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Literacy and Language in East Asia

Shifting Meanings, Values and Approaches

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Literacy and Language in East Asia

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Series Editors' Introduction

This important and informative book examines the nature and character of literacy in the twenty-first century with regard to the dynamic, rapidly changing and developing East Asia region. International education for development organisations such as the OECD, World Bank, UNESCO, UNICEF, and the Asian Development Bank all recognise the importance of literacy in contributing to economic and social development. This is particularly true in East Asia which contains many 'tiger economies' many commentators predicting that the twenty-first century will be the Asian Century.

Although Students in countries in the East Asia region are amongst the best achievers internationally in school-based international literacy tests such as PISA (Programme for International Student Assessment) and PIRLS (Progress in International Reading Literacy Study). However, teachers and learners stress the concern that student assessment in the region is overly examinations based, with rote learning, memorization and factual recall, rather than creative and lateral thinking is being stressed by teachers and learners. As a result it is argued that students do not have the best profile with regard to literacy and language skills which are flexible and which promote creativity and initiative. Many employers also stress the importance of 'soft skills', which include values and attitudes regarding problem solving, collaborative work practices which promote effective team work, and a positive work ethic which emphasises the value of work and the importance of punctuality.

This book argues that there are important disconnections between the examination driven education systems in countries throughout East Asia and that there is a need to educate graduates with employability skills. The volume brings together case studies (of Mainland China, Hong Kong, Australia and Malaysia), country analysis, empirical research data and public sources of data to question the status given to what the authors argue are static and iconic forms of literacy 'where student achievement and reductionist approaches to "worker" literacy are not adequate in responding to the complexities and multi-modalities of globalisation'.

This is an important contribution to the study of meaning, values and approaches with regard to literacy and language in education, with particular reference to the

East Asia Region. It examines various approaches to literacy and its contribution to the change and reform necessary for countries in the region as they seek to fully participate in the global economy. The book comprehensively describes and evaluates widely respected and used international testing, namely PISA, PIRLS and TIMSS (Trends in International Mathematics and Science Study). The volume critically examines the growing popularity of international testing and the consistently high ranking achieved by countries in East Asia with regard to these tests, and the response of Western nations to the ascendency of Asian nations. It explores the exams-based and standardised curriculum which impacts on teaching and learning in ways that stress uniformity. In doing this it presents several country studies from East Asia which document the influence of language policy, cultural values and norms on the character of national education systems. In drawing their conclusions, the authors argue that 'by approaching literacy from a pluralist perspective, policy makers, teachers and industry will find benefit through valuing a range of non-traditional literacy skills that are not included in what has been a mainstream examination-based curriculum'.

This book will be of considerable interest not just to countries in East Asia but also to the international education for development community, since the East Asia experience is of great interest to many countries world-wide as they seek to strengthen and upgrade their education systems in response to meeting the important demands of globalisation and economic and social development.

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Chapter 1
Introduction

Literacy and Language in East Asia: Shifting Meanings, Values and Approaches is a book that explores the nature and character of literacy in the twenty-first century as it relates to the rapidly changing and growing East Asia region. Global organisations such as the Organisation for Economic Co-operation and Development (OECD), national governments, education authorities and employer organisations are all placing increased emphasis on literacy as a determiner of national productivity in what is now the fastest growing region on the globe. Over 15 years, East Asian countries have achieved consistently high scores and rankings in school-based international literacy student achievement tests such as the Programme for International Students Achievement (PISA), Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS). In a region where achievement in schooling and advancement are highly valued this global leadership is interpreted by many as evidence of a shifting global balance in science, technology and learning. Combined with shifts in global economic power to China in the wake of the global financial crisis this book arrives at a time of an Asian ascendency in the economic, social and educational spheres of contemporary life.

East Asian countries such as Hong Kong, Singapore and Korea are consistently amongst the world leaders in international student achievement tests, such as PISA and TIMSS, a situation, which would normally not be a source of anxiety. Yet there are concerns that the examination based systems that typify Asian nations are an anachronism. Across the Asian region there is growing concern that while Asian students top the world, their graduates from schools and universities do not have the "right" literacy and language skill for the global economy. Government and employer organisations in countries such as China and Singapore are becoming concerned that memorisation and recall needed for an exam culture is no longer useful in an unpredictable and dynamic global environment demanding flexibility and initiative.

Leading business groups have been calling for "soft skills" that include the ability to display initiative, solve problems and use collaborative work practices in the workforce. They lament the skills of school graduates and their inability to fit into

the modern global workforce where the capacity to work in culturally and linguistically diverse settings is now highly valued. This perceived skills and capability gap happens at a time when there are also growing levels of unemployed graduates from school and tertiary systems in many Asian countries as a consequence of the global financial crisis.

There is a growing tension between the demands of the modern global economy and many of the traditions and values that have supported systems of schools where success in examinations is determined by memorisation and recall. Many commentators are anxious that the system of exams has thwarted and frustrated attempts for the systems to reform themselves to be more inclusive and democratic.

The examination driven system has focussed on the elites in Asian societies and neglected the broader needs of the society. While many countries are experiencing boom conditions women and girls, those in rural regions and those who speak languages other than the major languages experience marginalisation and poverty. This book critically analyses the examination based system and explores how a test taking culture and high stakes testing create a narrow and instrumental view of leaning that allocates a passive role to learners and operates on a teacher centred model of learning. This model of individualised learning frustrates attempts at developing approaches to learning that are participatory and involve collaborative and group learning that engage and empower students to be autonomous learners

The book also explores how the pressures of examination success, ingrained and embedded in the culture of East Asia, have created a parallel ghost system of cram schools and after school tuition to prepare students for them.

Chapter 2: Explores the various approaches to literacy and the challenges for nations, as they need to make the sorts of changes and reforms that are necessary to participate in the global economy. This chapter discusses the tensions between models of literacy, favouring instrumental human capital approaches to literacy, where literacy is seen as enabling the preparation of a workforce, and those that are more grounded in, and reflective of, the needs of diverse communities and groups. Many nations, for example Australia, are striving to develop notions of literacy incorporating what has been termed multiliteracies. Focusing on the requirements of the knowledge economy, multiliteracies stresses visual literacy and cultural literacy. In addition it proposes, "new basics", skills in the new technologies, contradicting more traditional views of literacy centred on attaining proficiency and correctness in reading and writing.

Chapter 3: This chapter describes and documents the growing popularisation of national or international testing, the consistent success of Asian nations and the growth of high stakes testing. It looks at the nature and character of what is termed "high stakes testing" and the implications for teaching and learning, teachers' work and the character of learning experiences that are directed to "teaching for the test". High stakes testing and international test have seen the growing popularity of "league tables" which rank systems in the order of achievement. This ranking has created a series of reactions across the globe that including "shocks", "surprises" and a sense of crisis about the performance of schools in the west relative the Asia. The chapter also explores perceptions of a crisis in literacy that have led to generic policy settings

which favour standardised testing and curriculum. These policy settings include the devolution and decentralisation of management to self-managed schools and the introduction competition between providers under the orthodoxy of public choice. This chapter also looks at the implications of these debates that are viewed to be largely products of the west on East Asia. In addition, it examines the influence of the success of East Asia on the politics of education in the western world, resulting in an education race akin to the space race of the 1960s in the cold war era.

Chapter 4: This chapter continues to explore the themes from the third chapter and describes how Asian nations have been influenced by the legacy of exam-based assessment and standardised curriculum with teaching and learning that stress uniformity and compliance. Reforms to these traditions face considerable challenges including resistance from clusters of established interests of publishers, teachers, coaching schools and the cultural heritage in Asia that assigns examination success a special significance. The durability of "old" ways of school learning in Asia are deeply ingrained and, for many countries, are also part of the historical legacy of colonialism by Britain, France, Portugal and Japan This is because in most post-colonial nations there is an enduring influence of foreign governance and administration on learning, literacy and language. The authors examine this theme with a view to exploring what the future may look like as a consequence of proposed reforms.

Chapter 5: This chapter documents and describes global testing and gives detailed explanations of three of the most commonly recognised tests – PISA, TIMSS and PIRLS. This chapter describes who is tested, the cycle of testing, what is tested and how results are reported. The authors of this book caution against comparing different tests or the same tests result from different years. The data illustrates the dimensions of the East Asian dominance in international achievement tests and the way in which testing is growing as a driver for policy including curriculum reform, incorporating standardised testing. This chapter presents data on the performance of Singapore, Hong Kong, South Korea, Taipei and Japan that shows that these nations have shared the top rankings since the establishment of international testing at the end of the 1990s. The tables identify how these Asian nations have consistently performed above the United States and many western European nations.

Chapter 6: This chapter documents and analyses the response of western nations to the ascendency of Asian nations and the impact on the United States of America (US) and Australia. In some cases the reaction has been typified by panic and accelerated attempts to reform schooling systems. It will also look at the shifts in policy directions including the impact of standardised testing as global policy and practice and the manner in which the demands of the global economy are reshaping national education systems. The discussion also looks at how several East Asian nations are coming to terms with these global pressures on local systems and are seeking further improvements even though they are topping the world rankings. This chapter commences with an analysis of several key issues emerging in East Asia such as the background and context of examinations, the emergence of private tuition and the ubiquitous cram schools. This chapter also discusses the relationship between exam

success, university entrance and graduate employment. The chapter looks at the controversies associated with growing graduate unemployment in Asia during the global financial crisis. The spectre of rising unemployment in a period of sustained growth is discussed as evidence of economic and social inequalities that characterise many urban landscapes in Asia. The impact of these inequalities and the destabilising impact of graduate unemployment is explored as a challenge to the discourse of economic development and stability in the booming Asian economies.

Asian nations have been the major participants in transnational education making up 42 % of all international students going to western and developed nations such as the US and Australia. More recently Asian countries like Hong Kong, Malaysia and Singapore have ambitions to enter the transnational education market through the establishment of education "hubs" where education becomes a platform for innovation, enterprise and the economy as these nations shift from a production economy to a knowledge-based economy. Such ambitious plans to internationalise local education system reposition education and training as a focal component of economic development. It also assigns a new role for both language and literacy that is explored in this book. As these nations, as well as China, pursue their ambitious agenda to become centres where educational services become are an export, English as the language of intentional learning will occupy a new role. The challenges for change are also amplified when there is a growing popularisation and commodification of English in the Asia Pacific as the language of preference in commerce, communications technology and education.

A changing global environment, the shift in the balance of global influence from the west to the east and the growing complexity of the contemporary moment all mean that narrow notions of literacy and success in performance based tests are not a good foundation for both the senior school curriculum and the preparation of workers for a global employment market. Countries such as China, Hong Kong, Singapore, and Korea are exploring reforms that respond to these developments and position their schooling system with capabilities to respond to uncertainty, diversity and complexity. These developments and the hesitant steps towards curriculum reform by governments are discussed in this book.

Chapter 7: This chapter provides an overview of the history of several education systems in East Asia. The country studies in this chapter explore the historic legacies of colonialism and independence of nations in East Asia. It demonstrates the influence of language policy, cultural values and norms and the political dimensions of national identity that have shaped the nature and character of national education systems. Critical in this analysis is a reference to the discourses on national policy that have linked education, development and economic progress with political stability. This chapter examines several other less familiar systems such as Cambodia and Macau, which also participate in international literacy tests with markedly different results.

Finally, this chapter also explores how the perpetuation of traditional views of knowledge, literacy and curriculum contradict attempts to modernise and internationalise the education systems in a number of Asian nations. Included in this analysis are Hong Kong, China, Malaysia, South Korea and Indonesia, amongst others.

Chapter 8: This chapter explores economic social and education inequality across East Asia. While the region has experienced economic boom, prosperity has not been distribute universally and there are entrenched inequalities emerging across the region as well as within countries. This chapter uses the international Human Development Index (HDI) and other sources to indicate the level of inequalities and the nature of poverty across East Asia. UNICEF surveys reported in this chapter highlight the impact of lack of access and inequalities on the lives of children in East Asia. In particular, this section reveals much about the ways in which inequality is reproduced, with respect to location, gender and commonality with the main language. Further, the section explores the ways in which poverty influences the levels of access to employment, quality education and other services.

Chapter 9: This chapter provides some possibilities in responding to the disconnnection between the examination driven systems of education and the need to provide graduates with employability skills. This chapter is in two parts. First, the chapter provides an exploration of the development of graduate attributes in Australia, specifically the way in which graduate attributes responded to the criticisms of business and employers that graduates in Australia did not have the skills needed for the new globalised economy. These skills included problem solving, showing initiative, working collaboratively and also working in culturally diverse settings. Second, this chapter documents an innovative program from a high school in Hong Kong that conducted a pilot program in work based learning across a range of industries in Hong Kong, including hospitality, tourism, information technology and retail. This program highlights not only some of the issues in developing a curriculum with a vocational element but also some of the potential advantages for students in developing situated learning. The experience of this program suggests that communication skills, particularly language and literacy, occupy and assume a new importance for students. The experience of the real world of work also provided applications to academic learning that did not immediately appear in classroom setting.

Chapter 10: The concluding chapter revisits some of the arguments in the book which includes case studies, country analysis, empirical research data and public sources of data to question the status given to what the authors argue are static and iconic forms of literacy. They argue that student achievement and reductionist approaches to "worker" literacy are not adequate to respond to the complexities and multimodalities of globalisation. The authors also argue that traditional curriculum approaches do not respond to the challenges associated with the broader challenges of the region such as environmental degradation, exploitation of women, terrorism, AIDS, climate-change as well as growing inequalities of global poverty as documented in the book. The authors provide some suggestions on how East Asian systems might develop a dynamic approach to change that promotes inclusion, student centred learning and pluralism.

The authors suggest that by approaching literacy from a pluralist perspective, policy makers, teachers and industry will find benefit through valuing a range of non-traditional literacy skills that are not included in what has been a mainstream examination-based curriculum. The authors, using several case studies in China, Hong Kong and Australia propose approaches which recognise a repertoire of

literacy and language capabilities that respond to global and local conditions in social and work settings. Incorporating a participatory approach for a range of stakeholders facilitates the notion of global and regional citizenship through an active engagement with language and literacy. This approach seeks to reverse hierarchical and elitist notions of literacy and literacy assessment, which often fail to respond to regional and local diversity, as well as the complexity of economic and political conditions in the region. The authors, in conclusion, seek to reverse thinking around literacy as a "problem" and look at the experience of students and workers as they contribute to the notion of a "global citizen".

These issues have a contemporary urgency as several nations seeks to resolve and respond to growing youth unemployment, gaps between worker skills and the capabilities needed for an economy where soft skills are in demand. Paradoxically, where Asia is becoming more influential in the world scene there is very little being written on these issues from an Asian perspective. In this volume the authors, Australians who have taught and researched in Asia, seek to the dominant Anglo American perspectives on literacy in Asia where Asia is seen on the periphery and simply an appendage to western interests. This volume proposes futurist approaches to some of the literacy and language challenges of the region, such as equality of economic and educational opportunity as well as the development of democratic institutions suitable for a global environment.

Chapter 2
What Is Literacy and Why Is It Important?

The way literacy is defined influences the goals and strategies adopted and the programmes designed by policy-makers as well as the teaching and learning methodologies, curricula and materials employed by practitioners. Its definition also determines how progress or achievements in overcoming illiteracy are monitored and assessed. (UNESCO, 2004, p. 12).

The major difficulty in defining literacy is that, like other abstract nouns, there is no absolute definition. In addition, as noted by UNESCO. The way in which literacy is defined has the power to influence policy makers and pedagogies. Measurement, based on particular definitions of literacy, determines not only how literacy is assessed and monitored but also, more recently, how schools are judged and financed. This chapter explores issues associated with definitions of literacy.

Typically, literacy itself is not defined. Rather, characteristics of what it is to be literate are at the core of any definition. Since literacy is a cultural practice, being literate is framed by cultural constraints. It tends to be defined in terms of necessary skills for a time and a purpose, and to meet specific agendas. So, for example in the mid-eighteenth century one definition of literacy was the ability to read from the Bible.

Although popular contemporary conceptions of literacy focus on reading and writing, these two skills were not always linked. There were times in human history where those who were able to sign their names were considered to be literate. At other times literacy was believed to be an ability to read (the Bible or other religious texts), often in Latin rather than the vernacular.

Many local definitions of literacy are derived from definitions determined by larger international bodies, such as the United Nations, particularly UNESCO, the OECD or the World Bank. The latter defines the youth literacy rate as "the percentage of people ages 15–24 who can, with understanding, read and write a short, simple statement on their everyday life" (The World Bank, 2011, n.p.). Like many definitions of literacy, this is quite broad and open to various interpretations of words and phrases such as 'with understanding', 'short' and 'simple'.

The World Bank definition cited in the previous paragraph has been stable in the period 1980–2009. In contrast, a UNESCO working paper traces the way UNESCO's

> **PISA definitions of:**
>
> ***Reading literacy***
> The capacity to understand, use and reflect on written texts, in order to achieve one's goals, develop one's knowledge and potential, and participate in society.
>
> ***Mathematical literacy***
> The capacity to identify and understand the role that mathematics plays in the world, make well-founded judgments, and use and engage with mathematics in ways that meet the needs of one's life as a constructive, concerned and reflective citizen.
>
> ***Scientific literacy***
> The capacity to use scientific knowledge, identify scientific questions and draw evidence-based conclusions, in order to understand and help make decisions about the natural world and the changes made to it through human activity.

Fig. 2.1 Defining different literacies (Source: OECD, 2005, p. 16)

original definition of literacy has changed over time from the simple notion of a "set of technical skills of reading, writing and calculating – the so-called "three Rs" – to a plural notion encompassing the manifold meanings and dimensions of these undeniably vital competencies" (2004, p. 8).

This multidimensional concept of literacy has been expanded and enshrined in several post 1990 international declarations, including World Declaration on Education for All (1990), the Hamburg Declaration on Adult Learning (1997), the Dakar Framework for Action (2000) and the United Nations General Assembly Resolution on the United Nations Literacy Decade (2002). From the perspective of the United Nations and UNESCO literacy is now regarded "as a key element of lifelong learning in its lived context…[linked to] citizenship, cultural identity, socio-economic development, human rights and equity" (UNESCO, 2004, p. 10).

The OECD takes a similar approach to UNESCO, defining literacy in plural terms. In line with the organisation's recent interest in literacy as demonstrated in the PISA test. Literacy is defined separately for reading, mathematics and science (Fig. 2.1).

Analysis of the wording of these definitions introduces questions about who determines what it is to 'understand', 'identify' or 'use'? Whose interests are served in the process of 'understanding', 'identifying' or 'using'? and Are the competencies assessed in the PISA tests indicative of the skills required by the workplace? How can UNESCO's links to citizenship, cultural identity, socio-economic development, human rights and equity be maintained when literacy is defined by a panel dominated by English and French speakers?

An increasingly cited source, *Index Mundi* (2013), although noting that there are "no universal definitions and standards of literacy" nevertheless uses "the most common definition – the ability to read and write at a specified age" (http://www.indexmundi.com/indonesia/literacy.html). As with the World Bank's definition, this is quite broad and leaves room for a range of interpretations.

The questions that arise from different definitions and the debates over definitions of literacy demonstrate the hegemonic power of literacy. That is, definitions of literacy act to include some and exclude others becoming powerful tools of ideology and selection. This selection takes three different forms: the kind/s of literacy that are privileged; the ways dominant forms of literacy influence policy, curricula and pedagogy; and the power of literacy to impact individuals and society as a whole.

If, as noted earlier, literacy is practised in social contexts and represented in multiple forms, it seems apparent that at least one form will establish dominance. Often "the dominant form is transmitted through official institutions such as schools" (UNESCO, 2004, p. 14). Singapore is an excellent example of dominance being created by the privileging of English as the principal medium of instruction in both teaching and assessment. While "such institutional domination tends to legitimize existing social structures and therewith, unequal power relations" (p. 14) in Singapore's case the move was made to take away privilege from the dominant, ethnic Chinese and provide educational, social and economic opportunities for all children in the nation by instituting English as the language of instruction. For many, this may seem sensible and unproblematic. However, when tests such as PISA or TIMSS are said to be administered in the 'local' language, the implication is that the gatekeepers have nominated the privileged language as the 'local' language. There is no evidence that children from ethnic minority groups are able to undertake these tests in their first language.

Typically, government and media responses to the results of national and international literacy tests further sanction and promote the dominant community's notion of literacy. This is often represented in societal attitudes to those who find achievement in the dominant literacy form difficult as people who are dumb, lazy or stupid. Sometimes the community regards those who struggle with print literacy as special, in it's pejorative sense, or outside the 'norm'.

However, the result of privileging one form of literacy over another is often "the neglect of other forms [of literacy] based on historical experiences and lived realities" (UNESCO, 2004, p. 14). In response, "individuals and groups in subordinate positions may construct their own forms of literacy in their own language(s), articulating their own – officially unacknowledged – meanings, knowledge and identity" (p. 14) as typified by the Creole speakers of Los Angeles. On occasions these individuals or groups strike out (Fig. 2.2).

Beyond definitions of literacy are claims about the power of literacy. This claim has two foci. The first is the detrimental effects poor literacy has on individuals. This is often supported by data demonstrating that people with poor literacy are over represented in prisons, on the register of the long term unemployed and the chronically ill. The implication here is that there is a causal relationship. That is, poor literacy leads people to commit crimes, resulting in incarceration. This is simply ludicrous as demonstrated by the number of highly literate people who are serving prison sentences or the people with poor literacy skills who head major companies. A more sinister implication is that people who struggle with conventional print literacy do not have the cognitive skills to understand right from wrong or the complexities of the legal system.

An example occurred during the severe flooding in
Queensland, Australia in 2011. When the National Relay
Service (NRS) "an essential national phone service for the
Deaf community – was out of action due to floodwaters
affecting their headquarters in Brisbane" (Deafness Forum
of Australia, 2011). Deaf advocacy groups successfully
petitioned the government and the media authority to have
an "Auslan (Australian Sign Language) interpreter
standing alongside Queensland Premier Anna Bligh during
press conferences" (Deafness Forum of Australia, 2011).
This enabled deaf Australians to understand the
breakdown in communications and helped those impacted
by the floods to access vital emergency information.
Recognising the subordinate status of this group two
free-to-air television stations cropped the interpreter until
complaints from viewers forced a change.

The converse of the first claim is that literacy has some kind of intrinsic magical powers that *"provide improved job prospects [or] enhance political engagement"* (Bartlet, 2008, p. 737). Street proposed that this conception represents an "autonomous model of literacy" (Street, 1993, p. 50) tending to conceptualize literacy as a skill learned gradually as the individual moves through universal stages of cognitive and physical development…[resulting] in individual rational thought, intellectual development, social development, and/or economic mobility (Bartlet, p. 738). Such an approach assumes that those who have not been able to gain adequate literacy skills do not attain individual rational thought, social development, and/or economic mobility.

UNESCO argues with the autonomous approach, noting that literacy is not the panacea for social and economic ills. Nor have "social cohesion, equity, the equal distribution of wealth and adequate access to good health care … been shown to depend directly on levels of literacy" (UNESCO, 2004, p. 14). Blaming these problems on illiteracy deflects attention from underlying causes, including political and economic disenfranchisement or injustice.

One of the most pervasive claims made by proponents of the autonomous model of literacy is the power of literacy to impact on national economic growth. This notion underpins the OECD's shift into educational assessment through the PISA test, which "reinforces the increasing significance that education has for economic development and hence for the work of OECD" (Lingard & Grek, 2007, p. 37).

