can help pupils to move on to the more important question of 'why'? Some teachers might be using this data file as part of a sequence of lessons serving the enquiry title 'Was Custer responsible for the defeat of the US Army at the Battle of the Little Big Horn?' If that is the focus, then there are plenty of other source materials for pupils to use in conjunction with the data file in order to reach a judgement on this very popular enquiry. For example, after the battle, Major Reno and Captain Benteen had to answer the accusation that they should have supported Custer when he sent Trumpeter John Martin to summon them. Major Reno's report to General Terry, written two days after the battle, stated:

> I have had a most terrific engagement with the hostile Indians. They left their camp last evening at sundown moving due south in the direction of the Big Horn Mountains. I am very much crippled and cannot possibly pursue. Lieutenants McIntosh and Hodgson and Dr DeWolf are among the killed. I have many wounded and many horses and mules shot. I have lost both my own horses. I have not seen or heard from Custer since he ordered me to charge with my battalion (3 companies) promising to support me.
>
> I charged about 2 p.m., but meeting no support was forced back to the hills. At this point I was joined by Benteen with 3 companies and the pack train rear guard (one company). I have fought thousands and can still hold my own, but cannot leave here on account of the wounded. Send me medical aid at once and rations.
>
> M. A. RENO
> Major 7th Cavalry
>
> As near as I can say now I have over 100 men killed and wounded.

This last detail is something that the pupils can quickly check. The teacher can also suggest more difficult enquiry lines to challenge higher-

attaining pupils. For example, some pupils could be set to look for 'stragglers' in the data file. What this will reveal is those men whose horses gave out and those who had to stay with the pack train. The clever teacher can help pupils to connect this with the argument that Custer drove his men too hard in his hurry to catch the Indians and gain the glory. Alternatively, some pupils could be asked to look for the 'deserters' in the data file. This will reveal the forty men recorded as deserters. Again, these pupils can be challenged to think about the significance of this high number of deserters. Is it to do with the problem of the low quality of recruits to the US Army suggested by some sources or to do with the poor treatment of his men by Custer suggested by other sources? Both of these illustrate the higher-level thinking that skilful use of the data file can lead to.

It is also possible for pupils to explore the battle from the perspectives of the many individuals. Take Trumpeter John Martin, an Italian immigrant who has anglicised his name (see Figure 5.5). Like all but three of Company H, he is a survivor, even though he was with Custer for a time on the day. How would his view of the battle differ from that of others such as Corporal John T. Easly, Company A, who survived to enjoy his promotion to sergeant, or from that of the wounded Second Lieutenant Charles A. Varnum, commander of the Indian scouts? And what about Private John Porter, Company I, 'safe' in prison at Columbus Barracks in Ohio or Private Charles L. Anderson, Company C, location unknown, who deserted early in June? A simple task asking pupils to choose any one man from the regiment who was still alive on June 26 and then to write a brief letter from that man describing the battle from his perspective leads to a fascinating class discussion of multiple viewpoints of the same event.

Here is another opportunity for the teacher to reinforce pupils' earlier work on immigration into the USA. Just like the rest of American society, the Seventh Cavalry contained many immigrants – 320 in all from seventeen different countries. Overcoming language difficulties can be seen from this excerpt from the *Army and Navy Journal*, in 1867, complaining: 'I have recently had an addition to recruits in my company, and when I wish to instruct them, I find myself obliged to speak French, German, and even Arabic, for I have a Persian.' While no Persians were present at the Little Big Horn, a Greek certainly was: Private Alexander Stella, who was killed. All of this rich detail can be brought to pupils' attention in the space of just one lesson in the computer suite questioning the data file, something that is not just possible but highly desirable within the constraints of the examination syllabus. It is the teacher's role to ask pupils the right questions, to stop them just printing

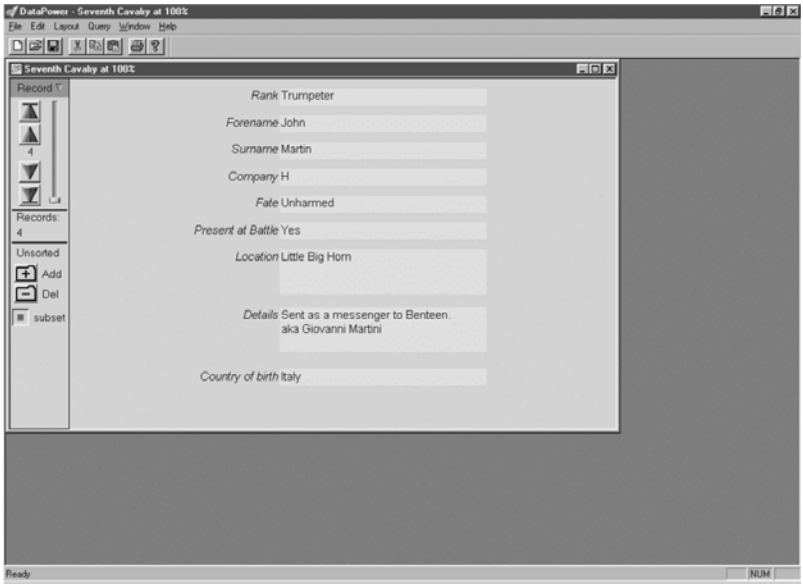


Figure 5.5 Data file screenshot of the record for Trumpeter John Martin

pretty colourful graphs and noting down information and to force them to think. Indeed, by Year 9, if ICT use has been 'regular and progressive' (Ofsted 2000), pupils should be practised in framing and evaluating their own questions within similar enquiries.

In this kind of activity, pupils have worked as historians engaging with the detail on which the generalisations are later built. They will have sifted through the information to find evidence to support their conclusions. By enhancing their historical understanding, their curiosity and their motivation to enquire, the activity will raise their achievement at GCSE. (For a similar example, see my chapter on the use of a data file of the Spanish Armada in Martin 1997.)

What were the problems facing medieval kings?

It is not just large data files that can help the classroom teacher. Small data files also can move pupils between the general and the particular. Take, for example, the typical treatment of the Middle Ages current in history departments in England and Wales. The National Curriculum currently requires teachers to give pupils some knowledge and understanding of the period 1066–1500. Teachers usually begin with an examination of the Norman Conquest and then stop off at various points

over the next 450 years to examine the relations of the monarchy with the Church, with the barons, and with the peasants and their neighbouring monarchs. They will also look at life in town and village. One of the key difficulties for teachers is how to help their pupils to put these disparate pieces together within the big picture. Once again IT can help. Pupils can be asked to set up small data files to develop their thinking and to help them to recognise patterns. (See, for example, my description of a Year 7 class gaining an overview of the indigenous peoples of North America in Martin 1998).

Year 7 pupils can set up their own data files on medieval kings. This 'set-up' process is both surprisingly straightforward and surprisingly rich in the learning that it affords, especially in relation to historical analysis and the nature of historical significance. Indeed, the setting-up phase is a necessary prelude to the enquiry phase, as the former gives pupils the understanding to make the latter work. Pupils should each be assigned a king and told to research him using a data-capture sheet, possibly as a homework task. The teacher can then check the pupils' completed sheets for historical accuracy. Next, the pupils can type their chosen king into the blank data file previously set up by the teacher (see Figure 5.6). The structure of this blank data file should exactly match the structure of the data-capture sheet. It is designed to produce the sort of pie chart shown

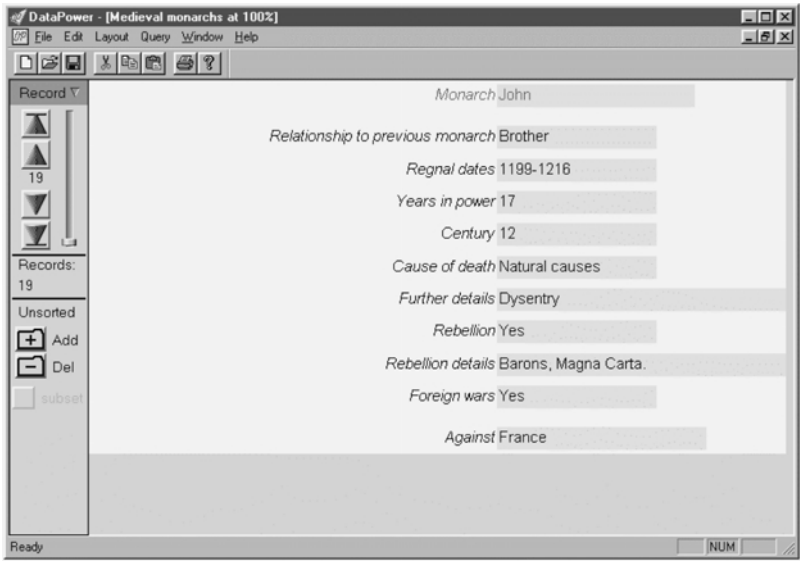


Figure 5.6 Screenshot of a data file on medieval kings giving a record for King John

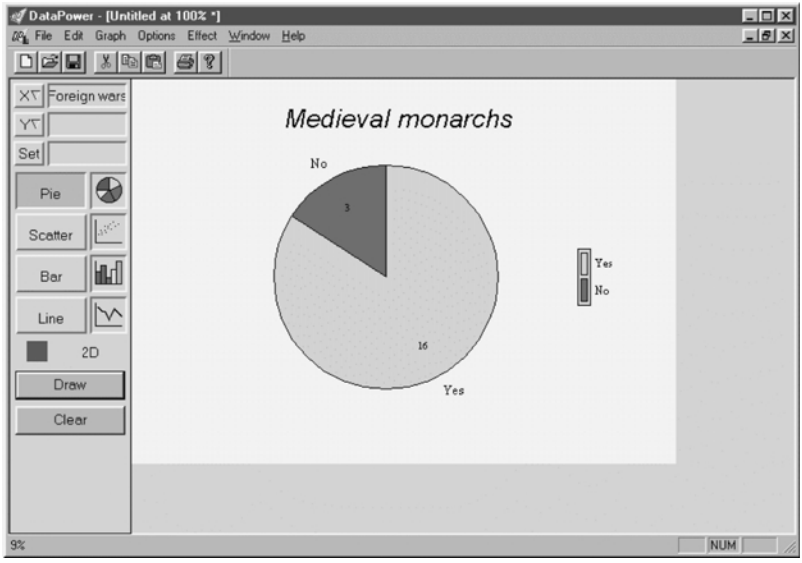


Figure 5.7 Pie chart to show how many kings had fought foreign wars

in Figure 5.7. This is the key point in designing and setting up small data files. Teachers must begin with the questions they want the pupils to ask, and decide how these can best be answered and displayed using the database software. A similar activity about rulers in the period 1500–1750 is described in *History Using IT: Searching for Patterns in the Past using Databases and Spreadsheets* (NCET–HA 1998). The fact that pupils first research and then set up the data file ensures that they clearly understand what is in it and how it can be used. Another strategy for making pupils familiar with the contents of a data file is provided by Rob Alfano (2000). He describes a 'fun and fairly competitive' detective task using a data file with his Year 8 pupils.

After setting up the data file, pupils can move on to the enquiry part of the activity. Pupils use their data files to ask a number of questions, such as:

- How many Kings had problems with the Church?
- How many Kings had problems with rebellions?
- How many Kings fought foreign wars? Who against?

Pupils then graph the answers. These build together to give the pupils an overview of the period which they can add to by asking their own

questions once they understand the data file and how it can help their historical thinking. They deliberately might try to frame questions that the datafile can and cannot answer. A good question, one that the data file will be reasonably helpful with, would be: 'How big a problem was rebellion for medieval kings?' Interrogating the data file will swiftly tell pupils that thirteen kings faced rebellions. They might then find some supporting detail concerning King John, who was forced to sign Magna Carta, or concerning King Richard II, who faced a rebellion by the peasants.

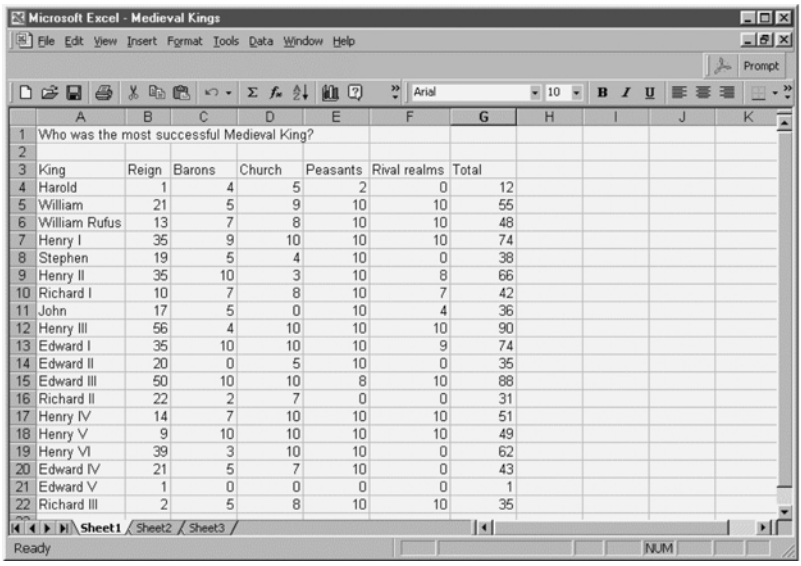
Teachers can lead pupils towards this kind of focused framing of questions, and must assiduously ask pupils about the quality or value of the question and the extent to which the data file can help. They must listen to pupils' discussions and ask many questions pertinent to the issue or problem with which pupils appear to be wrestling:

- What does this graph mean?
- Are you sure it shows that? What other conclusion could you draw?
- To how many kings does this apply?
- What evidence would you use to support your point that many kings had problems with rebellions?
- Can you work that out using *this* datafile, or would you have to go elsewhere?

The end result is that pupils gain an improved understanding of the whole period (the 'general'), by looking at the detail of the reigns of the individual kings (the 'particular').

Who was the most successful medieval king?

Another approach to giving an overview of the period 1066–1500 is to invite pupils to decide who was the most successful medieval king. The class might start by defining what makes a 'successful' king and then devise a system by which to measure each king's success. One way to do this is by using spreadsheets. Figure 5.8 shows the sort of simple spreadsheet that can be produced by Year 7 pupils. The class must first decide on the categories against which they want to measure a king's success. In this case they are: length of the king's reign and success in dealing with their barons, the Church, the peasants and rival rulers in France, Scotland, Ireland and Wales. (Pupils need to know at this stage that they will shortly be giving a score out of ten for each category.) Each pair of pupils should then be given responsibility for providing a brief summary of a king's reign, referring to each of those issues.



Microsoft Excel - Medieval Kings

File Edit View Insert Format Tools Data Window Help

Prompt

Arial 10 B I U

	A	B	C	D	E	F	G	H	I	J	K
1	Who was the most successful Medieval King?										
2											
3	King	Reign	Barons	Church	Peasants	Rival realms	Total				
4	Harold	1	4	5	2	0	12				
5	William	21	5	9	10	10	55				
6	William Rufus	13	7	8	10	10	48				
7	Henry I	35	9	10	10	10	74				
8	Stephen	19	5	4	10	0	38				
9	Henry II	35	10	3	10	8	66				
10	Richard I	10	7	8	10	7	42				
11	John	17	5	0	10	4	36				
12	Henry III	56	4	10	10	10	90				
13	Edward I	35	10	10	10	9	74				
14	Edward II	20	0	5	10	0	35				
15	Edward III	50	10	10	8	10	88				
16	Richard II	22	2	7	0	0	31				
17	Henry IV	14	7	10	10	10	51				
18	Henry V	9	10	10	10	10	49				
19	Henry VI	39	3	10	10	0	62				
20	Edward IV	21	5	7	10	0	43				
21	Edward V	1	0	0	0	0	1				
22	Richard III	2	5	8	10	10	35				

Sheet1 Sheet2 Sheet3

Ready NUM

Figure 5.8 Screenshot of a spreadsheet used by Year 7 pupils to decide who was the most successful medieval king

The class can then be taken to the computer room. After work on their spreadsheets, all pupils can then report back on their enquiry. Teachers would be right to observe that, thus far, there is very little different here from how teachers have approached this type of activity in the past, beyond the fact that the spreadsheet software will do the addition for the pupils. There is, however, one key difference: spreadsheets are designed to model a situation and to allow the user to explore the consequences of changing one or more of the variables. That is exactly what the pupils will be able to do.

The pupils' whose work resulted in the spreadsheet shown in Figure 5.8 would conclude that Henry III was the most successful medieval king. If prompted or questioned by their teacher they could begin to experiment. History teachers often comment that spreadsheet modelling in history is impossible because it becomes counter-factual. But in this instance the variable that pupils are experimenting with is analytic, not factual. The idea is that pupils experiment with the weighting accorded to each factor. That is exactly what historians do all the time: they ascribe weight, or significance, to particular factors before reaching a judgement. If pupils were to change the formula in the 'Total' column to *halve* the weighting given to length of reign, they might change their mind about

Henry III being the most successful king. That would be a legitimate analytic shift, on the basis that length of reign was just a matter of health, and is downright misleading in the case of a king like Henry VI who lived for quite a long time and yet in many ways was a most unsuccessful king. If pupils made this change, Edward III would emerge as the most successful king. In another case, they might choose to give a greater weighing to rival realms on the basis that protecting your own lands while gaining new territory was a key indicator of success in the medieval period. Alternatively, they might decide greatly to reduce the weighting of the peasants, after reflecting on their relative unimportance to a monarch's success. Once again this would alter the original conclusion. Pupils would be both drawing on and adding to their historical knowledge in making these tentative judgements about the way in which historians can construct the idea of *success* in medieval kingship.

At this point, some pupils might be given additional information. For example, they might be directed to a presentation of the changing English domination of medieval France that can be found on the Public Record Office's 'Learning Curve' website (www.pro.gov.uk). Of course such a crude modelling system does not produce a 'right' answer. That is not its intention. But it can meet a number of important learning objectives. Teachers might choose to draw on one or more of the following in formulating objectives for some of their lesson plans:

- The activity can force pupils to check their overall conclusions against the reigns of individual kings. This relates both to this activity and topic, and to wider work. It will encourage a disposition to check out the detail before making sweeping statements about success or failure of a ruler or any other figure with power or responsibility.
- The activity helps pupils to start to uncover the assumptions that they, historians and other interpreters sometimes use when ascribing weighting or significance to a particular factor.
- The activity deepens pupils awareness of the provisionality of historical conclusions. Alfano (2000) has discussed the role of spreadsheets and data files in teaching Year 9 about provisionality using more complex statistical data.

Given these wider purposes, a teacher who simply left the activity after a bit of addition and minimal discussion would be wasting the opportunity, and perhaps leaves pupils with simplistic or distorted views of how historical analysis takes place. The post-activity discussion – whether held as a whole class, or carefully structured and staged in small

groups – would be critical in helping pupils to see how their spreadsheet activity had shed light on both medieval kingship and the historical process. In the sequence of lessons into which such an activity might be placed, history teachers would want to set and assess specific objectives for pupils' learning in each lesson. The learning outcomes would be evident in pupils' decision making and oral responses during discussion. Teachers would be looking for types of knowledge about kingship (overview and depth aspects), ability to discuss significance of issues and facts for a particular enquiry, ability to use the spreadsheet tool to ask and answer *historical* questions and, above all, pupils' growing 'sense of period', evident in all of these outcomes.

Conclusion

Each of these four examples of the use of ICT is distinctive: different year groups, different abilities, different types of data file or spreadsheet; different historical periods, different historical issues and processes, and so on. But they have a number of things in common. First, each works because it fits within the historical context of the larger enquiries that teachers and pupils are already working on. The computer remains just one of a number of different resources being used. Second, the examples depend on easy-to-use software that matches the level of the pupils' ICT skills to ensure that very little lesson time is spent discussing technical issues. Third, each is dependent on teachers' careful planning and skilful intervention, with the focus firmly on the history. Without the latter in particular, pupils' work can so easily be mechanistic and low level. Such use of ICT allows teachers to help their pupils to see behind the general view of the past to the particular stories of the individuals on which that general view is based, and to explore the relationship between depth and overview. In every case this will strengthen pupils' understanding of the past while engaging their interest in its people.

References

Alfano, R. (2000) 'Databases, spreadsheets and historical enquiry at Key Stage 3', *Teaching History*, No. 101 (History and ICT issue) 42–7.

Atkin, D. (2000) 'How can I improve my use of ICT? Put history first!', *Teaching History*, No. 99 (Curriculum planning issue): 42–9.

Banham, D. (2000)) 'The return of King John: using overview to strengthen depth', *Teaching History*, No. 99 (Curriculum planning issue): 22–31.

Beevor, A. (1998) *Stalingrad*, London, Viking.

Commonwealth War Graves Commission. Online: www.cwgc.org

DfEE–QCA (1999) *History. The National Curriculum for England*, London, DfEE–QCA.

Figes, O. (1996) *A People's Tragedy*, London, Random House.

HABET (1992) *Teaching History Using IT*, London, Historical Association.

Martin, D. (1997) 'Spanish Armada: the classroom use of a database', in A. Martin, L. Smart and D. Yeomans (1997) *Information Technology and the Teaching of History: International Perspectives*, Amsterdam, Harwood Academic Publishers.

—— (1998) 'The Hopi is different from the Pawnee: using a data file to explore pattern and diversity', *Teaching History*, No. 93 (History and ICT issue): 22–7.

NCET–HA (1998) *History Using IT: Searching for Patterns in the Past using Databases and Spreadsheets*, London, BECTa–HA.

Overfield II, Loyd J. (1971) *The Little Bighorn, 1876*, Lincoln, University of Nebraska Press.

Ofsted (2000) *Subject Reports 1999–2000: History,* London, Ofsted.

Public Record Office (PRO) Education site '*Learning Curve*'. Online: http://learningcurve.pro.gov.uk

Riley, M. (1997) 'Big stories and big pictures: making outlines and overviews interesting', *Teaching History*, No. 88: 20–22.

—— (2000) 'Into the Key Stage 3 history garden: choosing and planting your enquiry questions', *Teaching History*, No. 99 (Curriculum planning issue): 8–13.

6 ICT + Maps

A significant development for teachers of history

Lez Smart with Miriam Norton

The aims of this chapter

This chapter explores how recent developments in ICT have created new opportunities for using maps in the teaching and learning of history. These developments have reduced costs significantly, increased the accessibility of maps and, most dramatically, have created new opportunities to *interact* with maps. These advances have not always been driven by an educational agenda, but the educational opportunities they offer are unprecedented and are, I believe, very exciting for all history teachers.

The speed of development within the whole sphere of ICT and its impact on our lives is often the subject of comment. The Internet, with all its 'www.' addresses in common daily use, is in 2001 still only a few years old. Schools have, for a variety of reasons, generally taken some time to obtain, explore and make effective use of technological developments such as radio, TV, tape-recorders, video cameras and computers, and this is likely to be the case with ICT and maps. What follows is written as a small contribution to the ongoing exploration of how to make the teaching and learning of history both more effective – and more enjoyable, through the use of ICT with maps.

First, an examination of the contribution of maps to the effective teaching and learning of history in the pre- and post-ICT eras is undertaken. This is followed by a detailed practical guide to gaining access to historical maps for your own area held by the Ordnance Survey (OS). The final section, written in collaboration with Miriam Norton, explains how one teacher's use of the history + maps + ICT combination with a group of pupils with learning difficulties had a significant impact on learning.[1]

Introduction

Somehow, the use of maps has never achieved the same status as many of the other teaching and learning resources at the disposal of the history teacher. Documents of all types, buildings and sites, oral accounts, artefacts and visual images (portraits, photographs and films) are all acknowledged as key sources in historical enquiry. The latest version of the English and the Welsh National Curriculum (DfEE–QCA 1999) details a comprehensive list of the 'sources of information' which children should work with in the secondary years of schooling. Under the section headed 'Historical enquiry', it states:

> Pupils should be taught to: identify, select and use a range of appropriate sources of information including oral accounts, documents, printed sources, the media, artefacts, pictures, photographs, music, museums, buildings and sites, and ICT based resources as a basis for independent historical enquiry.
>
> (DfEE–QCA 1999)

There is no specific mention of maps. Of course, these official requirements do not preclude the use of maps, and 'printed sources' is an inclusive term. However, with so much that teachers of history are *required* to do, a sceptical response to any suggestion to include anything beyond those requirements would be perfectly understandable. This is acknowledged and forms the starting point for what follows. Unless the teacher is aware, or is persuaded, that maps can make a significant contribution to the effectiveness of her teaching and her pupils' learning in history, there is very little chance of her finding the time to explore the latest ICT developments in this area. As Terry Haydn points out in Chapter 1, 'a teacher's time' is currently one of the most precious and over-stretched resources in education, with many competing demands on it. Unless a positive, convincing and *explicit* case is made, there is a danger that components of history which are not 'spelled out' in curriculum documentation will not be fully considered.

In an earlier study I explored the factors that affect 'the take up' of any innovation by teachers, particularly with regard to history teachers' use of ICT generally (Smart 1997: 95–6, 147–53). It was found that the individual teacher needed to be convinced that the proposed innovation would make a significant contribution to her *existing* agenda for any innovation to be taken on board successfully. This failure to realise, and then address, the crucial issue of 'the management of innovation' continues to be a critical weakness with many of the initiatives in education today and over the last decade.

The starting point must therefore be an exploration of how maps contribute to improving the teaching and learning of history for both teacher and pupils.

Maps and their contribution to the successful teaching of history

There is nothing new in the case for the use of maps in the teaching of history in schools. At the turn of the twentieth century a book entitled *Essays on the Teaching of History* (Archbold 1901) contained the chapter 'The teaching of history in schools: practice'. Referring to the 'instruments of history teaching', the author identified 'text books, illustrations and atlases' (p. 81) as the three main ones. He wrote: 'An Atlas of Historical Geography is, of course, an indispensable instrument in the teaching of history: indeed its necessity is so obvious, and by this time so generally recognized, that it is superfluous to prove it' (Archbold 1901: 83; italics added).

Archbold devotes several pages to detailing and evaluating the maps available. The tone adopted clearly suggests that the use of maps was established practice at the turn of the twentieth century. A cursory examination of some of the major publications written for teachers of history show that maps continued in this established role through to the introduction of the National Curriculum in England and Wales.[2]

More recently, the years immediately prior to the introduction of the National Curriculum saw Her Majesty's Inspectorate (HMI) produce a series of booklets on the different areas of the curriculum. Each set out to provide an overview, a 'state of play', highlighting positive features and drawing attention to areas of concern in relation to the effective teaching and learning of the subject. As sources, their status is of some importance as the information presented came from the national monitoring surveys undertaken by the Inspectorate. They are now important historical documents in their own right as they provide a 'base-line' account of the point from which the National Curriculum began and against which it will eventually come to be evaluated.

The two reports concerned with history (DES 1985 and 1989) are particularly relevant to the focus of this chapter. From these it is possible to identify what, if any, role maps had been playing in the teaching and learning of history, and the form which this contribution took. The two HMI reports show that maps featured prominently in the 'best' history teaching in the primary years (as evidenced by the exemplars they provide), and that maps also formed an established part of secondary-school history. The primary-level exemplars are illustrated

with photographs, with 8 out of the 14 featuring children using maps in different ways. The fact that the reports featured a further eleven illustrations containing maps clearly establishes that maps were being widely used in what was identified as 'good practice' in school history. The 1985 (combined primary and secondary) report is the less expansive of the two, but from both of them it is possible to identify that the use of maps took two forms: first, as a primary source of information; and, second, as an effective tool for synthesising and communicating what has been learned. These two roles are considered in detail below.