A recent UNESCO Global Monitoring report that focused on literacy, *Literacy for Life* (2006), while making the claim that literacy achievement enhances national productivity, confuses the issue in both the definitions of literacy used and putting provisos on the means of acquiring literacy. The report asserts that literacy confers a set of benefits "on individuals, families, communities and nations" (UNESCO, 2006, p. 137) and then sites a passage from Stromquist (2005) on the way that "literacy skills are fundamental to informed decision-making, personal empowerment, active and passive participation in local and global social community" (p. 13).

- Most research has not separated the benefits of literacy per se from those of attending school or participating in adult literacy programmes. More generally, there is a 'tendency to conflate schooling, education, literacy and knowledge' (Robinson -Pant,2005).

- Little research has been devoted to adult literacy programmes (as opposed to formal schooling) and existing studies focus mainly on women; the benefits of acquiring literacy in adulthood are thus less clearly established than those of acquiring cognitive skills through education in childhood.

- Research has focused on the impact of literacy upon the individual: few authors have examined the impact at the family/household, community, national or international level.

- Some effects of literacy, e.g. those on culture, are intrinsically difficult to define and measure.

- Literacy is not defined consistently across studies and literacy data are frequently flawed

UNESCO 2006, p. 138

Fig. 2.3 Five reasons it is not easy to provide systematic evidence of the benefits of literacy

The inference from this is that empowered, literate citizens are responsible, are hard-working and are responsible for striving to improve a nation's economic productivity. While this is laudable, there is no evidence that all empowered, literate citizens respond in this way.

Overall there are two problems with Stromquist's assertion in this passage. First, Stromquist defines literacy "*as* individual access to reading and writing" (2005, p. 2) a definition far more narrow and instrumental than the definition preferred by UNESCO at the time. Second, *Literacy for Life* gives five reasons why "a systematic, evidence-based account of the benefits of literacy is not easy" to provide (UNESCO, 2006, p. 138) (Fig. 2.3).

Stromquist's (2005) evidence, for example, indicates literacy is important but not fundamental for community and political participation. The paramount understanding here is that factors such as the type of literacy, the frequency and duration of classes, ethnic and socio-economic status, gender, religious affiliation and beliefs in personal agency all impact on how literacy achievement impacts on individual participation at the local and global community level.

Counter arguments condemn purported links between literacy and national productivity (Bloome, 1997; Brock, 1998; Graff, 2001) as fanciful and misleading. Bartlett argues

if we agree that there is no singular definition of literacy, that all definitions of literacy are socially interested and politically motivated constructions, and that they are often internally coherent, then it becomes much more difficult to think that literacy is a monolithic 'thing' that can have some "effect." (2008, p. 742)

Wiseman notes that the shift in thinking that makes educational attainment, such as literacy "a fundamental indicator of national educational legitimacy" (2010, p. xii) has occurred since the 1960s. However, he argues that such claims have

"not often been theoretically demonstrated beyond the macro-sociology of educational expansion [or] … been sufficiently documented through empirical investigation" (p. xii). Yet reports from international agencies continue to link literacy achievement with economic growth.

Occasionally a report signals caution. In a report for the World Bank Tilak (2002), while acknowledging the contribution education makes to economic growth, notes that it does not have the power attributed to it. "Education is a necessary, but not necessarily a sufficient condition for sustained economic growth, for the reduction of poverty and improvement in income distribution" (2002, p. 3). This statement suggests that nations need more than highly educated citizens to reduce poverty and create conditions of sustained economic development. Nor is there evidence that the income of the more educated "fully reflect the direct and indirect benefits of education, particularly the important social benefits of school" (di Gropello, 2006, p. xxix). In fact, if the economic conditions of several European nations following the 2009 downturn are any indication, the level of national literacy did nothing for national economic growth. The question is whether a high level of national literacy will help these countries shift out of their dire situations.

Instead of a causal link, Graff sees a symbiotic relationship between development and literacy. He has researched and addressed this relationship from an historical perspective, claiming that the argument that literacy drives economic development is mythical. Scoffing at the "dizzying number and variety of…effects" (2001, p. 12) imputed to literacy he notes that these "notions rest far more on expectations and faith than … on ambiguous evidence of complex, usually context-dependent relations and more complicated, oblique connections" (2001, p. 12). The evidence, particularly from East Asia, appears to be that fast economic growth enables investment in human capital, including advances in education. In a reciprocal fashion improvements in human capital drive economic growth (Tilak, 2002).

Viewpoints on literacy are not neutral and convey biases and perceptions about society that is broader than instrumental views about competence in reading and writing. Bartlett supports this, arguing that "definitions of literacy are not innocent: they incorporate beliefs and assumptions that have political implications" (2008, p. 739). The disparate definitions and statements about literacy discussed in this chapter indicate that biases and political positioning will realign aspects of teaching through policy a tendency that is recognized by UNESCO.

This book responds to claims that "the educational level of the labour-force is a significant determinant of economic growth [and] a strong positive relationship between investment in education and economic growth in both developed and developing countries" (Ramesh, 2004, p. 153). It examines the beliefs and assumptions underlying international literacy tests that measure literacy levels and looks at how changing and contested notions of literacy have influenced government policy, curriculum development, and lifelong learning in participating countries in East Asia. In addition, it reviews debates around claims of a link between economic growth and educational achievement.

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Chapter 3
High Stakes Testing, Literacy Wars, Globalisation and Asia

International testing has become the dominant methodology for analysis, informing debates and discussions on comparative educational systems. This chapter explores the nature of international testing, particularly its impact on the debates around literacy and student achievements, educational attainment and the performance of educational systems.

Over the last decade discussion and commentary on testing have virtually monopolised discussion on schooling and education to the exclusion of any other measure of achievement. In addition, standardised testing has displaced other policy initiatives in the OECD and has tremendous impact not only on the perceptions of individual education systems and jurisdictions but also on the nature of teaching and learning within the systems themselves (Lingard & Grek, 2007).

This ascendency of testing signals a shifting in priorities that has been accepted without question in many quarters. Testing has been assumed to be an unproblematic and an objective way of measuring performance of both students and school systems. Emma Nardi, a member of the Italian scientific committee for the Second International Literacy Survey (SIALS) and PISA 2000, does not agree that these tests are unproblematic.

She reports problems in both validity and reliability in the development of PISA 2000. With regard to validity she has two concerns. First, is "the relationship between so-called life skills and the aims of the test" (Nardi, 2008, p. 260). The OECD proclaims that it intentionally does not focus on national curriculum but on the way 15 year olds use the skills that are taught. However, as Nardi demonstrates, national Program Managers for the 2000 test were required to respond to a question about whether the test items were within the curriculum. She argues that, despite protestations from the OECD, "no test can be developed wholly outside the national curriculum" (2008, p. 260).

Indeed the OECD does little or nothing to dispel this claim from individual countries, inferring that a superior curriculum is a contributor to impressive results. High rankings are publicised and promoted through the mass media. In terms of the public discourse in East Asia, there is broad support for testing that can be attributed

to the continued superior performance of mostly developed Asian nations and their ability to use the test results to promote a discourse on national pride. By showcasing their credentials as international leaders in schooling and education they have been able to gain international recognition and prestige.

Despite the increasingly documented risks associated with high stakes testing, standardized testing gains its appeal from a belief in the objectivity of data on student performance. The use of testing is seen as the implementation of technical, culture-free measures that are not subject to teacher bias. Pallas, cited by Sadowski (2003), suggests that:

> Most standardised tests are viewed by the public at large as objective which means several things: there are right and wrong answers to test questions, unlike grades, which are awarded at the 'whim' of a teacher; standardized tests are standardized-scores and don't depend on who is performing the assessment; tests yield numerical scores, which are precise measures of performance and like a laboratory measurement, test scores are reliable. (Sadowski, 2003, p. 48)

The general impression in the community is that test scores are scientific data and that tests are a "fool-proof" way of finding what student know and what they have learned, or otherwise.

Nardi's (2008) second concern about validity relates the reading literacy objectives, their distribution and purposes. If, she argues, the test is about the way 15 year olds use (literacy) skills then there is no valid reason for merging PISA's original five objectives into three broad objectives. Nor does the distribution of purposes for reading truly reflect adult reading habits. For example Occupational Purposes are regarded as being used 16 % of the time, while Personal, Educational and Public Purposes are estimated to encompass 28 % each. It seems more likely that most adults use literacy in their occupation rather than for personal reasons. Nardi claims that there is only one purpose for reading literacy in the test – to complete the test. She argues that the OECD can make no other claim.

Perhaps Nardi's (2008) greatest concern is that the test is regarded as a bias free, assessment of skills acquisition. She argues that since the term 'culture' is never defined that the test can make no claim about lack of bias. Literature on PISA indicates that while it is difficult to identify cultural bias in individual items, simply having students complete the test creates bias in the culture of schooling.

There is clear evidence that standardised testing has toxic effects on the experiences of students, the work of teachers and the nature of curriculum, learning and pedagogy. Criticism in Asia centres on the way the culture of test taking and examinations is failing to prepare students for the new jobs and employment that will require a different set of skills than those used to succeed in standardised testing. Many in Asia see the graduates of schools as poorly equipped for the demands of a global economy and are striving for change and reform in schooling systems. In East Asia this is made more difficult by the hegemony of standardised testing and its links to public examinations, a phenomenon this book will explore in Chap. 6.

Standardised testing is no longer an isolated and discrete form of monitoring performance but a global policy instrument. The gradual spread of standardised testing across the globe has seen the adoption of a policy ensemble that includes

curriculum reform, monitoring of teacher standards and the use of tests in determining resources. This next section will, through an international analysis of the literature on standardised testing, explore the tensions and dilemmas that standardised testing present in East Asia as it negotiates change and reform away from examination based systems and looks to reform student learning, teachers' work performance and the curriculum.

High Stakes Testing: Lifting the Bar or Redistributing the Education Pie?

In most cases standardised testing is regarded as "high stakes testing" because poor achievement, or falls in performance of schools are likely to lead to punitive responses on schools, and in some cases on students, who have failed to meet or lift their performance targets. High stakes testing does not simply individually evaluate student performance but collates results and establishes performance data for schools. Test results are used as a proxy for measuring the quality for the performance of schools and the school system.

New forms of high stakes testing are very different from earlier benign forms of examination and assessment because high stakes testing aligns testing with curriculum content, and proficiency goals with resourcing. The creeping influence of these tests on curriculum and resourcing is best explained by Dall's observation that with the first PISA tests in 2000, "teachers [taught] to a national curriculum, but students [were] assessed, and compared to others on international criteria" (2010, p. 1). Within just 12 years teacher had learnt to teach to the test.

Teachers responded this way because they had experienced the way standardised testing tightens state control over schools, imposing sanctions on schools that do not meet performance standards. The instrumental nature of these tests and their pervasive impacts serve to demoralise teachers who imagine that teaching is about the whole person, not simply their ability to achieve on tests. In summarising teacher attitudes to the erosion of curriculum resulting from the globalisation of standardised testing Smith and Kovacs note that the result of "cannibalized curriculum [has] demoralized teachers" (2011, p. 204).

The impact on students includes mandated prevention of progression from one grade to another for students who do not meet the required standards. There seems to be little concern for the message being given to failing students or the younger cohort with which they are forced to learn.

The ramifications of high stakes testing go well beyond the performance of individual students and have an impact on the character of schooling and the distribution of resources to schools. In the United States the "*No Child Left Behind*" (NCLB) legislation enacted by the George W. Bush in 2000 is a prime example of high stakes testing where schools are required to participate in a cycle of testing from year 3 to 12 and meet agreed annual progress (AYP) targets. Failure to meet these (AYP) targets results in sanctions regardless of the context of the school.

Special schools, schools in poor or rural areas and isolated schools gain no concessions or weightings that account for barriers that they and their students may encounter. NCLB legislation saw federal government incursion into areas of administration that were traditionally conducted by state governments, and imposed sanctions. Valli, Croniger, Chambliss, Graeber, and Buese argue that NCLB "ratchets up the pressure on principals and teachers to raise test scores to levels that are unprecedented" (2008, p. 2).

Standardised testing redefines the language of schooling teaching and education, a trend McNeil describes as

> the power of cost accounting and management "accountability" to impede or seriously jeopardize the, the capacity for citizens – for parents, communities, and education professionals – to bring this "accountability" system to account. Its narrow and technical language excludes critique that employs nontechnical language; critique based on democratic values, children's development and equity. (McNeil, 2000, p. 232)

The implementation of accountability has been operationalised through the development of "performance" measures for school principals and education managers and the creation of rankings based on student performance scores.

Further, McNeil argues that standardisation widens educational inequalities and masks historical and persistent inequities (McNeil, 2000, p. 230). Standardised testing reinforces inequalities through the development of rankings as scores are disaggregated by race, ethnicity and report groups. In disaggregating scores, standardisation creates the impression that the system is "sensitive to diversity [and] committed to improving minority groups' schooling" (p. 232). Through excluding other forms of education and concentrating on test data to monitor improvements, these testing systems tend to re-affirm a discourse of underperformance and failure. As a teacher in Smith and Kovac's (2011) study noted, students are deemed to have failed if they do not meet the mandated threshold even though they have made extraordinary gains across the year.

Standardisation "shifts both the control of schools and the official language of educational policy into a technical mode to divorce the public from governance of school" (McNeil, 2000, p. 230). In this way, McNeil argues, the promise of accountability actually reinforces the power of bureaucracy over other stakeholders in education and distorts priorities towards performance in standardised tests and away from a broader educational experience for students.

This image of the objectivity and scientific "truth" of standardised tests is a seductive illusion for the political and administrative elites, as test data can simplify and distort complex issues around education and teaching. The influence of test data is more profound because it has become fashionable in the context of what policy-makers term "evidence-based" policy development. Testing data, represented through statistics and graphs, can conflate complex issues into simple percentages, rankings and ratios, providing "the evidence" for policy interventions in schooling.

Politicians argue that this performance data can promote efficiency and equity in the distribution of resources as test data can better identify those in "real need". It suggests that there is a rational policy process, not influenced by special pleadings, provider capture or lobby groups. It has created an impression that results are a

better way to monitor the performance of the system and are symbolic of growing moves for accountability. Monty Neill, the Director of the National Center for Open and Fair Testing, referred to this simplicity saying, "Testing is convenient. It reduces everything to a number" (Birk, 2003, p. 80).

Marguerite Clarke, the Director of the National Board on Educational Testing and Public Policy, has questioned the view that standardized testing is a superior guide to formulating education policy. She notes that:

> when they become the driving force behind reform they become corrupted. In this kind of environment attention focuses exclusively on the test at the expense of all other aspects of the education system. High stakes testing can then lead to low-level learning. (Sadowski, 2003, p. 58)

However, test development is a social and political process, assigning status to certain knowledge, facts, beliefs and, at the same time, subordinating others. Test design involves decisions about what will be tested and how that will be presented. Developing multiple choice questions and test item banks involves judgment that assigns status to some forms of knowledge and ignores others.

Teachers argue that a regime of testing undermines "educational freedom and pedagogical discretion" (Backes-Gellner & Veen, 2008, p. 570). In the context of a testing regime, teachers make radical decisions about content and direction and have to make choices about how best to prepare their students for such tests. In some cases they are substituting higher order tasks for superficial learning. McNeil describes how teachers claim they have to "omit or severely decrease extended reading assignments, analytical writing, research papers, role play…student led discussions, speaking activities, oral histories multimedia activities, science experiments [and] library hours" (2000, p. 246). These student-centred activities are substituted with teacher-centred activities, meaning that "most of the class periods every day for weeks is spent on drills for tests, much of that time spent in reading sample questions and trying to select among the provided answers" (2000, p. 247). In seeking to teach to the test, teachers are making difficult choices that amount to valuing only those things that are tested and are consequently narrowing their pedagogy.

Testing is also a distorting factor in the politics of education because the concerns of those advocating better standards in education has seen a reluctance to call for more resources. There has been a new politics around testing which has seen demands for improved standards that have tended to focus on the performance of teachers. As a result, proposals for the monitoring of teachers and increased accountability about what they teach and how they teach it abound. Standardized testing has been accompanied by an ideological orthodoxy that has linked several previously disparate concepts associated with school system reform. These concepts include notions and assumptions that monitoring and accountability will promote school system reform, create efficiency and stimulate improvement in teaching and curriculum. However, these assumptions are not unchallenged and have been criticized as an ideological orthodoxy. The advocates of testing have been called "*standardistas*" by Susan Ohanian (1999), a former teacher, who passionately derides standardization as eroding the capacity for students to enjoy learning, for individual student needs to be met, and turning teachers into technicians.

Conservative commentators justify, in part, these reforms by arguing that standardisation displaces the influence of parents, teachers and educators. Their rhetoric emphasises that there is a situation where provider-capture, parent groups, unions and progressivists frustrate the possibility for change and reform.

Observing the development of testing in Texas under former governor of Texas, Ross Perot, McNeil argues that standardised testing emerged as a means to take control of the education system and displace the influence of teachers and other lobby groups. Ross Perot argued for the "nuking" of school systems: "We've got to drop a bomb on them, we've got to nuke them—that's the way you change organisations" (McNeil, 2000, p. 153). Radical measures were proposed by Perot to "rescue" schools with the institution of rigid control and command approach to avoid reforms such as testing and increased accountability measures being "incrementalised to death" (2000, p. 186).

The initiatives associated with testing reveal a deep distrust and a suspicion of teachers and an attempt by those wanting reform to re-take control of the education and schooling system. The "reforms", instituted around standardised testing, enabled them to create the conditions that eroded the autonomy of teachers to create innovations that met the needs of diverse student communities. 'Reforms' include monitoring and surveillance of teachers and their work, resulting in a reduction of their ability to control what they do in their classrooms. The deep distrust of teachers by policymakers is a characteristic of a cultural view of teaching and teachers that devalues the work of teachers and contributes to the de-professionalisation of teaching itself.

Teachers and Test Taking Cultures

The responses of teachers to standardized testing have been characterized by complex and often contradictory behaviours. Testing has some support from some teachers who see value in the structure and predictability that testing provides in curriculum development. In "teaching to the test", teachers who are uncertain about what to teach have some guidance derived from what is in the test. In the absence of curriculum many teachers, particularly those who are inexperienced, gain a sense of security from the structure provided by testing. Testing provides some with the predictability and a framework to build lessons and classroom experiences. "Teaching for the test" creates a sense of orderliness and control for teachers who often lack the ability to develop learning experiences and curriculum and relate to the needs of learners.

But Lauren Resnick, from the University of Pittsburgh also suggests that there will be a narrowing of curriculum particularly in poor schools, noting there are "certainly some places where the curriculum is narrowing to whatever types of items are in the test" (Sadowski, 2003, p. 54). Resnick does, however, concede that some schools have benefitted from the advent of testing because they are in fact teaching something. This is a vast improvement on an absence of any teaching

which has typified low status and poorly resourced schools. Testing, according to Resnick, can provide some teachers and schools a basic structure which is better than no curriculum direction and it does provide some coherence in an otherwise chaotic school setting (Sadowski, p. 54).

Many schools and teachers respond to standardized testing by creating what Valli et al. call a "test taking culture" where "test performance is imposed as the ultimate goal of instruction" (2008, p. 25). This means that *"learning is supplanted by testing rather than supported by assessments"* (p. 25). Further, teachers engage in gaming behaviour to avoid adverse consequences of testing. Teachers reshape their instructional and strategies to mirror the strategies of standardized testing in their teaching. Test taking activities, norms and expectations dominate the school routine. This includes timetable setting and the relationship teachers have with students throughout the year.

Claims that testing enhances accountability may be contradicted because testing may encourage teaching and learning strategies that do not reward inquiry and analysis. In schools where there is a test taking culture teachers are forced to adopt activities that include drilling and teacher-centred activities directed at test preparation. In a climate of "excessive test focused drilling" (Popham, 2003, p. 11) rote memorisation and superficial learning may occupy the bulk of teaching effort.

Schools typified by a test taking culture have a tendency to allocate significant time to test preparation. Curriculum associated with the arts, sports, music and other social programs developed for the social and emotional development of students is often relegated to a minor role in the school routine. At times in the year prior to the test date "everything else [goes] by the wayside" (Smith & Kovacs, 2011) as resources and in-depth learning are marginalised with respect to time and facilities. Further, teachers note that time is allocated to them for recording and reporting on tests but not for planning teaching programs (Smith & Kovacs).

Popham argues that in schools with this teaching to the test focus "many teachers are being pushed so hard to raise their students' scores that their classrooms have been transformed into drill-dominant test-preparation factories" (2003, p. 11). Repetitive drilling, such as this, has the potential to undermine attempts to make learning engaging and enjoyable and creates a classroom environment where boredom, passivity and disengagement are evident in student behaviour.

These negative aspects on the nature of teaching and learning are also compounded by other serious concerns about teachers manipulating and falsifying aspects of testing. Some teachers, pressurised by accountability and testing measures, have resorted to "bending test administration rules" (Popham, 2003, p. 12) to ensure their students do better. There have been several instances of teachers cheating by supplying test answers. This unethical conduct tends to breed a culture of dishonesty and corruption that Popham suggests contributes to a widespread lack of confidence in public education and an undermining of professional standards. Although these responses by teachers are less common than the forced shifts and changes in the teaching and learning strategies that standardised testing manifests, they have an equally significant impact on schools and the profession of teaching.

Other teachers, who have operated with more learner-centred approaches have, in the face of increased proficiency monitoring, been forced to adopt what Linda McNeil calls "defensive teaching" in order to retain teacher licensing and maintain their professional status. This involves teachers temporarily adopting activities that feature in the test taking culture. At other times teachers, recognizing that test taking activities do not meet the needs of their students, use a broader repertoire of teaching/learning strategies. These include activities that involve the students autonomously directing their learning in partnership with their teachers. Problem-based learning and projects that are conducted in the community are typical of these strategies. This type of learning is often more motivating for learners who have special needs, learning difficulties, language and literacy needs as well as those who are reluctant learners, gifted and talented or have classroom management problems. Increasingly punitive measures associated with licensing, promotion and pay are used as ways of coercing teachers and their unions into co-operating with regimes of standardized testing.

The misuse of test data from standardized testing extends beyond schooling. Ostensibly promoted as enhancing transparency and accountability, the misuse of school data actually acts to reaffirm notions of social class and division between those with pathways to good education and jobs and those who do not. Ohanian (1999) documents, in passionate terms, the impact of standardized testing and high stakes testing on the lives of families. She suggests that the lives of many families have become dominated by intensified preparation in an effort to meet the standards.

Test scores have an important role in shaping many of the aspirations of the middle class with respect to their decisions about where they will live and what type of lives they will have. Publication of test scores and student achievement of local schools is often used by real estate agents to enhance the sales potential of properties. The prospects of raising children in an area where the schools are seen as "good" are used as a lure for potential homebuyers. Wagner discusses this relationship:

> Your local realtor will confirm that real estate prices are heavily determined by the perceived quality of schools-which in turn is measured by standardized test scores. Often prospective buyers with children will ask about a community's test scores before they even go to look at a house. (Wagner, 2003, p. 42)

This example illustrates how the use of test data extends into the social and cultural realm of community formation. It is a marker of the esteem and prestige of both a school and the district and acts to differentiate communities and allocate status and reputation. Wagner argues that test data is important in many of the decisions people make about schools and their children's future.

Ohanian points to the impact attending a prestigious, high ranking school has on students and also how concerns about this are ignored as parents and schools focus on the common good.