The National Curriculum came into existence in 1988 with the requirements for history coming into force three years later (DES 1991). It is worth remembering that this was *the* first time that central government had taken statutory powers to determine the history which was to be taught in schools. As such, these requirements and the supporting guidance documents had tremendous authority in the early 1990s. In the light of the HMI surveys regarding 'good practice' in the period immediately preceding these developments, one might reasonably have anticipated a secure place for the use of maps in both the primary and secondary years. Surprisingly this was not so. One searches in vain for *any* reference to the use of maps in the Statutory Orders for history, whether for early years, primary- or secondary-aged pupils – and this in spite of the fact that, for each of these age phases, the sources to which children are required to be exposed to are listed. (For Key Stage 3, these read: 'oral accounts, documents, printed sources, the media, artefacts, pictures, photographs, music, museums, buildings and sites, and ICT-based sources' (DfEE–QCA 1999: 20).) When one considers that the original Orders for KS2 included 'exploration and encounters' and a range of non-European societies, including Benin and Mesopotamia, and KS3 included the 'Roman Empire' and 'Expansion of Trade and Industry', this is, to say the least, surprising.

Of course maps weren't prohibited or excluded, and, obviously, could be deemed to be included within the 'documents and printed sources' category. While not forming part of the Statutory Orders, maps were also notably absent from the non-statutory guidelines which were produced to advise teachers as to the 'best way' of fulfilling the statutory requirements. A comprehensive read reveals just one solitary reference in the whole document to the concept of 'map', this appearing in the local history sources recommended (coming after parish records and school records).

In the modifications to the first National Curriculum model, which followed in 1995 and 1999, nothing changed with regard to the status of 'maps', and there is no specific mention of maps in the curricular

specifications for any of the Key Stages. There is perhaps a paradox here, in that just as new technology was making possible a wide range of exciting opportunities for the use of maps in history teaching, their position in the 'official' and published literature on school history appeared to have been marginalised.

By the time the 'Curriculum 2000' model came into effect, a massive investment was underway in making information available to teachers via the Internet rather than on paper. An evaluation of the effectiveness of this Internet access remains to be undertaken. Of relevance here is the re-emergence of the practically orientated non-statutory guidance of the initial model which has been 'lost' in the subsequent changes. Now produced by the Qualifications and Curriculum Authority, it consists of detailed advice on how teachers might address the requirements of Curriculum 2000. Although often guilty of adopting a somewhat linear and mechanical approach to the teaching of any particular historical topic, there are many useful ideas to be found there. Interestingly, it saw the re-emergence of an 'official' acknowledgement of the value of maps in the teaching and learning of history (see www.standards.dfee.gov.uk/schemes2/secondary_history/his11). The QCA guidance on maps concentrates on their use in the traditional role as sources of information and, rather disappointingly, fails to consider how they can also be used as a means of synthesising and communicating what has been learned, in the way that HMI began to identify over a decade earlier.[3] As the desirability of pupils undertaking independent enquiry is an underlying theme in the QCA guidance, this is in some ways a missed opportunity to present teachers with ideas on how such independent working can be achieved, and how the recent developments in ICT can contribute to it. Successful differentiation forms one of the key criteria when Ofsted inspect history departments, and, as the example below illustrates, the 'ICT + maps' combination has much to offer here.

However, before looking at this in practice in the classroom, there is a prerequisite that needs to be met, which is how to actually obtain appropriate maps to work with, without undue difficulty or expense. A key claim for the use of ICT in history teaching and learning is that it can 'facilitate', and the next section clearly illustrates this in relation to the use of maps in the teaching of history.

ICT and access to maps

In my early teaching career my access to maps was from three sources: what I could buy from the OS; facsimiles produced and sold by the

British Museum;[4] and, particularly valuable at the time, copies I could persuade the planning department of my local council to let me have when they had finished using them.

The fact that the latter were large scale and free more than compensated for the blue pencil lines and annotations the planners had added when working on them. A few years later the arrival of a photocopier at the Teachers' Centre and eventually one in school made a big impact on teachers' access to maps, as those which were too valuable or fragile for classroom use could be easily copied.[5] The educational advantages of this were twofold. The teacher could make the information on the map more accessible for pupils, as they could have a copy each to peruse closely themselves. Of greater significance, however, was that they could now *interact* with this source. By shading in key features, using different colours related to a key, or by annotating other important features, a degree of working *with* the map was created. The educational significance in relation to learning in history is explored further in what follows and is illustrated in the example presented.

However, there were still major drawbacks. You could obviously make copies only of what you already had access to, copyright permitting. You also had no control over which features appeared at the centre or edges of the maps you used. The OS grid system had no flexibility within it and I can remember having to buy several 25-inch squares because the local area we were studying was in the corner and spread across several sheets. Somewhere, there may be ex-pupils who still have exercise books containing my attempts at holding these together with paper clips under the photocopier lid to try to obtain a copy which had the local area on one sheet. Because of the contribution I believed the map made to the pupils' historical understanding, it was worth the aggravation, but there is no need for such contortions today. I would argue that access to maps, especially older ones, has never been easier, and that the situation is likely to get even better in the coming years. As ever, the developments in this field have not been driven by the needs of those in education (see Smart 1998a), but we can benefit from them nonetheless.

Obtaining a historical map specific to your requirements

Figure 6.1 illustrates just how much progress has been made in making maps more accessible to teachers of history. It takes the form of a step by step guide to using the Internet to:

(a) explore the range of historical maps that are held by the OS for your area;

1. Go online and type in www.old-maps.co.uk
2. An introduction appears on screen, explaining that the site provides free access to first-edition historical maps of Great Britain dated between 1846 and 1899. The site allows you to view historical maps simply by entering a place name, an address or a grid reference. The site also allows you to buy more detailed maps from the online store. This enables pupils to find out where their ancestors used to live or check out what their neighbourhood looked like 100 years ago.
3. Scroll down to the box in which to enter the location of interest to you. Here you can enter a village/town/district name, or quite simply a postcode.
4. You will be presented with a map of the UK and a list of all the villages or towns which share that name. Use of the postcode will bring up just the one location.
5. You will now be presented with a dated Victorian map of your chosen location.
6. On the right there is a colour-coded zoom facility which makes looking in detail at areas of interest (i.e. individual buildings) very easy.
7. The map is centred on your initial location, but a mouse click anywhere else on the map now visible will re-centre it. This allows you to go beyond the screen shown – and to keep going as far as you wish. (NB. The 'Help' button is also worth a click, as it presents a half-screen of further information, including a beautiful key of the symbols used on the map and explanations as to other features.)
8. If you now click on the 'Buy maps' box another dimension of this service, which is particularly valuable to us as history teachers, is revealed (you make *no* commitment to buy a map by clicking this option).
9. Once on the 'Buy decorative maps' page scroll down through a page or so of text. You are then presented with a list of all maps the OS has available for the area you initially identified. For my own search location I was presented with thumbnails (small pictures) of maps for 1865, 1871, 1895, 1896, 1897, 1913, 1914, 1919, 1935 and 1938. The scales vary from 1:2,500 through to 1:10,000. These thumbnail maps are intended to provide only an overview, and the current quality of these images is poor and is *not* the quality you get when you use the ordering system also present on this page.
10. To view the quality of purchased maps click on the 'View sample' box which appears just above the first of the thumbnail maps. The sample illustration map presented there is either of Buckingham Palace or Edinburgh Castle. Although of limited value to most teachers these do give a clear idea of the quality of the maps when purchased.[6]

Figure 6.1 How to obtain historical maps from the Ordnance Survey

(b) show how to customise these maps to your own purpose by placing the significant feature (i.e. your school) in the centre. (This is the process now known as 'site-centring');
(c) order this map so that it is delivered by email direct to your computer almost immediately, or by post if preferred.

A computer connected to the Internet is required.

This 'tour' of how to obtain historical maps from the OS was written in 2001, when the site was in its infancy and described as experimental by the OS. It will certainly have been improved by the time you read this. However, the point made here is that this access to the archives is a major development, even justifying the term 'breakthrough' for all teachers of history whether working with young children or advanced students. When I first explored the developments in the digitalising of maps (Smart 1998b) I was very excited over the *potential* it offered the teaching and learning of history in the classroom. However, it was prohibitively expensive and complicated, and only the truly devoted would have been prepared to find the time and energy to pursue it. Some three years later there is hardly a school in the UK that is unable to select a historical map of its area, customise it to its purposes and have it delivered by email within twenty minutes for less than £20. (Alongside the classroom copies I anticipate them becoming popular items in the foyer or behind the Head's desk). The importance of this breakthrough in ease of access cannot be overestimated. It is a *pre-requisite* to exploring the contribution maps can make to the teaching and learning of history. As with every resource, it is at this point that the teacher becomes the key factor in determining how effectively it will be used.

The next section consists of a detailed example of a teacher using the 'history + maps + ICT' combination in the classroom. The rationale developed earlier in the chapter for the contribution of maps is identified. It provides a deeper insight into how the use of ICT both facilitated and at times enhanced the historical knowledge, skills and understanding taking place through the use of maps in different forms.

ICT + maps: supporting the less-able pupil

Context

In every school there are some children for whom success in history is difficult to achieve. Although the activity discussed below was undertaken by all the pupils in the class, the focus here is on the children in

this category. The activity arises from work undertaken with a mixed-ability Year 7 class of twenty-seven pupils taken by a specialist history teacher, over three hour-long lessons. It resulted from an LEA in-service training course exploring the use of ICT in history.

The investigation considered here arose from the National Curriculum Study Unit 1 (Welsh NC) 'Wales and Britain in the medieval world c1000–1500':

> Pupils should be taught about some of the characteristic features of medieval society and the particular significance of the period for the History of Wales. They should be taught about pre Norman Wales and England c1000 and the impact of the Normans, about aspects of medieval society.

This parallels Study Unit 8 of the English National Curriculum: 'A study of crowns, parliaments and people: the major political, religious and social changes affecting people throughout the British Isles, including the local area if appropriate.'

In order to approach this subject matter, an enquiry question was developed around which to organise the children's investigations. The question chosen was: 'What made Cardiff Castle so strong, and so difficult to attack successfully?'

Resources

Essentials include:

- computer suite;
- scanner;
- *Local Studies* and *Map Importer* software programmes;[7]
- an aerial photo of the castle;[8]
- a collection of quality photos of different aspects of the castle (e.g. portcullis, crenellation, barbican, arrow slits, walkways) taken by an ordinary camera or by a digital camera, or simply cut out from the official castle guide book;
- at least one reference book on castles which names the different features available for the pupils to consult, if and when needed (For example: What was 'crenellation'?).

The teacher found that starting with an aerial photograph made it easier for some children to understand the layout of the castle, rather than the often used starting point of a map or line diagram. This is because aerial

photographs often reveal more information about the *whole* building and, importantly, its *relationship to the surrounding landscape*, than vertical photographs. An aerial photographic record of the whole country was undertaken as part of the millennium celebrations. (A copy for your area can be obtained from Wildgoose Publications; see note 8.)

Outline of investigation

The aerial photo with Cardiff Castle at its centre was imported into the *Local Studies* software programme (see note 7) in this activity. Once there it was worked on in the same way as if it was a map or plan, and the programme's facilities can be used on it.

The copy of the oblique aerial photograph **(**Figure 6.2**)** was used as the starting point, providing the initial stimulus for discussion with the whole class. The photograph shows a very good example of a motte with a stone keep together with a surrounding courtyard, or bailey. Although many extra features have subsequently been added, the central parts of the castle are still evident. The focus group was given a small pack of Post-its and a list of the following features; motte, bailey, moat, curtain wall, tower, gatehouse. The group was asked to discuss and agree where to place the post-its to identify these features and to keep in mind what it was they were beginning to investigate (that is, the strength of

Figure 6.2 Aerial photograph of Cardiff Castle

this castle). In the process of the discussion, the strengths and limitations of the aerial photo, especially the lack of detail on specific features was commented on. The link with the next stage of the actively was therefore made.

A collection of photographs of other features was now presented to the pupils (see Figures 6.3–6.7). One school had obtained these through the use of a digital camera when they visited the site being studied, while another school used photos cut out from the official brochure for the castle. The task worked well with both. The advantage of the first method, where practicable, lies with the pupils' involvement in collecting the information they are to work with, thus adding another dimension to the 'working in the manner of the historian' scenario. 'Features' included the barbican, portcullis, crenellation, arrow slits and walkways. The pupils were asked to locate these features on the aerial photo using thin wool and Blutac. Where organisational skills among

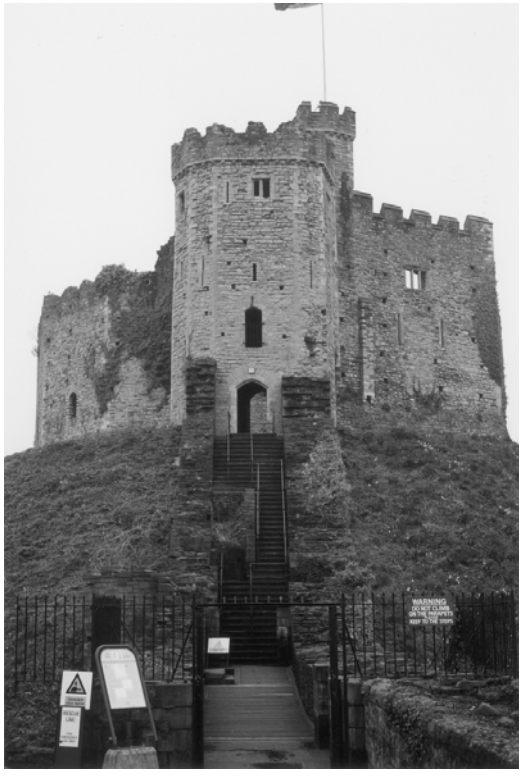


Figure 6.3 The original tower on the motte

Figure 6.4 Top of the guardhouse at the base of the motte

Figure 6.5 View from the base of the motte looking towards the main gate

Figure 6.6 The well

Figure 6.7 The rear gate

the pupils were lacking, support was provided in the form of a single sheet containing all the photos which could then be identified with a tick or a cross as the pupils made their decisions.

To extend the children's thinking about the layout of the castle the teacher kept one photo back so as to pose the question the other way around: 'Where would you have to be standing to see this? Why would it be important if you were defending the castle?' The group 'ran' with this idea and began to ask each other where the photos they had been using were taken from. This was a valuable development in furthering their understanding of the relationship between the 2D images and the reality of the castle on the ground.

At this stage the pupils had been encouraged to look carefully at a selection of photos providing information about the castle. The next stage was to encourage them to start making decisions about what the evidence told them about the castle in relation to the investigation question.

The focus group was asked to choose the five features that made the castle so strong and difficult to attack successfully. For the next lesson the class was in the computer room where pupils were asked to address this question and present their responses through using the *Local Studies* programme. All the photos they had worked with earlier in the week had now been scanned into the computer so that they could be called up as appropriate.[9] However, it was found useful to also have the paper photos on the desk and the pupils referred to these in their discussions and then went to the computer image once agreement had been reached.

The pupils now needed to look carefully at all the photos at their disposal. Which ones should feature, which ones could be discarded? And *why*? They needed to consider how important the tower was in relation to the walls or the moat or the gateways or the well. The group was made aware that its decisions would be challenged and its explanations of its selections had to be good and 'defendable' (via their developing understanding of how castles 'worked'). One interesting example that the group explored provides an insight into the value of such a task. The present-day castle plays host to a flock of peacocks. Some of the pupils assumed that they would have formed part of the defences. While this may be logical, it takes some working out as to whether peacocks would have been there with the Normans! (Still, if Rome had its geese . . . ?)

As options were discussed and decisions gradually arrived at the pupils added hotspots to the onscreen aerial photo into which they placed, first, the chosen photo of the feature (Figure 6.8) and, second, their text explanation of *why* they considered it so important a part of the successful defence of the castle (Figures 6.9 and 6.10).[10]

Figure 6.8
Aerial photograph with one hotspot

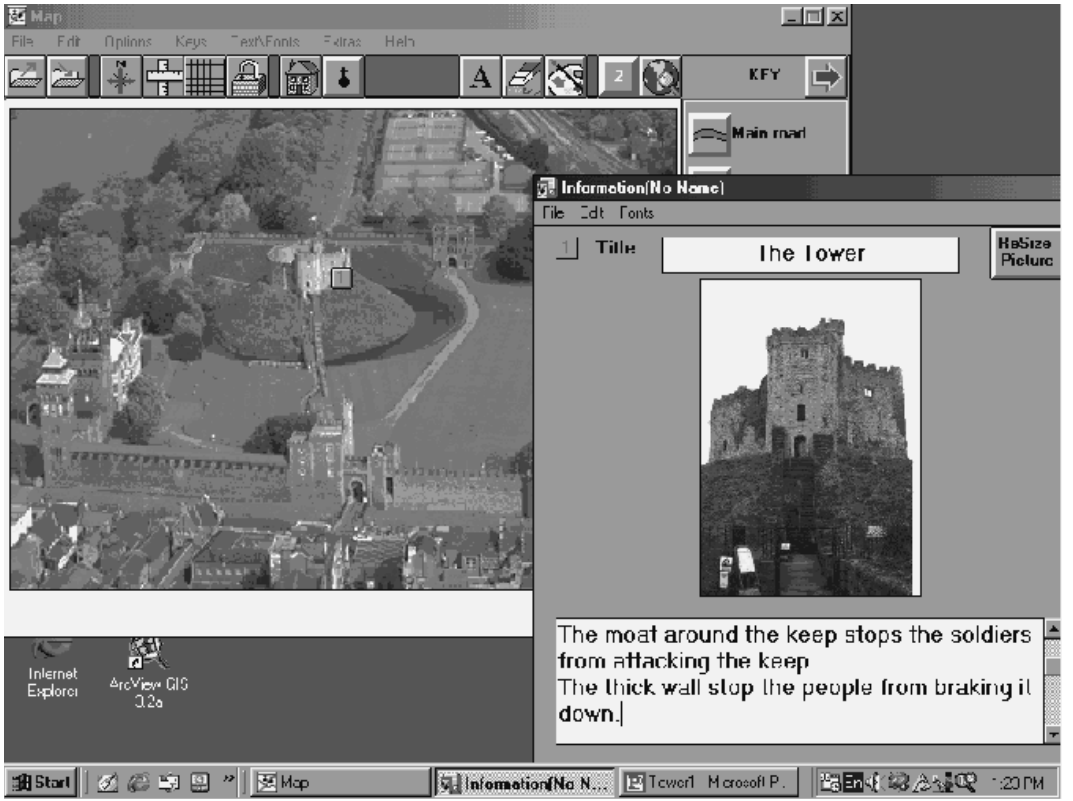


Figure 6.9
Aerial photograph with text added

Figure 6.10 Aerial photograph with several completed hotspots

Learning: the contribution made by 'ICT + maps'

The pupils were very proud of their collective results. The simple element of decision making, whereby they disposed of the pictures they felt were not relevant, became very important. It meant that they were *then* in a position to control their final presentation. The aerial photo provided a sturdy framework within which to make their choices.

Earlier in the chapter it was established that an analysis of the use of maps from official recommendations highlighting 'good practice' in history (DES 1985 and 1989) could be grouped under the headings

- 'As a source of information'
- 'As a means of communicating understanding'.

Although separated for ease of consideration, it is important to make the point that neither is a linear or one-way process. A great deal of learning actually takes place through the 'bringing together', presenting and communicating stages, and this is clearly shown in the following. Maps and aerial photos often, indeed usually, contain information that is not relevant to a given investigation. For those adults, and for the many pupils, who are able to quickly focus on the relevant elements, this poses limited difficulties. However, for others, the sheer amount of detail and the necessity of holding the central line of enquiry in mind can be confusing, frustrating and ultimately defeating. Just as teachers sometimes choose and narrow the written and visual sources they present to certain groups of pupils, so this can now be done with maps. The scanned area used in this activity was deliberately delineated to help focus the group's attention on the relevant areas for their enquiry, and it is believed that this was a contributory factor to the success achieved.

It needs to be remembered, particularly when working with less-able pupils in history, that we often assume that they can develop an understanding not only of a different time, but of a different place; both of which can be very difficult for some pupils. It should not be assumed that spatial awareness is any easier to develop than is chronological awareness. Linked to this, the aerial photo has the advantage of being less abstract than a map. The *Local Studies* software allows the two means of presentation to be brought together and layered, one over the other, making visual links rather than abstract ones for the learner who may have difficulties in this sphere.

As I have argued elsewhere (Smart 1997), the use of ICT can help to facilitate learning *and* enhance the learners' ability to communicate their understanding. While the former is important, it is in the second

area – that of presentation and communication – that the 'ICT + maps' combination moves beyond facilitating to actually enhancing what is now possible. The ability to handle more than one variable at a time creates both difficulties and frustrations for a considerable number of pupils when learning history. As the above example illustrated, this group was able to link sources together, constructing an argument or a list of reasons while working on each source separately. The facility to *combine* their developing ideas on the background image without the difficulty of integrating them all within a single description at that stage was a contributory factor in the group's success. Frequently pupils of lower ability find the combining of ideas from different sources very difficult and this programme gives them some extra support through the various layers of information they encounter. They can then organise their ideas effectively without problems in handling several different variables (sources) simultaneously: an example of Bruner's concept of 'scaffolding' in effect.

Also of real significance is the ease with which pupils can change or edit their decisions as they come across another variable at a later stage. Anyone who has watched pupils attempt to modify their presentation to incorporate some new information or perspective which involves peeling off pictures or text stuck down with stick-glue knows the grief this can cause. Instead of settling for 'Oh' leave it as it is', a common response to the above scenario, the group in the example edited freely and confidently in its determination to 'get it right'. This is good history, and it draws on the advantages of 'provisionality' which computers offer, in terms of quickly and efficiently exploring different alternatives (see Chapter 1).

There was on reflection a real sense of ownership of their work. This was undoubtedly related to the quality of the work they were producing and, unlike the traditional display, each member of the group could have his/her own copy of the booklet created. *Pride* is an appropriate word to use here. Some might argue that, while important, it is not 'history'. This, it is suggested, is rather a narrow view. Besides the impact this sense of pride had on all aspects of the quality of the work in this task, the pride in the product of this successful investigation is likely to feed forward in terms of expectation and motivation when history is next mentioned.

There is also the dimension of talk related to the task. There is no obvious reason why the quality of talk, particularly reasoned argument, advancing points of view, presenting supporting evidence, should have been of a higher level either with or without ICT present. However, the talk was clearly more task-related and moved between the above

categories. The 'ICT + map' combination was clearly acting as a catalyst for this group, with a positive impact in the realms of involvement and motivation. The capacity of the technology to reduce the amount of time and energy devoted to the 'chore' elements – writing, cutting, sticking – appears to have had a liberating impact on the children's willingness to engage in higher-level discussion. This is a good example of the *emancipatory* features of new technology being helpful in enhancing learning (see Chapter 1).

As was noted above, the group of pupils was very proud of its collective results. As group members showed them to their teacher she asked questions with reference to what they presented on screen. It wasn't just a case of reading the text the children had written. Her 'devil's advocate' comment, 'I'm not sure you have convinced me of the importance of the moat from what I can read here . . .', led to the demand to be allowed to add more to make it clearer 'to some people!' And they did.

Teacher perceptions

There are several real benefits that can be identified here. First, it enabled these pupils to work with more than one source at time. Although the teacher had created the framework she was not spoon-feeding the pupils one source at a time. There was a clear element of the sources being brought together *by*, rather than *for*, the pupils. The ICT provided the necessary support in relation to the variables for this to take place.

The success which the pupils in the group experienced had a positive impact on their motivation and their enjoyment of the subject. Every teacher knows how important this is to how they *themselves* feel about teaching their subject, especially when working with pupils who do not always demonstrate a positive attitude to learning history. The teachers involved found this a particularly rewarding facet of this work.

Also of great importance from the teacher's perspective was the fact that *Local Studies* is very easy to use and, with one or two simple instruction cards, the pupils can be encouraged to complete the work independently. The teacher is then able to concentrate on the historical content rather than lengthy explanations of the software. The use of 'a consultant' from an older year-group who had used the programme the previous year was a significant support. The present users knew they could expect to be called upon in this role in the next academic year, with benefits to all involved.

Overall, it was clear that the teachers believed that the combination of 'ICT + maps' had facilitated the pupils' learning, and enhanced their ability to communicate their understanding.

Concluding thoughts

In the preceding pages an attempt has been made to illustrate and explore the contribution which the 'ICT + maps' combination can make to the teaching and learning of history. The terms 'facilitate' and 'enhance' have been used in relation to this contribution. The ease of access to the nation's store of historical maps was presented as an example of 'facilitation', the importance of which should not be underestimated in relation to the competing demands on each teacher. However, the example of the group of pupils studying Cardiff Castle is of greater significance and provides a real insight into how this 'ICT + maps' combination can actually enhance the development of pupils' knowledge, skills and understanding in history. Yet it is no more than an indicative example of what can be achieved, and other examples could have been chosen. At the outset it was argued that unless history teachers are persuaded that *their* teaching and the learning of *their* pupils in relation to *their* schemes of work would be advanced in a significant way ICT and maps will make a minimal impact. The teacher in the example above experienced that 'oh so difficult to explain but what every teacher understands' satisfaction that comes from the creation of situations in which pupils experience success, and, through the success, enjoyment in their learning. This unquantifiable feeling is stronger still when such success is experienced by pupils for whom it is not a frequent occurrence.

If you have been 'so persuaded', at least to the point of being prepared to explore the contribution claimed here for the 'history + ICT + maps' equation, this chapter will have served its purpose. Finally, if, as a result of exploring this combination in your own teaching you find the history being taught and learned is advanced in some way, then do make a point of sharing your experiences. This remains a comparatively uncharted dimension of school history and there is much to learn from each other.

Notes

1 The section 'ICT + maps: supporting the less-able pupil' was written in collaboration with Miriam Norton, who is currently Associate Advisor for ICT within the Education Support and Inspection Team for Bridgend, RCT, Caerphilly and Merthyr Tydfil. She has a long history of using maps and ICT in the teaching of history and runs regular INSET programmes featuring this combination. This example arises from her current work with schools in her area.

2 Keatinge: *Studies in the Teaching of History* (1910); Beales: *A Guide to the Teaching of History in Schools* (1937); the Board of Education's *Handbook of Suggestions for Teachers*, Chapter 12 (1948); Burston: *Principles of History Teaching* (1963). Beales's work contains separate sections on maps, charts and

atlases, and lists a considerable number of reference works for teachers dating back to the beginning of the century.

3 From the earliest of the texts noted above, through to the HMI surveys in the 1980s, the map was seen almost exclusively as a source of information. However the two HMI reports had articulated a further contribution which maps were making to the teaching and learning of history in the exemplars they presented. This was how the map could be used by the learner to 'organize, synthesize, present and communicate' the learning that is taking place (DES 1985: 19 and 1989: 41). The HMI booklets show maps being used in a wide variety of forms and at different levels of sophistication, from the sketch map linked to fieldwork, to differently scaled OS maps, through to tithe redemption and estate plans. However, despite the different contexts, the age of maps, the age of children and other specific factors at play, it is clear that the use of the map was more than simply as a source of information.

4 It is worth noting here that a major map exhibition was mounted by the British Library (which now control the maps formerly held by the British Museum) in 2001–2. Materials were developed to support schools' use of the maps displayed and possibly others from the BL's massive collection (which I understand consists of nearly 2 million maps). A visit to the BL' s website (www.bl.org.uk) could be productive.

5 One of the first maps I ever photocopied was held at the local history library, and showed where bombs had fallen in the area during the Second World War. It is worth noting that, as we explore technological developments, the now humble photocopier was a major advance in its time – and not just for the teaching of history using maps!

6 It is worth a 'detour' to explore one of these examples. Adobe's *Acrobat Reader* (installed on most PCs or downloadable for free) performs all the necessary technical wizardry to create the map on screen. The *Acrobat* toolbar appears at the top of the sample map, and even with this general purpose programme, what can be done with a map is impressive, and is worth taking a few minutes to explore. The 'Zoom' facility (the magnifying-glass icon) enables any section of the area on screen to be scrutinised in minute detail, and any section of particular interest or the whole can be printed out for use away from the computer.

Using the 'Text' option you can also add annotations, labels or blank boxes requiring information to be added. Questions can also be left linked to any feature on the map with ease. The teaching opportunities presented by these facilities are many. All could be done with a pen, ruler, stick-glue and scissors, and several hours – here it can be done in minutes. Of course, and as ever, the teacher will need to decide what the intended learning outcomes are to determine how these facilities can be used to help realise them for her pupils.

7 *Local Studies* is the main programme, with *Map Importer* developed to do just as its title says. This is a well-established programme with a widening user base across the country. Written by ex-teachers, it makes the manipulation, creation and interaction with maps very easy indeed. Each update seems to take this a step further. Approval copies are available (SoftTeach Educational, Sturgess Farmhouse, Longbridge Deverill, Warminster BA12 7EA; or

online: www.soft-teach.co.uk). It is not the only software package developed to enable children to work with maps via the computer, and the OS catalogue lists others available.

8 The wonderfully named 'Wildgoose' can provide a full service in relation to aerial photos taken as part of the Millennium celebrations. You can buy these as a photo, deskmat, poster or on a CD-Rom as part of a software package known as *Our School, Aerial*. Wildgoose's catalogue is well worth sending for as the many formats available may act as a prompt for ideas on use (Wildgoose Publications, The Old Toy Factory, 10, The Business Park, Jackson Street, Coalville, Leicestershire; or online: www.wgoose.co.uk).

The local planning dept of your local council may be able to provide similar aerial photos, possibly without charge. The address of the Ordnance Survey is: Ordnance Survey, Romsey Road, Southampton SO16 4GU; online: www.ordsvy.gov.uk

9 Access to a scanner is now common and the *Map Importer* programme enables these photographs to be used within *Local Studies* with ease. Full instructions are included to guide the user through the process, and they are user-friendly. The latest version also allows video clips to be used in connection with hotspots on the map. Although I haven't experimented with this at the time of writing it does appear to significantly open up the whole 'combining of sources'.

10 The programme enables the user to interact with the map or aerial photo of choice. It is not possible to detail how to use each facility referred to here (i.e. importing a map, adding a hotspot, etc., but they are neither difficult nor time-consuming. All new programmes take a little getting used to, and that is the case here. It is not a difficult programme to become competent with.

Thanks to Softteach for its permission to use the screenshots from *Local Studies* and *Map Importer*; to Wildgoose for providing samples of its *Our School* software, and to Cardiff Harbour Authority, for its permission to use the photos of Cardiff Castle.

Websites

There are so many sites that can feature maps that it is impossible to list them all here. Many have a special focus – e.g. black history, Cornwall, Tudor, etc. A good, and very easy, way to see what is available for your own particular purposes is to use one of the search engines. For example, a request to search for 'maps + history' (you need to use the +) in either Google or Yahoo brings up many pages of sites with maps. A partial and idiosyncratic selection of 'history' websites for maps can be accessed at www.uea.ac.uk/~m242/historyggce/maps

Have fun.

References

Archbold, W. A. (1901) *Essays on the Teaching of History*, Cambridge, Cambridge University Press.

Beales, A. C. (1937) A *Guide to the Teaching of History in Schools*, London, University of London Press.
Board of Education (1944) *Handbook of Suggestions for Teachers*, London, HMSO.
Burston, W. H. (1963) *Principles of History Teaching*, London, Methuen.
DES (1985) *History in the Primary and Secondary Years: An HMI View*, London, HMSO.
—— (1989) *Aspects of Primary Education: The Teaching and Learning of History*, London, HMSO.
—— (1991) *History in the National Curriculum*, London, HMSO.
DfEE–QCA (1999) *The National Curriculum*, London, DFEE–QCA.
Heywood, G. and Norman, P. (1988) 'Problems of educational innovation: the primary teacher's response to using the microcomputer', *Journal of Computer Assisted Learning*, Vol. 4, No. 1: 34–43.
Keatinge, M. W. (1910) *Studies in the Teaching of History*, London, A&C Black.
Smart, L. (1988) 'The database as a catalyst', *Journal of Computer Assisted Learning*, Vol. 4, No. 3: 140–9.
—— (1997) 'Facilitate and enhance', in A. Martin, L. Smart and D. Yeomans (eds) *Information Technology and the Teaching of History: International Perspectives*, Amsterdam, Harwood.
—— (1998) 'Maps, ICT and learning', *Teaching History*, No. 93: 28–31.

7 Using ICT to develop historical understanding and skills

Isobel Randall

'Now what I want you to do,' said the teacher to her Year 11 SHP group revising for GCSE, 'is to select any person that made a really important contribution to the development of medicine. We'll have groups of three telling us why their selected person was so important: what his/her impact was; how it was achieved; under what influences; against what obstacles (and how they were overcome); and how lasting his/her influence has been.

'By the start of next lesson you need to have sorted yourselves into groups, selected your person and worked out your strategy. Use your existing knowledge but see if you can find out more. It would be a bonus if you had already begun your extra research. You then have two lessons and your own time to research and organise your presentation – any format – before you present it to us in the following lesson.'

Witnessing good practice

This sounds like one of those sloppy 'Go away and do your own thing' activities that lead to heavy reliance on unthinking copying, time-wasting and lack of clarity and conviction about outcomes. But this *is* different. Students come to the next lesson with clear plans for action. Their roles in their mixed-ability groups are defined. They set about their work systematically. By the end of the following week they deliver their presentations with confident incisiveness. There is a wide range of the usual formats – role-play, posters or OHTs with commentary, *PowerPoint* presentations. Everyone has addressed all of the issues; all the presentations are well planned and executed.

Why is this different? In part, because the department's groundwork in this mixed comprehensive school over five years has led the students towards this knowledge of what is expected of them. Teachers have equipped pupils with the required research and presentation skills, while teaching them to work with increasing independence in order to achieve

the stated objectives. By this time (in Year 11) there is no need to provide them with detailed guidance: they can concentrate on the history.

There is another factor. When I saw this happen, almost all of the students had at some time in the process made effective use of ICT. In this school, equipped to about the average computer–pupil ratio, the history department had proved the value of its use of ICT sufficiently to be given above-average access. Pupils not only used their access to the Internet efficiently to research extra materials, but as a matter of course they drafted their plans using computers. This, they explained, enabled them to refine their ideas while gathered round the screen, adding, re-ordering or deleting as their discussion developed. They used their lunch breaks for the initial stage; then, equipped with clear, systematic plans, they were ready to proceed to detailed work. At this stage, some continued to use the department's four computers; some went to the library; while others moved to more traditional means of research or recording findings, for at least some of the time. This good practice demonstrates Scott Harrison's point about 'regular and progressive use of ICT' being a factor in effective use (see Chapter 2). These pupils were used to using ICT in history.

The most impressive presentations were those, by two groups, based on *PowerPoint*. Why? First, because the attributes of this ICT application require well-structured thinking and careful selection of the most essential information if it is to be effective. These pupils knew they had space here only for the heart of each idea. They had therefore worked out a template for structuring their presentation (see Figure 7.1).

A second advantage afforded by the presentation software was the facility for each screen to be accompanied by its own notes, made in '*Notes View*', so that the pupils could expand on the headings in the presentation, reinforcing key points and enabling the accompanying exposition to stay closely synchronised with the images and messages on the screen. As a result, each argument was clearly and simply presented, but there was sufficient detailed supporting information to enable the pupils to substantiate their assertions. As they presented their ideas they were able to use the notes to add flesh to the bones. No reciting from the screen here, in spite of both groups' allocation of the polishing of the notes section to their least able pupil. Both of these pupils, incidentally, appeared to gain in confidence and fluency by using the 'scaffolding' provided both by the features of the presentation software and by working with the other members of the group.

Because of careful planning and clear teacher explanation of the task (see Chapter 3), the pupils knew that the main objective was to provide a convincing explanation of the importance of their chosen subject. After

Screen 1	Title and purpose of presentation
Screen 2	Outline planning with main section headings
Screen 3	Section 1 – key ideas
Screen 4	Expansion – illustration for first key idea
Screen 5	Expansion – illustration of second key idea
Screen 6	Section 2 – key ideas . . . and so on, until:
Final screen	Summation of the argument of the presentation

Figure 7.1 Pupil-designed template for the structuring of presentations

they had achieved this basic objective, and embellished it with relevant imported images, each group could then go on in its own time to enhance its presentation with sound and animations. The groups were aware that any such addition had to prove its worth in terms of emphasising selected issues, or in supporting the tone, mood and nuance of the presentation, in the same way that such techniques are used in the modern media. This provided an additional reason for careful scrutiny of the details of their arguments from a different, but still historical, perspective. The most able in each group led the discussion, in which music was selected to demonstrate mood and historical context, while using animation to emphasise the priority placed on different points.

So what had the ICT done to improve the outcomes in terms of historical knowledge and understanding? Through use of the Internet, pupils had researched and selected relevant illustrative detail; the structure of *PowerPoint* encouraged clear planning and organisation of their own ideas. This helped to reinforce the pupils' understanding of the main historical issues. The least able developed their understanding of the causal relationships involved; first through being involved in the initial design of the structure, and then through applying that structure to the researching, ordering and use of the '*Notes*' section. It was also one of the few occasions when the use of animation and sound to enhance the presentation encouraged reconsideration of the significance of the detail.

Working out what to do with ICT in history

This is only one example of the ways in which ICT can both facilitate pupils' learning and expression in history, and develop their powers of

organisation and analysis. In working with history teachers over a number of years, and as technology has advanced and teachers have worked out what can be done with it, it is apparent that almost all history teachers have moved on from the practice of using computers merely to motivate pupils and to improve the *appearance* of their work. ICT is now used to enable a range of historical outcomes: for example, pupils can investigate a wide range of historical sources on websites; they can analyse such sources using a word-processor to highlight significant words and phrases; their ideas can be organised effectively through thoughtful use of simple procedures such as cut and paste.

In this last example lies the clue to the correct identification of where to place the emphasis: the thoughtful use of a simple procedure – *historically* thoughtful – using the manipulative power of computers to think through how to deploy information intelligently in response to a historically worthwhile question. When tasks are structured appropriately, and historically worthwhile questions are asked of the information, ICT *requires* pupils to think when they are manipulating historical content. The thinking comes from the application of historical skills and understanding to the context in which we are working, facilitated by the tool that is ICT, with its facility for moving and rearranging information from different sources quickly, and its ability to access a library with a vast range of materials and an easy retrieval system.

HABET, since its formation, has consistently argued the pre-eminence of the history curriculum in the marriage of ICT with history. This approach was popularised by the work of HABET in conjunction with the British Educational Communications and Technology Agency (BECTa), whose aim was to demonstrate that using word-processing and data handling can assist pupils to hypothesise, organise and analyse materials. The impact of the work on word-processing was diluted, however, by the very aspects that made the work so popular and influential – the examples, so immediately attractive and accessible. Terry Haydn's explanation of the causes of the English Civil War has been used extensively by departments with limited access to ICT suites as a contribution to the use of ICT in history (BECTa 1998): it is interesting, easy to use, has obvious value in terms of causal explanation, and uses simple techniques that do not impede the pace of a lesson.

What was not always clearly understood is that it is *one* example in a series demonstrating progression in terms of historical understanding. The examples that followed were less immediately attractive because they could not be directly lifted from the page and the disk: they required the pupils to work out for themselves the ideas that they would then use in order to argue their point. Such an approach, involving time spent

discussing the ideas that would then be oh-so-slowly keyed in, instead of being simply pasted across and amended, has largely been ignored. What is encouraging is the extent to which this and other examples of word-processing exercises have been adapted, developed and applied to other historical contexts. Jayne Prior and Peter John (2001) describe how things have moved on since the earlier examples, and how departments are using word-processing to address high-order thinking in history and learning to avoid sterile and formulaic exercises which allow pupils to 'short-cut' through the historical thinking involved.

In the course of recent visits to history and ICT departments, such as in the example cited at the start of the chapter, I have been both impressed and humbled by the originality of approach. These teachers have looked carefully at the ICT curriculum since the introduction of Curriculum 2000 (DfEE–QCA 1999) and have found within it a range of demands on pupils' intelligence that matches fairly closely those of the history curriculum. They have interpreted these demands carefully, since the context in which common terms are set in each curriculum can alter the meaning of similar or even identical terms.

When they are using ICT facilities – resources scarce enough to be rationed to most school history departments – such teachers are making use of valuable history lesson time, and not simply to add variety to the experience of history or to enhance the appearance of the finished work. They are not changing direction: teaching history remains their priority. They are ensuring that ICT acts as an integral part of the development of reasoning and understanding, that it enables pupils to learn to analyse, and that it assists pupils in expressing their ideas cogently. ICT not only provides a structure that guides pupils' thinking, but gives them the freedom to make their own discoveries and to come to independent conclusions. A bonus is that these history departments often earn the gratitude of ICT coordinators who are delighted to find departments willing to rise to the intellectual demands of the higher levels of ICT. In practical terms, they get more time in ICT suites.

The ICT curriculum and history

Most of the other chapters in this book have taken as their starting point the nature of history as a subject discipline, and the requirements of the National Curriculum for history, stressing the improving of learning in history rather than in technological proficiency as the priority. I have found it interesting and helpful to explore the nature of the ICT curriculum's Statutory Orders to develop insight into the potential contribution of ICT to history. If we do the unthinkable, and look at

the language of the revised ICT curriculum as a starting point, the extent of the overlap between the two areas becomes apparent; so many familiar terms – 'question . . . reflect . . . select . . . interpret . . . organise and present'.

Level 4 of the ICT attainment target, for example, requires pupils to 'understand the need for care in framing questions when collecting, finding and interrogating information . . .', while at level 6 they 'use complex lines of enquiry to test hypotheses'. (DfEE–QCA 1999). A Year 7 or 8 pupil searching the Internet for information about the 'Glorious Revolution' will find that it pays to be specific in framing the request. Some website authors, particularly in parts of the USA, have unfamiliar and esoteric ideas about what constitutes a 'glorious revolution'.

In a different activity, Year 9 or GCSE pupils who are designing their own database will discover that they need to work even beyond the stage of framing questions to enhance their understanding of a period through interrogation of data. If they do not consider what they want to know *prior to* selecting fields, they will be frustrated in their enquiries at a later point. For example, even in the obvious classification of material in a nineteenth-century census file, those who think to add a field for 'family size' and another for 'household size' find that they can add considerably to their understanding of nineteenth-century domestic life. Pupils therefore need to use the historical context combined with the raw data to work out the potential value of taking the (not inconsiderable) time needed to construct a database, then ensure that their design enables them to answer the questions they have posed. This demands high-order thinking in both history and ICT.

In another example, while creating a database of the local entries on the National Roll of Honour for the First World War,[1] GCSE pupils were brought sharply up against the issue of reliability. They found in their local history study that simple data entry gave them a file that they could not profitably interrogate. The history, like the database, was more complex than their textbook had led them to believe. On the basis of handed-down oral tradition and their study of wartime reminiscence, they hypothesised that the lower the rank, the more likely a man was to be killed. When examining the pages of the original Roll of Honour in preparation for completing the 'rank' field, however, they had to consider the nature of the armed forces in 1914 – What is a gunner? How does gunner compare in rank with an able seaman or a bombardier? – in order to classify them accurately before being able to compare their fates. So, the need to construct the file carefully compelled them to examine the variety of roles taken by those who fought. Not all, they now realised, were 'going over the top' on the Western Front.

The exercise became even more fraught with difficulties and ambiguities. The teacher demanded that pupils ensure the validity of the data entered into the file. Initially, the pupils accepted the information at face value: 'It must be right!' they said. 'It's an official document.' They changed their minds when close examination of alternative sources for individual entries showed that the evidence from the Roll in comparison with other available resources was incomplete, and therefore unreliable. Pupils were forced to review their conclusions when they saw the substantial proportion of those whose names, even though on the local war memorial, did not appear in the Roll of Honour.

Discussion of the possible means of checking their findings against other sources led them to compare with local regimental lists in terms of the proportion of entries at each rank. They had to take into consideration the extent to which people had their own names or those of their relatives entered into the voluntary Roll of Honour, for which there was a fee. They began to question the surprising geographical distribution of the places of origin, and realised that whereas many men had come from a distance to enlist locally the converse would almost certainly be true, with local men enlisting elsewhere. Although they realised that this in itself would not affect the question of rank-related injury or death, they were more concerned about the partial nature of the evidence. How could they use this material for a detailed study of the impact of the war on the local area? They would need more sources.

The pupils began to realise that partial data can be as unreliable as mistaken information, which led a few to ask more searching questions about people's motives for having their names or those of their relatives omitted or entered on the Roll of Honour. Were they too disillusioned with the outcome of the war? Were they too poor? Was there a correlation between non-entry and the death in action of the head of the family, leaving the family in poverty?

The pupils found their own solutions. Kindly, they advised their teacher to start the following year by explaining their experience with the database of the National Roll of Honour then adding in the local regimental lists so that they could analyse the data more accurately. 'And', they demanded, 'Why not look at the Commonwealth War Graves Commission's website [www.cwgc.org] to check the local dead listed on other documents?'

Having discovered issues concerning the adequacy of the data, they had asked questions about it and provided potential solutions. I was impressed by the tenacity and perspicacity evinced by the activity of designing and completing the database. All this was before they had even begun to interrogate it and comment on the evidence from graphs in

terms of the received version coming from newspapers, handed-down oral history and popular television.

These pupils met the demands of both history and ICT. They took a popular myth and explored it in the light of a range of evidence. Knowing that they were designing a means of interrogating statistical evidence, they sought by all means possible in the time available to ensure the validity of that evidence. In doing so, they used teacher guidance but also worked independently to seek fresh sources. Above all, when the time had definitely run out, they wanted to continue. They were hooked on enquiry.

The difficulties (which might also be viewed as 'helpful problems') which they encountered illustrate the relevance of the requirements of the ICT curriculum: pupils need to 'interpret their findings, question plausibility and recognise that poor quality information leads to unreliable results'. In order to make effective use of ICT in history, pupils need to apply their historical judgement about the reliability of their sources and about the interpretations of others. They then need to interpret their findings: to make judgements based on their conclusions about the evidence in front of them. The statement may be in the ICT curriculum's Statutory Orders, but here we can clearly see issues which are at the heart of good history teaching.

The statement in the Statutory Orders – pupils should understand that '*poor quality information leads to unreliable results*' – also points to an opportunity to address one of the greatest current problems and opportunities of ICT – how to use the Internet intelligently. As Richard Slatta (2001: 20) argues: 'For better or worse, students increasingly go to the web for information. Who better than a historian to teach them how to separate the wheat from the not inconsiderable chaff?' The Internet poses new challenges for history teachers. Imparting information-handling skills has always been part of our job, but the emergence of the Internet as a major source of information has added to the complexity of this process. The Internet poses different challenges, both in terms of logistics (managing electronic searches) and in terms of establishing reliability, because the full provenance of sources is often not given. It also offers the opportunity of moving from considering reliability within the confines of a particular information medium to getting pupils to think about the comparative reliability of a range of information media (see Chapter 8 for further development of this point). Here is another way to move up from the mini-evaluation of gobbet-type sources into 'macro-evaluation', working in collaboration with librarians and English departments to teach evaluative techniques such as skimming and tasting the text in order to test first impressions, and then, as the teacher in the example

below did, asking pupils to compare sites in terms of accuracy, detail, clarity of mapping and fitness for purpose.

In a sixth-form lesson, a teacher had been dismayed by his students' tendency to unthinkingly accept the reliability of Internet sites and sources. In order to address this problem explicitly, students were given four websites, carefully selected by the teacher and downloaded to the school's system. One, they were told, would be the basis of next week's work. One was reliable, informative, and capable of being a part of their study of Robespierre's long-term influence. The others were flawed. Which one would they use? 'No need to answer the Robespierre question at this point – just tell me what is good about one site, and why you would not use each of the others.'

The teacher's skill lay in his selection of sites. He had chosen this topic because of the potential of the sites to illustrate the point. One, very attractive, was interesting, beautifully designed, well written – and undeniably inaccurate. A second, very erudite, site would challenge the understanding of some academics as it was hopelessly muddled in its layout. The third flawed site was the opposite: accessible, but its argument was without substantiation. The fourth site, pitched appropriately for 'A' Level students, contained information and a range of supported evaluations of Robespierre in his historical context. While not perfect, the site was useful. Combined with the pupils' existing resources, it would add to their study. The fact that it was not perfect was a bonus to the teacher, who wanted to show the need to use a range of sources even when his students thought they had hit the jackpot.

This example points to the need to teach the processes of Internet site evaluation at a much earlier stage. In terms of progression, it makes sense to provide this sort of structured exercise, using a limited range of sites pre-selected by the teacher, so that pupils can strengthen their research and evaluation skills *before* being given the freedom to roam the Internet.

In other schools, teachers are building banks of site evaluations using prepared forms. Pupils examine the site, and then look at evaluations already on the form to see whether they agree, before adding their own views. Used as a matter of course, this process encourages the development of critical literacy, especially if pupils are encouraged to state both positive and negative aspects of the site. Success here depends on the extent to which pupils understand the need for accurate reporting, focusing on evaluating both the quality and utility of the source in relation to the particular questions asked of it. They realise this when asked to use evaluations to select sites for their own studies, soon recognising the difference between useful and irrelevant comment, including the extent to which a site can be used to support other materials.

The ICT curriculum explicitly addresses the issue of synthesis of information. Level 4 requires learners to 'add to, amend and combine different forms of information from a variety of sources', and at level 5 to 'structure, refine and present information in different forms and styles for specific purposes and audiences' (DfEE–QCA 1999). ICT resources were often most effective when used in conjunction with non computer-based materials. ICT is not the sole means of extending the range of available sources, but it is emerging as a very powerful and increasingly rich source of helpful material for the history teacher. It extends the opportunities for pupils to practise the historical skill of marshalling a range of sources to explore a question, weigh a particular argument or demonstrate a historical point of view.

The Bedfordshire Gaol study demonstrates this point clearly. For almost twenty years some schools in Bedfordshire have been working on this topic, but its potential has grown enormously thanks to the Internet. The project has always had an element of ICT, using a database of prisoners on remand in Bedford Gaol between 1801 and 1877. Pupils and teachers explore the relationship between socio-economic conditions and offending in rural areas; the attitudes to property and person apparent in the sentencing of prisoners; and the impact of religious belief on the treatment of prisoners. The data themselves are compelling: why was one man fined 1 shilling and given a month's imprisonment for killing his wife, when another was transported for seven years for stealing a handkerchief? (It would be as compelling without the database, but over 1,000 records would be much more difficult to handle.)

The Statutory Orders for ICT are right to insist on the use of a range of sources. Although the data by themselves are fascinating, taking us directly into the lives of the poor, destitute and criminal up to 200 years ago, set in the context of supporting materials they gain significance in terms of the huge issues of religious belief, social attitudes, political and economic change in the nineteenth century. Pupils' understanding is greatly enhanced by the case studies that include all of the documentation available on some offences, showing the offender's previous record, the evidence for the prosecution, the newspaper accounts of the offence, the trial and its outcomes. Reading the findings of Howard and Gurney at the start of the period, they understand how attitudes to debt and crime changed, especially when they can use the plans for the growing and changing nineteenth-century prison, with designs for a treadwheel and the drawings of cells. Government regulations for the treatment of prisoners, added to the Bedford prison dietaries, allow pupils to feel prisoners' experiences. Even more enlightening is information on

transportation, or the hulks at Woolwich, the destination of so many convicted prisoners. Background information on institutions such as Millbank, Pentonville and Borstal explain the changing destination and fate of prisoners in the light of the authorities' evolving attitudes to social control. The real fascination of the study, however, is the collection of records of late nineteenth-century prisoners with their photographs attached to graphic details of their physical and intellectual attributes, with details of current charges and previous convictions. Pupils feel as if they know these men and women. With all of these data, pupils can relate the fate of Bedford convicts to national changes in sentencing and treatment of prisoners.

The value of this study has recently been greatly enhanced by ICT. Its inclusion on a web site (www.schools.bedfordshire.gov.uk/gaol) has significantly expanded the available resources. The database is easy to search in order to work out trends in the criminal behaviour and the treatment of offenders in a way that can be related to current policies and conditions. Importantly, pupils can now combine downloaded information into their own word-processed or desktop published presentations of a range of arguments. Pupils select from the available sources using downloaded illustrations to enhance arguments based on information gathered from the range of books, pamphlets and databases, to create prison reform pamphlets, illustrate criteria for penal reform institutions or evidence to be used in role-plays of trials.

This is another example of a website with a database which can be used in conjunction with contextual textbook and reference information to encourage selection, analysis and evaluation of material. Pupils can argue particular points linked to the major trends in nineteenth-century conditions and attitudes. For example, on a scale of increasing difficulty, to represent the various ages at which pupils use the data, the following questions could be posed:

- Why did sentences vary so much from prisoner to prisoner?
- For what kinds of offences were prisoners more likely to be acquitted, and why?
- Did the separate system work for the prisoners on file?
- To what extent was the development of prison design representative of national trends or reflective of local necessity?
- What were the reasons for changes in the treatment and destination of prisoners shown in the file – did they follow national imperatives or were they more representative of changes in class and religious attitudes?

These are difficult issues, but the collection of materials linked to use of the database enables valid responses, soundly grounded in historical evidence.

If we turn back to the statements in the ICT curriculum, at level 6, the incline in difficulty is not simply in terms of the ability to use more complex technological processes: pupils also need to think in a more sophisticated way. They are required to 'develop and refine their work to enhance its quality, using information from a range of sources . . . and when necessary, use complex lines of enquiry to test hypotheses' (DfEE–QCA 1999). This again mirrors aspects of the historian's process, from research through to the expression of ideas.

Some schools have engaged pupils in the study of a particular historical development or series of events through the use of newsroom simulation, in which pupils writing news reports from particular points of view are continually faced with the next stage in the story, often accompanied by primary source materials, and thus having to amend their writing, as the historical event unfurls. This encourages pupils to consider the situation at each stage, to see how it looked at the time, without the benefit of *post hoc* wisdom, and to study in depth the impact of each development. It also leads them to consider the impact of the tone of their language and any imported graphics accompanying the text.

In one school, Year 9 (14-year-old) pupils were asked to write a report on inflation in 1920s' Germany, based on research completed as homework. They were asked to write a pro-Nazi front page and then select appropriate illustrations and subtitles. Next, news of an attempt to assassinate Hitler was fed into the exercise. How would this impact on the composition and layout of their front page? Were their illustrations now inappropriate for such a momentous occasion (especially as the initial report that came through was that Hitler had in fact been killed)? What should they do with their original story after they had started the new headline news? Could they twist it to add depth to the main news? Looking afterwards at contemporary newspaper reports they could see that the reporters had been faced with some of the same dilemmas which they had faced. This was emphasised when the news was given that Hitler had in fact survived unharmed. Having completed their reports and evaluated them in the light of the contemporary reports, they could see from their study of Nazi propaganda techniques why and how the party took the opportunity to twist the news to its own benefit.