> Parents are somewhat ambivalent about the increased workload their children carry. They can see what the added stress is doing to their children and parents complain almost as

much as kids about finding time to get all the homework done. Teachers report that they hear few of the complaints. After all, with media complicity, the political industrial infotainment complex bombards us with the message of the direct links between academic success and future economic success, so it becomes a parent's duty to keep these kids running on the treadmill. (Ohanian, 1999, p. 2)

Much of the discourse of standardised tests invokes notions of how returning to the basics will assist in building achievement amongst groups where there is poor achievement. There is, according to McNeil (2000), a mistaken notion that standards will create equity in outcomes, based on the erroneous notion that standardisation enables groups to get off the bottom of achievement levels.

It reinforces the notion that attainment of the basics is a prerequisite and neglects the differential conditions in school quality, teacher experience and resources that typify the experience of minority children. In attaining the basics there is the assumption that minority children are getting the same education as economically richer students where resources are more plentiful. This creates the myth of equality and at the same time depoliticises inequalities through the introduction of the language of accountability.

This discourse of accountability takes education away from the language of parents and the community. Accountability "implies responsibility to higher authority; being held to account for; being obliged to" (McNeil, 2000, p. 260). In turn, this creates a hierarchy that constructs education in crisis and in need of technical and instrumental fixes rather than interpreting schools and schooling as cultural sites where issues are mediated by collaborative practices. The politics of accountability uncouples critical questions about how resources are distributed, what knowledge is valued and taught and the rights of parents, teachers and the community to shape the nature of schooling and education.

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Chapter 4
League Tables and the Politics of Ranking

Claims that the publication of results is an objective and value free exercise do not recognise how such data are used to sustain a hierarchy of power and interests that favours established interests. As indicated in the previous chapter, the general public assumes that the assessments of standardised test results, published periodically by news agencies provide a valid, value-free account of educational achievement. However, data, derived from testing, rarely sits on its own and is generally compared to other scores, other locations and other tests.

Test developers send mixed messages about the use of the data obtained with respect to league tables. For example, the developers of the TIMSS test "indicate that their primary purpose is not for country comparisons" (Reddy, 2005, p. 67). Yet their reports begin with a table of achieving nations and every aspect of analysis is presented in a tabular form indicating countries which are ranked highest, lowest and on average.

There are two positions on the importance of ranking schools or countries on league tables based on results of standardised tests. Those who have a benign view of testing advocate the importance of establishing benchmark data to assess improvement or deterioration in student and school performance. Others reject this argument noting that since literacy (the basis of these tests) is only one aspect of school and a rounded education that the rankings cannot be valid. Some opponents argue that the tests do not have validity and reliability simply on the stature of the test developers. This chapter will explore arguments on both sides of this debate.

One of the claims of the testing orthodoxy is the need to establish internal data to monitor operations and performance within a school. However, there are strong temptations to aggregate the data, removing the notion of performance at a specific school to make comparisons across schools. This situation is exemplified by PISA results for the USA that consistently indicate poor results for literacy and numeracy. A closer perusal of the data indicates that this aggregation hides the fact that some schools that are achieving at outstanding levels while others are failing to achieve. This unevenness is hidden by the compulsion to compare across schools and regions.

The mantra associated with the need for comparisons is an imperative for benchmarks from which individual scores can be validated and progress across a range or cluster of schools established. Unless such comparisons and benchmarking exercises are compiled with common variables, these exercises can be nothing more than futile procedures, seeking commonalities where none exists. The common criticism of benchmarking is that analysts are simply comparing apples with oranges. Benchmarking and comparative exercises need to be done cautiously and need to consider the context of the school, its background and history, the demographics and socio-economic status of the school population as well as the school staff and resources available to schools. It needs to have diverse forms of data for analysis rather reliance on a single set of test numbers.

Nevertheless there are powerful forces that demand what has been termed "league tables" which list schools in ascending order of performance. The mass media, on the basis of public interest (Leithwood, 2004), promotes these lists, which are publically discussed with schools and teachers "famed and shamed" (Dall, 2010, p. 2). Further, despite denials to the contrary, the publication of tables is strongly supported by politicians who seek to establish a ranking of schools and base election promises on those rankings (Leithwood).

Globally, data presented in easy to read league tables has begun to influence policy development. Steiner-Khamsi (2003) has identified three extreme policy reactions to the publication of league tables. Scandalisation is the response typified by highlighting the weaknesses of an education system based simply on a cross-country comparison (see discussion of the USA reading results above as an example). Glorification is exactly the opposite. It lauds and praises an education system based on a simple cross-country comparison indicating a high rank on the league table. Indifference results when politicians, the mass media and the public are disinterested in school and student performance. The example Steiner-Khamis gives is the last placing gained by German 14 year olds on attitudes towards migrants.

The point Steiner-Khamsi makes is that decision to scandalise, to glorify or to remain indifferent is a political decision. She argues that, "the attraction to international league tables and to countries that 'do better' often reflects the need to justify controversial school reforms at home" (2003, p. 4). Justifying league tables as a manufactured or perceived need for parents to make informed choices about where their children go to school also relates to controversial reforms. This argument for choice assumes that all parents have a choice and have the opportunity and willingness to move their children on the basis of performance scores alone. For those living in rural or isolated communities there are few choices.

There is a fetish about positioning schools in rank order by the media and politicians who are looking for simple answers to complex educational questions. Generating a number which positions a school against a field of other schools reduces the complexity. It also has the attraction of de-politicizing issues in education by reducing questions about education to a single digit or index.

Schools that are ranked poorly become stigmatized and their image in the eyes of the community is often damaged permanently. The problem is compounded because action, resources and a commitment to change and improvement by the school leadership is needed in many poorly performing schools. However, the assumption that

resources and action will accompany low scores and compensate poorly performing schools is often misplaced as poor scores are more often accompanied by punitive measures, more monitoring and diminished resources. Rather than recognizing the impoverished resources that characterize some poorly performing schools, the schools find themselves subject to ambiguity and uncertainty around resources and often subject to threats of amalgamation or closure.

Poorly performing schools find it hard to attract good students and good teachers. They are subject to a spiral of despair and helplessness as they become effectively disowned by their stakeholders. In stark contrast, it is usually the higher ranked schools which tend to siphon the best students and the best teachers, tending to compound already existing advantages that contributed to them being on or near the top. Under these conditions high stakes testing can be seen as contributing to affirming social division, negating the redistribution of resources and the widening lack of many of the compensatory programs designed to redress inequality and social justice.

High Stake Testing, Literacy and the "Literacy Wars"

Some observers such as Wagner claim that one of the mistakes of the high stakes movement was attempts to test an ever increasing range of subject areas as "if they equally mattered" (2003, p. 42). Wagner claims that this has led to a practice of escalating complexity, such as and where passing high level mathematics is tested and required for entry into college in the US. Wagner argues that the emphasis should be placed on a high level of literacy which he defines as "the ability to comprehend complex material, synthesise information and present it clearly" (2003, p. 142).

The importance of literacy is promoted outside school and education settings as "an indispensible skill in most workplaces today. Literacy and the ability to evaluate data are essential for citizenship" (Wagner, 2003, pp. 142–143). Urging government intervention similar to the post war reconstruction of post war Europe, Wagner calls for a Marshal plan for literacy with "a laser like focus on literacy" (2003, p. 142).

This view of literacy is expansive, going beyond a basic notion of reading, writing and speaking and links the notion of literacy to performance in the world of work. It also has dimensions associated with citizenship, social responsibility and productivity that go beyond the interpretation of written messages. Yet this position is not uncontested.

While Wagner and others focus on literacy in its broadest terms other critics have identified a "crisis" around literacy, and specifically reading. A conservative critique of current teaching of literacy asserts that students failing attain "basic" standards in spelling, grammar, syntax and comprehension. This critique vigorously claims that students display profound deficiencies in these formalities of language. Notions of effective communication or diverse views about what might constitute good expression, clashes with notions of "proper" and "appropriate" expression and the use of the protocols of languages.

This argument over literacy standards has escalated into what has been called the "literacy wars". The "literacy wars" have also seen a re-emergence of advocates of

what has been termed the "cultural restorationist" approach to knowledge and curriculum where the emphasis is on the acquisition of established facts, endorsed and recognized knowledge and "appropriate" behaviours. This position has a nostalgic orientation and argues for the preservation of traditional views about facts, knowledge and behaviours, regarding them as immutable and unaffected by change and contemporary trends.

In fact, the cultural restorationists have adopted a regressive position wanting to return to traditional methods, arguing passionately that there is a crisis in literacy evidenced by an erosion of proper standards due to faddish teaching. The cultural restorationists have argued for a "back to basics" approach that proposes a return to traditional teaching methods and methodologies untainted by what they see as dangerous progressivist practices and ideology. Progressivists are derided for failing to teach students to write and spell "properly".

The progressivist approach, according to the conservative cultural restorationists, is flawed because it promotes notions of literacy that emphasise a "whole language" approach that does not use the conventions of language as the foundation for learning language and literacy. In contrast to using the conventions of language "whole language" is based on constructivist view of knowledge and uses a situated view of language. Constructivism incorporates diverse views and perspectives on knowledge and has an inclusive view about what constitutes knowledge, facts and behaviours. This contests the essentialist views held by cultural restorationists that knowledge and language are developed around immutable facts. In contradiction, constructivism argues that knowledge and facts are socially and culturally constructed.

A constructivist position argues that valid knowledge is contested and shaped by culture and language and subject to interpretation and modification to the context in which knowledge might be generated and applied. Constructivist approaches avoid allocating a priority or a hierarchy around knowledge is but suggest that useful knowledge is subject to interpretation and context.

Progressive approaches to learning also favour locally developed curriculum that is developed through interaction and negotiation between students, teachers and their communities with a view incorporating diverse perspectives and approaches to knowledge. The much derided "whole language approach" to literacy teaching also adopts a constructivist approach and does not subscribe to the notion of uniform standards in the same way the conservative literacy teaching does. Whole language, because it is contingent on situation and context, can be eclectic and include methods of teaching such as phonics, drill and memorization that are normally favoured by conservatives. It is the perception that progressive teaching does not use these traditional methods which has been the greatest source of criticism by conservatives of progressivists. The conservatives have passionately argued that a failure to teach phonics and the use of literature-based learning has diminished the skills and competencies of students. Conservatives attribute the literacy crisis to these deficiencies.

The link with literacy and high stakes testing is highlighted in the debates associated with the literacy wars and the claims about a crisis in education. Since the 1970s conservative critics have repeatedly claimed that schools are failing and that national prestige will be undermined both economically and in the international

ranking. The panacea that has most often been proposed by politicians and the media is the growth of a back to basics movement in teaching which invokes traditional views of teaching and learning based on rote learning, testing and reading from classic literature. Overall there is an anxiety about falling standards and a sense of crisis about new methods of teaching.

Although what "standard" means is unclear and ambiguous, the political right has been very effective in promoting a sense of crisis and a view that standards have been eroded by progressivist teachers using constructivist teaching methods. The conservatives also successfully manufactured a backlash against many of the compensatory programs designed to meet the needs of disadvantaged. Apple (2006) argues that the political right has been able to create a false sense of injustice about such programs. Further, they have questioned the legitimacy of certain groups to have special resources allocated to them. Apple argues that conservative commentators have successfully created a narrative claiming that those who are benefiting from the status quo, rather than those who are in need and poor, are actually the ones disadvantaged. This sense of grievance has emboldened conservatives with a belief that their thwarted entitlement is under threat and jeopardised by initiatives and programs designed to meet the needs of the disadvantaged or minority groups. This continues to be a main narrative that sustains conservatives.

Conservative critics of literacy standards have also argued that teachers, their professional bodies and unions have captured the agenda in literacy and that they cannot be trusted to work in the broader interests of the community. This perception of thwarted entitlement and anxiety over a sense of crisis has mobilized a powerful and vocal backlash, resulting in rhetoric about restoring standards as well as greater accountability and monitoring of the performance of teachers and schools. This scenario has largely been played out in the Anglo-American countries of the United States, the United Kingdom, Australia and New Zealand, to varying degrees, and has been framed by parallel debates over the position of the state in education and the role of the market in the economy.

The orthodoxy of the right, and allies in academia and the media, has argued for greater privatisation and de-regulation of the state. This has meant that the left has been forced into a peripheral position arguing for a more effective state investment but has not challenged many assumptions around effectiveness, efficiency and accountability. The unchallenged acceptance of these notions has facilitated the introduction of standards, high stakes testing and centralized curriculum. All these developments and the rhetoric over standards have facilitated a narrowing view of what constitutes literacy and has, in turn, created an expansion in the growth in high stakes testing.

Globalisation, Soft Skills and New Literacies

These literacy wars have emerged in cycles since the early 1980s and have shaped policy debates in the English-speaking world. While these two camps have dominated academic discussion in literacy several key trends have added another

dimension to these entrenched positions. The globalization of the economy and the growing place of new communications technologies have transformed society and also the workplace. These developments have not only created a global environment typified by diversity, hybridity, complexity and mobility but one where uniformity and standardization have limited value. This post-industrial environment is typified by complexity and diversity and presents new challenges to educators and industry about what the capabilities and competencies workers will need.

Conformity, uniformity and compliance once valued as attributes for employees in a mass production industrial economy have now been replaced by demands for a very new type of worker. The new post-industrial worker is valued for being able to work well with uncertainty, ambiguity and complexity. In the post-industrial economy workers need to be able to work in atypical situations and in what are called niche and boutique work situations. Abilities to problem solve, show initiative, take the lead on matters and think for oneself are also highly valued in what has been termed the portfolio worker. This portfolio worker displays adaptability and an ability to work flexibly on a project-by-project basis rather than through the traditional life-long career trajectory. Although much of the hype about portfolio workers disguises an erosion of employment conditions and the exploitation of workers in low paid casual and short-term employment, it makes explicit a shift in the type of worker required for a global economy. While the economy has been moving into what has been termed a post-industrial or post-Fordist environment, there has been significant questioning, particularly by industry and commerce, about the capacity of schools to produce the workers with these capabilities for the contemporary global economy.

With technology changing rapidly the balance between interpersonal and technical job related skills has changed. Previously technical skills were valued more highly that social skills and this was because in a production economy the necessity for interpersonal interaction was limited and often discouraged. In addition technical knowledge, in a period of rapid technological changes in production techniques, has meant that individual techniques often have a very short shelf life.

Interpersonal competencies are now assuming a new importance. Proficiency in languages, superior communication skills and the ability to work in diverse setting with others are now in greater demand as the world of work has become more sophisticated and globalised. These so called "soft skills", are now becoming equally important in determining employability as the need for technical or "hard skills". While the relationship between these is debatable there is an undeniable questioning about the extent to which the basics are enough in a world defined by complexity and diversity.

These changes have resulted in a revival of constructivist approaches where situated practice and local conditions can be included in the learning experiences of students. New technology plus the mobility and hybridity of globalisation have also created new forms of literacy and communication. Multimodal and multiple formats have been incorporated in the new media of communications. No longer is text based writing the predominant form of writing because information technology, multimedia and computer based formats now incorporate graphics, animations and

photographic imagery. New types of writing involve formats which depart from the formal styles of writing and include such forms as drop down menus, scrolled text and fly out scripts.

These development were well documented and described by the New London Group in the early 1990s who argued that the learning needed to be designed to incorporate both graphic and visual forms of communication associated with the new technologies of learning. The New London Group also suggested that the days of uniform and standardized curriculum associated with education in the nation state needed to be replaced by a perspective on learning that accounts for globalization and diversity. They argued that standardized curriculum had been associated with the building of national identity around images of homogeneity but in the post-industrial era this was now redundant.

In recognition of these changes and the need to respond to diversity the New London Group proposed a framework that emphasised a negotiated approach to the design of learning and the use of situated practice as the basis of developing learning experiences. Importantly, the multiliteracies framework, developed by this international group, also promoted critical reflection and valued change and innovation through transformative action. This framework adopted a constructivist approach and responded to the changing environment which challenged the relevance and currency of curriculum developed within the centralised bureaucratic models that typified most systems.

Some states in Australia developed curriculum reforms such as Productive Pedagogies (Queensland) responding to the need for a wider range of learner pathways other than university entry. However, these attempts to introduce curriculum reform were frustrated by the failure of education systems to invest in professional development that was needed to equip teachers to utilize and optimize opportunities for locally developed curriculum. These attempts at curriculum reform sought to democratize the curriculum and challenge the often centralised and top down forms of curriculum. However, these bottom-up attempts have generally foundered in the face of the entrenched resistance from groups that saw such reforms as a threat to their established interests. The education bureaucracies, the networks of professional groups, university administrators, text book publishing companies and the business networks producing curriculum material designed to prepare students for examinations have rallied to retain a centralized approach to curriculum.

Conclusion

Periodic criticisms about standards, poor literacy and poorly equipped students have led to a revival of moves for centralized curriculum. These criticisms and the calls for standardized curriculum came at a time when the performance of students from developed western nations in international literacy tests have been seen as well above the world standard. While the evidence of some countries' poor performance, for example Australia, is debateable and contested, the general impression created

within the media, the community and government was that standards of student achievement was falling and Australian schools were failing. In contrast the achievements of Asian nations has been lauded globally. This has created both surprise and interest in what East Asian nations are doing to get such results and also ignites debate about reforms that improve system and school performance.

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Chapter 5
Global Testing: PISA, TIMSS and PIRLS

The earlier chapters in the book have discussed and analysed debates and research on literacy and testing and have focussed on the performance of many East Asian nations in the three internationally recognised literacy and numeracy tests. The three most important international tests are the Programme for International Student Achievement (PISA), Trends in International Mathematics and Science Study (TIMSS) and Progress in International Reading Literacy Study (PIRLS).

These tests have universally assumed a new importance in identifying the current state of national education systems across the globe and there is considerable prestige and controversy associated with the performance of various nations in these tests. The hubris and satisfaction of many Asian nations has been in stark contrast to the perceptions of inferior achievement by western nations and has characterised much of the media and press coverage of these tests. For some countries such as Finland this has been termed a PISA "surprise", while Germany and Great Britain suffered a PISA "shock" in 2000. For others such as some East Asian nations the results are seen as evidence of as shift in the global balance in education, technology and economic development.

Coverage and commentary of these tests has been directed towards finding explanations for the continued success of Asian nations such as Singapore, South Korea, Hong Kong and, most recently, Shanghai (representing China) in the 2009 PISA. Commentary, often from non-specialists and journalists, has tended to conflate the analysis of the tests suggesting that the three international tests are the same and that comparison of various tests can be made without concerns regarding the validity of such analysis. There are many assumptions made in the popular press, which fail to understand the differentiated nature of many of the testing programs. Essentially, this is because they have diverse cohorts in terms of age and grade range, jurisdictions, sampling size, participation of students, rationale and objectives for testing, balance between formative and summative testing methodologies and reporting formats and processes.

Failure on the part of observers to appreciate the differentiated and special features of each of these tests has resulted in a common occurrence where observers,

have mistakenly used the tests interchangeably, making judgements and analysis of the test results that have questionable validity. Judgements made on this basis, comparing rankings and performance, particularly with Asian nations, has created a mythical global competition. In essence, commentary about these tests has uncritically conflated the test and misused the data from them.

This next section will describe and discuss the three international testing programs with a view to highlighting their principal features and how they are conducted. In addition, there is some discussion on the validity of comparisons across these testing systems.

Programme for International Student Achievement (PISA)

PISA is conducted by the OECD and was launched in 1997. The first PISA was conducted with 30 of the 40 OECD member countries in 2000.[1] It also included 11 partner countries who are non-OECD member countries. PISA operates on a four-year cycle and involves 15-year old participants who are approaching the end of their compulsory schooling. In Australia over 14,170 students from a total eligible population of 234,940 participated in PISA 2006. This amounted to a survey involving 300 schools. In terms of participation Australia is one of the higher-level cohorts but lower than Canada involving 22,646 and Mexico with 30,971. This contrasts with Liechtenstein with 339 students from a population of only 353 15 year olds. The tests are conducted in September in Australia and during March to May in the northern hemisphere. A further round of PISA was conducted in 2009.

PISA explains that the use of the term literacy encompasses:

…the broad range of competencies relevant to coping with adult life in today's rapidly changing societies. In such a context, adults need to be literate in many domains, as well as, in the traditional literacy areas of being able to read and write. The OECD considers that mathematics, science and technology are sufficiently pervasive in modern life that fulfilment, employment and full participation in society increasingly require an adult population which is not only able to read and write, but is also mathematically, scientifically and technologically literate. (OECD, 2005, p. 9)

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[1]OECD member states are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxemburg, Mexico, Netherlands, New Zealand, Norway, Poland, Iceland, Ireland, Italy, Japan, Korea, Luxemburg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Rep, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

PISA Partner countries are Albania, Argentina, Azerbaijan Brazil, Bulgaria, Chile, China (Shanghai), Chinese Taipei, Colombia, Croatia, Estonia, Hong Kong (China), Indonesia, Israel, Jordan, Kyrgyzstan Latvia, Liechtenstein, Lithuania, Macedonia, Macao (China), Panama, Peru, Qatar, Serbia, Romania, Russian Federation, Shanghai (China), Singapore Scotland, Slovenia, Thailand, Tunisia, Uruguay.

Reading literacy is described as "understanding and using and reflecting on texts, in order to achieve one's goals to develop one's knowledge and potential to participate in society" (OECD, 2005, p. 46).

PISA uses a view of literacy that is based on adult notions of competency and the application of literacy skills within "real life" settings. PISA is also oriented towards the future, reflected in an approach to literacy that is concerned with the ability of students to apply skills in analysis, reasoning and communication skills in the testing process.

Student outcomes reported by PISA are disaggregated by sex, Indigenous status, geographic location and economic background. The testing process also includes a context statement regarding the participating schools that is completed by school principals and includes aspects such as resource levels, staff qualifications, and teacher morale, school autonomy, school policies and achievement levels in other areas.

Trends in International Mathematics and Science Study (TIMSS)

Trends in International Mathematics and Science Study (TIMSS) is an achievement test of 4th and 8th grade students in mathematics and science conducted every four years by the US based International Association for Evaluation of Educational Achievement (IEA), an international consortium of research organizations and government research organizations. In 2003 some 46 countries participated in TIMSS.[2] Participants in the study are based on grades, that is years of schooling, and not ages, like PISA.

TIMSS surveys were conducted in 1995, 1999, 2003, 2007 and 2011, but the 2011 results were not available at the time of writing. Many of the countries who participate in TIMSS also participate in PISA. Australia is one of those countries. In the United States, a national probability sample is drawn for each study that has resulted in over 500 schools and approximately 33,000 students participating in 1995, 221 schools and 9,000 students participating in 1999, and 480 schools and almost 19,000 students in 2003.

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[2]OECD nations in TIMSS include Australia, Austria, Belgium, Canada, Czech Rep, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Iceland, Ireland, Italy, Japan, Korea, Luxemburg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Rep, Spain, Sweden, Switzerland, Turkey, United Kingdom and United States.

Other nations included in TIMSS include Albania, Argentina, Bulgaria, Chile, Chinese Taipei, Colombia, Estonia, Hong Kong (China), Indonesia, Israel, Jordan, Latvia, Liechtenstein, Lithuania, Malaysia, Macedonia, Philippines, Palestinian National Authority, Qatar, Serbia, Romania, Russian Federation, Shanghai (China), Singapore, Scotland, Slovenia, Thailand, Tunisia, Uruguay, Algeria, Botswana, Djibouti, Egypt, Ghana, Morocco, South Africa, Bahrain, Iran, Kuwait, Lebanon.

Unlike PISA, TIMSS testing is structured around curriculum based/proficiency benchmarks and includes the following cognitive domains:

- Knowing: the facts, procedures, and concepts students need to know;
- Applying: the ability of students to apply knowledge and conceptual understanding to solve problems or answer questions; and
- Reasoning: the ability to solve more complex problems that encompass unfamiliar situations, complex contexts, and multi-step problems.