What did ICT contribute to this? First, the ability to amend without a complete re-write of the news as the updates came through. This encouraged good historical practice: deciding in the light of their contextual knowledge what they should retain and discard, examining

really closely what was important at each stage of the changing circumstances, evaluating the impact of each event on the people involved. Second, the use of ICT provided the opportunity for the pupils both to select an appropriate illustration from the school intranet and to quickly amend the sub-title and comments relating to the illustration, in the light of the change in editorial emphasis.

This worked well because the ICT had made the task much less laborious, freeing more time for pupils to think about the history. The selection of illustrations was pre-loaded by the teacher, as was the template for the newspaper. Two advantages: first, the size of the page and the font set a limit on the document, enforcing a compressed writing style; second, no time was wasted in drawing up desktop published front pages or selecting fancy coloured fonts. If they finished – which none of them did within lesson time – they were encouraged to make the appearance of the document enhance its message. The task also worked because of the high expectations of the teacher with regard to content and concentration, expressed in terms of clearly set objectives and crystal-clear instructions. Thorough preparation and careful planning underpinned the success of the exercise as a whole (see Chapter 3).

I referred earlier to the success of Year 11 pupils producing analyses of the contributions of particular medical reformers, as a result of careful progression in teaching towards independent working. The examples were based on *PowerPoint* – no coincidence here, as *PowerPoint* had been one of the most effective tools in the process. Real progress occurs when teachers take the not inconsiderable trouble to use *PowerPoint* as a means of teaching effective research and source analysis techniques, and the need for clear expression of findings.

Some departments have developed outline presentations as templates for pupils to argue the case for one side in a historical conflict. Take, for example, the conflict over land ownership in the American west in the nineteenth-century. The teacher asked pupils to consider all of the political, economic and social arguments current at the time. Working in pairs, they had to create an argument for or against the displacement of the native American peoples, with the more-able pupils invited to argue in favour of displacement. Groups selected relevant slides from a set of illustrations prepared as a presentation by the teacher to provide opportunities for arguing a range of issues. On each slide, the teacher placed a link to a source on the network, a website or a CD. The preferred argument derived from these sources could be expressed on each chosen slide either by labelling the illustration or by using bullet points. Pupils were taught to prepare for this by selecting for relevance from the background information, pasting into the 'Notes' section of

the *PowerPoint* presentation and using their selection to write the brief comment that contained their argument. Those who had the time re-drafted the 'Notes' using the headings on the slides, to provide both their guide to their commentary and reference for questions from others.

Use of *PowerPoint* thus provided the desired structure as a model for future practice. Through it, the teacher guided pupils towards relevant sources, readily available on the network, without heaps of paper cluttering desks. The structure compelled pupils to select material carefully, to consider its relevance to their argument and to the illustration and then to express their views concisely. Relevance . . . to the illustration – often they had to examine an image closely to see how it was supported by the linked document. In discussion with pairs of pupils, the teacher led them to consider the flow of their argument; *PowerPoint* enabled them to re-order their slides, to improve their impact, with the more-able pupils revising their comment to provide relevant links. The very act of presentation in this form encouraged thoughtful evaluation of their own arguments in the light of others' ideas: all were based on the same original materials, all closely guided by the structure, but all enabling free selection of focus, argument and supporting detail within the constraints of succinct delivery. Finally, they could amend their presentations to take into account the more compelling arguments of the other side. Those who discovered important omissions arising out of their original selection were able to add to the argument at the relevant point.

We all see both the potential and the pitfalls of allowing pupils to search the Internet for their own sources – hence the teacher's provision of appropriate sites in the above example. Here, however, there is a need to teach the processes of site evaluation much earlier than had the teacher in the sixth-form example, in preparation for the next stage of difficulty, when pupils have to choose from several sites before being given freedom to use the research skills they have been taught to find their own suitable sources.

Of course, some people have always been aware of and excited by the potential of ICT to enhance the quality of historical thinking and expression, but it took recent improvements in scope and accessibility of ICT to match the outcomes more nearly to the intention. Early simulations were designed to encourage pupils to study and hypothesise from their supporting materials that could be by-passed because limited computer memory prevented their inclusion as part of the package. Used together with the support materials they provided fascinating in-depth opportunities for active involvement in researching and making decisions about historical situations; used without the necessary background information they were reduced to a matter of the sterile mechanical

pressing of keys at random. The opposite was true of word-processing and data handling: history departments, especially in the pressured era of the early National Curriculum, usually could not spare the time to teach the complex codes and syntax required before the work could proceed. Those who persevered, however, found rich rewards in terms of motivation and learning.

Conclusion

The examples given here of good practice today form only a small sample of the many around the country in which the use of ICT is enhancing, not merely supporting, historical thinking and expression: widening the horizons of the available resources; making it essential that we learn to evaluate and select from these resources; teaching, not simply enabling, logical forms of argument; challenging pupils to question, to test and to explain. I have classified them artificially for the purposes of this argument, but they are as mutually dependent as those in the historical process. Look again at these ICT skills and recognise yourself, the teacher of history: 'question . . . reflect . . . select . . . interpret . . . organise and present'.

Note

1 Published in the 1920s, this reference work records the biographical details of many thousands of men and women who served in the First World War, including both those who were killed, and those who survived. There are fourteen volumes, or 'sections', and a full index. The following is a typical entry:

> *Child, T.J., Private, 18th Middlesex Regiment.* He volunteered in April 1915 and after a period of training was sent to France in December 1917, where he took part in heavy fighting at Ypres and the Somme. After being twice wounded at Kemmel Hill in July 1918, he was invalided home and in February 1919 was discharged as medically unfit. He holds the General Service and Victory medals and in 1920 was still undergoing hospital treatment. 8, Bravington Rd, Maida Hill, W9.

The National Roll of Honour volumes cost £38 each, hardback, and can be purchased through the website of Ray Westlake Publishers (www.hellfire-corner.demon.co.uk/catalog.html). There are copies of local volumes in most Public Record Offices and many public libraries.

References

BECTa–HA (1998) *History Using Information Technology – Improving Pupils' Writing in History through Word Processing*, London, BECTa –HA.

DfEE–QCA (1999) *Information Technology: The National Curriculum for England*, London, DfEE–QCA. Available online: www.nc.uk.net

Prior, J. and John, P. (2001) 'From anecdote to argument: using the word processor to connect knowledge and opinion through revelatory writing', *Teaching History*, No. 101: 31–4.

Slatta, R. (2001) 'Connecting learning goals with technology', *History Computer Review*, Vol. 17, No. 1: 19–30.

8 What do they do with the information?

Working towards genuine interactivity with history and ICT

Terry Haydn

The nature of interactivity

> The other important thing about CD-Roms of course is that they are interactive. Learning is no longer a matter of passively receiving information; you can become actively involved in the process, answering quizzes, manipulating images, summoning up pictures or music and pasting together your own notebook of words, images and sounds on screen.
>
> (Tony Blair, interviewed on *A Week in Politics*, Channel 4, 18 February 1995)

Interactivity is a facet which is frequently mentioned in justifying ICT's educational potential. There is talk of children 'dancing in cyberspace' (John Redwood, *TES*, 14 April 1995) with 'Hey Presto – *Encarta* wallpaper!' (Davitt 1999) 'Interactive sounds as if it must be a good thing; modern but approachable, hi-tech but homely. Put alongside words such as "multimedia" and "Pentium", and you're part of the future' (Coughlan 1997).

Computers do offer colour, movement, sound and pictures to learners. This can make learning materials look much more attractive to pupils. Moreover, as Bill Gates points out (*Guardian*, 2 March 1995), interactivity means that 'the person controls what he or she sees or hears'; using hypertext links, learners can negotiate their own – individual – pathways through learning materials.

The problem with this is that in terms of their interaction with the materials, learners sometimes do fairly low-level, meretricious or even pointless things with the data given, either uncritically accumulating information, or using hyperlinks to browse 'pinball' fashion around a topic, often using hyperlinks to avoid going near screens which have too much text on them (Hillis 2002). Josie Taylor of the Open University

cited the avoidance of challenge and difficulty as a potential hazard of hypermedia interactivity:

> We certainly need to keep their attention and keep them going when they're learning, but if they think it's all to do with trial and error, pressing this button, that button, that's not learning, that's not getting the knowledge into their minds in an integrated way, in a way they can make use of, that's just mucking about.
>
> (Taylor 1996)

In the UK, the development of 'interactive' online quizzes has been a feature of many history website activities, using 'quizmaster' technology to enable pupils to mark it themselves, work out which questions they answered correctly, and have further attempts to 'get it right' before moving on. Together with *Shockwave* graphics (see for instance the BBC's 'History of Medicine' materials at bbc.co.uk/education/medicine/swcontent.html, or the 'Schools History Site' at schoolshistory.org.uk), these offer a very attractive mode of testing for recall, compared to pencil-and-paper testing, but they work only for straightforward retention and comprehension questions.

If we think in terms of recent ideas about 'hierarchies' of learning skills (see, for example, Krathwohl *et al.* 1964; Taylor 2000), we can see that the sort of interactivity involved in such exercises addresses only the lower 'rungs' of the learning hierarchy.

At the lowest level are what are termed 'reactive–passive' activities such as listening, copying, reading, repeating and observing; recall, recapitulation and comprehension. It is at this level that much current ICT interactivity operates. Beyond this are 'reactive–processual' activities such as extracting, recording and translating data, 'proactive–processual' activities which involve interpretation and application, and the 'high-order' skills (proactive–analytical and proactive–synthetic) of analysing, hypothesising, inferencing and synthesising.

How big a problem this is, in terms of ICT's ability to provide interactive learning experiences in history, depends on two things: first, ideas about what constitutes effective learning; and, second, ideas about what school history is trying to achieve. As indicated in Chapter 1, although politicians are attracted to simple 'transmission' models of learning, teachers realise that there is more to learning than recall and comprehension. It is also now generally accepted that there is more to progression in history than the aggregation of substantive or 'subject content' knowledge. In addition to developing an understanding of history as a body of knowledge, school history is about a form of

knowledge approach which attempts to pick out the central features of a discipline and find ways of developing children's understanding of those features (Lee 1994). A key part of this is helping to develop pupils' ability to compare, analyse and evaluate historical sources, and representations and interpretations of the past. This involves handling the difficulties involved 'intelligently', in the sense of learning to use some of the procedures which historians would use to 'make sense' of the differing accounts or explanations of past events (Britt *et al.* 2000; Lee and Ashby 2000) As Lee and Ashby are keen to stress, this was not 'a retreat from the importance of students acquiring historical knowledge', instead, ' "knowledge" was treated seriously, as something that had to be understood and grounded' (Lee and Ashby 2000: 200).

Some of ICT's attributes can help history teachers to go beyond basic recall and comprehension interactivity. It can enable pupils to access materials and undertake activities which allow them to make connections between substantive or 'subject content' knowledge, and their understanding of the *nature* of historical knowledge – to understand what 'facts' are, the processes which are undertaken to establish the validity of claims, and how historians attempt to get at 'the truth' or, at least, what Arnold (2000) terms 'true stories'.

There is nothing wrong with online 'interactive' quizzes: they have their place when checking to see whether pupils have retained and understood the information which we want them to have, but we must explore other ways in which ICT can provide helpful learning experiences for pupils. How can we get ICT to address the higher levels of learning in Bloom's taxonomy (1956) and to develop pupils' understanding of history as a *form* of knowledge?

The question of interactivity impacts on the way that we attempt to assess the extent to which pupils have learned what we are trying to teach. With regard to testing for 'real learning', as opposed to the short term retention and comprehension of information, John Holt provides some helpful ways of assessing for 'genuine' gains in understanding:

> It may help to have in our minds a picture of what we mean by understanding. I feel I understand something if I can do some, at least, of the following:
>
> 1 state it in my own words;
> 2 give examples of it;
> 3 recognise it in various guises and circumstances;
> 4 see connections between it and other facts or ideas;
> 5 make use of it in various ways;

6 foresee some of its consequences;
7 state its opposite or converse.

> The list is only a beginning, but it may help us in the future to find out what our students really know as opposed to what they can give the appearance of knowing, their real learning as opposed to their apparent learning.
>
> (Holt 1964: 176)

Holt's list can be helpful in thinking about what questions to ask pupils and what activities to provide for them, in order to get meaningful rather than superficial interactivity between the learner and the resources for learning.

Jim Schick (1995, 2000a, 2000b), who has written and researched extensively in the area of history education and ICT in the USA, argues for the need to think of interactivity more in terms of what goes on in the mind of the learner, rather than what happens on the screen, and in terms of learners' general ideas about the past, rather than their specific recall of particular facts.[1] This ties in with Sadler's views about the need to 'disturb their thinking', lest pupils continue to think about the past very much as they did prior to teaching interventions (see Dickinson 1998).

If we want to make the most of the 'interactive' potential of ICT for improving teaching and learning in history, we need to think beyond sound and graphics, quizzes and games, and hands-on special occasions in the network room to satisfy ICT audits. The real potential of ICT lies not in the 'bells and whistles' of multimedia, to provide 'sugar-coating' for learning, but in its ability to access resources which would otherwise be inaccessible, and to manipulate and process those resources much more efficiently. Even these assets are only of real worth if we can think of historically valid activities for pupils to do with these resources and processes.

If we take into account recent ideas about how children learn, and what it means 'to get better' at history, ICT offers a range of opportunities to history teachers in terms of interactive learning, but not in the sense that the opening quotation of Tony Blair suggests. It is easier to take full advantage of these opportunities if we move away from the mental straitjacket of thinking that the use of ICT always has to involve hands-on experience for all pupils, and 'set-piece' whole lessons in networked computer suites. In terms of contributing to pupils' learning in history, giving out a resource which has been downloaded from the Internet or showing the whole class a sequence from a CD-Rom using

a data projector may be more helpful than marching them down to the network room to spend an hour labouring over a badly thought out word-processing task or desk top publishing exercise. In terms of Schick's use of the term, it can also be more genuinely interactive. Schick argues that the eye-catching features of multimedia have deflected attention away from more meaningful facets of interactivity. Does the activity force the learner to think, rather than simply remember? Does it put the seeds of a new idea in learners' minds? Does it make them think about 'connections' (either temporal or geo-political) that had not occurred to them before – including links to present-day problems and dilemmas? Does the question posed intrigue learners in a way that encourages them to read in more depth, and persevere in a difficult enquiry? Does it disturb their preconceptions? (Schick 1995, 2000a). Whereas early attempts at interactivity in history and ICT showed a limited understanding of the nature of historical knowledge, and only partial insight into what history teachers are trying to do, the last few years have seen more thoughtful approaches to getting ICT to do what history teachers need, and to providing more genuinely interactive experiences for pupils.

Recent developments in ICT, interactivity and history

Problematising the past

John Arnold reminds us that the Greek word from which 'history' derives originally meant 'to enquire', and, 'more specifically, indicated a person who was able to choose wisely between conflicting accounts' (Arnold 2000: 18). The 'communications' strand in ICT has transformed the scope for presenting pupils with a range of differing interpretations and representations of the past, and 'conflicting accounts'. Given limitations of space in even the best of text books, it increases the opportunities for pupils to learn history 'by reading multiple texts on the same topic, and by discussing controversies of interpretation' (Britt *et al.* 2000: 438). The Internet, and some of the more recently produced history CD-Roms, make it much easier for the history teacher to set up an argument or problem relating to the past in such a way that pupils have to think, reason and make judgements and decisions about information, rather than simply 'learning it'. This is the 'real' interactivity that Schick refers to. As one history teacher remarked: 'It just generally improves the depth of research on any topic . . . the railways can be a dire topic in terms of making it interesting, but with the help of the

Internet to conduct an enquiry, it really takes off and they really learn' (Haydn 2001). Even with this 'extraordinary supplement to the resources normally available for the study of history' (see Chapter 2), as much thought needs to be invested in what to do with the materials, and what questions to ask of them, as is given to just searching for 'more stuff'. Some sites appear to have potential for the history teacher, but are so vast that it is difficult to know where to start in turning them into a 'usable' lesson resource (see, for example, Bamber Gascoigne's 'Historyworld' site, of over a million words: http://historyworld.net). Often, the Internet is at its most useful when someone has put together a 'collection' of materials relevant to a particular aspect of the past (some examples are given later in this chapter).

It is not just that 'there is a lot of stuff out there', but that intermediaries – subscription sites, history departments, PGCE students, history journals and newspapers – have trawled the Internet's resources, selected particularly appropriate materials, and provided suggestions for ways in which they might be used. Given that 'teachers' time' is such a precious resource, the role of these intermediaries is crucial in rendering potentially intractable resources 'usable'.

Reuben Moore (2000) provides a good example of the use of the Internet to set up a well-structured interpretations exercise by selecting three contrasting reviews of the film *Michael Collins*, and then using the simple table shown below (Table 8.1) to structure the pupil activity that stems from the three sources.[2] This activity demonstrates that effective 'interactivity' is not about the volume of information which is 'shifted', but about the selection of appropriate sources, and the quality of the questions asked of them (see Chapter 3 for a more developed rationale for this activity).

The strong emphasis in the US History Standards on the development of students' abilities to compare competing historical interpretations of events (NCHS 1996: 2) has meant that many Internet sites in the US have incorporated the presentation of different perspectives and interpretations of the past into the instructional design of their materials (some examples are given later in the chapter). British sites are also realising the potential of the Internet for presenting multiple perspectives on the past, linking 'depth' to 'overview' (see, for instance, the Museum of London's virtual exhibition on 'The Blitz', with sections on 'Memory', 'The Big Story', and 'The Personal Story' (www.museumoflondon.org.uk/MOLsite/menu.htm). As Dave Martin points out in Chapter 5, ICT increases the opportunities for linking the detail of major events of the past with the fate of individuals who were part of those events, in a way that helps pupils to make sense of the past. We can

Table 8.1 Pupil activity on contrasting reviews of *Michael Collins*

Interpretation number	*Did the writer think the film was good?*	*Why did the writer think it was good/bad?*	*Why was each interpretation written?*	*In what ways has this affected how it was written?*
1				
2				
3				

listen to the commentary of the man who dropped the bomb on Hiroshima, and the testimony of survivors; the radio broadcast of Truman telling the American people that Hiroshima was a military base, the testimony of those who led him to believe that this was the case, and the differences between American physicists and chemists on the morality of dropping the bomb. See, for instance:

- www.ibiscom/vohiroshima.htm
- www.dannen.com/decision/index.html
- www.csi.ad.jp
- http://rmplc.co.uk/eduweb/sites/chatback

The fact that so much of history is contested on the Internet means that it is much easier to 'problematise' a wide variety of historical themes, events and individuals. Several of my students have said that they have found it much easier to make the Industrial Revolution seem interesting, important and relevant to pupils since using the Internet to make it a 'controversial issue', rather than something that pupils feel has nothing much to do with their lives.

A particularly useful site for history teachers is the 'portal' for newspapers, '*The Paperboy*' (http://thepaperboy.com). The online archiving of newspapers provides opportunities for disturbing pupils' preconceptions about the past, drawing on revisionist interpretations, and making a wider range of historical topics controversial, in the sense of illustrating to pupils that there are very differing views about, for example, the role of the individual, the welfare state, national identity, the powers of the state, and almost any topic that is part of the National Curriculum for history. (Sadly, the site has recently imposed a small subscription charge.)

Some of the more recently produced history CD-Roms have also drawn on the potential of electronic media to problematise the past. The

British Library's CD-Roms (1995, 1998, 2000) make a conscious attempt to use sources to set up worthwhile historical enquiries. *The Troubled Century* (YITM 1997), in spite of some flaws, also presents opportunities for argument and debate on a range of twentieth-century crises, allowing pupils to think 'in role', as Kennedy or Khrushchev, during the Cuban Missile Crisis, before giving the verdict of historians on their actions and motives. This CD-Rom is a good example of flawed resources providing opportunities for history teachers. After undertaking the role play of the crisis, the feedback suggests that there is a consensus among historians on the roles of Kennedy and Khrushchev. The follow up to the role play can be to direct pupils to the range of interpretations of the crisis which are available on the Internet, or to present them with a selection of judgements on the crisis (see www.uea.ac.uk/~m242/historypgce/ict/cuba.htm for some suggestions).

Developing pupils' 'information literacy'

The 'Crick report' *Education for Citizenship and the Teaching of Democracy in Schools* (DfEE–QCA 1998: 44) stated that the skills and aptitudes which young people should possess by the end of compulsory schooling were to include:

- the ability to use modern media and technology critically to gather information;
- a critical approach to evidence put before one and ability to look for fresh evidence;
- the ability to recognise forms of manipulation and persuasion.

The Government's 'Literacy across the curriculum' strategy also stresses the importance of young people being able to read with critical awareness as an important strand of literacy (DfEE 2001).

School history clearly has a major role to play in both citizenship and literacy. A historical education in the twenty-first century should aim, among other things, to develop pupils' understanding of the status and reliability of information from a range of media sources.[3]

A small-scale enquiry into pupils' ranking of the reliability of information from various sources revealed that in Year 7 pupils thought that CD-Roms, the Internet, and school textbooks were the three most trustworthy sources of information (see Table 8.1). The survey found that Year 11 pupils in the same school also regarded these three sources of information as more trustworthy than television, radio, newspapers, non-fiction books, and 'what the teacher says' (Howe 1997). The survey

Table 8.2 Years 7–11 survey results on sources of reliable information

Source	*Year 7*	*Year 8*	*Year 9*	*Year 10*	*Year 11*	*Overall*
School textbooks	6	8	8	6	7	8
General non-fiction books	5	2	4	5	5	5
Television	3	4	2	3	3	3
Radio	2	3	3	4	2	2
Newspapers	1	1	1	1	1	1
CD-Roms	8	5	7	7	8	7
What the teacher says	4	6	5	2	4	4
The Internet	7	7	6	8	6	6

Note: Pupils surveyed were instructed: Rank the following according to how much you trust in what they say (8 = most, 1= least)

Source: Howe 1997, reproduced with permission of the author.

suggests that in spite of recent emphasis on 'the reliability of sources', the experience of school history is not seriously disturbing young people's ideas about the reliability of the information they receive from the media.

This was a small-scale enquiry, conducted within one school, but it nonetheless raises interesting questions for history teachers. Given that one of the aims of school history is to help young people to handle information intelligently, there is perhaps a need to address the issue of 'media literacy' more specifically , and make connections between the reliability of sources 'from the past', and the sources from which they derive information in their day-to-day lives. Harold Macmillan once remarked that the main advantage of being educated was that you knew when someone was speaking nonsense (quoted in Williams and Mahlouji 2001). No subject is better placed than history to teach pupils that the Internet is not the ultimate repository of truth and wisdom. In the era of 'spin', media manipulation and sophisticated techniques for the distortion of information, an important facet of citizenship education is to teach pupils 'to sort out the differences between essential and non-essential information, raw fact, prejudice, half-truth and untruth, so that they know when they are being manipulated, by whom and for what purpose' (Longworth 1981: 19). Helping pupils to become 'mature' Internet users (see Chapter 2) is an important part of this aspect of citizenship education. In conjunction with the scanner, the Internet can be a valuable resource for developing pupils' visual literacy, given the wealth of images, portraits and cartoons which can be accessed online, especially now that many major search engines incorporate an 'Image search'

facility as part of their services (for example, go to www.google.com and click on 'Images').

The realisation that many young people do not have a sophisticated understanding of the status of information on the Internet has led to the development of a number of sites which can be used to develop pupils' 'Internet literacy'. One example of this is a 'spoof' site, about Oliver Cromwell, which at first glance, appears to be a *bone fide* educational site (www.inwards-holland.fs.net). The site was designed to make a point about the integrity of information on the Internet, and about the practice of uncritically downloading information. The author was deluged with email requests from students asking him to write their assignments for them.[4]

Several sites have moved beyond simply teaching learners how to search for information on the Internet, and onto educating them in evaluating the reliability of information on the Internet. For example:

- www.2learn.ca/mapset/tutorials/tutorial.html#evaluate
- www.ariadne.ac.uk/issue16/digital
- www.trinity.manchstr.sch.uk/curric/history/relnet/relianet.htm

There is also a site which explores the ethics of using resources on the Internet – 'Some advice and a lecture for those of you doing research, homework or whatever': www.geocities.com/SoHo/Studios/1344/advice.html

A more extensive list of resources which might be helpful to history teachers in addressing 'media literacy' can be found at: www.uea.ac.uk/~m242/historypgce/ict/medialit.htm

In addition to asking about the reliability of information from electronic sources, questions can also be posed about the comparative efficiency of various educational media. The abundance of materials on a wide range of historical topics means that it has become comparatively easy to set tasks where groups of pupils can be instructed to learn about a historical topic by using books, video, CD-Roms, or the Internet, and asked to think about the comparative advantages and disadvantages of using such different approaches. This can help to make the point to pupils that the computer screen is not necessarily the most time-effective way of acquiring basic content knowledge about historical topics.

Making connections between the past and the present

Another powerful asset of the Internet in particular is the facility with which the past can be connected to the present. There is an abundance

of materials which provide links between current-day problems and issues and the historical perspectives on them which are the substance of history teaching. There are still many pupils who think that history is boring, useless, and of no relevance to their lives (see, for instance, Adey, 2000; Aldrich, 1994). One of the key challenges to history teachers is 'how to demonstrate the relevance of history to the present in a sufficiently convincing manner to gain the interest of the pupils' (Burston and Green 1962: 9). Using the resources of the Internet to link the past to the present can be a way of persuading pupils that history is vital and relevant to their lives, and escaping from what Ball (1993) terms 'the curriculum of the dead'. If we tell them that 'How democratic was Victorian Britain? is a 'key' question, shouldn't this link into some consideration of how democratic Britain is today? If pupils are going to be taught to analyse Tudor portraits, shouldn't we also give them some contemporary images to think about? The scanner can be an invaluable tool for presenting images of individuals from the present as well as the past. As well as helping to persuade pupils that history is important, as well as interesting, making links with the present can also be a way of developing pupils' conceptual understanding of many of the ideas which they encounter in history:

> Learning about the concept of kingship (*or whatever*) frequently involves two sets of simultaneous learning: learning about power and its distribution in modern society. The former cannot be given real meaning until pupils have some more contemporary knowledge against which to calibrate their historical understandings.
>
> (Husbands 1996: 34)

Helping trainee history teachers to make effective use of television programmes, the Internet and a scanner can be an important part of developing their *pedagogical* subject knowledge (How can I teach this topic in a way that makes sense to these pupils?) Most history teachers regularly use video extracts as 'components' of their lessons (Sharp 1995); the Internet, the scanner and newspapers also offer a wide range of opportunities for adding to the impact, challenge and interest of lessons. The recent online archiving of broadsheet newspapers has provided access to a range of articles which trace the antecedents of current problems, issues and crises, polemics which interpret them in different ways, and reviews of the most recently published history books. Such resources can play a big part in persuading pupils that history is vital, relevant and important to their lives. Sites such as '*The Paperboy*', (www.thepaperboy.com), the gateway site to newspapers worldwide, or the 'Archive'

section of newspapers such as the *Guardian* (www.guardian.co.uk/Archive) provide the opportunity to access a wide range of articles which link the present to the past, on topics such as race, slavery, opposition, British identity, the census, the changing role of the monarchy, immigration, religion and economic change. For a list of examples, see www.uea.ac.uk/~m242/historypgce/ict/paperboy

Depth, difficulty and extended reading

One of the central challenges in realising the potential of ICT in history is how to use it to counter cultural and educational trends towards the easy, the quick and the superficial (Berman 2001; Kay 1995; Postman 1985) In Kay's words:

> Although understanding or creating such constructions is difficult, the need for struggle should not be grounds for avoidance. Difficulty should be sought out, as a spur to delving more deeply into an interesting area. An educational system that tries to make everything easy and pleasurable will prevent much important learning from happening.
>
> (1995: 150)

Attention has recently focused on pupils' abilities in extended writing tasks (see, for example, Counsell 1997); less attention has been accorded to extended reading. Kaye points out that because computer screens are not good for reading extended prose, there is a tendency to show pictures, diagrams and short 'bumper-sticker' sentences, 'because that it what [computer] displays do well' (Kay 1995: 152). History text books have also moved away from extended prose. Whereas history text books of twenty years ago contained substantial and unbroken sections of text, a survey of several Key Stage 3 texts revealed that there were *no* pages without a picture or a diagram, and the amount of text on any particular topic was limited to a few hundred words at most. How are pupils to be prepared for reading 'proper', 'grown-up', history books?