TIMSS looks at how students have mastered the factual and procedural knowledge taught in school mathematics and science curricula and programs. The test is developed by first scanning the curricula, and then analysing the scan for common features.

The test package includes teacher, student, and school questionnaires. In 1995 and 1999 TIMSS had a Videotape Study component. TIMSS results are expressed as a position relative to the average score of the performance of the United States.

Progress in International Reading Literacy Study (PIRLS)

PIRLS is an international comparative study of the reading achievement levels of 4th graders. PIRLS uses a quotation from Mullis et al. to define literacy:

> The ability to understand and use written language forms required by society and/or valued by the individual. Young readers can construct meaning from a variety of texts. They read to learn, to participate in communities of readers in school and everyday life, and for enjoyment. (Mullis, Kennedy, Martin, & Sainsbury, 2006, cited in Baer, Baldi, Ayotte, & Green, 2007, p. 2).

Like TIMSS this testing program is conducted by the US based International Association for the Evaluation of Educational Achievement. PIRLS participants are 36 partner countries. Some countries are members of the OECD.[3] Others are not. The first PIRLS achievement test was in 2001 and was repeated in 2006. The 2006 survey included 45 education systems. Four East Asian nations, Chinese Taipei, Hong Kong SAR, Indonesia, Singapore, participated in PIRLS 2006. The most recent round of PIRLS was conducted in 2011. Results were not available when the current text was under preparation.

PIRLS is used to compare a comparative sample the performance of US 4th graders with a selection of other countries. The comparative sample is developed through school districts or jurisdictions. Results are compiled and presented by

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[3]PIRLS participating jurisdictions Austria, Belgium (Flemish), Belgium (French), Bulgaria, Canada (Alberta), Canada (British Columbia), Canada (Nova Scotia), Canada (Ontario), Canada (Quebec), Chinese Taipei, Denmark, England, France, Georgia, Germany, Hong Kong (SAR), Hungary, Iceland, Indonesia, Iran, Israel, Italy, Kuwait, Latvia, Lithuania, Luxemburg, Macedonia, Moldova, Morocco, Netherlands, New Zealand, Norway, Poland, Qatar, Romania, Russian Federation, Scotland, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sweden, Trinidad & Tobago.

Table 5.1 PIRLS benchmarks

Benchmark	Cut point	Reading skills and strategies
Advanced	625	Interpretive figurative language;
		Distinguish and interpret complex information from different parts of text;
		Integrate ideas across text to provide interpretations about characters' feelings and behaviours.
High	550	Recognise some textual features, such as figurative languages and abstract messages;
		Make inferences on the basis of abstract or embedded information;
		Integrate information to recognise main ideas and provide explanations.
Intermediate	475	Identify central events, plot sequences and relevant story details;
		Make straightforward inferences from the text;
		Begin to make connections across parts of the text.
Low	400	Retrieve explicitly stated details from literary and information sources.

background characteristics (sex, race and ethnicity) and by contextual factors (school characteristics, instructional practices and teacher preparation as well as the home environment).

The test is developed by reading experts and reading research coordinators from participating countries. It is designed to reflect the range of needs of countries and develop a consensus around reading needs.

PIRLS examines three dimensions of reading which include:

- Processes of comprehension,
- Purposes of reading and reading behaviours,
- Reading behaviours and attitudes.

The results are reported on a scale from 0 to 1,000. In 2006 the reporting benchmarks were revised to conform to those of TIMSS (Table 5.1).

Comparing PISA and TIMSS

TIMSS enables a comparison of countries based on student populations with similar numbers of years of schooling. On the other hand PISA measures the mathematical and scientific literacy of 15 years old students. PISA is seen as measuring "system yield" or the performance of students at a specific point, that is, nearing the end of their compulsory education (Gonzales et al., 2004, p. 101). The scores are not seen as directly comparable for practical and technical reasons. There is an argument that the conceptual frameworks may be comparable. Some research comparing test items has identified some similarities and departures particularly in the area of problem solving.

A study by Dossey, McCrone, and O'Sullivan (2006) reviewed the assessment items of PISA 2003 and TIMSS 2003 and showed that 38 % of 8th grade TIMSS 2003 and 48 % of PISA 2003 mathematical literacy items measured some aspect of problem solving. In addition 26 % of 8th graders in TIMSS 2003 and 49 % of PISA science literacy items measured some aspect of problem solving. In terms of science, the study found that 80 % of TIMSS science items required students to know science information and knowledge compared to 35 % of PISA science items.

These disparities highlight the essential differences between the tests. PISA has a focus on a situation and phenomena based approach and TIMSS has a focus on school based curriculum. For example, PISA has a greater focus on data analysis, statistics and probability in mathematics than does TIMSS. The study suggests that there is more congruence between TIMSS and NEAP than there is with PISA. In general these differences suggest that:

> Assuming PISA places more emphasis on items that require greater focus on problem solving, the critical evaluation of information and the probability in mathematics than either TIMSS or NAEP, it also seems reasonable to have expected the PISA results in mathematics to differ from the results in either TIMSS or NAEP. (Gonzales et al., 2004, p. 102)

The reality of this on results is indicated by the poor achievement of US students who in 2003 scored below the international average in mathematical literacy and below their 15-year old peers in 20 of the 28 other OECD member countries. American students have consistently performed relatively poorly in mathematical literacy areas in comparison to other OECD nations.

Comparing PISA and PIRLS

Like TIMSS, PIRLS differs from PISA around several key features such as purpose, partner countries, populations, content, orientation and precision of estimates. A key difference emerges in the way in which the achievement levels of countries are reported. The international average for PIRLS is based on participating countries and jurisdictions, including a number of emerging and non-industrialised countries. As a result, comparisons may be made across countries and within countries. International averages on PISA are compiled only on OECD member countries. Japan and Korea, do not participate in PIRLS.

PISA and PIRLS are grade based but PISA is aged based. PISA involves 15-year olds who are in ninth and tenth grade in the US whereas PIRLS assesses fourth graders. Sample sizes are similar with PISA 2006 sampling 5,611 in 166 schools in the US and PIRLS 2006 sampling 5,190 in 183 schools.

PISA has focussed on a broader definition of literacy that includes the application of competencies in real world situations. PISA includes reading and literacy from the school curriculum as well as real world applications. This focus differs from PIRLS, a test which focuses on text based reading and comprehension.

The Comparability of International Testing Programs

Many sources discuss literacy and numeracy achievement levels and national performance in these tests interchangeably. Critics argue that this is not possible as there are variations in the age ranges, sampling procedures, test construction and reporting format which make meaningful comparisons difficult. Kell and Kell (2011) has questioned comparability arguing that different countries are involved and that some tests, such as PISA, are aged based and others, such as TIMSS and PIRLS, are grade based. The model for TIMSS is embedded in curriculum while PISA is structured around assessing a broad range of competencies. There are also variations in the orientation of the testing, illustrated in the previous section, where problem solving is more evident in PISA than in PIRLS. This is also a feature of TIMSS with its focus on curriculum.

The East Asian Nations in International Testing Programs

The participation of East Asian nations in international testing programs has, since their inception, been strong and their performance has been consistently in the high achievement range in most domains tested. They have frequently attained the top rankings. China in particular, as Taiwan/Taipei, Hong Kong and Macao and more recently Shanghai, has been involved in the three programs and has been in the top bands of performance. Some nations, such as China-Hong Kong, have been involved in the OECD PISA as non-members. Others, such as Singapore and Malaysia, have been active in TIMSS and are recent entrants to the PISA program, joining in 2009. Some developing countries in South Asia and the Middle East have been encouraged to participate in the tests and have been sponsored by the International Association for Evaluation of Educational Achievement and US donor agencies. The participation of Asian nations in the three major international student performance tests is listed in Table 5.2.

The success of Asian nations is not an overnight phenomenon but has emerged progressively from the earliest student performance tests in 2000. Performance has also been strong in all variations of the tests such as PIRLS, TIMSS and PISA. In this section several tables are presented indicating the positioning and performance of East Asian nations and their performance relative to the United States, the European Union and Australia.

TIMSS and East Asian Nations (2003 and 2007)

In the TIMSS rounds in 2003 and 2007 Asian nations clustered, with average scores in science and mathematics considerably higher than the TIMSS average of 500. The nations of Chinese Taipei, South Korea, Japan, Hong Kong and Singapore

Table 5.2 East Asian participation in international testing (1995–2011)

Country/jurisdiction	PISA	TIMSS (grades)	PIRLS
China – Hong Kong	2000 Plus[a]	1995 (4/8)	2001
	2003	1999 (4/8)	2006
	2006	2003 (4/8)	2011
	2009	2007 (4/8)	
		2011 (4/8)	
China – Macao	2003		
	2006		
	2009		
China – Shanghai	2009		
Chinese Taipei	2006	1999 (8)	2006
	2009	2003 (4/8)	2011
		2007 (4/80)	
		2011 (4/8)	
Indonesia	2000 Plus[a]	1999 (8)	2006
	2003	2003 (8)	2011
	2006	2007 (8)	
	2009	2011 (8)	
Japan	2000	1995 (4/8)	
	2003	1999 (4/8)	
	2006	2003 (4/8)	
	2009	2007 (4/8)	
		2011 (4/8)	
Malaysia	2009 Plus[b]	1999 (8)	
		2003 (8)	
		2007 (8)	
		2011 (8)	
Philippines		1999 (8)	
		2003 (4/8)	
Singapore	2009	1995 (4/8)	2001
		1999 (4/8)	2006
		2003 (4/8)	2011
		2007 (4/8)	
		2011 (4/8)	
South Korea	2000	1995 (4/8)	
	2003	1999 (8)	
	2006	2003 (8)	
	2009	2007 (8)	
		2011 (4/8)	
Thailand	2000 Plus[b]	1995 (4/8)	
	2003	1999 (8)	
	2006	2007 (8)	
	2009	2011 (4/8)	
Vietnam	2009		

[a]Additional country assessed outside the main time frame

[b]OECD partner countries participated on a delayed time frame with testing taking place in 2010

Table 5.3 Rankings of East Asian nations in PISA 2000, 2003, 2006, and 2009

Country	2000 (Reading literacy)	2003 (Mathematics)	2006 (Science)	2009 (Reading literacy)
Hong Kong	2	3	4	4
South Korea	6	2	7	
Singapore				
Japan	8	4	3	
Chinese Taipei				

http://en.wikipedia.org/wiki/Programme_for_International_Student_Assessment#National_add-ons

occupied rankings in the top five in both rounds of TIMSS in 2003 and 2007. They have tended to swap the first three positions but Singapore has been the most consistent, claiming the premier position six times overall. It should be noted that South Korea only participated in the grade 8 TIMSS performance testing in 2003 and 2007. In the eighth grade mathematics and science the Koreans have performed well with second placings, both in mathematics and a third and a fourth position in science.

In 2003 Singapore topped the rankings in TIMSS mathematics and science in grades 4 and 8. Again in 2007, it was ranked first in science and mathematics in fourth and eighth grades. Hong Kong was second in 2003 in both fourth grade mathematics and improved this to a first in 2007 but in the 2007 eighth grade science was relatively low with an equal 9th. Japan has been a solid performer in the top five in fourth and eighth grade in 2003 and 2007. The highlights for Japan have been two third places in 2003 in fourth grade mathematics and science. Although the performance of Japan generally fell in 2007 it claimed a third place in eighth grade science.

Chinese Taipei has also ranked highly in TIMSS with no less than five second places and a first place in 2007 in eighth grade mathematics that was up from a fourth in that category in 2003.

In 2003 Malaysia, another East Asian nation was ranked tenth in eighth grade mathematics.

In general these East Asian nations rank highly on international benchmarks, above the average scores of the United States, Australia and most European nations. The most poorly performing nations are consistently Arab states such as Qatar, Saudi Arabia and Tunisia or African nations such as Morocco, Ghana, Botswana and South Africa. The only East Asian nation to feature in this lagging group was the Philippines in fourth grade mathematics in 2003.

Table 5.3 indicates the consistently high ranking of Hong Kong across four cycles of PISA. In addition, it demonstrates the improved ranking of Japan across three cycles.

Table 5.4 shows clearly the lowest performers of East Asian nations in the 2006 PISA rankings were Macau and Japan at 8th position, which is still well above the international benchmark of 550 and above many developed western nations.

Table 5.4 PISA 2006 rankings of East Asian nations in maths, science and reading

Country	Maths		Sciences		Reading	
Hong Kong	3	547	2	542	3	536
South Korea	3	547			1	
Singapore	1		1		1	
Japan	8	523	4	531		
Taiwan	1	549	4	532		
Macau	8	525				
International benchmark		**550**		**550**		**500**

Table 5.5 PISA 2009 rankings of East Asian nations in maths, sciences and reading

Country	Maths		Sciences		Reading	
Shanghai, China	1	600	1	575	1	556
Hong Kong	3	555	3	549	4	533
South Korea	2	546	6	538	2	539
Singapore	2	562	4	542	5	526
Japan	8	529	5	539	8	520
Taiwan	5	543	14	520	23	495
Macau	12	525	18	511	28	487
Thailand	50	419	49	425	50	421
Indonesia	60	371	55	401	57	402

In the 2009 PISA results the ascendency and the regional disparities of East Asia were evident (Table 5.5). 2009 saw a continued strong performance from South Korea, Hong Kong, Singapore, Japan and Taiwan. The biggest surprise in 2009 was the performance of Shanghai China, topping the achievement ladder on its first appearance in PISA. Less impressive was the performance of the larger and less developed nations such as Indonesia and Thailand.

Similar levels of performance have been evident in TIMSS with East Asian nations sharing the first three places in both mathematics and science between 2003 and in 2007 in mathematics and science in grade 4 and grade 8. Singapore, Hong Kong, and Chinese Taipei and Japan have dominated TIMSS in this period as the individual analysis shows in further detail (Table 5.6).

Table 5.7 gives some indication of the clear advantage several East Asian nations have in their TIMSS rankings. However, it also indicates the vast range of performance in East Asian nations in TIMSS with the Philippines ranking third last.

Mathematics scores and average scores in TIMSS in 2003 and in 2007 saw the continued trend of East Asian superiority. Other more fancied nations, such as the United States and Australia, are well down the achievement ladder in comparison (Table 5.8).

There are 6 nations from East Asia out of 14 nations that were above the US average in the TIMSS 2003 grade 8 score (Table 5.9).

Table 5.6 Rankings
of East Asian nations
in TIMSS 2003 and 2007

Country	Gd 4 Maths	Gd 8 Maths	Gd 4 Science	Gd 8 Science
2003				
Hong Kong	2	3	4	4
South Korea	n/a	2	n/a	3
Singapore	1	1	1	1
Japan	3	5	3	6
Chinese Taipei	4	4	2	2
2007				
Hong Kong	1	4	3	=9th
South Korea	n/a	2	n/a	4
Singapore	3	3	1	1
Japan	4	5	4	3
Chinese Taipei	2	1	2	2

Table 5.7 TIMSS 2003
average mathematics scale:
scores for fourth-grade
students

Country	Average score
Above US average	
Singapore	594
Hong Kong (SAR)	575
Japan	565
Chinese Taipei	564
Belgium Flemish	551
Netherlands	540
Latvia	536
Lithuania	534
Russian Federation	532
England	531
Hungary	529
United States	**518**
Cyprus	510
Moldova	504
Australia	499
New Zealand	493
Norway	451
Last three	
Philippines	358
Morocco	347
Tunisia	339

Source: TIMSS (2003)

East Asian nations dominate the top five groupings. Here Australia is below the
TIMSS average and the bottom nations are almost 200 points below the top nation,
Chinese Taipei (Table 5.10).

In the 2003 TIMSS science grade four there was only one country outside East
Asia that was above the US score. This was England (Table 5.11).

Table 5.8 Average TIMSS 2007 mathematics scale: scores for fourth-grade students

Country	Average score
Hong Kong SAR	607
Singapore	599
Chinese Taipei	576
Japan	568
Kazakhstan	549
Russian Federation	544
England	541
Latvia	537
Netherlands	535
Lithuania	530
United States	529
Germany	525
Denmark	523
Australia	516
Last three	
Kuwait	316
Qatar	296
Yemen	224

Source: TIMSS (2007)

Table 5.9 TIMSS 2003 average mathematics scale – scores for eighth grade students

Country	Average score
Above US average	
Singapore	605
Korea	589
Hong Kong (SAR)	586
Chinese Taipei	585
Japan	570
Belgium Flemish	537
Netherlands	536
Estonia	531
Hungary	529
Malaysia	508
Latvia	508
Russian Federation	508
Slovak	508
Australia	505
United States	**504**
Sweden	499
New Zealand	494
Italy	484
Norway	461
Last three	
Saudi Arabia	332
Ghana	276
South Africa	264

Source: TIMSS (2003)

Table 5.10 TIMSS 2007
average mathematics scale –
scores for eighth grade
students

Country	Score
Chinese Taipei	598
South Korea	597
Singapore	593
Hong Kong	572
Japan	570
Hungary	517
England	513
Russian Federation	512
United States	508
Lithuania	506
Czech Republic	504
Slovenia	501
TIMSS average	**500**
Australia	496
Last three	
Saudi Arabia	329
Ghana	309
Qatar	307

Table 5.11 TIMSS 2003
average science scale – scores
for fourth-grade students

Country	Average score
Above US Average	
Singapore	565
Chinese Taipei	551
Japan	543
Hong Kong (SAR)	542
England	540
United States	**536**
Latvia	532
Hungary	530
Russian Federation	526
Netherlands	525
Australia	521
New Zealand	520
Belgium Flemish	518
Italy	516
Norway	466
Last three	
Philippines	332
Tunisia	314
Morocco	304

Source: TIMSS (2003)

East Asian nations again held the top positions but the Russian Federation and Latvia are the closest European nations. Arab countries make up the bottom group (Table 5.12).

Table 5.12 TIMSS 2007
average science scale – scores
for fourth-grade students

Country	Score
Singapore	587
Chinese Taipei	557
Hong Kong	554
Japan	554
Russian Federation	546
Latvia	542
England	542
United States	539
Hungary	536
Italy	535
Kazakhstan	533
Germany	528
Australia	527
TIMSS average	**500**
Last three	
Morocco	297
Qatar	294
Yemen	197

Source: TIMSS (2007)

In 2003 East Asian nations were well above the United States scores. In this round Singapore topped each of the TIMSS categories (Table 5.13).

In general the science scores replicate the results in mathematics with East Asian countries continuing to share the top places. Less impressive is the performance of some less developed African nations such as Ghana and Botswana as well as more developed South Africa. It should be noted that some of the wealthiest nations on the globe such as Qatar, Kuwait and Saudi Arabia do badly in international achievement tests (Table 5.14).

The Performance of East Asian Countries in PIRLS

The participation of Asian nations in PIRLS in 2001 and 2006 illustrates well the high level of performance of the two participating Asian nations, Hong Kong and Singapore, as well as the rapidly escalating performance of these nations. In this English language based test both these nations performed well. In 2001 in the average combined reading literacy score neither Hong Kong or Singapore was in the top five countries. In 2006 in the same scale Hong Kong was second to the Russian Federation (565) with a score of 564, and Singapore was third on 558. In 2001 on the average literacy subscale Hong Kong (518) and Singapore (528) were a long way behind equal first Sweden and England on 559. In 2006 Hong Kong was equal third on 557 with Hungary, behind Canada Alberta (561), the Russian Federation (561) and Canada

Table 5.13 Average science scale – scores for eighth-grade students

Country	Average score
Above US Average	
Singapore	578
Chinese Taipei	571
Korea	556
Hong Kong (SAR)	556
Estonia	552
Japan	552
Hungary	543
Netherlands	536
United States	**527**
Australia	527
Sweden	524
Slovenia	520
Norway	494
Italy	491
Malaysia	410
Last three	
Botswana	365
Ghana	255
South Africa	244

Source: TIMSS (2003)

Table 5.14 TIMSS 2007 average science scale – scores for eighth-grade students

Country	Average score
Singapore	567
Chinese Taipei	561
Japan	554
South Korea	553
England	542
Hungary	539
Czech Republic	539
Slovenia	538
Hong Kong	530
Russian Federation	530
United States	520
Lithuania	519
Australia	515
TIMSS average	**500**
Last three	
Botswana	355
Qatar	319
Ghana	303

Source: TIMSS (2007)

Table 5.15 PIRLS average scores for fourth grade students participating in PIRLS 2001 and 2006

Jurisdiction	Average combined literacy score		Average literacy subscale score		Average informational subscale score	
	2001	2006	2001	2006	2001	2006
Bulgaria	550	547	550	542	551	550
Canada Ontario	548	554	551	554	542	551
Canada, Quebec	537	533	534	529	541	533
England	553	539	559	539	546	537
France	525	522	518	516	533	526
Germany	539	548	537	549	538	544
Hong Kong SAR	**528**	**564**	**518**	**557**	**537**	**568**
Hungary	543	551	548	557	537	541
Iceland	512	511	520	514	504	505
Iran	414	421	421	426	408	420
Israel	509	512	510	516	507	507
Italy	541	551	543	551	536	549
Latvia	545	541	537	539	547	540
Lithuania	543	537	546	542	540	530
Macedonia	442	442	441	439	450	450
Moldova	492	500	480	492	505	508
Morocco	350	323	347	317	358	335
Netherlands	554	547	552	545	553	548
New Zealand	529	532	531	527	525	534
Norway	499	498	506	501	492	494
Romania	512	489	512	493	512	487
Russian Federation	528	565	523	561	531	564
Scotland	528	527	529	527	527	527
Singapore	**528**	**558**	**528**	**552**	**527**	**563**
Slovak	518	531	512	533	522	527
Slovenia	502	522	499	519	503	523
Sweden	561	549	559	546	559	549
United States	542	540	550	541	533	537

British Columbia (559). Singapore was fifth on 552. 2001 in the average informational subscale score Hong Kong (537) and Singapore (527) were highly placed but a long way behind Sweden (559) and Netherlands (553) and Bulgaria (551). In 2006 Hong Kong was first on 568, four points ahead of the Russian Federation on 564 with Singapore in third place on 563. These levels place Hong Kong higher than the US average in both the 2001 and 2006 PIRLS results (Table 5.15).

Conclusion

The performance of East Asian nations in international student testing programs in literacy, mathematics and science is consistently at the highest level. Many western critics argue that these East Asian nations have advantages because they are "city

states", are culturally homogenous, have advantages in a test taking culture and have a cultural heritage which values learning. Despite these criticisms the superior performance of East Asian nations has been consistently impressive from 2000 to 2009 and is rivalled by few nations. This chapter has provided an explanation of these tests and their diverse scope as well as an analysis of the performance of East Asian nations. The next chapter looks at the global responses to the international tests and seeks to explore why East Asian nations do so well.

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Chapter 6
International Testing: The Global Education Space Race?

The reaction of politicians and the press has seen the objectives and outcomes of international tests as a "contest" against other nations. This has triggered anxieties in many developed nations as their assumptions of educational superiority have been challenged.

In Australia this has been constructed as a "race" against Asian nations (Patty, 2012). This view was promoted at the very top of the political hierarchy by the Australian Prime Minister, Julia Gillard, who in a speech about funding for disabilities expressed a vision for a "high wage, high-skilled society" amid rapid economic growth in Asia. Gillard identified a challenge for Australia in needing to "win as a nation in this century but, in order to do that we've got to win in the education race". She continued the saying that "our competitors are continuing to invest and improve the quality of their school systems, and four out of five of the top performing school systems in the world are now in our regions" (Patty, p. 12).