The 'communication' strand of ICT offers opportunities for countering the inherent weaknesses of the computer screen, and the limitations of text books, by making it possible to access and download longer historical texts. Now that most newspapers are archived online, articles can be used in a variety of ways to provide pupils with longer and more challenging reading. They can be used as homework or preparatory reading, or be 'talked through' in the classroom, with accompanying teacher exposition, or to provide voluntary extension

activities for able and enthusiastic pupils who want to learn about a topic in more depth. Alternatively, different articles can be 'sub-contracted' to pupils, to enable them to discuss different or conflicting ideas about historical issues.

The aspiration is that the quality of the writing will draw the pupils into challenging and difficult materials, in terms of both depth and difficulty. Such articles can be helpful because they provide new findings or theories about particular topics, or because they help to develop pupils' understanding of what history is, and that there are differing approaches to interpreting the past.

High-quality extended reading can also be accessed from history websites, and the online section of history journals (see under 'Web addresses' (pp. 33–34) for history journal websites). Many history websites now offer substantial depth of coverage in a wide range of historical topics, which can be helpful for either developing trainee teachers' subject knowledge, 'cherry-picking' resources for classroom use, or serving as an aid to 'personal study' exam projects for older pupils (see, for instance, the 'Virtual Economy Site' at http://ve.ifs.org.uk for a history of the British economy and the chance to run it, and the 'Calvin Academy' on Nazi propaganda at www.calvin.edu/academic/cas/gpa/ww2era.htm).

This is interactivity in the sense of providing difficult materials which force pupils to think – which might disturb their preconceptions, the way they think about particular historical topics, and about what 'history' is more generally.

It is also about using ICT to access challenging and quality writing to get pupils interested, so that they will engage and persevere with what is difficult, rather than to make history easy for them (for some examples, see www.uea.ac.uk/~m242/historypgce/ict/paperboy.htm). Articles which have been downloaded from online newspaper archives generally come without accompanying photographs. Although this makes them look less attractive, it is a step towards persuading pupils that materials without pictures can be interesting, and that sometimes it can be worth reading extended sections of text, because of the depth of understanding and 'new knowledge' it provides.

These materials will often not be appropriate for working with younger or less-able pupils, but for 'A' Level pupils, and able pupils, they can be a way of providing provocative polemical and stimulating resources which require them to read about history in some depth. Pupils can also be helped and guided through such texts, in the way in which John Fines used to make use of challenging historical sources. Given that it is difficult for even the most dedicated and imaginative teachers to

come up with homeworks which are consistently stimulating and helpful, the use of electronically accessible newspaper articles can also be a way of enhancing homework provision in history.

Some examples of 'interactive' approaches using ICT

The Holocaust: what questions do we ask?

There are many ways of approaching this important and sensitive topic (see, for instance, *Teaching History* (2001), No. 104 [Holocaust issue]). We must not, however, make the assumption that all our pupils either know about the Holocaust or share adult perceptions of its importance. One danger is that it can be done in a way which leaves pupils thinking that it was something which happened many years ago, something that has nothing much to do with their lives. Another is that pupils think that the Holocaust was just about the concentration camps, and was created, fairly unproblematically, by the personal wickedness of Adolf Hitler. If teaching focuses mainly on the camps, and the Final Solution, some of the pertinent and relevant questions about the Holocaust may not be posed. Another problem about teaching the Holocaust is the limited amount of lesson time which can be devoted to what is a very broad and complex topic. The aims of the approach outlined below are to use the resources made accessible by ICT to get pupils to think about the Holocaust in broader terms, to challenge their ideas about its causes and the questions it raises, to get them to think about the issues raised outside the classroom, after they have finished the taught sessions, and to realise that many of the questions raised by the Holocaust are relevant to the lives they themselves will lead.

The first part of the lessons is to ask pupils what they know about the Holocaust, and what images they think of when they close their eyes to think about it. How much and what they know will obviously very from group to group, but there will be few classes where none of the pupils have any knowledge of the Holocaust, and few where the camps and the 'Final Solution' are not at the forefront of their thinking about the Holocaust. (An alternative approach is for the teacher to provide some of the better-known images of the camps – '*Arbeit macht frei*', the gates and railhead at Birkenau, on OHP or *PowerPoint*, before asking what pupils know. Images can be accessed from www.remember.org/image/index.htm).

The next stage is to ask the pupils why they think that study of the Holocaust has been made a 'compulsory' topic of study, why young

The Holocaust: what questions might we ask of it?

- Is the Holocaust 'special' or different in some way from other events in history; if so, why, what is its significance?
- To what extent can a study of Hitler and his policies explain the Holocaust?
- When did the Holocaust start?
- To what extent is it about Germany and German history?
- To what extent is the Holocaust about the Jews?
- Why didn't other countries do more to stop it?
- Why did ordinary 'educated' people do terrible things?
- To what extent was it unique or different from other twentieth century genocides?
- To what extent was it about eugenics and 'the efficient society', and what messages does that have for us today? Is it possible to value people differently and yet still treat them equally?
- How can people deny the Holocaust when there is so much evidence to support it?
- Should it be illegal everywhere to deny the Holocaust, as it is in Germany?
- What does the Holocaust tell us about human nature and the human spirit?
- Are some questions about the Holocaust more important than others?
- Could it happen again – in Germany or England, or elsewhere?

Figure 8.1 Questions about the Holocaust

people should know about it and what questions we might ask of the Holocaust. The amount of teacher 'prompting' will vary from group to group, but most groups should be able to come up with a list similar to that in Figure 8.1 (I am not suggesting that this list is definitive).

The next stage is for the pupils to watch some video footage on the concentration camps. The last thirty minutes or so of the Holocaust episode of *The World at War* is one possible option, containing, as it does, a brief excerpt from a Nazi 'public relations' documentary about the camps; but any programme which provides a substantial section on the camps would do.

The pupils are then referred back to the list of questions about the Holocaust, and asked: 'Which of the questions does this source (the video extract) help us to answer?' Most footage of the camps provides

evidence of the reality of the Holocaust, and helps us to understand the *scale* of the camps, and what happened to the people in them, but is of little or no use in answering many of the other questions in Figure 8.1. This helps to make the point to pupils that if we limit our study of the Holocaust to what happened in the concentration camps, it will limit our understanding of some of the important and relevant questions which the Holocaust poses.

The next step is to provide pupils with, or direct them to, a more wide-ranging collection of sources on the Holocaust (see Figure 8.2), using resources which can be accessed via the Internet (and CD-Roms, if available). The class is split into groups of 4–6 pupils. Each pupil within a group is given an article to read, take notes on, and report back to the group as a whole. If you have eight articles/sources which address different facets of the Holocaust, give two different sets of four sources to adjacent tables and ask each table to report to the other after the first round of feedback. The pupils are asked to consider which of our questions about the Holocaust their source is useful for, and what are the possible problems and limitations of the source as evidence. The reading and summarising of the articles can be done either in class or as a homework. The articles offer a broader or more eclectic approach to the topic than is possible within the constraints of most text books, and the aim is that the exercise will have disturbed their thinking about what the Holocaust was about, and that long after the taught sessions are over pupils will think about some of the issues arising from the articles, including those which may seem tangential to the Holocaust itself, but which are relevant to the society they will grow up in.

The articles listed below have been selected because they address aspects of the Holocaust which are not related specifically to the concentration camps, and because they address some of the questions in Figure 8.1. They have been selected by using

www.thepaperboy.com
www.remember.org
www.annefrank.ne and
http://vector.cshl.org/eugenics

You could obviously use many other Internet sources and CD-Roms such as *Lest We Forget* and *Anne Frank House*, and there is also a collection of quotations related to the Holocaust which can be accessed at www.uea.ac.uk/~m242/historypgce/hol.htm

- 'The scientific origins of eugenics' (available online: http://vector.cshl.org/eugenics)

- 'Revealed: why evil lurks in us all' ('Study shows that crude loyalty to our social group and blind obedience make tyranny possible anywhere.' An *Observer* article by Martin Bright; available online: www.guardian.co.uk/Archive/Article/0,4273,4106805,00.html)
- 'We all have blood on our hands', ('The Holocaust Memorial Day should remind us not only of German depravity, but of all genocidal campaigns everywhere.' Will Hutton, *Observer*, 21 January 2001; available online: www.guardian.co.uk/Archive/Article/0,4273,4120705,00.html)
- 'No way back' ('Europe is anxious about the rise of neo-nazism, but, argues Ian Kershaw, Hitler's biographer, history will not repeat itself, particularly in today's Germany.' *Guardian*, 30 September 2000)
- 'Elderly neglected by NHS' ('Ministers told to act on health discrimination.' David Brindle in the *Guardian*, 8 November 1999)
- 'Lipstick in Belsen', (Lieutenant-Colonel Mervin Willett Gonin, *Guardian*, 13 June 1998)
- 'In the Stasi archives' (Matthew Reisz's *Guardian* review of Timothy Garton Ash, *The File: A Personal History*, 3 July 1997)
- 'Why history matters' (reflections on the Irving trial by D. D. Guttenplan, *Guardian*, 15 April 2000)
- 'Two tribes go to war' (Peter Beaumont's, review of P. Gourevitvch, *We Wish to Inform You That Tomorrow We Will Be Killed with Our Families* (London, Macmillan), *Observer*, 14 March 1999)
- 'Let's pretend that life is beautiful' ('Why do we use the story of Anne Frank to tell a story about the essential decency of human beings?' A. Karpf's review of three Anne Frank biographies, *Guardian*, 3 April 1999)
- 'Master race of the Left' ('Forced sterilisations in Scandinavia have shocked the world . . .'. J. Freedland, *Guardian*, 30 August 1997)
- 'The everyday face of evil' ('It may be comforting to think that the Gestapo were hated and feared by most Germans, or that the Nazis were a short-lived phenomenon, but it is not the truth.' M. Brown, *Guardian*, 9 September 1997)
- 'Apocalypse then' (N. Lezard's review of S. Lindqvist, *Exterminate All the Brutes*, (London, Granta), *Guardian*, 23 January 1999)
- 'Myth and memory' ('Britain's first Holocaust Memorial Day – but why has such a laudable event stirred up anger and protest?' D. Cesarani, *Guardian*, 24 January 2001)
- 'The most dangerous man in the world' (report on the controversial views of Australian philosopher Peter Singer, *Guardian*, 6

November 1999. A long article which might be appropriate for particularly able or well motivated students)

- 'Couple jailed for neglect of 5 children' (*Guardian*, 21 March 2000. The right to found a family is one of the articles of the UN Charter of Human Rights, but should all adults have the right to have children, and in what circumstances might they forfeit the right to have children?)
- 'Humanity among the horrors' (*Guardian*, 26 February 2000. An interview with Tzvetan Todorov, author of *Facing the Extreme* (London, Phoenix)a book about the moral dilemmas of prisoners in the camps)
- 'Germany fears Superman's return' ('Philosopher unnerves nation with call to weed out the weakest.' *Observer* 10 October 1999)
- 'Poland's willing executioners' (*Observer* 8 April 2001. Account of anti-Semitic atrocities in Poland)
- 'A chance dialogue with a contemporary Nazi', (account of a seven-hour train conversation which a traveller had with a neo-Nazi on a train journey from Berlin to Katowice in 1995, from the 'Cybrary of the Holocaust' website, http://remember.org/educate/munn.html)
- '"Nobody was gassed at Auschwitz": 60 Rightist lies and how to counter them' (another source from the 'Cybrary of the Holocaust' website at http://remember.org/ideas/kz.html).

The articles noted above are merely suggestions, and possible starting points. Another way of using 'The Paperboy' site is to explore different newspapers' reactions to the same event – the decision to have a Holocaust Memorial Day, the events and reaction to the events of 11 September, the debate about whether there is such a thing as 'the British race'.

The hope is that, at the least, exposure to these very different perspectives on the Holocaust will lead pupils to reappraise their ideas on what the Holocaust was about, its relation to the present and to the lives they themselves will lead.

The development of 'depth' sites with improved instructional design

Only a few years ago there were many high-profile education websites which were fairly superficial in terms of depth and quality of content, and which had devoted little thought to what learners would do with

the information provided. The National Grid for Learning itself was until recently a fairly skeletal and anaemic creature, particularly with regard to quality history materials and activities. This led to a degree of disenchantment with the possibilities of 'virtual' interactive learning, exacerbated by the 'hard sell' and hype surrounding the early phases of education website design.

This situation has changed, and there has been a move towards devoting more time and thought to the instructional design of history websites – thinking about what the learners can usefully do with the historical information once they have accessed it.

Whereas the history teacher or the history department typically has a very limited budget and limited time to plan how to resource and teach particular topics, many history websites are able to spend thousands of pounds, and hundreds of hours thinking about how to approach teaching a particular historical topic in depth, and about how to enable effective learning to take place. There is no necessary correlation between the size and the usefulness of history websites, but over the past two years some interesting sites have emerged, both in the USA and in Great Britain, which have moved beyond interactivity at the level of quizzes and comprehension exercises. The key thing which the five sites reviewed below have in common is that at least some aspects of the design requires learners to think and make decisions or 'intelligent choices' in relation to the historical information presented.

- The PRO's 'Learning Curve' site on the Cold War (www.learningcurve.pro.gov.uk/coldwar)
  This site is a good example of the lessons that have been learned in the field of web design and learning over the past few years. It makes the point that the quality of the history is related, at least in part, to the questions posed of the content and the instructional design of the site. Based around six key enquiry questions and case studies of different events from the Cold War, much of its content could be printed off and used in class, or for homeworks, but the multimedia components are well chosen for (where facilities permit) 'hands on' use or whole-class demonstration using a data projector.
- 'Crisis at Fort Sumter' (www.tulane.edu/~latner/CrisisMain.html)
  Many history teachers' interest in computers was elicited by early simulation packages for the BBC B-computer (such as *Attack on the Somme*, *1914*, and *The French Revolution*), where pupils digested

information about an unfolding historical event or crisis, and then made a series of decisions after analysing the information. I have spoken to several teachers who remarked very fondly about these simulations, and the interest and enthusiasm which they evinced from pupils. Although the fate of Fort Sumter in the American Civil War lies outside of the British National Curriculum or GCSE syllabuses, the design does give an indication of the potential of websites to problematise historical events, and to get pupils to analyse, evaluate and make judgements in situations 'where there is not a provably right answer' (Joseph 1994). Learners are presented with a series of problems which Abraham Lincoln had to deal with over Fort Sumter, and asked to choose between various courses of action, before finding out what Lincoln actually decided to do and what were the consequences of his actions. The site is aimed at advanced or undergraduate learners. It does, however, give an indication of approaches to interactivity which could be adapted for younger pupils, and to events and crises in British history. The site is text-heavy, but the absence of flashy graphics and multimedia special effects can help to avoid the danger that learners short-cut on reading, analysing and evaluating the information, in order to 'get a result' in terms of activating these graphics and special effects.

- Nova's 'Holocaust on Trial' (www.pbs.org/wgbh/nova/holocaust/pseudoscience.html)
  In exploring the resources on this part of the Nova site on the Holocaust, learners' ideas and assumptions about the role of science and 'evidence' in the twentieth century are questioned, both in relation to the Holocaust, and to contemporary issues such as the greenhouse effect and educational testing.
- *New York Times* 'Education Site' (www.nytimes.com/learning)
  See, for instance, the section on slavery (www.nytimes.com/learning/teachers/lessons/990329monday.html), with a collection of resources and a suggested lesson plan for students to 'explore how and why various historical resources present information about slavery differently'.
- The Annenburg–CPB's 'Biography of America' site (www.learning.org/biographyofamerica)
  A characteristic of 'high-level' interactivity is that as much time and thought has gone into the questions posed of the resources as into the resources themselves. The 'Questions to ponder' facility provides questions which require learners to make connections to other historical contexts, and to the present. So after accessing

well-selected materials on the USA in the 1920s, learners are given the following questions to ponder:

- Could we term the economic boom of the 1990s 'The Roaring Nineties'?
- How different is American life in the 1920s from the way we live today? How is it the same?
- Think about the forces that are shaping America in the first decade of the twenty-first century: what name would you give to this new decade?

History, the Internet and the development of political literacy

The Crick report (DfEE–QCA 1998) noted the development of political literacy as one of three central strands of citizenship education – an area where history clearly has a potentially vital role to play, particularly in terms of developing pupils' understanding of political concepts.

The interactivity of the Internet makes it possible for pupils to visit sites such as those outlined below and undertake political profile tests online which help to develop their understanding of concepts such as liberal, socialist, Left, Right, libertarian, authoritarian, centrist, fascist and communist. Having undertaken the tests, they can print out their own political 'ideology' on a Nolan-chart, obtain clarification on definitions of political concepts, and compare their profile with all the other people who have done the test.

- 'The World's Smallest Political Quiz' (www.self-gov.org)
  In this case, over 1.25 million people have taken the quiz, but most of these live in the USA, and the site is hosted and run by the Libertarian Society. It offers ways into concepts such as bias, position and propaganda, and the thought that peoples' political ideas will vary according to when and where they live. The site contains links to others which raise interesting questions about political affiliations in different societies, including a 'depth' site on the French Revolution, which offers a 'position paper' on Louis XVI, and views on how he rated as a king.
- Political Compass (www.politicalcompass.org)
  The test explains the limitations of the 'Left–Right' continuum in defining political positions, and provides considerable depth of information about where a range of historical figures stand in terms of 'Left–Right' and 'authoritarian–libertarian' continuums, as well as a list of references which were used to construct The Political Compass.'

- 'The World's Shortest Political Quiz' (http://yoyo.cc.monash.edu.au/~mongoose/quiz)
- 'The Political Quiz Show' (http://madrabbit.net/webrabbit/quizshow.html)
  Americanised, but suggests ways into what a British equivalent might look like, or what questions might have been asked in other eras.

As with other aspects of school history, 'The Paperboy' site offers a range of archived resources for older and more-able pupils, or for use with younger pupils if edited and presented appropriately by the teacher. The following are examples; other suggestions can be accessed at www.uea.ac.uk/~m242/historypgce/ict/paperboy.htm

- 'Down with meritocracy' (Michael Young, *Guardian*, 29 June 2001)
  The man who coined the phrase 'meritocracy' in 1958 explains his thoughts on how this political concept has evolved since then. The article can serve as a way of getting pupils to think about equal opportunities' issues in history, and aspects of citizenship and democracy.
- 'De Montfort was Braveheart of England after all' (Jason Burke, *Observer*, 27 August 2000)
  'New evidence restores reputation of democracy's hero'; a succinct update of recent research on Simon de Montfort.
- 'Hand to Brand combat' (Naomi Klein, *Guardian*, 23 September 2000)
  An accessible synopsis of *No Logo;* not all pupils would find the book an easy read, but this five-page article provides a way into globalisation issues and the eclipse of the nation state which might serve as a useful counterpoint for pupils studying nineteenth-century European history.
- 'A brief history of the mob' (John Mullan, *Guardian*, 28 April 2001)
  How many pupils fully understand the concept of 'opposition'? This article provides a succinct summary of the ways in which opposition has manifested itself in this country from the Gordon Riots of 1780 to the defacing of Churchill's statue in 2000.
- 'Orwell for our time' (Timothy Garton Ash, *Guardian*, 5 May 2001)
  A useful introduction to the idea of 'political writing', for AS Level students.
- 'First the biography' (Timothy Garton Ash, *Guardian*, 10 November 2001)

> Suggests criteria to use in deciding whether people are terrorists or freedom fighters. Could be used in conjunction with C4's *Heroes or Villains*? and *What the Papers Said* schools broadcast series.

All these resources have the collateral advantage of being more interesting to read than Pandas, DfES circulars and much of the documentation which is currently inflicted on teachers. They might have the incidental advantage of reminding both teachers and pupils about why they became interested in history in the first place. They can be used in a variety of ways: as a source of simple teacher exposition; printed off as homeworks; given to pupils to précis, or summarise; or to present different interpretations of a historical figure or issue.

Collections

Although many history teachers have used or adapted elements of the QCA schemes of work (www.standards.dfes.gov.uk/schemes), they are still often left with the time-consuming task of scavenging for resources which will transform the 'ideas' spelled out in a scheme of work into quality practical teaching activities. The Internet is becoming an increasingly useful vehicle for putting together a 'collection' – a range of sources which someone has painstakingly put together to address a particular key question or idea. Such collections are used in the learning activities that follow.

British soldiers' attitudes to fighting in the First World War

The following task (see Figure 8.2) was devised by Laura Berzins and Rachel Ward,[5] and is an adaptation of Christine Counsell's 'happy–sad continuum' exercise on the Blitz, featured in *Teaching History*, No. 99. (Counsell 2000).

The key question is 'Why is it so difficult to describe how soldiers felt about the First World War?' Even if we think of a good and purposeful enquiry question, it can take hours of research to track down the appropriate sources which will 'fit' the exercise, and make it a challenging and worthwhile history activity. The advantage of ICT is that a collection of sources, already assembled and trialled, can be put together as a simple file which can be accessed from the Internet. It is also easy to adapt and add to the resource in the light of experience and practice.

There are over forty sources in all, but the collection can be edited to suit the age and ability of pupils, and the amount of time available.

Why is it so difficult to describe how soldiers felt about the First World War?

Analyse the sources at www.uea.ac.uk/~m242/historypgce/ict/ww1.htm The sources are all from British soldiers fighting in the First World War. Put them into a 'positive-negative' continuum, with the most positive attitude to the war at the top and the most negative at the bottom. In the right hand column, note any comments or problems/limitations of the source.

When you have put together your continuum, think about the following questions:

Did all the soldiers have negative or positive attitudes? Why were they happy or sad? Are some sources more helpful or problematic than others, or easier to classify? Were some soldiers *both* happy and sad? Is there any evidence of change in their opinion of the war? In there any link between the rank of the soldier and their attitude to the war? Is there evidence to suggest that attitudes became more negative as the war progressed?

Author	*Rank*	*Date*	*Positive?*	*Negative?*	*Notes/comment*
Grenfell	Captain	Oct. 1914	'Adore war… like a big picnic… never been so happy'	Nothing	We don't know whether this was before 'real action'

Figure 8.2 Why is it so difficult to describe how soldiers felt about the First World War?

The authors of the exercise note that by challenging pupils' ideas about the influence of rank and front-line combat, and exploring pupil predictions and hypotheses *before* analysing the sources, pupils would have to think more carefully about the diversity of the trench experience, and their understanding of the period, and of war in general. The exercise could even be 'opened up' to look at testimony about combat more generally across the twentieth century (see www.uea.ac.uk/~m242/historypgce/ict/c20war).

Developing children's understanding of time and chronology

This is a site where I have tried to draw together a range of ideas and resources for developing pupils' understanding of time. I have found that many of my trainee history teachers tend to neglect this element of the knowledge, skills and understanding of the National Curriculum for

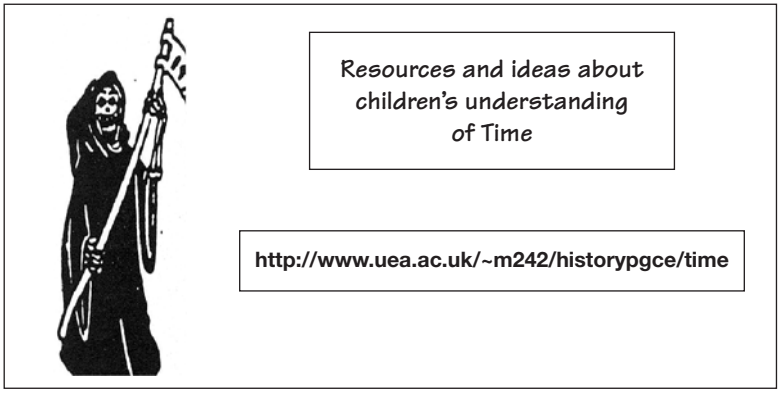


Figure 8.3 Resources and ideas about children's understanding of 'time'

history, or approach it in a fairly unstructured and general way. The site is designed to get them to think about what it means for pupils 'to get better' at understanding time (see Figure 8.3). Part of the interactivity is the process of getting trainee history teachers to question their ideas about progression in an aspect of the subject which they may not have fully reflected on. There is a suggested 'framework' for thinking about how to consider pupil progression, with links to a range of activities designed to address this aspect of historical understanding; there are thumbnail summaries and a bibliography of recent research on children's understanding of time; links to websites which provide insights into aspects of time and chronology; and an 'e-conference' about whether pupils should be made to learn 'dates' in history.

The site also contains other 'collections', including sources to support Ian Luff's article 'Speaking and listening in history' in *Teaching History*, No. 105 (www.uea.ac.uk/~m242/historypgce/gaskellure) and materials about citizenship and school history (www.uea.ac.uk/~m242/historypgce/cit). These resources are not meant to be an 'off-the-peg' lesson, but are to save teachers time in hunting for resources to support worthwhile historical enquiries and interpretation exercises which they are doing anyway.

Commercial collections

- The three British Library CD-Roms on British history 1066–1900[6] are good examples of how the instructional design of CD-Roms has

improved over time, with collections of sources which 'problematise' the past, in relation to 'key questions'. For example: Was the English Civil War the fault of Charles I, or was it due to factors beyond his control? Was the Civil War characterised by chivalry or barbarism? Does the evidence allow us to conclude that atrocities became more prevalent as the war progressed? Interactivity derives from the shift in pupils' thinking as they confront the contradictions and limitations which the sources present. They are guided towards thinking about the sources and questions, and making judgments on them, rather than just passively receiving them.

- The *Mentor* database[7] is a collection of sources on five National Curriculum topics: Life in the Middle Ages; the Industrial Revolution; the First World War; Hitler's Germany; and the Second World War. This CD-Rom makes the point that ICT resources do not have to be at the 'cutting edge' of new technology to be useful and usable. Research by Davis *et al.* (1989) found that teachers would use ICT only if it was easy to use, and if it did something useful; and many history departments have found the straightforwardness and simplicity of this database to have been helpful in enticing teachers into exploring ICT. Thought has been given to the questions which might be asked of the sources *as a collection*, and to asking different *sorts* of historical questions. Interactivity derives from the insights which these questions provide about the range of questions which historians ask. The database helps to develop pupils' understanding of history as a form of knowledge, as well as a body of knowledge.
- The National Portrait Gallery's *Woodward Portrait Explorer* CD-Rom[8] is a useful means of addressing aspects of visual literacy. It is a good example of a resource which lends itself to *integration* and *interplay* with other resources, rather than a 'set-piece' whole lesson in the ICT suite.
- The HiDES computer-based learning packages for history teaching[9] are a good example of the interactive potential of ICT. Although limited to A Level students and undergraduates, the level of intellectual challenge of the materials, often requiring analytical synthesis of documents, maps, statistics and posters, demands perseverance and application, in addition to high-order information-processing skills. As with the British Library's CD-Roms, one of the principles underpinning 'interactivity' here is that learners are forced to make judgements on the comparative adequacy of differing historical explanations. With the accession of Hitler to the chancellorship in 1933, for example, students are given four differing historical

'interpretations' of the event, and a substantial amount of supplementary information in the form of maps, graphs, cartoons, election statistics and election posters, and asked to judge which of the four interpretations offers the most robust explanation of Hitler's rise to power. The capacity of the programme to analyse the adequacy of students' responses, and to indicate omissions and misinterpretations, makes it more genuinely interactive than online quizzes and multiple-choice tests. An example of the potential of this approach for working with younger pupils is the American software toolkit *The Sourcer's Apprentice*. Although the content is directed at the USA's History Standards, it gives an indication of how that approach could be adapted to subject content more relevant to the British National Curriculum for history (Britt *et al.* 2000).

Assessment

The marking of pupils' work is a significant part of teachers' workload, and the use of ICT to reduce that burden has not yet been fully explored and developed. Some examples are emerging which use some of the functions of ICT to enable pupils to mark and reflect on their own work. The 'Insert comment' button on the 'Insert' menu of *Word* is one way of enabling pupils to access responses and feedback to their initial attempts to answer questions, as is the creation of 'Answers' files to complement pupil exercises, either on floppy disks, the school intranet or a departmental website.

The table shown as Figure 8.4 is an attempt to assess how well pupils have grasped the relations between the major powers of Europe in 1914. They are asked to give a mark out of 10 to each relationship, with 10 out of 10 representing the most solid and committed of alliances, and 0 out of 10 representing intense hostility between countries.

The pupils fill in the marks out of 10, either with or without textbooks and other resources to help them, and then when they pass the mouse pointer over the 'Comment' boxes the answer or the teacher's comments is revealed onscreen (for the fully worked example, see www.uea.ac.uk/~m242/historypgce/assess).

Another example of self-marking and virtual feedback (see Figure 8.5) can be located at www.uea.ac.uk/~m242/historypgce/time/t1/time1.htm.

This is a web-based equivalent of the simple pencil-and-paper test on pupils' understanding of dating conventions and time vocabulary, and

	Britain	*France*	*Germany*	*Italy*	*Russia*	*Austria–Hungary*
Britain						
France						
Germany						
Italy						
Russia						
Austria–Hungary						

Difficult one; about 6 out of 10; must be lower than France-Russia: traditional French mistrust of 'Perfidious Albion' plus past colonial rivalry in Africa, only an '*entente*' (friendly understanding), not a firm military alliance: no commitment to support France in the event of a German invasion

Figure 8.4 Activity: relations between the great powers of Europe, June 1914

was trialled with about 1,000 Year 7 pupils. In addition to the 'Answers' file, teachers can access a file which gives details of pupils' overall performance on the test in the schools involved in the research.

The Internet can also provide access to examples of pupils' work, and practical guidance on interpreting current assessment arrangements: see for instance, the 'National Curriculum in Action' site (www.ncaction.org.uk); or, for an interesting example of a 'commended' A Level essay go to www.ipswich.suffolk.sch.uk/departments/history/tory.htm.

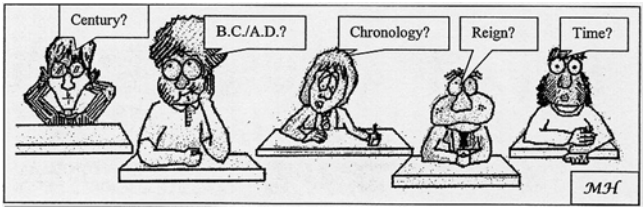


Figure 8.5 A short test about 'time': dating systems, centuries and some 'time' vocabulary
www.uea.ac.uk/~m242/historypgce/time/t1/time1.htm

Conclusion

The 'Out of line' multimedia room at the Anne Frank House Museum is a good example of genuine and purposeful interactivity using new technology. Would outlawing *Mein Kampf* have averted Hitler's rise to power and all that followed from that? Visitors are asked to consider and make judgements on contemporary moral and ethical dilemmas where freedom of expression is balanced against the protection of minorities. You can see from coloured ceiling panel displays how the rest of the audience has voted after they have watched each of the complex and problematic case studies. The multimedia dimension helps to make the presentations more compelling and powerful. Both sides of the argument are presented in a plausible and well-substantiated way. Interestingly, participants' votes are context-dependent – different scenarios evince differing responses, which helps to bring home the complexity of the issues. It is interactive in the sense of being thought-provoking – 'interactivity' in Jim Schick's sense of the term rather than Bill Gates's definition (see page 196). It leaves you thinking about (and therefore interacting with) the case studies and contingent ethical dilemmas long after you have left the museum. In terms of interactive learning, it addresses 'the gulf between knowing X, and using X to think about Y' (Wineburg 1997: 256). Full interactivity involves critical thinking on the part of the learner. In the words of Richard Slatta (2001: 21):

> Intrinsically tied to historical enquiry are critical thinking skills . . . an intellectually disciplined process in which one actively and skilfully finds and evaluates evidence (locates data: determines whether it is reliable and valid), conceptualises (puts data together with ideas so that it all makes sense), analyses (thinks critically about the concepts and data; breaks it all into meaningful pieces), synthesises (shapes the pieces into a logical, consistent whole) and applies the analysis and interpretation as a guide to belief and action.

We are beginning to see the emergence of examples which demonstrate the potential of new technology to move beyond interactivity at the level of retention and comprehension quizzes. Recent developments in instructional design have meant that new technology is *sometimes* being used to engage history pupils and students in worthwhile activities rather than simply trying to make the study of history easy. More consideration is being given to how children learn. There is an increasing number of Internet sites and CD-Roms which give thought to what learners will do with the information once they have accessed it, and to the quality

of the questions posed of historical content. Some history sites and CD-Roms are heeding John Holt's suggestions for assessing for genuine understanding (see page 194–5).

The full potential of ICT for providing worthwhile interactive learning in history will only be realised when instructional design consistently takes into account the nature of history as a subject discipline, and requires learners to apply, amend, revise, compare, interpret, analyse, select and make judgements on the information which they access.

Notes

1 Although many of the examples of ICT-based tutorials, both in Schick's work and on US history websites in general, are on the history of the USA, the principles underlying the instructional design of the materials would be just as relevant to topics which are part of the British National Curriculum for history.

2 Full details of this and other activities can be found in Reuben Moore's 2000 article in *Teaching History* (see References). The three reviews of the film can be found at:

- www.suntimes.com/ebert/ebert_reviews/1996/10/102509.html
- http://michaelcollins.warnerbros.com/cmp/welcome.html
- http://geocities.com/CapitolHill/Lobby/5598 or www.uea.ac.uk/~m242/historypgce/ict/collins.htm

3 Sheila Lawlor (1989) argued that we run the risk of confusing pupils if we present them with differing interpretations of the past, and that they would be better off just 'mastering the facts'. If we do not make them aware that history is a construct, and that there are differing views about which facts are important and how they should be selected and interpreted, we run the risk of pupils never really understanding what history is. As Peter Lee (1994: 43) points out, the idea that school history is primarily a set of facts to be learned is to reduce the discipline to 'unhistorical political mythologizing' and to diminish its potential usefulness to young people.

4 I am grateful to Sue Holland for drawing this site to my attention. More on the 'history' of the site can be found at www.uea.ac.uk/historypgce/ict/medialit

5 I am grateful to Rachel Ward and Laura Berzins for giving permission for the use of these materials. The exercise is an excellent example of adapting and refining ideas to apply to differing historical contexts.

6 *Medieval Realms*: *Britain 1066–1500* (£9.99 + VAT, CD-Rom only, not easily available). *The Making of the United Kingdom: Britain 1500–1750* (£79.00 + VAT, plus £75 for network license) and *Britain 1750–1900* (£99 + VAT, plus £75 for network license).

7 *Mentor* database available from Actis Ltd, Rutland Mills, Market St, Ilkeston, DE7 5RY. Tel.: 01159–448300; online: www.actis.org.uk

8 The National Portrait Gallery's *Woodward Portrait Explorer* CD-Rom (£20), from the National Portrait Gallery. Tel.: 0207–312 2463 Ext. 253; online: www.npg.org.uk

9 HiDES computer-based learning packages for history teaching available from Primary Source Media, The Gale Group, PO Box 45, Reading, RG1 8HF. Tel.: 0118–956 8844; online: www.galegroup.com the packages cost £42.50 per unit, plus £40 for the HiDES software installation package. Topics include: The dissolution of the monasteries; Did Hitler plan the Second World War?; Did Hitler achieve a social revolution?; The Hossbach Memorandum, Poverty and Poor Law relief; October 1917: The Bolshevik seizure of power; Why did Hitler become chancellor on 30 January 1933?

References

Adey, K. (2000) 'Choosing history at Key Stage 4: factors', Paper given at HTEN Conference, Homerton College, Cambridge, 13 July.

Aldrich, R. (1994) 'Interesting and useful', *Teaching History*, No. 47: 11–14.

Anne Frank House (2000) *Anne Frank House: A House with a Story*, Amsterdam, Anne Frank House.

Arnold, J. (2000) *History: A Very Short Introduction*, Oxford, Oxford University Press.

Ball, S. (1993) 'Education, Majorism and the curriculum of the dead', *Curriculum Studies*, Vol. 1, No. 2: 195–214.

Berman, M. (2001) *The Twilight of American Culture*, New York, Duckworth.

Bloom, B. S. (1956) *Taxonomy of Educational Objectives: The Classification of Educational Goals*, New York, David Mackay.

British Library (1995) *Medieval Realms* (CD-Rom), London, British Library.

—— (1998) *The Making of the United Kingdom* (CD-Rom), London, British Library.

—— (2000) *Britain 1750–1900* (CD-Rom), London, British Library.

Britt, A., Perfetti, C., Van Dyke, J. and Gabrys, G. (2000) 'The Sourcer's Apprentice', in P. Stearns, P. Seixas and S. Wineburg (eds) *Knowing, Teaching and Learning History*, New York, New York University Press, 437–75.

Burston, W. H. and Green, C. W. (1962) *Handbook for History Teachers*, London, Methuen.

Coughlan, S. (1997) 'Caught in the net', *Times Educational Supplement*, 10 January.

Counsell, C. (1997) *Analytical and Discursive Writing at Key Stage 3*, London, Historical Association.

—— (2000) '"Didn't we do that in Year 7?" Planning for progress in evidential understanding', *Teaching History*, No 99 (Planning issue): 36–41.

Davis, F., Bagozzi, R. and Warshaw, P. (1989) 'User acceptance of computer technology; a comparison of two theoretical models', *Management Science*, Vol. 35, No. 8: 982–1003.

Davitt, J. (1999) 'A digital education', *Guardian*, 12 January.

DfEE–QCA (1998) *Education for Citizenship and the Teaching of Democracy in Schools: Final Report of the Advisory Group on Citizenship*, London, Department for Education and Employment–Qualifications and Curriculum Authority.

DfEE (2001) *Key Stage 3 National Strategy: Literacy Across the Curriculum*, London, Department for Education and Employment.

Dickinson, A. (1998) 'History using information technology: past, present and future', *Teaching History*, No. 93 (History and ICT issue): 16–20.

Endless, SA (1997) *Lest We Forget* (CD-Rom), Endless, Belgium.

Haydn, T. (2001) 'Subject discipline dimensions of ICT and learning: history – a case study', *International Journal of Historical Learning, Teaching and Research*, Vol. 2, No. 7: Available online: www.ex.ac.uk.historyresource/journal3/haydn.pdf

Hillis, P. (2002) 'Using ICT to enhance the teaching and learning of history in Scottish schools', *History Computer Review*, Vol. 18, No. 1: 11–25.

Holt, J. (1964) *How Children Fail*, New York, Pitman.

Howe, M. (1997) Unpublished assignment 'Pupil perceptions of the reliability of information from different sources', University of East Anglia.

Husbands, C. (1996) *What Is History Teaching?*, Buckingham, Open University Press.

Joseph, K. (1984) 'Why teach history in school?' *The Historian*, No. 2 (insert).

Kay, A. (1995) 'Computers, networks and education', *Scientific American*, reprinted from the September 1991 edition: 148–55.

Krathwohl, D., Bloom, B. and Masia, B. (1964) *Taxonomy of Educational Objectives: The Classification of Educational Goals*, London, Longman.

Lawlor, S. (1989) *Proposals for the National Curriculum in History: A Report*, London, Centre for Policy Studies.

Lee, P. (1994) 'Historical knowledge and the national curriculum', in H. Bourdillon (ed.) *Teaching History*, London, Routledge: 41–8.

Lee, P. and Ashby, R. (2000) 'Progression in historical understanding among students ages 7–14', in P. Stearns, P. Seixas and S. Wineburg (eds) *Knowing, Teaching and Learning History*, New York, New York University Press: 199–222.

Longworth, N. (1981) 'We're moving into the information society – what shall we teach the children?' *Computer Education*, June: 17–19.

Moore, R. (2000) 'Using the internet to teach about interpretations in Years 9 and 12', *Teaching History*, No. 101: 35–9.

NCHS (1996) *National Standards for United States History: Evaluating the American Experience*, Los Angeles, National Center for History in the Schools.

Postman, N. (1985) *Amusing Ourselves to Death: Public Discourse in the Age of Show Business*, New York, Viking Penguin.

Redwood, J. (1995) *Times Educational Supplement*, 14 April.

Schick, J. (1995) 'On being interactive', *History Computer Review*, Vol. 11, No. 1: 9–25.

—— (2000a) 'Taxonomy of interactivity', *History Computer Review*, Vol. 16, No. 1: 15–28.

—— (2000b) 'Examples of interactivity', *History Computer Review*, Vol. 16, No. 2: 15–42.

Sharp, C. (1995) *Viewing, Listening, Learning: The Use and Impact of Schools Broadcasts*, Slough, NFER.

Slatta, R. (2001) 'Connecting learning goals with technology', *History Computer Review*, Vol. 17, No. 1: 19–30.

Taylor, G. (2000) 'Does ICT really improve learning?' *Education Today*, Vol. 50, No. 4: 23–30.

Taylor, J. (1996) *Technonerds*, 19 March, C4 TV broadcast.

Teaching History (2001), No. 104 (Holocaust issue).

Williams, H. and Mahloouji, V. (2001) 'The poverty of education', *Guardian*, 18 August.

Wineburg, S. (1997) 'Beyond "breadth and depth": subject matter knowledge and assessment', *Theory into Practice*, Vol. 36, No. 4: 256.

Yorkshire International Thomson Multimedia (1997) *The Troubled Century* (CD-Rom), Leeds, YITM.

9 Getting started in history and ICT

Alf Wilkinson

Introduction

This chapter is aimed at history departments, history teachers and history teacher-trainees who do not feel confident about their proficiency and knowledge of ICT, or about integrating ICT with schemes of work, and making computers part of the day-to-day work of teachers and pupils.

Where 'baseline' experience of using ICT in the teaching and learning of history is limited, the way forward is as much about attitudes to change and teachers' learning as about technological proficiency in ICT. It is also about departmental collaboration and development, and perhaps as Chapter 3 indicates, it involves, above all, clarity of thinking about planning for learning in history generally, as well as understanding how ICT impacts on the pedagogy of school history.

As Chapters 1 and 2 indicate, if not heavily into using computers to enhance the teaching and learning of history, your's is not the only department in that position. My own experience of working with history departments over the past several years bears out recent research which suggests that there are obstacles and difficulties to realising the potential of ICT in history (Bardwell and Easdown 1999). As Terry Haydn argues in Chapter 1, computers are not unproblematical educational miracles. It needs time, thought and energy to turn ICT resources into worthwhile learning means in history, but it can be enjoyable, interesting and fulfilling working out how to achieve this, and it can be a good test of how well departments are able to work together at the important challenge of managing change. Getting started in history and ICT is partly about moving towards a position where thinking about how new technology might contribute to history lessons is seen as an interesting and relevant challenge, rather than a threat and a burden.

Starting from where you are now

There are some things ICT is good at doing, and others at which it is not so good. We should use ICT where it does something we already do, only better, or does something we cannot already do. The best way to start is to move on from what you can already do. Many of us use word-processing to prepare our worksheets. We might even use desktop publishing to incorporate pictures and text. We might use a spreadsheet to track progress and predict examination performance, and we most probably use the library's database system to find that video you remember recording several years ago because it might be useful one day, or perhaps an Optical Mark Reader for registration. Many of us use email to keep in contact with family and friends and search the Internet for resources; and someone in the department may well have used a digital camera which could be used in a departmental context on visits and fieldwork. It can be helpful for members of a department to adopt a 'strategic' approach to moving forward in ICT, by pooling expertise and experience, and sub-contracting areas of ICT between them, sharing the workload, and deriving interest and enjoyment from using ICT to find out more about a subject we enjoy, and share our findings.

As has been noted elsewhere in this book, there is no necessary correlation between the sophistication of the technology and the potential it possesses for improving teaching and learning in history. Quite simple ICT can make significant contributions to the development of pupils' historical understanding. Starting with applications which colleagues are already familiar with, such as finding historical resources on the Internet, or in which it is fairly easy to develop basic proficiency, such as *PowerPoint*, can be a way of ensuring that the focus is on history rather than technological competence.

Using the 'C' in ICT

Several recent developments have made it easier to get started in history and ICT. There is now a much more substantial 'archive' of ideas, suggestions and examples for integrating various facets of ICT with the day-to-day work of the department. Two recent issues of *Teaching History* have focused on ICT, providing a rationale, practical guidance and worked examples of the ways in which ICT can be used to improve teaching and learning in history (Issue 93, November 1998, and issue 101, November 2000).

There are also the HA/BECTa packages on word-processing, data-handling, and the use of multimedia and the Internet which provide ready-made examples that you can use and adapt with your classes

(BECTa–HA 1997, 1998, 2001). These are helpful (and inexpensive) resources for departments to use in developing expertise and familiarity with key ICT applications.

There have also been great strides forward in the structure and organisation of the World Wide Web. The development of 'portals', or 'gateway' sites, as they are sometimes called, has helped bring together history on the Internet in a much more manageable and accessible way, so that you do not have to spend hours trying to find the most helpful sites for a particular topic at Key Stage 3 – someone has probably already done it. There are lots of helpful sites which have brought together the most propitious materials for use in school history, and some are listed at the end of this chapter.

The 'C' in ICT is perhaps the key to accelerating progress in using new technology to teach history effectively: communications technology means that information, ideas and resources can be disseminated across the educational community much more rapidly, and millions of pounds have been spent on the creation of 'super-sites' such as the BBC's 'Education' site, and the National Grid for Learning, with the specific purpose of providing free resources to help teachers. This does not mean, however, that departments can simply download or buy-in an ICT package as a quick-fix one-step solution which will obviate the need to think about how the materials will be adapted and deployed. As Michael Fullan (1999) points out, other people's products are rarely transferable in a transparent and unproblematical way. Even well-thought-out resources which have considerable potential need time, thought and revision in the light of experience to get best use out of them.

Putting history first

First of all, you need to remember that you want to use ICT to learn history, not the other way round. You do not want to spend precious history curriculum time teaching your students to use a specific piece of software. Chapters 1 and 2 of this book point out some of the mistakes to avoid, and some of the attributes of ICT to keep in mind when working to develop the contribution of ICT to teaching and learning in the department. As Christine Counsell and Ben Walsh stress, in Chapters 3 and 4, it is not about how much ICT is used, or about simply providing a variety of teaching approaches; it should be about learning to use ICT appropriately. This means thinking about the history involved, and looking for natural correlations between the facet of history being addressed and the attributes of particular ICT applications. The nature of the Internet, with its plethora of sources of dubious

reliability can afford accessible ways into enquiry, and interpretations of history, and *PowerPoint*, with the constraints on how much information can be fitted on a single slide, can be useful in addressing area 5 of the knowledge, skills and understanding of the National Curriculum for history: 'Organisation and Communication' (DfEE–QCA 1999: 20).

Look at your curriculum planning – where can you use ICT to enhance what you are doing already or to do something you would like to do but haven't been able? You want to re-run the Battle of the Somme – there is a CD-Rom that lets you see if you can do better than Haig (you probably can't). You want important documents from the Public Record Office? There is a website that lets you access them with ease. You want your 'reluctant writers' to learn how to write better essays? Word-processing can help. One department I know uses ICT heavily just before 'choices' are made in Year 9, as an aid to recruitment – very effectively, if the activity is a good one. Another uses a desktop publishing activity with the new intake of pupils when they visit in the summer term. Although the use of ICT should not just be about persuading pupils that history is interesting and enjoyable, the realisation that pupils often find well-thought-out ICT activities stimulating and enjoyable can serve as a boost to departmental resolve to explore the possibilities of ICT.

Some general points

In making a start with ICT and history, it is also important to have an understanding of the school's approach to ICT. The BECTa–HA publication *Defining Effectiveness in History Using IT* (1998) is helpful in explaining the different 'models' for delivering ICT across curricular subjects, and it is essential that you have some awareness of what approaches other departments are using with ICT. This is partly about the quality of departmental liaison with the ICT coordinator, to find out which software applications pupils use, and at what point in the school cycle they are taught to use them. This can also be helpful in terms of negotiating access with your ICT coordinator. He or she should know when the computer room is likely to be available for your classes.

Five general points should be kept in mind:

- It needs an investment of *time* to make sustained and significant progress in effectively integrating ICT across the department. You need time to think through and experiment with how to adapt resources and ideas into schemes of work in a way that works well for your pupils.

- Be careful to avoid just stockpiling more and more website addresses, CD-Roms, history and ICT packages, etc; you need to keep a balance between getting hold of 'more stuff' and actually deploying it in your teaching. It is sometimes easy to think that simply by buying things, or downloading things from the Internet, you are making some sort of progress.
- Don't focus just on the 'major event' of the whole lesson in the network room; instead, explore ways of integrating into lessons 'bits and pieces' of ICT, which are no more than minor contributory components of the lesson (see Chapter 4). You don't have to do a 'big project'. Take it one step at a time and aim to make gradual but sustained progress; don't go for grandiose and extremely complicated and time-consuming schemes which might lead to frustration and loss of momentum. The activities in this chapter are generally small, often one-lesson activities that make reasonable starting points for teachers who have limited confidence in using ICT.
- If at all possible, try to move to a position where you have at least one history room which has the facility for whole-class projection with a computer. This means that instead of booking and moving to the network room every time you want to use ICT, it can just be a routine bit of a lesson, like showing a video extract. If the school/department does not possess a data projector, or the funds to acquire one, a lead to link one computer to a large television screen is a much cheaper alternative. As Davis *et al.* (1989) point out, teachers' use of ICT depends not just on the perceived usefulness of the technology to pursue subject goals, but also on its perceived ease of use. Having the facility to model an Internet activity, or show a CD-Rom animation to the whole class, as part of a lesson, can transform teacher attitudes to the utility of ICT.
- Take note of the Ofsted findings on the use of ICT in history (see Chapter 2); in particular, give consideration to the quality of the non-ICT-related aspects of the lesson, teacher exposition, questioning, feedback, interaction with pupils etc. All these things still have a major influence in how successful the lesson will be. Don't get 'tunnel vision' and neglect these considerations because you have become too immersed in the technology aspects of the lesson. As with non-ICT lessons, the quality of learning is influenced by the quality of the questions we ask (see, for example, Rayner 1999).

A departmental approach

The BECTa–HA case studies reported in 1998 (see Counsell 1998) suggest that a departmental approach to making progress in history and

ICT is more helpful than delegating responsibility for ICT to a particular individual within the department and leaving him or her to get on with it. This does not mean that one person should *not* be designated a 'lead' role, but that it needs to be seen as a departmental initiative, not an individual one. This means allocating departmental time, including time at formal departmental meetings, and making *informal* time for ICT so that discussing ICT, learning and history becomes part of the routine professional dialogue within the department.

Some departments have successfully 'sub-contracted' aspects of ICT in history, either by year-group or by application, but to make the most of this approach it is important to share ideas, resources and findings. Even at the level of sharing interesting historical information which colleagues have come across on the Internet, it can help to engender a positive attitude to ICT – that it is something of interest and relevance to historians and history teachers, rather than another burden to be borne.

It is also important to keep the department's focus on thinking about *what to do* with ICT-based resources – how to use them in the classroom or in homework tasks – so that you are not simply accumulating website addresses, CD-Roms, etc., that do not get used. Try to get all your department to try an activity together – that way you can help each other develop confidence, and can learn from each other's mistakes.

Getting used to a different teaching environment

Where your explorations of ICT take you into networked computer rooms, remember that being in a room full of computers is different from being in your own classroom – the pupils are sitting differently, often facing in several directions. You need to think about how to manage both the pupils and the use of computers. If it is your first time in a network room, ask the technician to help you set up the machines beforehand, and make sure a technician is nearby to deal with the possible glitches or system malfunctions. Or get a more computer-literate colleague who has a 'free' period to support you: it is not 'cheating' to ask for help in your initial forays into ICT. Also, don't overlook the ICT expertise of pupils, who can be a helpful resource in a variety of ways. Be aware that it might take a long time for everyone to log on to the Internet, especially in the afternoon. Make sure you are familiar with the software before you try the activity with your class – no one will expect you to fix a broken network, but they will expect you to be able to do whatever you are asking your pupils to do. Are the pupils going to 'save' their work at the end of the lesson? How? Where? Or are you

going to try to print out all their work – probably unwise. Always have a fallback position, a Plan B. The network might be down, the Internet link might have failed, or the person with the only key to the room is in a meeting – all these things have happened to me when I have arrived, with my class, at the carefully negotiated time in the computer room. And don't panic – however strange it is to begin with, however unsure you are about the practicalities, things always get better with a little practice. A carefully designed activity that works well will help you see the potential of computers, and give you the enthusiasm to try again. A determination to explore the possibilities of ICT and a willingness to experiment are more important than high levels of generic technological expertise.

Using word-processing to find things out, to select and synthesise ideas, and to present a conclusion

Things to keep in mind

Although many departments have found that the word-processor can be a valuable tool in helping pupils to organise and classify information, and develop their skills of extended writing (Walsh 1998), it is important to keep a critical eye on word-processing exercises. The research of Jayne Prior and Peter John (2000) revealed that many pupils tended to disaggregate their prior knowledge and learning in undertaking 'sorting' activities using the word-processor, and not connect up what they were reading on the computer screen with other relevant information. Moreover, they tended to 'phrase spot' rather than read through and assimilate the material, so that when tested afterwards their understanding of the topic covered was limited. The task had become 'mechanical', and the pupils had not been 'drawn into it' in the way Schick (1997) notes as a precondition for successful interactivity using ICT. Prior and John's 2000 article in *Teaching History* provides suggestions for word-processing activities which address these possible problems; they encourage pupils to integrate their prior knowledge with the material in the word-processing template; and they have ideas for enabling them to work with knowledge and opinion in a way which develops historical understanding, rather than just mechanical and 'unthinking' dumping of information. Similarly, when giving pupils sequencing tasks on the word-processor, it is important to have carefully chosen materials which contribute to a genuine development of their 'overview' of an element of the past, rather than sequencing for its own sake. A poor sorting and classifying activity will not be transformed into an effective one by the

introduction of a word-processor: it is the quality of the thinking behind the activity which counts.