These anxieties about the relative performance of Australia were described as Australian students being "beaten" by Shanghai, Hong Kong, South Korea and Japan. Australia in absolute terms was seen as falling behind in writing, arithmetic and the numbers of students completing the final year of secondary school. The Australian performance was seen to be handicapped by a "tail end" of students lagging in the lower achievement bands and fewer students in the top performing bands. In contrast, in nations such as Singapore, Hong Kong and South Korea there were fewer low performing students and relatively higher numbers of top achieving students (Kell & Kell, 2011).

The achievements of Asian nations in international testing have created a sense of crisis about the performance of systems in other countries such as the United States and Australia. The success of the Shanghai jurisdiction in the 2009 PISA 2006 reverberated within the American education community with the impression that the US school system was falling behind Asian nations like China, Hong Kong, South Korea and Singapore. The reaction to the success of Shanghai in PISA was compared to the shock the American scientific community received from the launching of the Soviet space rocket the Sputnik in 1957. "Wow, I'm kind of stunned, I'm

thinking Sputnik," said Chester Finn the former Secretary of Education in the Reagan administration in response to China's success (Dillon, 2010). Likewise the US Secretary for Education Arnie Duncan Said, "We have to see this as a wake-up call," saying that, "we can quibble, or we can face the brutal truth that we are being out educated" (Dillon, 2010).

Finn argued that the progress of the Chinese would be relentless and outpace the US stating that "I've seen how relentless the Chinese are at accomplishing goals, and if they can do this in Shanghai in 2009, they can do this in 10 cities in 2019, and in 50 cities by 2029". In science American students were seen as performing well below Shanghai which scored 575, followed by Finland, a distant second on 554 with the US in 23rd position on 502 with a cluster of countries such as Poland, Ireland, Norway, France and others (Dillon, 2010).

Commentators such as Chester Finn saw this as evidence of a shift of economic and industrial power and a reversal of the ascendency of American global power. The success of Shanghai was attributed to several factors including Shanghai's status as a migration hub for all of China and the city's position as a leading global city. In this context Shanghai was able to attract and retain what has been termed "stellar" students, within their system.

Mark Schneider, the US Commissioner of Educational Research in the Bush administration, refuted some claims that the success of China came from cheating, arguing that the students' success was more a product of nationalist pride after being informed of the importance their success for China's image. Schneider suggests a similar reaction could be achieved in the US saying, "Can you imagine the reaction if we told students of Chicago that this was an important international test and that America's reputation depended on them performing well" (Dillon, 2010). Schneider also identified Shanghai's success as evidence of China taking education seriously in combination with a work ethic that is "amazingly strong".

President Barack Obama invoked the metaphor of the 1957 sputnik launching and linked it to America's educational performance saying, "Fifty years later our Sputnik moment is back". The President introduced the challenge from Asian nations who are "suddenly plugged into the world's economy" with the most educated workers prevailing but Obama identified that, "As it stands now America is in danger of falling behind" (Dillon, 2010).

The success of the Asian countries in these tests has provoked analysis of the reasons why these countries do better than their western counterparts. The Chinese success has been attributed to several factors, many of which are founded on mostly subjective judgements. The OECD suggests that China's success was because China has a strong history of competitive examination. "Schools work their students long hours every day, and work weeks extending into the weekends" (Dillon, 2010). Schneider argued, however, that "the real significance of these results is that they refute the commonly held hypothesis that China just produces rote learning" (Dillon). Chinese students were seen by commentators like Dillon, as spending less time on athletics, music and other activities that are not directed towards core exam based subjects.

Intensive schooling, concentrating on success in external exams with few diversions from core test related subjects, was attributed as an advantage but a higher quality of teachers was seen as equally important. The elevated status and quality of teachers was seen as providing Shanghai with an edge as teaching in the new China

had assumed a status and prestige in the community that enables the recruitment of high quality graduates.

Governments such as Singapore claimed its performance in international tests confirms the absence of a lagging, or low achievement group. The government suggests that successful Asian nations have confidence that they are more equitable societies with opportunity distributed across all groups.

While the western Anglo American nations are typified by divisions, criticism, anxiety and self-doubt about the performance of their systems, some Asian nations display an attitude of self-satisfaction and even arrogance about their educational superstar status. Writing about the reasons for Singapore's success in international tests, Sandra Davie of the *Straits Times* newspaper writes;

> Singapore's good performance shows that schools are on the right track. As an MOE official put it: "It proves that our students are not just 'muggers'; they can apply what they have learnt in school to real life." Indeed, many students told the Straits Times in a report published on Monday that the test was easy, describing it as "simple", "basic" and "no sweat". (Davie, 2010, p. 1)

The term "muggers" refers to students who are "fearful of losing marks for making mistakes in exams" (Davie, 2010). While Singapore does well in TIMSS and PISA there has been a concern that students do not have a sense of creativity and are too reliant on rote learning and memorisation and are not capable of analysis, synthesis and problem solving. The Singapore system is often portrayed as being successful at churning out good workers but lacking in creativity. This was confirmed in 2008 by the then Minister for Education Mr Tharman Shanmugaratnam who lamented that,

> test scores did not correlate with success in life, and went on to observe that while 'America has a culture of learning that challenges conventional wisdom, even if it means challenging authority', Singapore was not able to do so well in areas such as 'creativity, a sense of adventure, ambition' (Davie, 2010, p. 1).

However, Singapore's success is also attributed to an interesting combination of factors, which include greater opportunities for pupils to gain exposure to the English language and education in English from a young age. For example, the Singapore government claimed that success in the PIRLS test could be attributed to both a growing exposure to English and high levels of pre-primary education. PIRLS is a test conducted in English and in the 2006 PIRLS test Singapore was ahead of New Zealand, the United States and English speaking provinces in Canada. The Singaporeans noted there was a rise from 37 % in 2001 to 42 % in 2005 of students where English was the predominant language at home (MOE, 2007). In 2006, 21 % of Singaporean students reported they only spoke English at home. There was also a rise in pre-primary instruction for PIRLS from 55 % in 2001 to 84 % in 2006 (MOE). In addition, reforms to the English curriculum and teacher training were also identified as important in providing an environment conducive to the success of their students. The Singaporean's success in the 2006 PIRLS was seen as a consequence of English Language Syllabus 2001 that emphasises language use through the study of a wide range of text types organised around three areas: (i) language for information, (ii) language for literary response and

expression, and (iii) language for social interaction. The new syllabus also places greater emphasis on reading skills and strategies than the previous one but was also complimented by attempts of the government to improve the climate of Singapore schools. Finally there were important initiatives in improving and upgrading the qualifications of primary school teachers to a university degree level (MOE).

Most significant in the performance of Singapore in PIRLS 2006 was the ability to lift the bottom-performing group of students by 5 %, a feature that is important in lifting the performance of nations relative to others in the ranking of international test participating nations. Singapore identified an egalitarian system with opportunity for all races and communities as an important feature of national development.

Similar statements of hubris in Asia greeted the successful results of China and Hong Kong in PISA 2009. When Shanghai topped the world, the reaction was nationalist sentiments and the lauding of the achievements of the Chinese state. In Hong Kong observers, such as Lau Nai-kueng, a member of the Hong Kong Basic Law Committee who is closely aligned with Beijing, saw the results of PISA 2009 as evidence of a shifting global balance favouring China. Lau, like others, was sensitive to criticism of Shanghai's selection in the absence of other parts of China, noting "The pundits tried hard to assert that Shanghai is not representative of China; clearly, it never occurred to them that Shanghai has a population of 20 million" (Lau, 2011, p. A11). The Chinese argued that PISA results were a sign of a shift in intellectual power saying that in the mathematics Olympiad China had won eight championships and had two other second places. Further evidence of Chinese ascendency cited by Lau was the ACM intercollegiate computer competition sponsored IBM which sees Chinese teams placed at the highest in consecutive years.

Lau also argues that America has been challenged by the Chinese achievements in PISA 2009 saying that:

> In relation to the money spent, the performance by Americana students – 19th overall among 33 OECD countries – deserves a reality check. The result undermines American claims of US exceptionalism by those on the political right. However from an elitist point of view, what really matters is that the US world ranking in the higher value added chain has hardly budged. (Lau, 2011, p. A11)

The satisfaction of China and Hong Kong was compounded by superiority of teaching methods and attitudes to learning. Lau disparages western "educators" who believe that "the free-for-all, glib classroom discussion favoured in western schools are more important than reading comprehension, cleverness in mathematics and problem saving in maths" (Lau, 2011, p. A11). In refuting this position Lau argues that Chinese students have been maligned as not engaging in extracurricular activities such as music and arts. He claims that Chinese students were more likely to be involved in playing the oboe, violin, clarinet and other classical instruments than western students. He asserted, "Unlike learning a few chords on electric guitar, playing classical music can be very time consuming" (Lau, p. A11). Extending the rebuttal of the criticisms of western observers about the absence of sports in Asian schools, Lau said, Chinese students were more likely to be playing ping pong, badminton and basketball rather than baseball or American football.

The success of Asian nations in international literacy and numeracy tests has been attributed to their ability to have high numbers of students in high performing groups and lower numbers of students in lower performing areas. This has been claimed as evidence of equality of opportunity and the absence of entrenched poverty and divisions. However, the reality of this rhetoric is that many of the highly ranked nations such as Hong Kong have entrenched poverty, which contradict claims about the absence of economic inequalities and have deep divisions between rich and poor. An example of this is evident in Hong Kong where reports in the *South China Morning Post* in 2011 claimed that there is a growing gap in wealth between the richest and poorest in the city. The *South China Morning Post* report claimed richest in Hong Kong earn up three times more than those who are in the poorest groups (Cheung, 2011).

The *South China Morning Post* report on monthly average earning identified stark divisions between those in the poorest regions of Hong Kong such as Wong Tai Sin on $HK19,300, Kwai Tsing $HK20,000 and Tuen Mun $HK20,500 that are in the more remoter areas of the Northern Mainland of the city. These pockets of low income contrast strongly with the high average monthly earnings of those in the richer areas of Central and Western with $HK53,300 and Wan Chai $HK55,500 in the richer business and finance areas Hong Kong Island (Cheung, 2011). These inequalities and variations are evident in a city where there is increasing costs of accommodation, transport and food which is summarised by Cheun Kwok-wai, a citizen of Hong Kong, who referred to a "sandwich class" saying "we sandwich-class workers have always been the most pathetic sector in Hong Kong. Earning $HK10,000 is not bad in Hong Kong but everything is more expensive" (Cheung, p. 2).

Why Is Asia Topping the International Test Rankings?

Reactions to international testing, particularly by politicians and the media, have exhibited some strong, polarised responses. Brown and Brown, who look critically at the debates surrounding international testing, challenge claims that the results indicate the supremacy of a system or the demise of a system. In their analysis of TIMSS and PISA, they argue the predictions from poor results in mathematics and science leading towards a decline in economic performance are exaggerations because "the vast majority of these students will never become scientists, mathematicians, or engineers, so why the does it matter?" (Brown & Brown, 2007, p. 13). They argue that traditional technology and manufacturing jobs are vanishing and that it is more important that students understand how to interpret and estimate scientific data and mathematical data and be able to engage in debates on such topical issues such as stem cell technology and global warming.

They argue that interpretations by commentators tend to ignore the way in which test results are determined by the socio-economic status of students which, they claim, influences the relative performance position of some nations.

Curriculum and Teachers' Work

Patrick Gonzales, the TIMSS analyst for the US Department of Education, also challenges the validity of international comparisons, noting that the introduction of science in the curriculum occurs at different sequences in different countries with different entry points. Gonzales is quoted as saying,

> some countries don't start science education until the third or fourth grades, while others teach basic geometry in seventh and eighth grade. If US kids don't do well in geometry as in other areas, it is because they are rarely exposed to geometry. (Brown & Brown, 2007, p. 14)

Some of the salient features of US curriculum are also seen as handicapping American students and favouring other nations. Roger Bybee head of the BSCS, a non-profit science curriculum organisation in Colorado, criticises the curriculum in science and mathematics and the fragmented nature of the curriculum. According to Bybee, other countries, such as Japan, teach only six or seven major ideas each year whereas American curriculum has requirements to teach something like 75 major ideas. William Schmidt from the University of Michigan TIMSS Center concurs, arguing that, in comparison to other nations, the American science curriculum has too many major ideas, creating a situation where curriculum is "a mile wide and an inch deep" (Brown & Brown, 2007, p. 15). Bybee is quoted by Brown and Brown describing the impact this has on student experience as:

> like sitting in front of a television when somebody who has the clicker is changing channels one after the other. You don't know the score of the football game, the plot of the story, or the guest on the talk show. It's just click, click, click – but in the end you're going to have to quiz the information. This is what it's like sitting in and eighth grade classroom. (Brown & Brown, 2007, p. 15)

The strength of Asian curriculum is viewed as a more concentrated and integrated approach that is enhanced by centralised and uniform curriculum. In contrast, in the US there is an absence of national curriculum, creating a fragmented pattern where there are differences between states and within states about what is taught in science. There is also a an attempt to "cram" in too many topics with Schmidt stating that in some curriculum teachers are required to teach as many as 100 objectives but only have as few as 181 days of school tin which to do so. Schmidt also argues that compared with high performing countries, curriculum in the US is incoherent, with an emphasis on terms and facts rather than deep conceptual, connected knowledge. Teaching techniques that do not help student learning has hampered this approach to curriculum. Jim Stigler (Brown & Brown, 2007, pp. 16–17) conducted a major comparative study of teachers teaching technique in nations preparing for the 1995 and 1999 TIMSS tests. The study involved observing teachers teaching their classes and found that while curriculum is important the quality of what happens in the classroom is equally important.

Stigler argues that two top ranking nations, Hong Kong and Japan, use very different teaching techniques and approaches which promote deep conceptual knowledge in contrast to US techniques. For example, in Hong Kong 84 % of problems were procedural and only 13 % connections. In Japan 41 % were procedures

Table 6.1 Average weekly teaching time and class sizes (lower secondary)

Country	Average weekly teaching hours	Class size
Shanghai	10–12	40
Korea	15	35
Hong Kong	17	36
Singapore	–	35
Australia	20	23
US	30	23
England	19	21
EU21	17	22
OECD average	18	24

Source: Jensen (2012, p. 13) and OECD (2011)

and 54 % were connections. The US has 68 % procedures and 17 % connections. However, Stigler found that in implementation the difference between Hong Kong and Japan were minimal with the use of connection problems being used 46 % of the time in Hong Kong and 48 % of the time in Japan. In contrast, no US teachers used connection problems in their lessons. This means that in US classrooms there is a preoccupation with teaching procedures and there is, according the Sigler's observations, a lack of development of conceptual, connected knowledge.

Stigler says that US teachers, in contrast to those from Asia, have fragmented and piecemeal approaches to topics and lack the systemic and sequenced organisation that enables students to develop comprehensive understandings. He also argues that the consequent overload and intensification of teachers' time contributes to this impression of fragmentation. Stigler argues for stable times so that teachers to develop their own ideas and philosophies about learning (Brown & Brown, 2007).

This assigns an importance to enabling teachers to have their own time away from the classroom for reflection, professional development and exploring new ideas on teaching. The need for this and the need to reorientate the balance of work of teachers are supported by Ben Jensen (2012) who compares Australian teachers' focus and activities with those from Shanghai. According to Jensen's data, Australian teachers are involved in classroom teaching for 20 hours and have 50 % less non-teaching time. In Shanghai the average teaching time was between 10 and 12 hours per week with non-teaching time involved in classroom observation, team teaching, school based assessment, giving feedback, identifying learning needs, modelling good practice and active collaboration. Although Jensen's data was obtained through interviews and not through any large-scale survey data across the system, the comparison in the Table 6.1 suggests that higher teacher non-teaching mitigates against higher class sizes in higher performing nations.

Socio Economic Status and Educational Performance

Testing has reaffirmed the link between socio economic status and educational performance. Rather than creating new insights, testing results have confirmed that parental income and the level of school resources are the most influential variables

in educational performance. Conservative columnist George Will succinctly said, "the crucial predictor of a school's performance is the quality of the children's families" (Holt, 2002, p. 266).

A study of rural villages in China following the educational decentralisation of the 1980s and early 1990s (Hannum, 2003) extended this notion to the whole village. She concludes, "social, human, and cultural resources are increasingly tied to the quality of education experienced by children" (p. 158). Importantly, where education improves the socio economic status for families or the neighbourhood as a whole, families and communities will support it. If, however, children are seen to be of more economic benefit working, as is the case in Macau, there will be limited support for education at the local level.

However, the link between socio economic status of a student's family and achievement on high stakes tests is not clear. "Socio-economic disadvantage weighs more heavily on test scores in some countries than others" (UNESCO, 2010, p. 170). Where there are distinct socio economic disadvantages in countries, such as Germany, France and England, students whose families are in the lowest socio economic band tend to perform poorly on PISA. In countries, such as Finland and South Korea, where there are not great socio economic differences, very few students perform at the lowest levels.

UNESCO cautions that socio economic disadvantage on its own does not explain the poor performance of students. Other factors such as the language spoken at home, being taught by a teacher with less than 5 years experience, and being a migrant, when combined with socio economic disadvantage are much more reliable predictors of poor achievement on both PISA and TIMSS (UNESCO, 2010).

A Spiralling Cycle

The calendar of testing and evaluation, involving a cycle of preparation, testing assessment and evaluation has the effect of intensifying the experience of both learning and teaching. Holt (2002) compares the intensification of learning and teaching engendered by the intense pressure of high stakes testing to the fast food industry. He argues that, like the fast food industry, there is a narrow concept of practice that is replicated in modern education. Holt's analogy is that the fast food industry requires only rudimentary skills for preparation and has a uniformity and absence of character or context that sees the same hamburger selling in Moscow and Paris. Holt argues that, "the form of schooling espoused under the banner of standards demonstrates the same deterministic thinking that governs the production of fast food" (p. 268).

The effect of what Holt calls "fast schooling" classroom practice is that it becomes boring and routine where teachers see themselves as deskilled and the students are disengaged. Under these conditions the experience of education becomes tedious and mundane and is also under considerable pressure to meet the requirements of testing and standardised curriculum.

What has eventuated according to Holt citing Ken Terawaki from the Japanese Ministry of Education, is a situation where:

> just telling kids to study, study, study has been a failure. Endless study worked in the past… when Japan was rebuilding… But that is no longer the case. We want to give them time to think. (Holt, 2002, p. 271)

Terawaki argues that an "orderly and unimaginative school systems excel at producing compliant and disciplined workers but are failing to produce the problem solvers" (Holt, 2002, p. 271).

What High Stakes Tests Don't Test

But there are sets of attributes that testing cannot measure easily. These include creativity, critical thinking, resilience, motivation, persistence, humour, reliability, enthusiasm, civic mindedness, self-awareness, self-discipline, empathy, leadership and compassion. Gao Chungying, a primary school teacher in China notes that Chinese teachers are critical of such deficiencies, arguing that in China "what you learned in school days has nothing to do with your work in the future" She laments the quality of the learning experience saying that that "our children can't create and they are turning into idiots" (Garnaut, 2010, p. 23). These comments echo those from employers who claim that students are not graduating from school with the skills needed in the workplaces such as creativity, initiative, teamwork and self-reliance. Many in China argue that the success in international tests masks profound problems with exam-based curriculum, which encourages with compliance, uniformity and reliance on memorisation. The examination systems, an historic and influential feature of Chinese education has, according to Xu Jilin, a Chinese historian at North Eastern Normal University, outlived its effectiveness in a modern world and is not supported by teachers, parents, students and employers. Xu says that "Students hate it, parents hate it, principals complain about it and even the Minister of Education is far from happy with it" (Garnaut, p. 23). At the same time that the Chinese system is receiving international acclaim there are deep problems within the Chinese education system that suggest that many of the Confucian values around compliance and deference to authority do not position Chinese students for a workforce where flexibility and initiative will be increasingly valued.

High Stakes Exams, Education and Opportunity in China

The gaokao[1] is China's College entrance examination and translates in English to be the "top test". It is held every year on June 7–9th and over nine million school seniors sit the examination in China. This examination is a major event and ritual for

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[1]The *gaokao* is the Putong Gaodeng Xuexiau Zhaosheng Quanguo Tongyi Kashi, which is Standardized Higher-Education Students' admissions National United Examination.

schools, young people and their families across the whole country in a manner that is unique to China. The examination consists of 9 hours of papers in English, Mathematics and Chinese plus two other optional subjects such as Geography, Chemistry or Physics. The results determine the allocation of college placements across China.

This examination demonstrates aspects of the social and cultural impact of the test taking culture, which is a feature of the Chinese system. The importance of this culture is well illustrated in a 2009 Chinese movie directed by Jiang Haiyang, called "*Examination 1977*".[2] This movie was part of the Chinese film festival exhibited in Hong Kong and other destinations. It told the story of the reintroduction of *gaokao* at the end of the violence and turmoil of the 10 years of Chinese Cultural Revolution from the perspective of a number of young red guards in a failing and isolated collective farm in western China. The reintroduction of the examination system was an important initial reform of Chairman Deng Xiao Ping that replaced the system where applicants for university study were recommended through the political apparatus of the Chinese communist party.

The revival of the *gaokao* was an important part of the reforms and modernisation of Chinese society of that time. It was seen as "renewing a channel for social mobility" (Larson, 2011). The year it was reintroduced over 5.7 million people registered for the examination. That was 21 times higher than the number of available places (*The Global Times*, 2011). The film depicted the tribulations of the young red guards as they raced to register for the test on time after a long journey from their isolated collective farm. The film identified tensions between old ways and the new ways associated with the introduction of market capitalism and the notion of meritocracy rather than patronage or '*guanxi*'. The film stressed the importance of the *gaokao* examination in determining future pathways and opportunities for study and security. While high stakes testing has ramifications for the institutional and structural aspects of school systems, individual success, or otherwise, in the *gaokao* has considerable impact on the lives of those who sit this examination.

The examination is seen as a defining point in young people's lives as their futures are determined by their performance. The situation for test takers is summarised as "do well and, you've joined the elite; do poorly and your prospects dim dramatically" (Larson, 2011). The influence of *gaokao* results on future opportunities for students is summarised by April Rabkin who says in China there is a "time honoured career domino effect: good gaokao score, top university spot, communist Party membership, job in the government bureaucracy" (2011, p. 3)

More recently the appeal of the *gaokao* appears to be fading as fewer candidates register for the examination. In 2011, 9.2 million students sat the *gaokao*. This was 300,000 fewer than 2010. This pattern was replicated in Beijing where there were 76,007 candidates, down from 2006 when 110,000 students sat the test. Some see this as a growing maturity in Chinese society as students and their families see other

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[2]Produced by the Shanghai Film Group Corp, 'Examination 1977' stars veteran actor Wang Xuebing, Sun Haiying, Zhou Xianxin and Zhao Youliang. The film was part of the 60th Anniversary celebrations of the founding of the People's Republic of China.

options emerging for mobility. As a result they have a more relaxed attitude towards success in the examination. Others are more sceptical about the value of university education, and therefore the need to sit the test, in the face of high unemployment of graduates. The test still retains considerable trust and confidence in Chinese society as a fair way of selecting students for the future and is viewed as being immune from corruption and patronage.

There is considerable criticism emerging from the *gaokao's* status as the single yardstick for entry to college as many begin to question whether it really does discover the brightest and the best. According to Larson, a Chinese writer, parents and students are asking the questions, Is the test fair? Do the wealthy have a head start? Does an emphasis on test preparation crowd out other learning? (Larson, 2011). Many Chinese also complain that the continuous and intensive preparation for the examination robs children of their childhood and creativity. Many parents commit large amounts of money to have their children attend after school tutoring to prepare for the test. The study regimes of some students resemble something akin to an enforced confinement with few diversions and a relentless study routine. One former student described the rigid study regime.