The BECTa–HA materials have reached a wide audience, and have often been helpful in providing starting points for departments wanting to move forward in history and ICT; but, as Counsell (1998) notes, the materials often need to be adapted and revised to work effectively, and we still need to keep a critical eye on word-processing activities, to make sure that they are adding something to the value of teaching and learning, rather than just enabling us to tick boxes on our ICT audit. It is always worth considering whether such activities might work better as a card-sort, or as a non-ICT-based homework.

In using word-processing and writing frames to develop pupils' ability to express their historical understanding in the form of extended writing, it is also important to remember that the aim is to bring them to a position where they can write for themselves, so that the 'prompts' and 'scaffolding' which the word-processor provides are eventually internalised, and pupils are able to write without a frame or table.

Rachael Rudham makes the point that well-designed 'sorting' exercises need not be confined to work with younger pupils:

> Arranging and rearranging information to answer specific enquiry questions allows students the freedom to experiment with their historical knowledge in a way that traditional note-making does not. It gets to the heart of what note-making *ought* to be about – thinking independently and creatively about knowledge selection, rearrangement and classification.
>
> (Rudham 2001: 18)

Activity 1: using a word-processor to organise information on the Black Death

This is a simple activity which uses the basic word-processing tasks of copy and paste and tables to get pupils to look closely at the Black Death, and the kinds of things people did to try to cure it (see Figure 9.1). The important thing is the *history* involved. It asks pupils to identify *fact* and *opinion*, and to think about differences between then and now by looking at possible cures for the plague, why people thought they might work, and whether or not we think they would work. Pupils can also be asked to think about some of the consequences of the Black Death. It concludes by asking pupils to write a paragraph summarising their thoughts and ideas. Some pupils might need a little more structure for this final activity; this could easily be done by providing a list of key

Introduction

The Black Death arrived in England in 1348. It is thought to have started in China, and slowly spread its way across Europe. People knew it was coming. No one knew how to prevent it. No one knew what caused it. The first people to die from the Black Death in England were in the Dorset seaports. From there the disease spread across the whole country. Historians are unsure just how many people died, but it is estimated that it may have been up to half the population.

Catching the Plague:
On Day 1 painful swellings called 'buboes' appeared in a victim's armpits and groin. They were usually the size of an egg, but might be as big as an apple. On Day 2, the victim vomited and developed a fever. On Day 3 bleeding under the skin caused dark blotches all over the body. On Day 4 the victim had spasms and was in terrible pain. Day 5 was usually fatal. Sometimes the swellings burst and foul-smelling black pus came out. If this happened a victim might live. Otherwise it was a very painful death.

What people did to try to cure the plague and halt its spread:
Because people sometimes survived if the swellings burst, doctors thought if they could get rid of the poison the sick person would get well. They tried to do this in several ways:

- Put a live frog on the swelling. The frog will swell up and burst inside a quarter of an hour. Keep doing this until the swelling has gone down. If the frog does not burst the victim will not survive.
- The swellings were softened with figs and cooked onions. The onions should be mixed with yeast and butter. Then open the swellings with a knife.
- Things people tried in order to avoid catching the plague or to halt its spread were:
- Carry a bunch of herbs and hold it to your nose at all times.
- Force the sick to leave the village.
- Burn sweet-smelling wood in your house.
- Burn or bury the clothes of plague victims.
- Pray to God for forgiveness for your sins.
- Walk through the streets whipping yourself (flagellation) to show God you are really sorry for all the sins you have committed.

We now know that the Black Death was spread by fleas that lived on black rats. When the rats died the fleas spread to humans. It was not until 1894 that scientists discovered how to treat plague. It can now be cured with injections.

The consequences of the Black Death:
The Black Death changed the way the survivors lived and worked and thought. Many villages lost most or all of their inhabitants, and so were abandoned. There were not so many workers, so wages went up. If the lord of the manor treated you unfairly, you just left, as there were plenty of other lords desperate for workers. Some lords changed over to pasture and sheep farming, which required fewer workers. Many of the workers were now able to rent land from the lord of the manor rather than work for him for nothing. People thought much more about death, and many went on pilgrimages to holy places like Canterbury to thank God that they had survived.

Figure 9.1 Word-processing activity on the Black Death

Tasks

1 From the Introduction, copy and paste *facts* and *opinions* into the relevant boxes below. The box will grow as you add more text.

Fact	The Black Death arrived in England in 1348
Opinion	

2 In the table below, copy and paste the cures and means of containing the spread of the plague the people tried out. In the second column, write whether or not you think they would work. In the third column add why you think people at the time thought they might work.

Cure	*Work, or not?*	*Why people thought it might work*
Put a live frog on the swelling		

3 Now, try to decide whether you think the consequences of the Black Death were for the better or the worse? Copy and paste the effects into the relevant box below. Some things you might think are both good and bad, and therefore go into both boxes.

Good effects	*Bad effects*

4 Finally, use the work you have done to write a paragraph about the Black Death.

Figure 9.1 (continued)

words and ideas, or by using a table and providing stem sentences as a starting point. The previous activities should provide enough guidance for most pupils to allow them to write a paragraph themselves. More extended writing could be set as a homework exercise. This activity could easily be done in one lesson at the computer, either as a follow-up to work already done, or as an introduction to more detailed work on the topic.

This exercise could also serve as a platform for pupils to consider the issue of significance – to consider why the Black Death had such an impact – both then and now. They could also explore the notion of 'plague' by looking at Internet sources which focus on other 'plagues' – these sources can either be pre-selected by the teacher and given to the pupils as printed sources, or pupils can be given a list of selected sites to look at, where Internet access makes this practicable.

Word-processing activities like this can be adapted for all year-groups and all topics. The key starting point is the history you want your pupils to do and what you want them to learn from such an activity.

What does *word-processing* add to this activity? It involved *minimal teacher input* – simply typing in a couple of paragraphs of text and inserting a couple of tables – but made quite challenging demands on the pupils, in terms of their deployment of the information. Freeing pupils from the low-level tasks of laborious transcription provides more time for concentration on high-order thinking. At a more prosaic level, by copying and pasting, pupils who struggle with or are deterred by the physical act of writing can be lured to engage with the activity – the focus is on the history and the quality of their thinking. By choosing the text yourself, you can also exercise more precise control over the focus of the lesson, by selecting exactly what you want, rather than what a textbook's author has chosen to include. Pupils can '*save*' their work on a disc and take it away as a basis for homework. Alternatively, once pupils think they have finished their work, the teacher can introduce another factor into the equation, forcing them to re-think their ideas and modify their work – not discard it, but edit it in the light of some new evidence. This is something that word-processing is designed to do, allowing the re-drafting and modification of work in the light of new evidence – something it is extremely difficult to get pupils to do when work has been hand-written. Word-processing also helps pupils develop the ability to organise their thinking: its *provisionality* enables pupils to explore ideas and relationships in a way that hand-written work rarely allows. Only when they are satisfied with the result does the piece of work become *final*. This can help to improve their confidence and their communication skills.

Using desktop publishing

A desktop publishing package, like Microsoft *Publisher*, can be a much more effective way to combine text and pictures as a resource for developing pupils' historical understanding, compared to traditional 'poster' work with pupils. It is infinitely flexible and, once you have mastered a few key ideas, very easy to use. It is much easier in many cases to combine text and pictures using *Publisher*, for instance, than using a word-processing package like *Word*. And, if you decide you don't like your page once you have finished working on it, it is very simple to rearrange the content in a more appropriate way. You don't have to start again at the beginning, and the importing and exporting of visual elements is much quicker than getting pupils to draw their own pictures, leaving more time for historical thinking.

Most desktop publishing packages work in a similar way. You start with a completely blank piece of paper. You have to draw 'text boxes' to be able to type text on the page, and 'picture boxes' to insert graphics. These can be as big or as little as you like, and whatever shape you wish. There are also lots of effects, like borders, shading, arrows and speech bubbles, which can divert pupils' focus away from the history involved. Whichever package you choose, it will probably come with lots of pre-set pages and styles, if you prefer not to design your own. One of the best lessons I have seen using desktop publishing involved a pre-set page designed to make a birthday card. The task was to produce the birthday card your Hitler Youth group might have sent to Hitler in 1938. The pupils focused on the content – the message and appropriate images (the teacher had scanned a selection of images into the computer and pupils had to choose which they thought best suited the occasion) – while the computer printed their compositions out in 'greeting card' size and shape. This was a well-worked example of the computer doing the mundane tasks and leaving the pupils to focus on the history.

Things to keep in mind

The quality of historical thinking is the main target, not the aesthetics of the final product. Topics involving different views and interpretations of events are often particularly well suited to DTP work, such as the Battle of Jutland or the Battle of Britain. Providing a selection of photographs to accompany the text can add an extra dimension to DTP work, where pupils have to choose from a range of options, and explore why, for example, German newspapers might choose particular photographs, or the differing ways that photographs might be subtitled to distort or 'spin' the information. The facility with which a wide

range of images can be 'cut and pasted' into pages can be helpful in developing pupils' visual literacy (see Chapters 2 and 8).

The quality of teacher exposition in setting up the task, and pointing out the subtleties and complexities involved in the manipulation of information can have a significant influence on the quality of pupils' thinking (see Moore 2000 for suggestions on this). Getting pupils to articulate the reasoning behind their choices and selections can also be helpful in developing their abilities in area 5 of the knowledge, skills and understanding of the National Curriculum for history 'Organisation and Communication' (DfEE–QCA 1999: 20).

Activity 2: using desktop publishing to present ideas and information

A common activity in the history classroom is to ask pupils to produce a newspaper front page, or several pages, covering a key story or event. The Assassination at Sarajevo is a good example. This is often done as a way to present information at the end of a research project or a series of lessons. I used to ask Year 9 to produce a newspaper front page after watching a video about the Franklin expedition to discover the North West Passage in 1845–48. It was the Royal Navy's greatest peacetime disaster, with all three ships and 131 crew disappearing without trace. The video showed three bodies being exhumed and an autopsy that suggested they had died of lead poisoning, as a result of using improperly sealed tinned food – the Navy accepting the cheapest tender, not the best. Every year we found pupils who spent all their time producing a very neat and carefully coloured – in title – 'The Daily Moon', or some other catchy headline, price and date but who then had no time left to do the history. Using desktop publishing it is easy to avoid this problem, by setting up a page with the newspaper name and price, etc., already included, each in a separate text box. Pupils then *have* to focus on the history.

The relevant pictures, drawings and photographs which pupils will use to support their arguments can be scanned in. For the less able, text boxes with first sentences included, or a list of key ideas, can be used as prompts. The teachers' knowledge of their own students is important here, in terms of offering appropriate support and guidance. This helps them to focus on the history, the content, the information they have been given to work with, so that they can select, organise and present it with an audience in mind. They do not waste their time on the peripherals, because you (and the computer) have already done that. And, of course, as in the word-processing example above, additional information can be

added part-way through the activity to force your pupils to re-think and change their ideas and presentation. This kind of activity is readily adaptable to all age ranges and topics. It is another way to produce and present conclusions. It is another way in which we can use ICT to help our pupils focus on the history we want them to do.

DTP can also be a particularly helpful tool for exploring different interpretations of historical events. Events such as the Treaty of Versailles lend themselves to the sub-contracting of perspectives on a particular historical event, by assigning groups of pupils the responsibility of drafting a French, German, British or American report on the outcomes of the Versailles conference. As with other ICT activities, the quality of the learning outcomes will depend on non-ICT factors, such as the quality of the planning and preparation, and the way in which the differing perspectives on the Treaty are explored in the post-activity plenary session.

Using a database

It was using a database to interrogate census data that introduced me to using computers in the first place. If you have ever tried to get pupils to interrogate census records using pen and paper it will be immediately obvious how the computer can help. The computer does all the maths and all the sorting while the pupils focus on the history. One of the things I used to do was to give my pupils an old textbook account of life in Britain in 1851. 'Everyone lived in the towns and worked in factories, married couples all had twelve children, people died by the age of 20, no one moved very far from where they were born . . .'. Pupils were asked to interrogate the census data for the village which lay beyond the bottom of the school playing field, and then asked to test out whether the textbook was accurate or not. This was a helpful way of getting pupils to develop a more critical stance to information from a source that they had hitherto regarded as 'reliable' (see Chapter 8). The development of straightforward 'child-friendly' databases has been an important step forward in this area, (I like *FindIt*, although there are plenty of others you can use). Ease of use is important – I don't want to spend my precious history time teaching my students how to use a database, I want them to do history.

To think about

Databases offer opportunities for pupils to pose and explore genuinely historical questions, to consider the soundness of claims made and the

extent to which particular hypotheses are tenable. An important determinant of the effectiveness of database work is the quality of the questions posed. As Peter Lee (1994: 42) has noted, 'even Questions have to meet standards – some are uninteresting and some merely foolish'. Use of a database often benefits from some time spent thinking about the kinds of questions that are worth asking of the information – this is an important part of developing pupils' historical understanding. Beware of exercises where the main demands on pupils are in terms of locating information, without having to subsequently *do something* with that information, or express an opinion about it, and 'comprehension' and 'basic numeracy' questions which do not address 'history' agendas.

It can also be helpful to get pupils to think about the limits of the information in the database. What relevant and potentially helpful information is *omitted* from the database? Which questions does it *fail* to help us with? And what are the questions we might ask about the reliability of the information? Part of an education in history is getting learners to 'question the model', and databases and simulations often provide opportunities to do this.

There is also an issue of progression in the use of databases. At a basic level, it is essential that pupils (and teachers) have a clear grasp of what a database *is*, and what it can be used for. A next step is that learners are able to access and interrogate a database which has been commercially produced – a wide range is available. A more advanced stage is that at which learners are able to construct their own databases from historical information, and structure the fields so that they are able to ask intelligent and pertinent 'historical' questions of the database. At this level, where pupils have to consider how to select and structure information, and which questions one might meaningfully ask of the information when the database is completed, high-level thinking is required. Although this chapter is about getting started in history and ICT, it is still important to be aware of levels to aspire to, and, ideally, departments should be thinking about how they can move to a situation where, as they progress through the school, pupils are increasingly autonomous in the construction and interrogation of databases. (More detailed guidance on databases is given in Chapter 5.)

Activity 3: using a database to interrogate primary source material

This is a relatively straightforward activity using a database. It is based on the Register of Deaths for All Saints' Parish in Newcastle-upon-Tyne, in the months of December 1831 and January 1832, when cholera

Name	*Where lived*	*When buried*	*Age*	*By whom buried*	*Cause of death*
Elizabeth Hedley	Butcher Bank	Dec 4	61 years	W A Shute	cholera
Joseph Miller	Side	Dec 5	9 days	W A Shute	
Richard Cooper	Sandgate	Dec 7	1 ½ years	W A Shute	
Mary Marchbank	Sandgate	Dec 9 Fri	75 years	W A Shute	

Figure 9.2 Extract from the Register of Deaths for All Saints Parish, Newcastle-upon-Tyne

first came to Britain (see Figure 9.2). There are 121 records in total, so it is not too difficult or time-consuming to make. In a database each item of information is entered as a separate 'field', thus allowing you to search and sort the information in many different ways. The hardest decision when setting up a database relates to the number and types of field you need. It is worth spending some time on this, because mistakes made at this stage can lead to problems later.

The Register of Deaths contains records giving for each person entered the name, where she or he lived, the date of burial, age at death, who performed the ceremony, and the cause of death. It is also split into weeks, which start on Fridays.

The first step is to set up your empty database, or 'shell' (Figure 9.3). Each of the items of information in the Register can be a separate 'field'. I also like to add 'fields' for 'Record number' (so that after you have sorted or searched the records it is easier to return them to their original order) and 'Notes'. Sometimes the Register contains extra information, and you will want to be able to include that, or, if the age at death is less than 1 year, as in the case of Joseph Miller in the extract above, you might want to enter 0 as age and the exact age in the 'notes' field. It is also useful to be able to sort the records by sex. This is usually easy to deduce from the names. In this example, some of the deaths are in 1831 and some in 1832 so it is helpful to include a 'Year' field too. So, in this case, you will need a total of twelve fields (see Figure 9.3).

Your database will want to know what types of field are involved – text, or number or dates – because the computer treats each in a slightly different way. For instance, the 'Age' field is obviously numbers, whereas the 'Name' Field is words, or text. It is well worth taking considerable care in organising this, especially if you want to be able to graph your results. Now all you have to do is enter the data. I always think it is a good idea to enter 15–20 records and then ask the database the kinds of

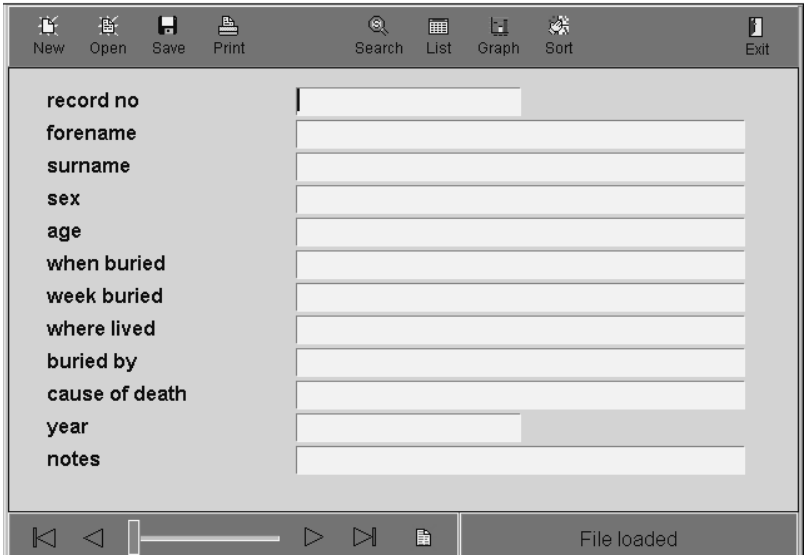


Figure 9.3 Setting up an empty database, or 'shell', using 'fields'

questions you hope your pupils will, to see if it works. At this stage it is not too onerous a task to edit or alter your data, or even to start again if the fields aren't quite right. For this example your completed data file will have 121 records, and each record, or the details for each individual, should look something like Figure 9.4.

To make your pupils familiar with the database it is always a good idea to ask them a few simple questions first. In this case, record 4 refers to Elizabeth Hedley. So, ask them how old she was when she died. Where did she live? What was the cause of her death? Who buried her? This will familiarise them with the structure of the information. Get them to move through a few of the records to see the range of information they contain and to get confident in using the database.

So far, we haven't really used the power of the database, we have just looked at a few records. The 'Graph' function is a good way into the data. Try drawing a bar chart of the districts where people lived, to help you find out the most unhealthy part of the parish, or a bar chart of ages, to see who was most likely to die, or a bar chart of the week people died – when did most people die? Or of Sex – did more men or women die? Try pie charts and line graphs – see which type of graph is best for each type of datum.

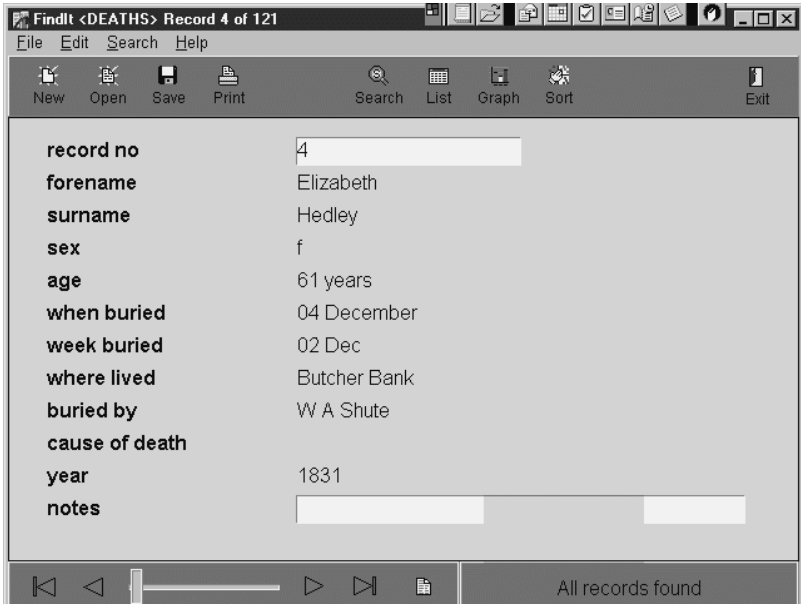


Figure 9.4 Record 4: Elizabeth Hedley

The most interesting part of the data, for most pupils, will be the cause of death. How many died of cholera? How many had no cause of death given? Why might this be? (Clue – look closely at their ages.) The graphing function allows careful analysis of the data in a quick and easy way. Most databases will allow you to print out your graphs, or save them to disc and then import them into a Word Processor and include them in written work or for display.

Once pupils are familiar with the answers to some of these questions they can 'search' for those who died of cholera. (Search using the field 'Cause of death'.) This gives us seventy-six records. Try to find the youngest victim. What was his or her name? Who was the oldest victim? Were the old more likely to die of cholera than the young? And so on. The 'Search' function allows you and your pupils to ask increasingly complex questions of the data. The computer does the manipulating; all you have to focus on is the history – asking the right questions to ensure you extract as much information as you can from the Register about the impact of cholera on this small part of Newcastle in December 1831 and January 1832.

Taking it further

Tyne and Wear Archives[1] will supply you with a photocopy of a contemporary map of the area, along with the 'Registry of persons who have died of cholera at Newcastle upon Tyne from October 1831 to March 1832'. If you prefer, there is also a transcript of the Register of Deaths, All Saints Parish, Newcastle Upon Tyne in *Cholera and Public Health* by Neil Tonge and Michael Quincey. This latter also contains a map of the area and some illustrations to help explore the issue of cholera further. Your local Public Record Office will have similar information available on your area.

Putting the data into a computer database makes the data more accessible, and far easier for pupils to get to grips with. But there are some questions which the computer, and the data, cannot answer. For instance, we can only look at those who died of cholera, not those who caught cholera. For that information we need other sources – doctors' notes, almanac entries, and so on, and to really decide which parts of a parish were the least healthy we also need census data from 1831 and total populations for the area. We might be able to use trade directories to trace families and to ascertain class and therefore susceptibility to cholera, or poll books from elections as who could vote often depended upon wealth. There are lots of ways in which this study could be extended, and the computer may be only one part of the resources used. The use of a database could be combined with word-processing in order to present the findings.

Using the Internet

The Internet has enabled history teachers and students to access information and resources previously tucked away in dusty old vaults. It has changed attitudes in many places about access to resources, and it allows easy publishing – too easy, really, because anyone can put anything on the web. That makes it a real challenge for historians – how do you sort the good from the bad? How do you find the materials you want? How do you decide if a resource is reliable or useful? And how do you stop your students downloading pages and pages of content from the web, or from a CD-Rom for that matter, without really reading it and thinking about the content?

To think about

How often, when you ask your students to research a topic on the web, do they get lost among the masses of sites containing information about

any given topic? Search 'Google' (www.google.com) for 'First World War', for example, and you are given a choice of 2.5 million pages. How do you make sense of all those? There are shortcuts you can use. Many sites, like 'History Online' (www.historyonline.co.uk) or the BBC's 'History' site (www.bbc.co.uk/history), have links to recommended sites. Use these. If you have an intranet at school, ask your 'techy' to temporarily save two or three good sites onto the school server, so that your students can access only those. Ask colleagues if they know of good sites, and add these to your 'Favourites' list so that you can easily find them when you want them. Encourage pupils to use their skills as historians to weigh up the evidence and decide for themselves whether, and in what ways, a site is useful or not. Exactly the same rules apply to websites as to sources and books. Is the site biased? What evidence has the author used to support the arguments?

Reuben Moore (2000: 35) points out that there is an 'overlap' between the discipline of history and the nature of the Internet:

> Whose idea was it that we should teach history through ICT? The answer is that it should have been ours. The skills, approaches and attitudes that we teach in history are the vital ones for teaching pupils to use the Internet. No one else teaches them as directly, as systematically and with such attention to progression across years 7 to 13 as we do. . . . The Internet has increased the opportunity through its scope and its resources, but its proper use demands a certain kind of rigour which is already evident in the professional practices, language and debates of history teachers – and has been for over twenty years.

In spite of this, there is some evidence to suggest that not all pupils are, to use Scott Harrison's term, 'mature Internet users' (see Chapter 2), and even many older pupils believe that the Internet is an eminently trustworthy source of information, ranking above television, the radio and 'teachers' in terms of reliability (see Chapter 8). In an age when the Internet is becoming an increasingly influential source of information for young people, helping pupils to become 'mature' users of the Internet should, as Terry Haydn suggests in Chapter 8, be an overt aim of an education in history.

Finally, the Internet can be an invaluable aid in setting up a historical debate or argument, and in making the 'contested' nature of history apparent to pupils. Diana Laffin's 2000 article on the use of the Internet in the teaching of AS and A2 Level pupils (16–19-year-olds) provides a good example of this.

Activity 4: getting your students to use part of a huge website to focus on specific activities

Here is an activity involving use of a website for a specific enquiry. The site in question, 'The Cybrary of the Holocaust' (http://remember.org) is a huge collection of material covering all aspects of the Holocaust. Some of the accounts and the photographs are quite harrowing, and the site itself is so huge it is easy to get distracted from the task in hand. Big websites require the exercise of disciplined focus and concentration, by both teachers and pupils, if their use is to be helpful in undertaking enquiry activities.

Taking it further

This exercise is geared at UK A Level students, usually aged 16–19. However, it is easily adapted for younger students by

- using restricted amounts of the material on the site
- using the same historical and educational processes but changing the exercise slightly by employing an alternative site or even an appropriate CD-Rom and
- restricting the amount of work you ask students to tackle, or getting them working in teams and sharing the work between them.

Finally, don't forget the possibilities offered by software such as word-processing and presentation tools, such as Microsoft *Powerpoint*. Students can be asked to select material from the website to prepare a presentation on the subject of their final review. This approach can be adapted to any topic and any individual website you wish to use.

Many departments are wrestling with the problems of making the most of what the Internet and other ICT applications can do. There is nothing wrong with adopting a healthily sceptical attitude towards the use of ICT in history, as long as you also consider the benefits which, given time, it might bring to your history lessons and homeworks, and you are willing to actively explore its potential.

Aims
- To use a website to find information.
- To weigh up the reliability of its information.
- If possible, to come to some tentative conclusions.

Lesson
Log on to website 'The Cybrary of the Holocaust' at *http://remember.org*
Search for information, make notes and download files to a disk or desktop in order to answer the following questions:
1 Why did the Nazis hate the Jews?
2 What were Hitler's plans for the Jews?
3 What did the Allies know about the Final Solution?

Step 1
Go to the 'Teachers' Guide'.
Read the sections titled 'First Steps' and 'The Final Solution'. These are largely factual accounts, but are they biased in any observable way?

Look carefully at the 'Timelines' and 'Questions' that follow these extracts. This should give you a sound factual knowledge of the issues and will form an excellent starting point for your investigation.

Step 2
This time, go to the option titled 'Search'; and enter the words 'Nazi hatred of the Jews' to bring up a list of articles.

- Do these support the factual information you have, or do they contradict it?
- Do you think these articles are reliable?
- Can you answer question 1 ('Why did the Nazis hate the Jews?') from what you have found out online?
- Prepare a short summary of why the Nazis hated the Jews, either by making notes in a word-processor or by downloading selected parts of the articles.

Step 3
Again, go to the 'Search' option, and enter 'Hitler's plans for the Jews' to bring up articles.

- Do you think the information found here is reliable, or unreliable?
- Why is that?
- Was it always his intention to exterminate the Jews?
- Prepare a summary of the information you have discovered about what Hitler planned.

Figure 9.5 Using 'The Cybrary of the Holocaust' for a specific enquiry

Step 4
This time go to option titled 'Education' and find the book by Richard Breitman called 'Official secrets What the Nazis Planned, What the British and Americans Knew'. Click on the title to be taken to an extract. This extract seems to answer question 3 – 'What did the Allies know about the Final Solution?' Breitman argues that the Allies knew about the Final Solution by the middle of 1942.

- What evidence does he use to argue his case?
- How convincing do you find his argument?
- Can you find other evidence on this site to support his arguments?
- Can you find evidence on this site that counters his ideas?
- Now try searching the internet to try and find other 'Holocaust' sites which would add to your arguments.
- Finally, prepare your answer to question 3 – 'Just how much did the Allies know about the Final Solution?'

Step 5 review
- What have you learned that you didn't already know?
- Have you changed your mind about your answers to any of the three questions while researching your answers?
- How did you decide whether the material was reliable or not?
- What has using the World Wide Web added to your learning?

Figure 9.5 (continued)

Note

1 Tyne and Wear Archives can be contacted at Blandford House, Blandford Square, Newcastle-upon-Tyne, NE1 4JA. Tel: 091–232 6789. You should be able to find the address of your local record office in the telephone directory.

Some useful Web sites

'History Online': a subscription support service for history teachers. Activities 1, 3 and 4, and many more like them, can be downloaded from here. (www.historyonline.co.uk)

'History Channel': good GCSE and A Level materials and revision quiz. (www.thehistorychannel.co.uk)

'Spartacus': contains lots of detailed GCSE resources. (www.spartacus.co.uk)

'New Perspective': AS and A2 Level articles and revision guides. (www.history-ontheweb.co.uk)

'The BBC': lots of ideas and information here, some good and some not so good. (www.bbc.co.uk/history)

'Cuban Missile Crisis': an excellent site for a very specific topic – you could almost teach the entire topic using this site. (http://library.thinkquest.org/11046)

References

Bardwell, S. and Easdown, G. (1999) (Keele University–Staffordshire QLS) *Survey of History Teacher Attitudes to the Use of ICT in History Teaching: Final Report*. Available online: www.sln.org.uk/history

BECTa–HA (1997) *History Using ICT – Improving Students' Writing in History Using Word Processing*, Coventry, BECTa.

—— (1998) *History Using ICT – Searching for Patterns in the Past Using Databases and Spreadsheets*, Coventry, BECTa.

—— (2001) *History Using ICT – Multimedia and the Internet in Secondary History*, Coventry, BECTa.

Breitman, R. (1999) *Official Secrets: What the Nazis Planned and What the British and Americans Knew*, London, Allen Lane – Penguin.

Counsell, C. (1998) *Defining Effectiveness in History Using IT*, BECTa–HA, Coventry.

Davis, F., Bagozzi, R. and Warshaw, P. (1989) 'User acceptance of computer technology: a comparison of two theoretical models', *Management Science*, Vol. 35, No. 8: 982–1003.

DfEE–QCA (1999) *The National Curriculum for England*, London, DfEE–QCA.

Fullan, M. (1999) *Change Forces: The Sequel*, London, Falmer.

Laffin, D. (2000) 'A poodle with bite: using ICT to make AS Level more rigorous', *Teaching History*, No. 101: 8–16.

Lee, P. (1994) 'Historical knowledge and the National Curriculum', in H. Bourdillon (ed.) *Teaching History*, London, Open University–Routledge: 41–8.

Moore, R. (2000) 'Using the internet to teach about interpretations in Years 9 and 12', *Teaching History*, No 101: 35–9.

Prior, J, and John. P. (2000) 'From anecdote to argument: using the word processor to connect knowledge and opinion through revelatory writing', *Teaching History*, No. 101: 31–4.

Rayner, L. (1999) 'Weighing a century with a website: teaching Year 9 to be critical', *Teaching History*, No. 96: 13–22.

Rudham, R. (2001) 'The new AS-Level: principles for planning a scheme of work', *Teaching History*, No. 103:18–21.

Schick, J. (1997) 'The future of the survey course in American history', in A. Martin, Tonge, N. and Quincey, M. (1985) *Cholera and Public Health*, London, Macmillan Education.

Walsh, B. (1998) 'Why Gerry likes history now: the power of the word processor', *Teaching History*, No. 93 (History and ICT edition): 6–15.

10 History, ICT and learning 2002–10

Christine Counsell and Terry Haydn

> The computer can be a fabulous tool. . . . But the dirty little secret is that no one really knows what to do with this stuff.
>
> (Warhaftig, quoted in Banks and Renwick 1997)

Relating ICT to how children learn

The relationship between ICT and learning is a complex one. The usefulness of computer applications varies from subject to subject. It is taking time to find out how best to integrate ICT with day-to-day teaching and learning across different subject disciplines. Progress has been hampered by misconceptions about computers and about learning, including the belief that school subjects should be used to teach children about ICT rather than the other way round and that an increase in the volume of information transmitted across the educational system would lead to a commensurate increase in learning. Pacific Rim education systems have been quicker to realise that education in the twenty-first century is not primarily a question of filling up learners' hard-disk space, but one of developing the sophistication and power of their information processors (Galton 1994). This involves thinking about how children learn and taking their needs into account in the way that we design and use ICT materials and activities. It means thinking carefully about what it means 'to get better' at history. It means asking pupils to do something worthwhile with the historical information that they access using ICT.

Above all, it means investing in teachers' pedagogic expertise in the subject. If pupils are to succeed and grow in the discipline of history, then teachers need to know how to frame rigorous enquiry questions, how to locate ICT within an enquiry journey and how to think clearly about the interplay between a pupil's growing knowledge and the

processes of historical analysis, evaluation or synthesis that an ICT activity makes possible. These things become more, not less, essential if ICT resources are to be selected and deployed with professional skill.

Making it easy to use ICT

There is also a need to think about the way in which classrooms function. Networked suites of computers, for example, influence what teachers can do in a lesson (see Chapter 1). This is an area where resource decisions have not always followed what our best teachers know about pupils' learning. As things stand at the moment, for most history teachers, the decision to integrate ICT with classroom teaching makes life more difficult. Any learning gains have to be weighed against the considerable inconvenience, waste of time and lack of teaching flexibility which the use of network suites involves. Simply putting more networked rooms into schools may not be the most helpful way forward. The DfES must be careful not to place too much reliance on the computers-to-pupils ratio in schools as an access indicator. Where computers *are* in schools, the numbers of classrooms which have whole-class projection facilities and the ease with which pupils can access the Internet outside taught classes will be more important as indicators of helpful educational provision of ICT.

Politicians work in an environment where access to a data projector for presentations is not generally a problem. There is therefore a tendency to underestimate the logistical problems involved in using computers with large groups. Currently, the majority of history departments do not have easy access to a networked suite of computers, nor to whole-class projection facilities in any history room. The move towards investment in networked suites has meant that some history departments do not possess *any* computers in their teaching rooms (Haydn 2001). This makes it very difficult to integrate elements of ICT with day-to-day teaching. Dawes (2001: 62) makes the point that the surprise is not that computers have had a limited impact in schools but that 'the number of schools using ICT to good effect at the end of the last century could be seen as a tribute to the persistence of teachers in spite of adverse conditions'.

In America, the move has been *away from* networked suites in high schools. In some states, more than 60 per cent of computers are located in classrooms as against separate computer suites (Banks and Renwick 1997) and the data projector is emerging as the 'killer application' that is increasing the ease with which ICT can be integrated with teaching, together with what Cuban (1997) terms 'the current wisdom' of 5–7

desktop computers per class. This corresponds with recent UK research which reports teachers expressing a growing preference for clusters of classroom-based or subject-dedicated computers as against ICT suites, so as to allow better integration of ICT with daily lessons (ImpaCT2 2001).

The failure of policy makers, resource managers or school leaders to foster, analyse and use their own teachers' professional knowledge about teaching and learning may well be a reason for the frustrating slowness with which this transformation is coming about. In the early days of using computers in history lessons during the 1970s and 1980s, when the history education world was sparsely populated with skilful enthusiasts and influential pioneers, a couple of computers in the classroom was a more typical pattern. There was much to be learned about how teachers deployed these to enrich a particular aspect of historical learning for an individual pupil or a group of pupils. But as the number of computers in schools has expanded, concerns about efficiency and maximising access have been translated into large suites where 'sole-user access' is the expectation. This goes right against a sensible and flexible integration of ICT with the process of historical enquiry, where a computer is pulled in to serve a data-management, investigational or communication need at a particular stage in the lesson sequence. Pupils then see clearly – and are ultimately able to choose – its role in serving the enquiry 'journey'. When the fifteenth and last of the original City Technology Colleges, John Cabot CTC, was set up in Bristol in 1993, the question of hardware deployment in a relatively ICT-rich environment was a hot agenda item. The humanities faculty's preferred model was 3–4 computers in each classroom for history, geography and RE. This model was used successfully in the early years. The influence here was subject-specific. Influenced by Michael Riley's idea of 'enquiry' (Riley 2000), as a governing idea for planning, and by ideas then circulating about geographical enquiry, the faculty's teachers wanted pupils to learn the value and functions of ICT *in context*. It became increasingly hard, however, to defend this deployment. Wouldn't we minimise the time during which computers lay idle (ran the counter argument) if they were all together in dedicated suites where they could be used intensively? This was a clash of two discourses – a managerialist assumption that constant use represented value for money versus a teacher's strong pedagogic judgement that contextualised use and the cultivation of critical expertise in pupils formed a better investment.

In terms of sensible investment in ICT, one step forward would be for departments to have at least one teaching room with a computer and video linked to whole-class projection facilities, whether it be a data projector or the cheaper option of a lead connecting a computer to a

large television screen. Ian Hinde, of Long Stratton High School, notes the impact which this modest investment (about £130) has made on the department's use of ICT:

> It has meant that we are beginning to use ICT more routinely. It's not as good as a data projector, but it enables us to do a range of things. . . . I can present topics in a more powerful and accessible manner. . . . With Tollund Man, I used some pictures from the Internet in my introductory talk and it made it much more effective. We are making more use of the CD-Roms which the department has bought . . . short animations and simulations. We use it mainly to help us to teach rather than 'hands on' for pupils, or sometimes we can get 3 pupils working from the screen, and 2 around the computer itself.
>
> We've found that *PowerPoint* has a lot to offer, it's good for introductions, and to get the pupils to summarise. Our computer suites don't yet have data projectors, so we can present and explain what they will be doing in the computer room and 'set up' the activity so that we make more effective use of time when we are in there. When we couldn't do a fieldtrip because of foot-and-mouth, we found it was really useful for local history . . . the pupils worked using the Internet instead, and produced really good work. We're still finding out and experimenting. We will still use books, but I now think that it *will* change things over the next few years. . . . It will be colossal: it changes very dramatically what you can do.
>
> (Interview with the authors)

The next step for the department's investment in ICT will be to spend the money from involvement in initial teacher training on a proper platform for the large television screen, so that all pupils can see the display clearly without moving from their seats. This is a good example of equipment purchase being driven by classroom practice rather than by esoteric levels of technological expertise. In the USA, where departmental budgets may be more munificent, Richard Slatta (2001) argues for the combination of a laptop computer and a data projector as the most effective means of enabling flexible deployment of ICT.

The status and value accorded to a subject in a school can be another factor. At the Woodlands School, a large comprehensive school in Basildon, history is valued highly by senior managers: the subject becomes more popular each year with the entire ability range, and there are currently seven large sets taking GCSE history in Year 10. In this school, every history classroom has a computer connected to a large

television screen and its use is almost too 'everyday' and normal to remark upon. In Sawston Village College, an 11–16 technology college near Cambridge, history has a similarly high profile. It is the norm to take history GCSE (again, seven sets in Year 10) and – because school leaders acknowledge the wider benefits to pupils' learning and development that history brings – ample curriculum time (two hours per week) is devoted to history at Key Stage 3. Access to networked suites of computers is plentiful and teachers can therefore integrate ICT experiences at an appropriate stage in a historical enquiry with little difficulty. To argue for such subject-centred use of resources remains very difficult, however, in schools where the curricular focus seems to be about teaching ICT rather than teaching history (or indeed any subject) well.

Teachers also need a realistic sense of what might be a reasonable resource allocation for which to argue. In order to integrate ICT efficiently, and in such a way that rigorous historical learning can be planned for, history departments ideally need a combination of whole-class projection facilities, a cluster of computers for flexible use and reasonable access to a suite of networked computers. In some schools, this is unlikely to happen unless there is a will to create and sustain informed professional debate *across* subjects about learning *within* subjects. Sadly, ICT will remain as 'ICT', something to be taught for its own sake and in its own right.

Complete integration of ICT with a wider set of teaching and learning strategies might seem rather messy, but it is surely the only way forwards. Ogborn (2000: 26) talks of computers being used 'not as a special event, or to impress others, but naturally, when the need arises'. Jack Kenny (2001) gives a vivid description of a teacher combining exposition and questioning with a range of ICT applications in a way that held pupils' attention for thirty minutes and which elicited spontaneous applause. Teachers do not generally confine themselves to a single method of teaching throughout an entire lesson. They do not write on the board for an hour, or have pupils working from the textbook for an hour. Why should computers be any different? Likewise in medium-term planning, it is the skill with which teachers can combine different learning resources and teaching strategies with their initiative in using ICT to build up an archive of quality 'learning packages' (see Chapter 4) and their judgement in choosing the most appropriate learning resources for particular stages of a historical enquiry that will be the hallmarks of quality teaching. Dave Martin's use of databases and spreadsheets (see Chapter 5) presupposes the positioning of computer work at the most appropriate point in a lesson sequence designed to tackle a historical problem. Current arrangements for the use of computers in

schools do not generally lend themselves to such integration. By viewing ICT as a thing in its own right, rather than a tool to support particular kinds of learning, we fail to evaluate ICT use properly.

Giving teachers time to explore and develop history through ICT

It can take many hours to develop even a reasonable working knowledge of a single history gateway site or CD-Rom. The speed at which ICT applications have developed, and the exponential increase in the amount of information which is potentially of use to history teachers, have meant that it has been difficult for pedagogy to keep pace with technological change. This problem has been exacerbated by the increasing administrative burden borne by teachers in the UK in recent years (Smithers and Robinson 2000; Spear *et al.* 2000). In spite of the government's financial support for in-service training in ICT, it has been difficult for teachers to devote substantial amounts of time to this, in addition to responding to many other equally high-profile educational initiatives. Together with access problems, lack of time to explore how to integrate ICT with schemes of work has emerged as one of the most influential factors in the limited use of ICT (Dawes 2001; Haydn 2001). In the 1970s and 1980s, many LEAs commonly financed large numbers of teachers for full-time, one-year secondments to pursue aspects of professional development through Masters-level courses or to work in and with advisory services. ICT is such a massive and important agenda that it probably does require *substantial* amounts of time to make full progress in integrating it with classroom practice.

That time needs to be spent not on finding more and more history websites and CD-Roms but on the much more challenging task of thinking how to make best use of these resources in teaching. New Opportunities Fund ICT training is a modest start, but it has to be fitted in on top of everything else. Banks and Renwick (1997) point out that in the USA, significant progress in ICT has been made when teachers have been given one-term or full-year secondments to explore the potential of ICT in their subject. The USA is not the only country to realise that giving teachers time to work out what to do with ICT is as important an agenda as access; the Finnish system also has a more generous provision in terms of giving teachers time and there is also more emphasis on cooperative working methods to maximise the percolation of ideas and developments (Santos *et al.* 2000).

A former chief inspector for schools in the UK, Chris Woodhead (1999), argued that investment in ICT was wasted because teachers

lacked the confidence and training to use it effectively. Recent research suggests that pressures on teachers' time and the lack of appropriate resources are more persuasive explanations of the limited progress in history and ICT. In the words of Larry Cuban (2001): 'Without attention to the workplace conditions in which teachers labour and without respect for the expertise they bring to the task, there is little hope that the new technologies will have more than a minimal impact.'

History, ICT and learning outside the classroom

Already there are some schools where it is possible for history teachers to set homeworks which involve the Internet and where, by using ICT, many pupils spend as much time learning history outside taught sessions as they do within them. Over the next few years, it is likely that this situation will become increasingly prevalent. It will be helpful for history teachers to think about how to make best use of these developments. Some school subjects have already explored the use of CD-Roms which have been specifically designed to support particular A Level courses, and which encourage e-communication between students taking the course. The development of history-specific DVD programmes may begin to erode the gap between history teachers' use of television and computers, as data projectors become more commonly available (see, for instance, 'The History Zone' at www.history-zone.com). Where history teachers are frustrated by the limited amount of time given to history on their school timetable, school intranets at least offer the opportunity to make departmental resources available to pupils outside taught sessions. Dave Martin describes the advantages this offers at Chailey Comprehensive School, in Sussex, where pupils have open access to most of the department's history materials via the school intranet. These include the development of differentiated exercises to use with the resources, the opportunity for pupils to look ahead to prepare for sessions, a facility for pupils who have been absent to catch up on work, and many advantages for learning support assistants (a full description of the case study 'Making effective decisions about the use of ICT in history' is available online: www.becta.org.uk).

Given the government's plans to extend public access to the Internet through the creation of a national network of learning support centres (DfEE 1997), we may also be able to operate on the assumption that all pupils have some degree of access to the Internet outside school. This could enable history teachers to 'get more out of pupils', to develop their ability to learn independently and to keep history in pupils' consciousness outside the confines of the classroom. Richard Slatta (2001: 24)

notes the positive effects that the 'onlining' of history courses has had in the USA, in terms of student engagement with the subject, their ability to learn in a flexible and autonomous manner, better communication with and between students and a substantial increase in the amount of time that many students devote to thinking about history. He also points out that such courses at his own institution are oversubscribed compared with their non-online equivalents. Slatta's case is not based primarily on the argument that ICT is proven to raise grade levels but that it has a positive impact on students' attitude both to history and to learning in general. Internet use can sometimes lead to the uncritical, unfocused and pointless downloading of information. Well-directed, however, it leads to the cultivation of genuine intellectual curiosity and love of the subject.

By 2010

'*It doesn't really matter whether history teachers use IT in their classrooms. . . . What does matter is that history is still on the school curriculum and that it is taught well*' (teacher's remark at a history workshop quoted in Dickinson 1999: 16).

To some extent, this statement will always be true. The history teacher's skills of exposition and questioning will continue to be an important determinant of the quality of the educational experiences of pupils. Teaching and learning are about relationships involving shared values – between learners and between learner and teacher. The history teacher as living inspiration, as role model and as personal motivator with close knowledge of his pupils cannot be replaced by a computer. Pupil discussion, argument and debate will always be vital to history lessons. Printed material, whether textbooks or photocopied articles and pictures, will still be a staple resource.

Yet while it will still be technically possible to teach history well without using computers it will be difficult for history teachers who eschew new technology to teach with the same power, vitality and rigour as history teachers who fully exploit ICT's potential. If school history is to be both balanced and challenging, pupils need to see a provocative diversity of material. Using the example of film, Sutton (2001:48) makes a powerful case for working with a richer diversity of audio-visual material and for exploiting that diversity so that the often irreconcilable goals of sophistication and access are secured:

> Students need access, not reasons to run back to Hollywood . . . the innovation of DVD . . . and the Internet's opening up of the world's shopping markets means that we don't have to rely on American-

> fixated British distributors to decide what films we are going to see. . . . Within the decade, when the European archives go digital . . . we'll be able to access them through our classroom laptops.

By 2010, the quality and volume of useful resources available digitally to the history teacher will mean that teachers eschewing their use will be placing themselves and their pupils at a disadvantage in the same way as it would were they to avoid using moving images, or pictures or books.

The dissemination of ideas for using ICT purposefully in school history and improvements in access to ICT, both in and out of schools, will mean that new technology can be integrated more effectively with resources and teaching strategies. There will be more and more history topics where an archive of quality resources and purposeful suggestions for pupil learning are accessible through ICT. These will enable *good* history teachers to deliver the topic in a more powerful, compelling and effective manner. It is important to note, however, that such resources will not automatically create good teachers out of bad. Those history teachers who need more direction in thinking about pupils' learning, more time to consider the rigour of a historical question, more practice in creative and responsive interventions in pupils' learning and more training in planning for progression will not be helped by the proliferation of ICT resources alone, no matter how 'classroom friendly' such resources become.

Following current trends in the USA, many more classrooms will have whole-class projection facilities which enable history teachers to incorporate ICT resources with their day-to-day teaching, in the same way that they currently use video extracts. Improvements in home, public and school access to ICT will mean that a combination of book-based learning and ICT-based research can be used to set preparatory activities, in the form of pre-session homework, to maximise the quality and effectiveness of teaching sessions. Pupils should be able to work on history with increasing ease outside the classroom.

Whether the advantages of data-processing and data-manipulation applications will be fully recognised or will be more effectively used to develop pupils' skills in selecting, organising and deploying information is difficult to say. All these things seem likely from where we stand now. But the speed with which more history teachers are enabled and motivated to use them effectively will depend in large measure on whether teachers are given both the opportunities and the necessary time to develop their own thinking. Teaching history is an intellectual activity. It is also a creative activity. It requires a teacher to be both inspired and inspiring. It is not, primarily, a technical activity involving the following

of recipes. But improved ICT resources might help. They cannot replace history teacher thinking, but they can support it. If best practice in history and ICT continues to be harnessed then we might see more history resources routinely paying significant attention to problematising historical topics and issues. We might see more history resources presenting differing interpretations of 'cause', 'consequence' and 'significance'. We might see these resources more effectively pitched in order to improve the learning of weaker pupils. Where resources set up exciting historical problems that pupils are obliged to engage with and resolve, this could go a long way towards doing something much bigger than improving use of ICT: it could support and improve teachers' own understanding of the discipline and how to teach it.

Communications technology has led to an increase in the speed at which resources develop and improve. In the time it has taken to write this book, many museum sites have improved out of all recognition, the National Grid for Learning has gone from an embarrassment to a potentially useful resource and some LEA sites have become increasingly well organised, helpful and aware of the importance of saving teachers' time (see, for instance, www.bgfl.org.uk and http://e-gfl.org.uk). Sites such as the Webby Awards (www.webbies.com) and the Public Record Office (www.pro.gov.uk) have provided models for better instructional design and purposeful interactivity, and online newspaper archives have gone from providing a text-only service to one which provides animations and cartoon/picture archives. It is now possible, for instance, to access Steve Bell cartoons and quality resources on 11 September on the *Guardian*'s online site (www.guardian.org.uk).

We believe that, over the next few years, a tendency will become apparent for pupils to express a preference for history courses in which there is an effective integration of ICT-based resources and that departments failing to explore the potential of ICT will find that their courses are less popular. Moreover, history courses not using ICT will be failing to use the full range of 'interpretations of history', such as websites (see Chapter 3), if they ignore the Internet. Comparisons can be drawn with the use of video in the history classroom. In 1957, Lord James, the high master of Manchester Grammar School, proclaimed: 'over my dead body will a television set for looking at and listening to the BBC, and still more, for looking at ITV, enter the school' (quoted in Moss 1998). Forty-five years later, there were few history departments not making use of television and video (Sharp 1995). Yet the justification of their use has long outstripped the low-level defence of pupil motivation and interest. Many history teachers would judge that pupils were missing out on the full field of enquiry that the discipline of history embraces

if we did not use newsreel as a historical source or film and documentary as historical interpretation.

Because the relationship between technology, learning and subject disciplines is a complex one, it takes time to assimilate ICT with pedagogic practice. In spite of Warhaftig's opening assertion, we *are* gradually working out 'what to do with all this stuff'. We will work it out all the more effectively if the complexity of teacher expertise starts to receive the respect it deserves. If teachers are encouraged to debate ideas about learning, to share and scrutinise each others' practice and, above all, to keep the demands of the discipline of history to the forefront of any evaluation, we will get there a lot faster than we would through the imposition of a quick-fix, through external pressure or by easy one-size-fits-all solutions. Given time, support and the appropriate facilities, it is likely that by 2010 nearly all history teachers will make increasing use of ICT, not because they feel under pressure to do so, nor because Ofsted (if it still exists) is lurking round the corner, but because they enjoy doing so, because it makes their job easier and because they *know* that it helps them to teach history more effectively.

References

Banks, S. and Renwick, L. (1997) 'Technology is still a promise, not a panacea', *Los Angeles Times*, 8 June: Available online: http://realworld.org/archives/timesarticle1.html

Cuban, L. (1997) 'High-tech schools and low-tech teaching', online: www.edweek.org/ew/vol-16/34cuban.h16

—— (2001) *Oversold and Underused: Computers in the Classroom*, Cambridge, MA, Harvard University Press.

Dawes, L. (2001) 'What stops teachers using new technology?' in M. Leask (ed.) *Issues in Teaching Using ICT*, London, Routledge: 61–80.

DfEE (1997) *Connecting the Learning Society*, London, Department for Education and Employment.

Dickinson, A. (1999) 'History using information technology: past, present and future', *Teaching History,* No. 93: 16–20.

Galton, M. (1994) *Times Educational Supplement*, 25 November.

Haydn, T. (2001) 'Subject discipline dimensions of ICT and learning: history, a case study', *International Journal of History Learning, Teaching and Research*, Vol. 2, No. 1. Available online: www.ex.ac.uk/historyresource/journal3/haydn.pdf

ImpaCT2 (2001) *Interim Report*, online: www.becta.org.uk

Kenny, J. (2001) 'Whiteboard magic casts a spell in the classroom', *Times Educational Supplement*, 8 June.

Moss, R. (1998) *Times Educational Supplement*, 6 March.

Ogborn, J. (2000) 'Shaping the future: revitalising physics education', in A. Morris (ed.) *Post-16 Physics for Tomorrow*, Bristol, Institute of Physics.

Riley, M. (2000) 'Into the Key Stage 3 history garden: choosing and planting your enquiry questions', *Teaching History*, No. 99 (Curriculum planning issue).

Santos, J. Ritzema, R., Sakamoto, T., Muller, R. and Kangasniemi, J. (2000) 'Other national approaches', in OECD, *Schools for Tomorrow: Learning to Bridge the Digital Divide*, Paris, OECD.

Sharp, C. (1995) *Viewing, Listening, Learning: The Use and Impact of Schools Broadcasts*, Slough, National Foundation for Educational Research.

Slatta, R. (2001) 'Connecting learning goals with technology', *History Computer Review*, Vol. 17, No. 1: 19–30.

Smithers, A. and Robinson, P. (2000) *Attracting Teachers: Past Patterns, Present Policies, Future Prospects*, Liverpool, Carmichael.

Spear, M., Gould, K. and Lee, B. (2000) *Who Would Be a Teacher? A Review of Factors Motivating and Demotivating Perspective and Practising Teachers*, Slough, NFER.

Sutton, P. (2001) 'Preparing for history teaching in the digital age' *Teaching History*, No. 102 (Inspiration and motivation issue): 375–6.

Woodhead, C. (1999) 'Technical hitch', *Guardian*, 16 February.

Index