> My classmates and I spent all our time on campus. We were not allowed to go out on weekends, only maybe Sunday afternoon to buy some things, with permission. Or on Saturday night, our parents could visit. Mostly to go out you need a ticket from the teacher that you had an important reason. (Larson, 2011, p. 2)

Parents and their children who have to make long journeys to the test centres from outlying and regional centres endure similar sacrifices. Some students have been disadvantaged because they had to make a journey to take the test where their household is registered (*hukou*), rather than where they are studying. This policy disadvantages migrant children and those from the west of China living in the east because they had to make long journeys to their western home-towns. In 2012 the Ministry of Education announced reforms that enable students to sit the exam where they reside. This reform was to overcome the belief that the testing processes and procedures favour the rich and influential and those living in the cities and east coast (*The Global Times*, 2012).

The absence of a clear alternate test and the reluctance of authorities to develop a replacement is, in part, a response to the esteem in which the Chinese community holds the test. This sentiment is evident in the comments of Jiang Xueqin the deputy principal of Peking University high school who said;

> given the complete lack of trust in each other and in institutions, given the stifling poverty that most Chinese find themselves in and given China's endemic corruption and inequality, the gaokao, for better or worse, is the fairest and most humane way to distribute China's [scarce] education resources. (Larson, 2011, p. 3)

The legitimacy of the test has been criticised by some who have taken the test and found that the preparation for the examination had little relevance to their lives after the examination. As one student said "it wasn't important in real life" (Larson, 2011, p. 2).

The *gaokao*, is so embedded in the lives of students that the preparation and the exam have been incorporated as symbolic rites of passage. The routine of the school

builds group solidarity through an intensive program with a rigorous routine. School commences at 7.30 am, meaning many students have to rise as early as five in the morning to travel to school. The school day ends at 5.00 pm on weekdays and 3.30 pm on Saturdays with an extra 5 hours for study. There is little time for extracurricular activities such as sports or other pastimes. Neither is there much choice for the students about their school subjects and their lives. Rabkin (2011), a former American exchange student in a Beijing high school describes a joyless existence without, what students from other nations would describe as "fun". "Classes are picked for them, dating is forbidden. Fashion is largely irrelevant. The blue and white Second High school uniform is a unisex polyester track suit so devoid of shape and visual interest that it negates almost everything attractive about the wearer" (Rabkin, 2011, p. 1). Long hair, perms and dyed hair have also banned but more recently girls have been allowed to wear their hair long.

Shadow Schools: Supplementing Regular Education in Korea

Rabkin's experience is more the rule than the exception in nations that have a test taking culture. For example, it is not uncommon in Asian cities to see children under the age of 12 in their school uniforms going home on public transport as late as 11.30 at night. These children are more often coming home from sessions in after school tutoring referred to in the common parlance as "cram" schools. These schools continue to be a booming business in Asia growing on the back of anxious parents who are concerned that not going to after schools tutoring will disadvantage their children in an increasingly competitive examination environment.

The punishing daily schedule of schooling in preparation for external examinations is typical in Korea with a dawn to midnight routine not uncommon as students spend up to 10 hours at school and then attends a cram school. Park Dae Hyon, an 18 year-old Korean student has a routine that is typical of many Korean students. Park has five tutors in Mathematics, English and Science, costing some $US36,000 per year. This is in excess of the school fees of $US1,300 and does not include his sister's tuition fees, that, when included amount to almost 50 % of his parents' income (Moon, 2000). In 2010 74 % of students engaged in some private after school tutoring at a cost of about $2,600 per student per year (Ripley, 2011).

Most students in Korea attend what is termed shadow schools or "*hagwons*". Hagwons are designed to assist students improve their scores in the equivalent Korean college entrance examinations but these shadow schools are also subject to restricted entry. The prestigious Daesun Institute bases its entry on tests scores and only accepts 14 % of applicants. In this Institute the students are subjected to a 14 hour day. Results suggest that such an investment has its benefits as 70 % of the Institute students gain entry into Korea's top three universities (Ripley, 2011, p. 36). While other nations such as Singapore, Hong Kong, Japan and Malaysia have a strong private after school cram school sector, South Korea remains the leading

country in this sector. Koreans spend 2 % of their GDP on private instruction (Ripley, p. 37).

Cram schools are a hot political issue as they are seen as a vehicle for eroding the public provision of education and consolidating the advantage of wealth and privileged in Korean society. Many see cram schools as contributing to a growing polarisation of opportunity in Korean society. In his 2008 inauguration speech the South Korean President Lee Myung-bak called for changes to the admission policies and exams that caused students stress saying, "One size-fits-all government-led uniform curriculums and an education system that is locked only onto college-entrance examinations area not acceptable (Ripley, 2011, p. 36).

Park's mother, who pays almost 50 % of family income on tutoring, recognises the limitations and the distortions towards exam subjects. She notes ruefully that there is "little attention to originality and artistry, and many careers are ruined because of a single bad performance on the day" (Moon, 2000, p. 2).

The concern over *hagwons*, and the long hours being endured by schools students has led to government-imposed crack downs on opening hours. A 10pm curfew is enforced by inspectors and government authorities who conduct sweeps and raids of premises checking for violations.

Chances of abolishing the networks of *hagwons* nestled within the towns and cities is a formidable task as the authorities have to confront the corporate nature of South Korean society dominated by large business interests. Like other sectors of the economy, the private tutoring industry is subject to control by large businesses. For example Megastudy, Korea's largest tutoring business, earned $US4m in 2010 from a combination of online and in-person lectures. The advent of online provisions has also assisted many of the *hagwons* avoid breaches of the curfew laws as well (Ripley, 2011, p. 37).

Attempts to reduce the impact of this after school tutoring is not new and, despite bans on tutoring during the period of dictatorship, it has been revived and popularised in recent years. Like China, entry to a prestige university is both a career and life defining moment that can "haunt" people's lives and prospects if they fail. However, like other systems in Asia the sustained growth, and the impression that the system provides advantages to the rich and privileged has increased pressure on school reform and alternative entry pathways. Yet these initiatives remain frustrated. Attempts by colleges and universities to break the rigid monopoly of examinations have been thwarted by central governments intervening for the preservation of the status quo. In China, for example, the South University of Science and Technology in Shenzhen, attempted to introduce an alternative entry criteria other than test results but was confronted with threats by the Chinese government to withdraw diplomas to those students who were admitted to the program (Rabkin, 2011).

The "prodigious growth in out-of-school" (Mori & Baker, 2010, p. 36), private tutoring organisations as a supplement to formal schooling was first identified in the 1990s as a growing trend in East Asia. The students, or more correctly their parents, were motivated to pass key external exams and sought extra tutoring outside the officially recognised established school system. This movement has promoted a

parallel system of education since 1990. It is considered a parallel system because the courses of study supplement the subjects studied in regular school (Dang & Rogers, 2008) rather than alternative subjects. Similarly, a study of the growth in private tutoring in Malaysia, found that

> a considerable percentage of youths attended private tuition [as private tutoring was more commonly called in Malaysia] in order to prepare themselves for the selective national examinations. Experience…showed that the practice of private tuition was so prevalent that it could be considered as a "shadow educational system" (Marimuthu et al., 1991 cited in Bray, 2010, p. 2).

This notion of a shadow or ghost system arises from the fact that these schools are not separate from established schools but are totally dependent on them (Dang & Rogers, 2008). That is, they shadow or ghost regular schools. There has been a worldwide spread of such schools, initially in East Asian countries, such as Japan and Singapore (Bray, 2010). Shadow education systems now operate in many Asian nations as well as Canada, Egypt, Kenya, Korea, Mauritius, Morocco, Romania & Turkey, The UK and The USA (Dang & Rogers, 2008). Shadow education has become a significant industry in many countries.

Stevenson and Baker (1992) identified this shadow education in what has been called "cram schools" as "a set of educational activities that occur outside formal schooling and are designed to enhance the student's formal school career" (cited in Bray, 2010, p. 2). These are called *yobiko* in Japan, *hagwon* in South Korea and are seen overwhelmingly in the private sector in a fee-paying environment.

They identified two sets of activities that generally typify these schools. These were preparation for school examinations and preparation after secondary school for university entrance exams.

The emergence of this parallel system is also seen as related to concerns about the quality of state education systems and the flight of those who can afford to pay for private education. Mori and Baker suggest that shadow education is, "a valuable collective purpose and even helps to meet unmet demand for more education, as public education seems to lag behind" (2010, p. 39). They also suggest that shadow education is a feature of globalisation and contemporary society where education and lifelong learning have an important role in preparing the workforce at both a collective and individual level. They argue that there is dual role where,

> shadow education not only assists in allocation of individuals to social roles (as per either human capital or reproduction perspectives); it has come to possess its own institutional power, enhanced by the institutional logic of education in general in the postmodern society. (Mori & Baker, 2010, p. 40)

They argue that this will be a global phenomenon driven by an expansionary dimension. Bray (2010) developed a typology to describe this new institution as a way of interpreting the growth of after school programs which included "Supplementation", that is, the tutoring programs covers work that has already been covered in school programs, or areas such as languages not covered in schooling. "Privateness" describes the features where there are payments by parents as a personal commitment. The nature of programs were identified as "Academic" where activities and

content were directed principally to examinable subjects and excluded areas such as arts and music which were seen as being for pleasure and leisure. Areas of research include discussions on the growing popularity and costs of shadow education as well as investigation of the general effectiveness of tutoring.

Sourcing data on the effectiveness of shadow education has been problematic because sources such as TIMSS questions have not specifically referred to private tutoring and this has meant it is difficult to explore the extent of shadow education. Further, complications emerge in the diversity of tutoring in several countries including Japan where the term *Juku* is the umbrella term for a range of tutoring styles.

> "Hoshuˆ juku offer remedial teaching, while fukushuˆ juku provide supplementary teaching, and yoshuˆ juku provide preparatory teaching. Shingaku juku cater for pupils with high achievement who wish to do better, while kyoˆsai juku have a flexible approach in contrast to doriru juku which rely on drills and competitive exercises. (Bray, 2010, p. 5)

Dierkas (2010, p. 25) says "that in common parlance, *juku* is translated as *cram schools*", which is the English term that summarises these private education institutions across East Asia.

While the *juku* system in Japan has a long history and is accepted throughout the nation, in many countries there is a level of secrecy about the operations of private tutoring. This is because in some countries many teachers, mostly in government schools, accept payment for tutoring and in many cases make up a part of the workforce in private tutoring. In some countries, such as Malaysia, such activities are a breach of the public service rules and those found conducting tutoring are subject to dismissal or fines.

However, there may be other complex social and cultural reasons as to why finding data on shadow education might be more difficult. These relate to the cultural context in which tutoring takes place and some of the sensitive social protocols and taboos relating to perceptions about tutoring. Bray, describing some of these cultural reasons for the reluctance about divulging information says:

> For cultural and other reasons, pupils may be unwilling to indicate even the number of hours per week during which they receive tutoring. For some pupils, tutoring might be associated with low academic performance and therefore bring elements of shame; and for other pupils, tutoring might be associated with high academic performance and could be seen as bringing an unfair advantage. (Bray, 2010, p. 6)

These factors contribute to a sense in which shadow education is underground and has an element of intrigue. As many governments in the East Asian region seek to limit the spread of cram schools through punitive legislation and policies this image has developed a wider currency. In some countries the image of shadow as an outlier has grown as a consequence of its origin. In general there is a sense of shame but a resignation that such activities are necessary and unavoidable (Dierkas, 2010).

Japan, one of the first Asian countries to move across a threshold of post-war recovery, has been a leader in the cram school movement. Growth in affluence and disposable income in the 1970s spawned a boom in *juku*, which, in turn, strengthened the ethos of social and economic improvement. This secrecy and the

fragmented nature of the industry make it hard to establish reliable data but in In terms of participation Dierkas (2010) comments that in Japan,

> Since attendance varies significantly by grade and location, it is probably fair to say that it would be difficult to find any classroom above grade 4 in a conventional school anywhere in Japan where fewer than 25 % of the students are attending *juku* and it would not be difficult at all to find classrooms where virtually all of the students are attending, especially in metropolitan areas for higher grades. (Dierkas, 2010, p. 3)

In Hiroshima, one of Japan's major cities, it is estimated that 1,480,000 students attend juku establishments and that the average size of these is about 250 students spread over 6,000 juku. The cost of such programs in Japan is about 6,000 Yen per month or $US650 thus generally targeting the lowest 20 % of the income groups in Japanese society (Dierkas, 2010, p. 27).

In Japan the growth of private tutoring emerged from activities of leftists who, because of their political activities in the 1960s, were excluded from government service and careers in the schools system. These former activists, excluded from the formal education sector, established private teaching and tutoring companies (Dierkas, 2010, p. 29). "No one seems to aspire to become a *juku* operator" (Dierkas, p. 30). However, many people either excluded from mainstream Japanese education or in a peripheral relationship with a highly formalised and rigidly stratified Japanese society tend to gravitate towards ownership of *juku*.

In Japan most regulation of these schools is in the area of the institutional business aspects and does not relate to accreditation of teaching and the curriculum. In general, there is considerable autonomy in cram schools and many teachers, frustrated with the rigidity of the established school system, find that they are able to undertake innovations and creative approaches to learning that are not possible in regular schooling.

Examinations and Testing: An Asian Tradition

The special historical place examinations have in Chinese culture and their role in East Asian society is explained by Hill in a UNESCO working paper on secondary education:

> They have their origins within the region, being 'invented' by the Chinese centuries, if not millennia ago. As far back as the Han Dynasty (BC 206/AD 220), selection to the bureaucracy was on the basis of national examinations. These were very long and demanding exams requiring years of preparation and study. Competition was fierce and some candidates spent a lifetime trying to pass them and to secure, what remains to this day in the Orient, a coveted goal – a position in the senior ranks of the civil service. (Hill, 2010, p. 1)

The Nanjing Examinations centre built in 1169 was the principal centre for Imperial examinations under the Qing dynasty (1368–1912) with 20,644 small rooms for the candidates to stay in when they were undertaking the arduous 3 day examination program. The examinations system was seen as a vehicle for

meritocratic regulatory access to professions and as a way of opening up entry into the imperial civil service to all walks of society.

Examinations also operated in a similar way in many of the colonised countries in Asia and the legacies of these endure in the contemporary era. Most examination systems are modelled on European examination schemes where there are examinations for entry into secondary, senior secondary school and college entrance.

The former British system of the 11+ at the end of primary school, the Certificate of General Education at the end of junior high school "O" levels (CGE) and General Certificate of Secondary Education "A" levels (CGSE) has been adopted by a number of countries. Malaysia, Singapore, Fiji, Sri Lanka and Brunei for example have preserved the British system in localised forms.

Most countries, like Britain, have abolished their equivalents of the 11+, preferring to boost participation in secondary education. Some have diminished the importance of the lower secondary examinations. For example, from 2011 Hong Kong has abandoned the examination at junior secondary and has reformed the senior secondary curriculum to enable a broader range of study options and destinations for students.

While many European and Australian systems have reshaped the senior secondary curriculum exit assessments framework, Asian systems have remain relatively static in their reliance on formal examinations. Advances such as school based assessments, the introduction of vocational education and training and testing of generic academic competencies have not changed. The preference in these systems is standardised examinations of curriculum that is both subject and discipline based. These examinations are usually constructed around multiple-choice items, cloze exercises and some essay and writing tasks. Success in examinations is often dependent on the ability of students to recall and reproduce material consistent with the curriculum content. The crucial role of examinations in the Asia Pacific is well summarised by Hill (2010) who states that they are:

> the chief means for controlling access to the next level of schooling, to the most prestigious schools, to good jobs, to universities, and to greater life opportunities. In other words, because they have enormous consequences for students and their families, getting good results is of paramount importance. (Hill, 2010, p. 7)

There is growing frustration with examinations systems. There is a need to reform them because systems for validating progression, credentialing and accountability are now subject to considerable changes. These examination systems were developed at a time when education was not universally available and the student body was not as diverse as it is in the contemporary era. Many of the systems were developed to consolidate national identity on fragmented educations systems in the period directly after postcolonial independence. They are now subject to considerable criticism by employer groups, industry, parents and the students themselves and the pressure for reform is building an imperative to make changes. Hill argues that reforming examinations systems needs to be undertaken within the context of other reforms such as curriculum and teacher professional development and should involve a consultative process to include a wider range of stakeholder views (Hill, 2010).

Unemployed Graduates and Labour Shortages

This connection between life opportunity and educational examination success endures today in the region, with most East Asian societies such as Japan, Korea and Vietnam replicating the Chinese systems. Yet this connection is under threat from the changing global economic conditions as the link between exam success and employment is being broken. The largest share of job growth globally is in Asia whereas the European Union is negative. Even though Asia is the fastest growing region in the world it has is escaped increasing unemployment that has been a feature of the global economic crisis that hit in 2008. The International Labour Organisation has reported that global unemployment jumped by some 10.7 million people lifting from 5.7 % in 2007 to 6 % in 2008 (Mohideeen, 2009, p. 1). In total it was estimated by the ILO that unemployment at the time of the global crisis increased by 3.5 million in 2008 and the Asian region made up 33 % of that increase, mostly women.

These figures suggest that Asia's growth through the early part of the twenty-first century did not protect it from large scale job shedding at the height of the global financial crisis. It is estimated that during the last 2 months of 2008, there were 40,000 lay-offs in Indonesia, and over 250,000 manufacturing workers sacked in the Philippines (Mohideeen, 2009). In some countries like China the most vulnerable are the floating population of mobile workers estimated to be a staggering total of 150 million. When the economic crisis first hit China it was estimated that 20 million of these workers were laid off and had to return to their homes, mostly in the poorer west of China. The job losses represented a massive attack on the living standards of the working class and more particularly women and young workers.

Youth in Asia are more than three times likely than other workers to experience unemployment. In South East Asia youth unemployment had increased to 15 % in 2008. This figure is expected to increase because young workers are likely to be the first to be sacked and first time job seekers are at a substantial disadvantage competing against more experienced workers. In China it was estimated there were six million college graduates coming to the employment market in 2009, joining the four million from the previous year who were also seeking employment.

In 2011 a third of Japanese graduates had not found work. This was seen as profoundly worrying as the first job from college is seen in Japan as the foundation for lifelong career development that is usually seen as being with single employer. The failure to get such a position in Japan is regarded as leading to a limited career opportunities typified by contracted and low wage employment. Unemployment for young well-qualified people has ramifications for the balance of the economy as Japan with an older demographic means that when older people spend less that there is an inbuilt propensity towards a contracting economy. In 2011 68.8 % of university students had secured employment by December 1st which is the lowest recorded since 1986. Graduates from Japanese Junior Colleges had fared worse with less than half securing jobs by March 2011 (*The China Post*, 2011).

This slump in graduate opportunities is seen as more problematic because many of the large corporations such as Toshiba and Sony are experiencing strong growth

in China but there is a reluctance of employers to jeopardise growth with higher labour costs if each hiring of a graduate leads to life time employment. Erosion of this strong tradition of lifelong employment has prompted some government intervention.

In 2010 the Japanese government introduced a subsidy offering funds for companies to hire graduates. Companies were able to capitalise on this in an extended scheme in 2011 that gave 100,000 Yen or about $US1,200 to companies to hire graduates, which given the size of the problem and cost in establishing a lifelong employment opportunity, seems a modest amount. The incentive, however, is based on converting the workers to full time work and the company then qualifies for 500,000 Yen (*The China Post*, 2011). Part of the problem in Japan is that there is also a need to change expectations of graduates who have a preference for careers in major corporations such as Sony and Toshiba rather than considering smaller, middle-sized corporations. In changing the expectations of graduates the government was also instrumental in providing a range of trade fairs and exhibitions to profile smaller companies and shift perceptions of graduates.

Much of the discussion in the Asian media tends to "blame the victim" or attribute the failure of graduates to get work as an inability to have realistic expectations and perceptions of the employment market. There is also an emerging and growing view that many of the graduates do not have the skills, competencies, behaviours and attitudes that employers value and want. There is also a contradictory tendency that although there is substantial job growth there is simultaneously a shortage of workers even though there are is large numbers of qualified graduates to fill these positions. This is evident in most Asian countries but is on a massive scale in China and India and poses a significant threat to the economic and social fabric of these countries.

India provides an example of the complexities and contradictions that typify the issue of graduate unemployment, the links to schooling and the misalignments between qualifications and the needs of the economy. India has a major problem as over half the Indian population are under the age of 25 years. And according to the *Times of India* a million people a month will be entering the labour market over the next decade. While the Indian economy grew 19 % from 2010 to 2011 there is extraordinary pressure on the economy to continue to create jobs but there is a fear that that many of the students are not equipped well by the characteristics of Indian education (Po & Chang, 2011).

Indian employers have attributed many of the problems associated with graduate unemployment to over bearing bureaucracy in education and a focus on rote learning rather than on critical thinking. Some Indian business executives have questioned the policy of government that while keeping tuition fees low has promoted access to schooling for the poor. This has also kept teachers wages and investment in education low. The business leaders are also critical of out dated curriculum that is disconnected from what some in business see as the real world of work. There, are however, dilemmas because the Indian education system is producing qualified workers but 75 % of technical graduates and 85 % of general graduates are considered by business as unemployable as they do not have the right mix of skills. In desperation some companies have started to develop training arms that provide the skills

needed for employment. The Tata group has been reported as expecting to employ 65,000 people in a year and is attempting to bridge the skills gap through 72 days of training in a special campus located in Southern India that will provide mass training for as many as 10,000 participants (Po & Chang, 2011).

There is another disappointment for students whose situation is made more complex because there are reciprocal obligations to their families that mean they have to repay them for their financial support during their study when they get jobs. An Indian job seeker 25 year old Mr D.H. Shivanand from Bangalore describes this dilemma for many graduates:

> my family has invested so much in my education, and they don't understand why I am still not finding a job. They are hoping very, very much that I get a job soon, so after all their investment, I will finally support them. (Po & Chang, 2011)

In order to be employable Shivanand had made a decision to study English, a course that cost him $4,500 tuition that he had to borrow from his family (Po & Chang, 2011).

The possession of superior language skills and the ability to converse with confidence with people seems to be attributes that employers in India find lacking in graduates. Too many graduates lack these skills which are essential to the modern business environment where communication skills are as equally valued as technical and job specific skills

In China there is evidence that the glut of graduates has depressed the salary levels for graduates to the level of low skilled migrant workers. The frustration is well summarised by a Chinese graduate, Wang Lefu who says "What is the point of putting so much effort and time into getting a university degree if at the end of it all you get is the salary of a migrant worker?" (Bezlova, 2009, p. 1). Another frustrated graduate Wang says, "One needn't have bothered with all the exams and the bureaucracy" (Bezlova, p. 1). For many, overseas study is an option with the potential to return to China with a foreign degree, an asset which many see would make them more attractive in a competitive market situation.

In the first year of the economic crisis the Chinese government's response to the employment crisis for graduates invoked the ideologies and nostalgia of the "cultural revolution". The government revived the Chairman Mao's notion of "*Shan Shan Xia Xiang*" or "Climb the mountains and go down to the villages" policy where graduates were sent work in poorer rural areas of western China. Under this scheme over 17 million young people were sent to these regions to benefit from the transformative qualities of working with the peasantry. Many leading figures such as President Hu Jintao were involved in rural projects. The scheme was ended in 1980 but revived in 2008 with incentives for students including an exemption from paying back their college tuition fees.

Students who enlist will also have the benefit of "quick promotions" and opportunities to study in the People's Liberation Army. The nostalgic qualities of the cultural revolution may have some value in mobilising nationalistic sentiment but the shift to modern capitalism had created new expectations on advancement and

opportunity that had the potential to create disillusionment with the status quo and the performance of the Chinese government. The contradictions between the ideology of selfless service to the poorer regions contrast strongly with the messages of self-interest and consumption generated by the new capitalism of China. The growing inequalities of life in China and the differential impact of the economic crisis tend to create cynicism about such "volunteer" programs.

The origins of the graduate employment crisis in China can be attributed to the government response to the earlier Asian financial crisis in 1997. To balance the effects of unemployment, China boosted enrolment, lifting the intake from 3 % of college students in the 1980s to 20 %. But even with these developments China has struggled to find jobs for all of its graduates in the boom times experienced before 2008.

This has made getting work more difficult. While many graduates specialise in law, accounting and computer sciences the real demand in the manufacturing economy is in the technical and engineering occupations. This is particularly true as China retools it's manufacturing to high technology and knowledge based industries.

Rather than accept responsibility for the deficiencies in the labour market Chinese leaders have tended to blame the attitudes of graduates for their own plight. Like Indian business leaders they see the expectations of graduates as inflated and unrealistic. Yi Weimin the Chinese Minister for Human Resources and Social Security claimed that:

> It is high time that young diploma holders lower their expectations and began to see the potential of many once neglected but well-paid jobs…as a result of the crisis there will be a change of values in our graduates. (Bezlova, 2009, p. 2)

However, college graduates remain frustrated and many have been forced to take up positions as nannies, domestics and process workers at pay rates as low as 1,500 Yuan per month. The competition is reported to have been so tight that graduates are struggling to get work as nannies where peasant girls from the west are favoured more than college graduates with English language skills. Many now blame the government for making a high level of college education a prerequisite for employment in a depressed employment market where low skilled jobs are the only options for desperate graduates. How this disillusionment with conditions of young people in the labour market of China translates into public action is something which the Chinese government in the post-Tiananmen era remains a source of interest and speculation.

Much of the blame has been attributed to those who are victims, the graduates and much of the burden of unemployment has been, often unfairly, attributed to inflated expectations on their part. Likewise industry's incapacity to create positions for the new waves of graduates has attracted little criticism. The dimensions of the global economic crisis and the high levels of unemployment suggest that the structural conditions of the global economy have more to do with economy graduate unemployment than with the deficiencies in skills of graduates.

Responding to Unemployment and Underemployment

UNESCO has sought to explore this phenomena and suggests that a multi-sectoral approach is needed that involves a range of stakeholder governments, training institutions, employers, industries as well as parents, communities and youth themselves. The 2006 UNESCO report on a multi-stakeholder approach to youth unemployment in South East Asia, argues that the boundaries between work and training are artificial and there is a need to develop closer linkages between training and work, as well as government, industry, employers and employees and that they need to be engaged in a dialogue. The Bangkok conference hosted by UNESCO provided a framework for the region on how to respond to these issues. The UNESCO report identified several areas of action where reform and change were needed. Uppermost within the UNESCO report was urgency about addressing and responding to the mismatch of qualifications with the requirements of the employers. Associated with this is the need to develop better links between educational institutions and industry for students and their parents to obtain relevant information about employment.

The UNESCO report also identified an absence of employment experience amongst Asian young people. While western students have experience at a young age of the world of work through part time jobs in such areas as fast food chains and casual employment in retails, many Asian young people have little experience of the workplace. They do not generally undertake part time work unless their family circumstances require them to work in their family business or if their income status is low (UNESCO, 2006, p. 4). UNESCO suggested there is a need to provide opportunities for job placements, work experience and training incorporated in school curricula. However, the report noted that these initiatives are more acceptable and common in vocational education and training programs, which leaves higher education and schools largely unreformed.

The UNESCO report also identified the reliance on the core competencies of the three Rs – reading writing and arithmetic but suggested there needed to be an emphasis on "soft skills". The report lamented that there needed to be more "soft skills, such as social skills, interpersonal relationships, motivation, critical thinking, communication, creativity, [and] language skills, [observing that they] are usually not taught within the formal curriculum" (UNESCO, 2007, p. 5).

Aligned with the absence of employability skills in the curriculum and any work experience in the schools, the UNESCO report noted the need for career counselling and information on employment. The report argued that this was needed to respond to the "unrealistic expectations of and demands of young employees especially given their lack of experience and skills" (UNESCO, 2007, p. 4).

The need for employment advice in secondary school, universities, and vocational education was seen as useful but largely absent. The report argued for training workshops, annual supply and demand reports as well as job information sessions. The need for mentorship programs was also identified as was the need for events which focus on preparing for employment and career opportunities such as job fairs and careers nights which generally are seen as less important than preparation for examination success.

This might also bridge the gap between perceptions about the nature of the labour market and the reality of job vacancies. In many Asian countries there is a preference for jobs in the public sector bureaucracy yet these openings have diminished as the size of government shrinks and as new industries in multimedia and information technology emerge. Information on vacancies, emerging demand for employment and the publication of relevant statistics, trends and analysis of patterns of labour are needed to assist inform debates at a national level.

While there are some statistical collections developed by universities in Malaysia and Thailand, there is an absence of nationally compiled statistics. This information is crucial in informing developments in universities and training institutions and also providing data for career and job counsellors but is lacking in many Asian countries. In the absence of hard data, students and their parents tend to be reliant on traditional perspectives of employment pathways, preserving faith in success in the examination system to deliver employment pathways.

The UNESCO report identified the criticism of "tailor made" graduates rather than "trainable" graduates, and recognised that this impacts the "philosophy, policy and pedagogy of educational institutions" (UNESCO, 2007, p. 3). This mismatch problem means that programs need to be aligned to capabilities around employability and provide graduates with skills that are in demand in the labour market.

In general the focus of the UNESCO report indicated a need to make shifts towards a more collaborative multi-sectored approach. Such an approach would involve stakeholders in using employment data to develop curriculum and training programs. The key to such reform is a network that integrates training providers, employers and government agencies to develop programs, employment data and reform in the curriculum to training and education with stakeholder involvement. A multi-sectored approach also underpins many of the ambitious plans that governments have to internationalise education in the Asia Pacific.

Asian Cities and Education Hubs

The triumphalism associated with the success of Asian nations in international student performance tests such as TIMSS and PISA is not simply boasting but also valuable in promoting Asian cities as education hubs. The ascendency of Asian nations has been accompanied by claims that cities and nations are international centres of excellence in education. Centres such as Singapore, Hong Kong and countries such as Malaysia have sought to claim a status as an internationally recognised "education hub".

This notion of an international education hub has been used widely to promote the credentials of these centres with capabilities in research and innovation, a destination for international students and a centre for international education providers. The term education hub has been used widely to describe a cluster of activities relating to education, training, research and innovation with industry. It is a term that has been popularised with some 250 education hubs emerging in the Middle East, Asia

and Latin America. These include Bahrain Higher Education City, announced in 2006, Kuala Lumpur Education City, Dubai Knowledge Village and Singapore's "Global Schoolhouse".

However, education hubs are embedded within the framework of international business that characterises many global cities where investment in education includes the establishment of international education providers and real estate developments in defined education and technology precincts or parks. These hubs are promoted with ambitious targets for internationalisation through recruiting international students and transnational education conducted by local and international providers.

The term education hub is seen by Cornelissen et al. (2008) as a metaphor for the relativatisation of scale where higher education systems are denationalised; reshaped, as it were, by forces and actors that are thinking at, and operating at, scales other than national. These new initiatives are, "imbued with territorial development objectives associated with the building of new knowledges" (Global Higher Education, 2008, p. 6). Typically, these metaphors are developed and circulated as the guiding discourse and relate to the relationship between education, the economy and globalisation. Importantly Millar (2006, p. 65) points out "the world needs a multitude of new metaphors leading us to a better future". To many centres in Asia these new globalized knowledge space operates to appeal to the aspirationalism of communities in Australia for high quality international standards education.

China for example has invested in its higher education system and in 2003 identified a target of half a million foreign students by 2020. Likewise Singapore has fashioned an identity as a global schoolhouse with ambitions to be a destination for international students by inviting prestigious international education providers. Singapore benefits from a reputation as a safe and secure destination, where English and Mandarin is widely spoken and where there are job opportunities in the global city.

In 2006 Singapore hosted over 80,000 international students but is proposing to lift this to 150,000 by 2015. With its close proximity to China, similar linguistic and cultural background almost a third of Singapore's students came from Mainland China. Neighbouring Malaysia has also capitalised on its English speaking background and has approximately 50,000 foreign students per annum but is also looking to build this to over 100,000 at the end of the decade (EAHP, 2010). The attraction for these governments is capitalising on an educated workforce with languages skill and capabilities that position these nations and cities favourably with the global economy. Also the creation of jobs in the new education, high technology and knowledge management sector will replace jobs lost with the decline of jobs in agriculture, manufacturing and some in the low skilled service sector.

Many of the ambitious plans have not been met. The expectations of many governments is that international providers would be the foundation for education hubs has been patchy with some centres such as Singapore experiencing provider collapses in the case of the Australian provider the University of New South Wales and the separation of American providers such Johns Hopkins University (Kell & Vogl, 2012). Other centres such as Hong Kong have found it difficult to achieve an international status since only a small minority of international students do not come from

mainland China. This has undermined claims of Hong Kong being a global education centre, despite many of its public universities such as Hong Kong University, The Hong Kong Chinese University and the Hong Kong University of Science and Technology are ranked in the top 50 universities in the world (Kell & Vogl).

One of the newer education hubs illustrates the ensemble of urban, development and educations precincts. The site of the Kuala Lumpur Education City (KLEC) is primarily a property development at Bandar Enstek. This is in close proximity to the Low Cost Terminal Airport and the main terminal of Kuala Lumpur International Airport at Sepang, the site of the international Formula One motor race. It is 38 min from the Kuala Lumpur City centre. Bandar Enstek is marketed as a RM9.2 million integrated township over 5,116 acres with150,000 residents. The residents will have high quality communications infrastructure with broadband applications supplied by the development company's partners and Telekom Malaysia.

Conclusion

Regardless of the reality of claims about a shifting centre or focal point of Asia, being the new powerhouse, there are substantial changes in the balance of global activity and dimensions in education and training. The features of this mean that the connections with globalisation mean that competence and proficiency in English is as important as the languages of Asia. There is also considerable movement and traffic of students between and across Asia that means that there is student mobility within the Asia Pacific as centres are promoted as alternatives to European, North American and Australasian study destinations. The prestige of educational performance and global business means that instruments, such as international testing, will occupy a status as a proxy market indicator as well as an indicator of international esteem. The emergence of education hubs is a part of the metaphors of the post-industrial nation state and is an aspiration of the state. This means that the hubris over student performance exhibited in the statements from China, Singapore and other countries indicates that there is a dimension which links to the metaphor and dimensions of the state. This in turn places a special importance on literacy and language in shaping the image of the state.

The next chapter starts to explore the development of education systems in East Asia and the relationship between colonialism, national development, education and language and literacy.

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Chapter 7
Schooling, National Development and Growth in Asia

Many of the features associated with change and reform were very different in Asia from the Anglo-American experience. The Asian situation is an inverted mirror image of the developments in the West described in this section. One major difference from the Anglo-American world is the positioning of the state in steering the economy and directing education. While the economic crisis of the 1970 led to the winding back of the government's role in the West, Asian nations did not pursue a purist neo-classical solution. In Anglo-American countries, including Australia, the post 1980s era saw a reduction in the influence of the state and a shift towards a deregulated economy. The principle shift was a move from the state steering the economy to a belief in the superiority of the market in determining economic direction. This shift to market forces led to a disinvestment in state functions, including education and a growing privatization of functions that were previously run by the state. This meant that in broad terms policy making in the West was conducted within a framework of cut backs, efficiencies and multiple accountabilities. Tight budgets and diminishing taxation receipts meant that education policy in the West was constrained by scarcity and shaped by a rationing of resources. The emergence of high stakes testing fits well in the West as a mechanism for redistributing scarce resources. High stakes testing, masquerading as unbiased science, became an import tool in de-politicizing controversial issues around the rationing of resources. However, in Asia the status and positioning of high stakes testing and its relationship to schooling, curriculum and nation building is very different to the experience of the West. It means that literacy and language are positioned differently. But it does not mean there is an absence of pressure for reform.

Asia, Schooling and National Development

In contradiction to the West, many Asian nations, many recently decolonized and seeking to sustain a national identity, allocated a fundamental role for the government in steering the formation of the state and its economy. This was not

entirely surprising given the difficult journey of many modern Asian nations to attaining independence, often typified by war, civil strife or a lack of preparation for independence. In many countries, such as China, modern nationhood concluded a long period of civil war. The ethos of many of these Asian nations features a strong commitment to an ensemble of unity, stability and economic growth. It is a formula that is evident in the national plans of Malaysia, Indonesia, Singapore, China and several others. Asian nations, mindful of the turmoil of the past and the vulnerability to fragmentation, see significant importance in the state mediating competing claims and working for the common good. This does not mean that there is automatically a sustained commitment to equality and equity. Indeed most Asian nations are characterised by stark and deep inequalities and limited opportunities for democratic change. Authoritarian regimes have characterized many of the nations in Asia and have been dominated by repressive leadership in the Philippines with Ferdinand Marcos, Indonesia with Suharto and China with the long rule of Mao, for example.

However, the apparatus of the state is represented as important in promoting and facilitating economic growth for the benefit of the community. In this formula, education occupies an important focus in the aspirations for advancement. Showcasing national development and achievement in areas such as science, engineering, commerce and education is also part of the national project of many countries.

Perhaps mindful of the ramifications for stability and expectations for growth releasing control over the economy, means that very few Asian nations have ever adopted, without qualification, the orthodoxy of deregulation proposed by international agencies such as the World Bank and the International Monetary Fund (IMF). The exception was Indonesia, which adopted an IMF plan for recovery during the 1997 economic crisis with catastrophic results including riots and killings in Jakarta, leading to the eventual collapse of the Suharto regime.

The orthodoxy from these international agencies stressed deregulation, the removal of tariffs and subsidies and the reduction of barriers to free trade. Ignoring this orthodoxy, many Asian nations like Taiwan, Malaysia, Indonesia and China utilized state support to build strong manufacturing bases under a low tax and high subsidy umbrella. Exploiting special trade and tariff arrangements in the major export markets of the United States and Europe, Asian nations such as Taiwan, South Korea and, more recently, China were able to build up large trade surpluses with their trading partners and displayed astonishing rates of economic growth. Equally important many Asian nations ignored the Anglo-American response of relying on the market by adopting long term planning to target investment and development. The faith and durability in this astonishing growth meant that observers referred to "Asian Tiger" economies, a term which was used widely before the 1997 crash. Under this formula of strong state control many nations were able to develop primary schools and lift attendance in compulsory schooling. More recently, however, the trend towards privatization has built momentum, as the state is unable to meet the demand by a growing affluent middle class for high quality post compulsory and tertiary education.

At end of the Second World War, Asia was the poorest region in the world but by the beginning of the twenty-first century it was the richest. There are still areas of extreme poverty in Asia, such as Bangladesh, Cambodia, Laos and East Timor. However, countries and regions such as Singapore, South Korea, Hong Kong and Taiwan have living standards that are amongst some of the highest in the world.

East Asia, as a geographic area is defined by UNESCO (2009) as, Brunei Darussalam, The Kingdom of Cambodia, the People's Republic of China, The Republic of Indonesia, The Democratic Republic of Korea (North Korea), Japan, Lao Peoples Democratic Republic, Macao-China, Malaysia, Myanmar, People's Democratic Republic of Korea (North Korea), Philippines, Republic of Korea (South Korea), Singapore, Thailand, Timor Leste and The People's Republic of Vietnam (Bernard, 2005). In addition to the UNESCO countries listed here there is the Republic of China (Taiwan) and Hong Kong-China. A glance at this list indicates a range of countries, reflecting the cultural, economic and geographical diversity of this region. It is a region that covers about 28 % of the Asian continent with a land mass 15 % greater than Europe.

Bray and Lee (1997) cautions against temptations to homogenize Asia and points out that Asia should be viewed around several measures of diversity. These include economics where Asia has some of the richest nations in the world such as Japan and the poorest such as Bangladesh. Populations also vary in Asia where there are some of the largest nations such as China with 1,200,000,000 and Macau with 538,100 people. Political systems vary with some countries shifting from communism such as Mongolia and Cambodia and other being permanent capitalist regimes such as Singapore, South Korea and Malaysia. Others are communist regimes with market economies such as China and Vietnam. Countries are differentiated by religion. Buddhism is predominant in Thailand, Myanmar and Bhutan. Islam is dominant in Indonesia and Malaysia and Christianity is predominant in the Philippines and East Timor. In terms of geography, island nations such as Indonesia and the Philippines are very different to land locked Laos and Nepal. Perhaps most importantly the colonial legacies are also very different with British colonies being Malaysia, Singapore, India with the French colonizing Vietnam, Cambodia, Laos, the Dutch colonizing Indonesia and the Portuguese occupying East Timor, Macao and Goa. Japan has also colonized Taiwan and South Korea and parts of Manchuria for long periods in the twentieth century. While these features highlight the diversity across the region many nations are characterized by diversity in terms of ethnicity, religion, language, culture and economic activity. This diversity is often hidden and suppressed in narratives that have been used to promote national unity. In some nations the manifestations of diversity have been suppressed and resisted, in some cases by the state, and this has resulted internal tensions. Other tensions emerge in some nations in the differentiation between rich and poor, typified in China where the developed east is contrasted by a poorer eastern interior.

This chapter will now briefly outline the educational context of several countries exploring the characteristics of individual national systems as well as some of influences that are transnational and in the wider region.

School Systems and Country Studies in East Asia

Tilak, like Bray (1998) points to the heterogeneity of the school and education systems in the regions saying "in the case of education there are significant differences between these several East Asian economies" (2002, p. 4).

The authors in acknowledging a lack of homogeneity across the region, will explore the role of literacy without making direct comparisons between radically different countries but seek to explore and reflect on the context of these countries and identify several common themes influencing literacy and language.

Most systems have derived from colonization or have been strongly influenced by the European and American ideas about education and schooling and its legacies. Tilak points out the profound role of colonization saying that:

> Most of the East Asian economies were subject to colonial rule by the United Kingdom, France, Spain, the Netherlands, the United States, or Japan (which itself had a long period of feudal rule); and became independent only in the middle of the twentieth century. (2002, p. 12).

Apart from Japan, under colonial administrations the "development of education at all levels, including primary, secondary, and higher education, was retarded to a great extent under colonial rule" (Tilak, 2002, p. 12). The nature of colonialism, in servicing the economic needs of the colonial power meant that education was aimed predominantly at providing workers for the colonial powers. As such it ignored local languages and forced on the populations of the Asian colonies the knowledge of the languages of the colonizing powers. For most countries in East Asia the immediate post-colonial period was one of reassembling, reconstituting and restructuring of alien education models to introduce "indigenous education systems" (p. 12) that served "domestic national needs" (p. 13).

The country studies indicate some of the themes, trends and practices that characterise policy and practice, shaping the school systems. These policies position literacy and language within the teaching and learning and curriculum design highlighting the social and political role of education.

Hong Kong

Hong Kong, as a former British coloniaIly which was returned to China in 1997 as a special administrative region in the People's Republic of China, provides a good example of the merging of influences of colonization and the modern trend of globalisation. The contemporary system in the late twentieth century and early twenty-first century reflects the style of administration, which typified British rule, devoid of democratic institutions and local involvement. Lo captures the tone and outcomes of British rule on the contemporary schooling systems saying that, "in Hong Kong, important parts of the education system are highly centralised, and decision-making mostly follows a top-down, centre-periphery approach. The Education Commission is the highest advisory body in the formulation of education policies" (2010, p. 163).

As a consequence of the stratified aspects of colonial rule which the British used to identify a ruling elite, "the Hong Kong school curriculum in the 1960s and early 1970s was highly academic, and focused on inculcating the knowledge and skills derived from disciplines such as chemistry and history. Its purpose was to prepare a select group of students with high academic abilities to compete for entrance into university" (Lo, 2010, p. 166). One result of the shift to nine years of compulsory education in the 1970s was that students with a greater range of and interest in academic skills were staying on at school. The curriculum was adjusted to include practical or vocational subjects, such as home economics and woodwork.

After a brief (3-year) experience working within a "curriculum framework [that shifted] from a subject focus with teacher-centred approaches to generic skills with student-centred approaches in English, Chinese and mathematics" in primary schools, a new framework, launched in 1997, "placed a high premium on student-centred approaches and school-based curriculum development for meeting diverse learning needs" (Lo, 2010, p. 167).

Hong Kong has performed well in international testing and has been identified as a high performing system, consistently ranking in the top three countries. Yet there is significant criticism of the opportunities for student outcomes of education. Hong Kong has profound economic and social inequalities, which restrict universal economic opportunity. Some government policies such as flat tax rates and the promotion of privatised schooling systems have tended to exacerbate growing inequalities. The Hong Kong government and employer groups, have grown concerned that graduates from high school do not possess the capacities and competencies to sustain Hong Kong's status as a global centre for trade and commerce. Cyclic curriculum reforms have been a response to a view that the exam focussed tradition and the test taking culture evident in the Hong Kong have impeded the formations of generic employment skills.

Critics argue that Hong Kong school graduates need competencies in working in atypical situations typified by complexity and diversity. They cite the need for students to display initiative, collaborative practices and be able to speak and work in international languages more effectively.

Using data from PISA 2003, McGaw (2006) argues that Hong Kong demonstrates high quality/high equity educational achievement (Table 7.1).

Macau[1]

One of the smallest countries of East Asia, Macau has a total land area of 29.2 sq. km and a population of 538,100, qualifying it as one of the world's 56 Small States and Territories (SST). The population consists of 96 % Chinese of whom many are

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[1]Macau is also spelt as Macao.

Table 7.1 Hong Kong results in PISA 2009

Type of school	Student academic intake	Total number of schools (%)	Number of participating schools (%)
Government	High	16 (3.2)	5 (31.2)
	Med	8 (1.6)	3 (37.5)
	Low	7 (1.4)	2 (28.5)
	N/A	3 (0.6)	0 (0)
Aided	High	120 (24)	44 (36.6)
	Med	120 (24)	41 (34.2)
	Low	132 (26.5)	39 (29.5)
	N/A	3 (0.6)	0 (0)
Independent	Local/DSS*	54 (10.8)	15 (28.0)
	Private/International	35 (7.0)	2 (5.7)

*Direct Subsidy Schools funded by the government may include non-local students who are not subsidised by the government

migrants and refugees from the Chinese mainland, 2 % Portuguese, 1 % Filipino and 1 % other nationals. This breakdown of ethnicity and their status within colonial society is vital in considering the education system of Macau, such as it is.

Throughout their 450 years of colonial rule the Portuguese administration focussed "its administration and governance on three ethnic communities only: Portuguese nationals residing in Macao, Macao-born Portuguese and Eurasian 'Macanese'" (Shan Wen Jing & Leng Sao Leng, 2008, p. 40). Basically their interest was in replicating Portuguese society and culture in East Asia, a tendency that was also repeated in Africa.

An example of the Portuguese cultural dominance of Macau is a decree issued in 1749 allowing only 184 mainland Chinese to live in the fortified city. The rest, classified as foreigners, were relegated to the outlying islands. Adamson and Li (2005) argue that the "enclave mentality created a centre-periphery dichotomy that was evident in the development of schooling". In effect parallel education systems emerged in Macau catering for different social, ethnic and religious groups. Under the Portuguese administration there was no central bureau to co-ordinate these parallel systems or oversee curriculum, assessment or teacher training. Education was characterised by "a tradition of extreme laissez-faire, non-interventionist practices with very few regulations and controls, and concern overwhelmingly for the schooling of the Portuguese, to the neglect of the resident Chinese" (Morrison, 2009, p. 255).

The government established schools that characteristically were for a minority, followed the Portuguese curriculum and used Portuguese as the medium of instruction. This created the space for religious groups, charities or political groups to establish alternate private education systems for the majority population, operating "with a high degree of autonomy" (Tse, 2001, p. 307) running parallel to the government's Portuguese medium schools. Each system prepared children for university studies in Hong Kong or Portugal or China or Taiwan or the United Kingdom (Lo, 2010), as Macau did not have any universities until 1981. The language

of instruction, the curriculum and the textbooks reflected the education systems of each of these countries.

Although the Macau government's "non-interventionist policy" (Tse, 2001, p. 307) and "inertia" (Adamson & Li, 2005, p. 39), neglect of the majority of school children created a diverse education environment, this diversity was not without problems. First, with such a disparate and uncoordinated approach to education it was very difficult to change schools because the curricula, the medium of instruction, the assessment and the structure of schools in each system were incompatible. So, students, or their parents, needed to decide reasonably early where they wanted to attend university. Second, with no central education authority educational development was slow, if not stagnant, under an administration "plagued by corruption, administrative incompetence, stifling bureaucracy and inefficiency, frequent reorganisation, and intense politics of parochialism" (Tse, 2001, p. 308). Consequently, Macau's education system had no public examinations, standards were low, there were limited school development opportunities, teacher training was poor (Morrison, 2009) and schools were generally underfunded (Tse, 2001).

The period between 1974 and 1999 was one of transition for Macau. In 1974, following the so called anti-colonialist "Carnation revolution" in Portugal, China redefined Macau as a "Chinese territory under Portuguese administration" (Bray & Koo, 2005, p. 4) as it decolonised and prepared for sovereignty as a Special Administrative Region (SAR) of the People's Republic of China. Major education reforms proposed at this time included increased government expenditure on school and higher education, seven years of free compulsory education and using Portuguese as the medium of instruction (Tse, 2001). However, the influence of the private education sector has served to restrict some proposed reforms, particularly the use of Portuguese as the medium of instruction.

In 1996 Luso-Chinese kindergartens, primary schools and secondary schools were introduced on a trial basis. These schools followed the model of the government's Portuguese medium schools but used Chinese (Mandarin) as the medium of instruction. In addition, the government began providing formal teacher education, introduced ten years of fee-free compulsory education and commenced curriculum reform in the Chinese schools (Adamson & Li, 2005). Much of these reforms plus the building of new schools or renovation of older schools was funded from Macau's burgeoning new industry – gambling.

Casinos have been a mixed blessing for Macau's education system. Admittedly the extra funding, particularly to schools operated by religious organisations and NGOs has been welcome, but, as Shan Wen-Jing and Leng Sao-Leng (2008), note the rapidly expanding gambling industry exerts two daunting negative effects on education. First, the demand for high and mid-level personnel draws bright and talented graduates away from education. Second, many young people fail to finish school because, at age 18 they are lured into relatively well-renumerated positions as dealers in the increasing number of casinos.

Since 1999, when Portugal entered negotiations to return Macau to mainland China, the government has made great advances in developing education policy as can be identified by Macau's success in PISA tests. Despite this apparent success in

international tests, students in Macau are not happy at school. They dislike the lecture style of teaching, feel overburdened by homework and are generally disengaged. It seems that while politicians and bureaucrats value Macau's high rankings, the school students do not value their education.

Philippines

Equity in access to education has always been a challenge to the Philippines, "home to over a hundred linguistic, cultural, and racial groups" (Torralba, Dumol, & Manzon, 2007, p. 275) living across an archipelago of 7,107 islands. It has a proud history of education dating from the pre-Spanish era but education has always served as a "focus of emphases/priorities of the leadership at certain periods/epochs in [its] national struggle" (Republic of the Philippines Department of Education [RPDE], 2011, para 1). In essence there are three major periods/epochs of education in the Philippines.

1565–1700

During the Spanish colonization of the Spanish Habsburgs, the informal, unstructured, village-based education was replaced with religion-oriented education at primary school level provided by Spanish missionaries, including the Augustinians, the Franciscans, the Jesuits and the Dominicans. Reading and writing were taught as a means of studying the Bible and other religious texts. Although education was free, the medium of instruction was Spanish and the teachers were male, trained by the Jesuits and reflected the needs of the colonial elites.

In Manila, the seat of Spanish administration, three secondary schools and one university were established in the seventeenth century, initially for the children of Spanish settlers. Education in these schools aimed at preparing young people for high-end professions such as the priesthood or law (Torralba et al., 2007). Generally education in the Philippines in that era can be characterised as "inadequate, suppressed, and controlled" (RPDE, 2011, para 3).

1700–1898

Education in the post-Hapsburg era was characterised by pressure for the children of Filipinos who had grown rich through trade with Britain and the USA to attend secondary school and university. Spanish colonial policy changed so that villages were no longer autonomous but governed by the Spanish. As a result, town schools opened, "providing an alternative to parish schools" (Torralba et al., 2007, p. 279). Gradually, the education that had been available to the upper classes was made available to the lower classes who started to perceive education "as a way out of

poverty and a way to acquire social dignity" (p. 279). The most significant evidence of this is the Philippines movement for change of the late nineteenth century. Most of the leaders of this movement were graduates of the University of Santo Tomás in Manila. Towards the end of this era literacy rates in the Philippines exceeded that of many European countries (p. 280) as a result of the expansion of primary and secondary education and training of women as teachers.

Post 1899

The defeat of the Spanish by the Americans (1899) ushered in an era that shaped education in the Philippines in the twentieth and twenty-first centuries. The medium of instruction changed to English and public education was "adequate, secularized and free" (RPDE, 2011, para 5). The school system, following an American model, was expanded to incorporate "special educational institutions, schools of arts and trades, an agricultural school, and commerce and marine institutes" (para 7). To cope with the huge increase in the number of schools and the shift to English, 600 qualified teachers were sent from the US.

There are two major impacts of these periods of colonization on current education in the Philippines. First, the medium of instruction has had considerable impact on the quality of education for many years. There are 80 languages with more than 120 local dialects in the Philippines, none of which is Spanish or English. By the time the Americans defeated the Spanish, the elite were Spanish speakers with the vast majority using the local vernacular. In the face of no lingua franca the Americans introduced English, a decision that has been "challenged ever since" (Torralba et al., 2007, p. 281). Of course this meant that local teachers had to learn to teach in a foreign language. This has been, and continues to be, very difficult and "the level of spoken and written English among the population at large has deteriorated steadily since the departure of the American teachers more than 70 years ago" (2007, p. 281). In preparation for independence Tagalog, the first language of about one third of the Philippines, was nominated as the basis of a national language in 1937, was declared the national language in 1939, and "became part of the basic education curriculum" (2007, p. 281) in 1940. In 1959 it was renamed Pilipino to remove ethnic connotations and renamed again as Filipino in 1987. The use of Tagalong has been resisted in the two thirds of the Philippines where it is not the vernacular but its uptake by mass media has resulted in superficial knowledge of it in these areas.

Singapore

The archaeological record shows that Singapore has been a trading port since at least the fourteenth century. As such it attracted a range of Chinese, Indian, Muslim, Javanese, and Siamese occupiers. When the British established a trading post in

1819 there was a population of around 500. This increased rapidly over the next few years. Similar to the experience of other colonies, formal schooling was introduced to educate clerks for commercial houses in a fast-growing global trading environment.

The first school (established by Raffles in 1823, but not opened until 1834) was, from its inception, a free school. That is, unlike schools in other colonies, education was open to all, not just an elite. However, in general, the Chinese chose to educate their children in vernacular schools that had a focus on writing Chinese characters, Confucian literature and calculation using the abacus (http://education.stateuniversity.com/pages/1343/Singapore-HISTORY-BACKGROUND.html "Singapore – History Background") and a curriculum replicating that taught in China. The Chinese community funded these schools. The government funded government schools, and later took over missionary schools.

Reflecting the multiracial character of Singapore, "a four-medium form of instruction (English, Chinese, Malay, Tamil) emerged" (Gopinathan, 2012, p. 66) in the earliest schools. However, race was not the sole determiner of education. The colonial government tended to depend on an "English-educated class" (Aiyer, 2006, p. 43). This class included a few Chinese and even fewer Indians who were educated in English rather than their vernacular. As a result of this language/education policy, Singaporean society was "segmented by ethnicity, religion, language and occupational specialization" (Gopinathan, p. 66), an impact that is reflected in race relations in post-colonial Singapore.

1965–1985

With independence from Malaysia in 1965 came the realisation that Singapore could not flourish as an independent nation if it remained solely a trading post. The task facing the new government was to build a strong, productive, united nation. Singapore needed "to diversify and accelerate economic growth through industrialization" (Law, 1997, p. 6). This, the government reasoned, could only be achieved by building human capital. Education was regarded as vital in this process. Accordingly, Singaporean education since independence has been driven by the dual goals of "social cohesion and the development of national identity" (Ho & Gopinathan, 1999, p. 101). This is supported with the core national tenants of "multiracialism, multilingualism… multireligiosity" (Aiyer, 2006, p. 157) multiculturalism, meritocracy and inclusiveness (Gopinathan, 2012).

Singapore needed workers for emerging industries in an export-dependent economy. Yet, despite more than a century of education under colonial rule "the newly-independent Singapore inherited a poorly-educated, poverty-stricken workforce beset by chronic unemployment" (Sanderson, 2002, p. 85). The government introduced policies that would develop the necessary skills. One of these policies related to the language of instruction. As English was seen to be the more global of the languages of instruction, it was chosen as the medium of instruction. At the same time bilingualism was encouraged and the study of a second language

(mother tongue) for secondary school students was made compulsory in 1966. Later teaching and examination of a second language was made compulsory in primary and secondary school. The irony of this policy is that, effectively, a child's first language became their second language when they started school. Aiyer (2006) argues that the bilingual policy, introduced 1 year after independence, is a major source of social engineering in modern Singapore, particularly as the choice of second language for study purposes is predetermined by race.

Another initiative that could also be seen as social engineering was integrated schools. These schools were expected to bring children from different racial groups together in a spirit of "ethnic interaction and cohesion" (Aiyer, 2006, p. 226). In reality, integrated schools were compounds containing English, Indian, Mandarin and Malay medium schools under a single administration (NLS, 2008). In addition, the government introduced common examinations in an attempt to equalise the four languages.

The need to train both a technical and a professional workforce also led the government to focus on technical and vocational education at polytechnics and pathways for university studies.

A government white paper, *Report on the Ministry of Education* [The Goh report] (1979), addressed two major issues arising from the post-independence curriculum reforms. First was the issue of poor literacy levels incumbent in the complexities of learning in a bi-lingual environment. The second was the issue of attrition of students who could not keep up with a more sophisticated curriculum. The outcome of this was the introduction of ability-based streaming in primary and secondary school plus an extra year of schooling for students falling behind (NLS, 2008) and introduction of a raft of "tests, examinations and teachers' reports" (Ho & Gopinathan, 1999, p. 103).

1985 – Response to a Recession

Since educational policies in Singapore are so closely linked to social and economic progress, the recession of 1985 provided an opportunity to reflect on whether the school structure was appropriate for Singapore in a globalised economy. In 1986 the Ministry of Education announced three principles of Singaporean education. The first of these restated the link between education and the economy and society. The second and third principles focused more directly on schools. The second placed an emphasis on basic disciplines of study, encouraging logical thinking and lifelong learning. The third principle signalled a shift from central to local introduction of initiatives.

As the result of a study tour to the UK and the USA, a group of 12 school principals made recommendations of how these principles could be implemented to foster "educational innovation at the school level" (Ho & Gopinathan, 1999, p. 105). Most significant of these was allowing (initially) three (now six) government schools to become independent. This grand experiment was aimed to demonstrate that when schools are given autonomy for hiring and firing teachers, paying higher

wages to attract superior teachers and charging fees significantly greater than government schools the outcomes for students would be better. The other recommendation centred on enhanced and intensified training for school principals and heads of departments, a greater variety of vocational programs and especially training levels at the workplace level, and more tertiary institutions with increased student intake (Ho & Gopinathan).

1990

Tinkering or fine tuning of Singapore's education system, at the primary school level occurred after the release of the Ministry of Education report *Improving Primary School Education* in 1991. As a result children were able to opt in or out of learning a second language, vocational courses were introduced at the secondary level and students were streamed in secondary school, based on the primary school leaving examination. In effect by age 12 students were placed in academic and vocational streams.

South Korea

Modern schools were first introduced in Korea "about a century ago" (Kim, 2002, p. 30). However, major changes have occurred since 1945.

Post- 1945

Education in Korea was in a parlous state when it was liberated from Japanese colonial rule in 1945. Only two thirds of eligible children were enrolled in primary school and one fifth in secondary school. In the same way that USA sent teachers to the Philippines, more than "40 % of primary school teachers and 70 % of secondary school teachers" (Kim & Lee, 2004, p. 3) were Japanese. When they returned to Japan, Korea faced a severe shortage of qualified teachers. The Korean War (1950–1953) was another blow to Korean education as most facilities were destroyed during the war.

1948–1960

Emphasis in this period was a rapid expansion of primary education. Achieving this necessitated the establishment of several teacher training colleges and "an aggressive construction campaign" (Kim & Lee, 2004, p. 3). From 1954 the government aimed to build 5,000 classrooms per year. Consequently primary school enrolments doubled between 1945 and 1947, and doubled again to 4.9 million between 1947

and 1965 (Kim & Lee, 2004). This number of students represented the achievement of universal primary education.

1960s–Mid-1970s

In the first two of a series of 5-year plans, the new South Korean government focused on the development of export industries (Kim, 2002). As in Singapore, there was a realisation that education would provide manpower with the requisite knowledge and skills to drive this export economy. In order to provide education to all eligible children, strategies, such as "increasing class sizes and double-shifting" (p. 30) were introduced. The curriculum at this time had a three-pronged focus – the usefulness and practicality of education, morality and anticommunism – all themes that reflected South Korea's recovery from war.

During this period a significant feature of South Korean education became apparent – the rise of private tutoring or cram schools discussed in detail in Chap. 6. One explanation for cram schools is the high value Koreans traditionally place on education (Kim, 2002). With increasing incomes from an advancing economy and most children completing primary school, there was a "strong surge for the demand for secondary education" (Kim & Lee, 2004, p. 4). Competitive examinations for entrance to better quality schools and prestigious universities forced parents to pay for extra tuition. The result was "*ipsi-jiok* (entrance examination hell)" (Kim, p. 4) and a huge demand for private tutoring.

By the time of the third 5-year plan (1972–1976) both the economy and education policy had shifted. Rather than the light industrial and consumer goods production that drove the first 10 years of Korea's post-war recovery, the emphasis was on heavy industries, such as shipyards and chemicals. A close link was established between education and economic policies. Emphasis in this plan was on vocational and technical education in the upper secondary school (Kim, 2002). The curriculum also changed to be more "discipline-oriented, stressing science and technology" (p. 30). Individually administered entrance examinations were abolished and the government randomly allocated students to schools, government or private. Private schools lost their rights to select students and were forced to accept students assigned by the Ministry. The government also equalized the, "levels of tuition, salaries of teachers, and the curricula of private schools" (Kim & Lee, 2004, p. 5). As a result, there was almost no differentiation between public and private schools.

Mid-1970s–1980s

The fourth and fifth 5-year plans (1977–1981 and 1982–1986) saw education linked to social policies. This shift arose from a sharp rise in the demand for private tutoring that the government recognized as becoming a serious social issue. School equalization policies introduced at this time were designed to reduce competition and regulate private tutoring.

Post-1990

The escalation of enrolment that commenced in immediate post-war South Korea continued well into the 1990s. Where the initial emphasis was on primary education, the focus turned to secondary school. Large numbers of students were completing all levels of school and aiming towards higher education. The 1990s saw a dramatic increase in university enrolments. Early in that decade, about 50 % of high school graduates were entering university. By 1997 this percentage had risen to 87. In response the government stepped in to regulate higher education and set student quotas, standardized the entrance examination and "enforced governmental standards for academic programs, the faculty, and facilities" (Park, 2002, p. 4). Although this degree of government intervention in higher education has reduce over the last decade, the government still holds a firm grip on the governance of colleges and universities.

Kim (2002) claims that from the beginning, the dramatic expansion of all levels of education in South Korea has been an egalitarian process, ensuring "equal opportunity for all – regardless of gender, religion, geographic location, or socioeconomic status" (p. 30). This is quite true with regard to raising the educational levels of all citizens. Unlike other developing nations, Korea's educations was aimed at an elite group of citizens in one ore more geographic areas. However, this statement is far from the truth when considered as part of Koreans obsession with educating their children. The rise and rise of private tutoring is testament to this grass roots drive. It has been estimated that the total amount of private income spent on cram schools exceeds the government's education budget. Additionally, there is evidence that families, who can afford the best private tuition, are able to get their children into the most prestigious colleges and universities. So the notion that Korean education is egalitarian is contradicted by the ability of families to fund private tuition.

Thailand

In common with other Asian nations, education, particularly literacy, is regarded as having a duel role in Thailand. First it is a fundamental prerequisite for national development. Second, it is a key factor in shaping and changing quality of life (Suwanpitak, 2008). Through its long history, dating back to the education of young men in Buddhist monasteries, Thailand has promoted literacy. However, the most systematic efforts have occurred in five periods since World War II.

The First Period (1940–1947)

Under the principle that 'Education shall be provided for all people', the incoming government after the 1932 revolution prioritised education. In part this was in response to a 1937 census that indicated a literacy rate of 52.37 %. Due to the low

literacy rate in the adult population, focus fell on Adult Literacy, culminating in a literacy campaign from 1940 to 1947. This was the Thai government's "first systematic attempt…to tackle the illiteracy problem" (Suwanpitak, 2008, p. 763). At the end of this highly successful campaign, the rate of illiteracy amongst adults had been reduced to one in five and the importance of Adult Education was entrenched.

The Second Period (1948–1960)

Despite a temporary decline in Adult Education in the immediate post-war years, it soon gathered pace, supported by UNESCO. Three key elements arose in this period. First, the definition of literacy was broadened to include "numeracy as well as some knowledge and skills necessary for the improvement of everyday life" (Suwanpitak, 2008, p. 764). Second, adult literacy expanded to include vocational skills and education aimed at community development. Finally, in 1960 compulsory education was extended from 4 to 7 years.

The Third Period (1961–1976)

As a result of the introduction of the concept of 'work-oriented functional literacy' at a UNESCO conference in 1965 the Ministry of Education introduced a curriculum that integrated literacy and vocational skills. A similar curriculum geared towards adult learners 14 years of age and over was also introduced by the Division of Adult Education. The 'Work-Oriented Functional Literacy Programme (later the Functional Literacy Programme) used an approach known as *khit-pen* (able to think) "to help the learners solve their problems by themselves by using three kinds of knowledge, namely academic knowledge, self knowledge and environmental knowledge" (Suwanpitak, 2008, p. 765).

The Fourth Period (1977–1997)

The new national education scheme, promulgated in 1978, imposed 6 years of compulsory education. As a consequence by 1980 83.3 % of children aged 7–12 were enrolled in school (Suwanpitak, 2008). Adult Education benefited from the Fifth National Economic and Social Development Plan (1982–1986), which had the goal of reducing illiteracy in the 14–50 age group from 14.5 % in 1981 to 10.5 % in 1986.

Later, influenced by several international conferences supported by UNESCO and the World Bank (among others), Thai education authorities adopted a non-formal approach to Adult Education. This approach is based on the World Declaration on Education for All (the 'Jomtien Declaration'), adopted by UNESCO and more than 150 other countries (Suwanpitak, 2008).

The Fourth Period (1998–Present)

As the result of a severe economic crisis that hit Thailand in late 1997 the Ministry of Education was restructured. At the same time education reforms sought to link the country's constitution with Education for All principles.

There is compelling evidence that education in Thailand has direct social benefit. Research by Warunsiri and McNown (2010, p.21) identified that Thai females, on average, have one and a half years more education than males. Important spill-overs from this include "improved child health, reduced fertility, and an increased tax base due to the higher labor force participation rates of educated women" (Warunsiri & McNown).

Cambodia

Cambodia illustrates well some of the multiple themes associated with education in the East Asian region as a consequence of colonisation. Like other countries, the colonisation of Cambodian in the nineteenth century impeded attempts to develop education and schooling systems that responded to the diverse needs of the Cambodian community. According to Ayers (2000) colonisation by the French did little to develop access to schooling and imposed French curriculum, teaching techniques and institutions in the capital that were irrelevant the broader population in Cambodia. Inequalities in opportunity and access typified education and schooling in Cambodia as a consequence of the social and cultural contexts of Cambodian society.

In the post war period of independence concerted attempts were made to improve universal access to primary school education. Promoted as part of the prerequisite needed for the modernisation processes, tensions and dilemmas emerged when the modernisation project in a highly stratified society was unable to absorb graduates from schools and universities. Rather than facilitate stability, prosperity and a redistribution of wealth, the specific conditions of Cambodian society meant that the modernisation process was frustrated and simply exacerbated existing inequalities, amplifying and creating the social and economic inequalities that contributed to a destabilised Cambodian society.

Cambodia exhibited the highly stratified social structures evident in traditional society with a significant distance between the rural peasant class and the urban elites. The status of the ruling elites was reinforced by strong links and connections between Buddhism and the Royal family. This social ensemble affirmed the power of the ruling elites through perceptions that their status was a divine right, enabling an absolutist rule. This absolute political authority operated without a sense of reciprocal obligations and those in authority demanded unquestioned deference to the King. Ayers described these social relations as, "those at the top governed and those on the bottom existed to be governed" (2000, p. 11). Belief in this political system was sustained through the Buddhist system of the village *wat* where the

monks taught a mix of morals and literacy. These were the first sites of organised education but had the disadvantage of curriculum and activities associated with memorisation of religious texts and a frequent turnover of monks. It also meant that males primarily accessed education.

Cambodia's oral and literacy customs were intimately connected and both were connected to Buddhist and Hindu (Ayers, 2000, p. 13) traditions, The ability to read and write was very low amongst the peasantry and most of the vast majority of education received through the period was as a religious novice literacy directed towards memorising the country's proverbs such as the *chhab*, the *Reamker* and the *Gatiloke*. As a foundation for a modern schooling system this was problematic as it lacked connections with vocational outcomes and instructional techniques needed for higher order literacy.

The colonisation of Cambodia by the French was formulated through a treaty in 1863 protecting Cambodia from Thai and Vietnamese interests. Cambodia was a minor part of the French interests in Indochina, with most of the efforts of the French directed at current day Vietnam. Like the British, the French tended to leave local administrative and government systems within an instituted parallel systems that suited the pragmatic requirements of the colonial regime. The French ideology of colonisation shifted from promoting the notion of assimilation based on the principles of the French revolution to impose a uniformity and European rationality. In this context, education and schooling incorporated the rationality and culture of metropolitan France and was centred on the French language and European notions of science and culture. In 1867 the first secular school was established under the patronage of the King Norodom and a second school was established in Phnom Phenh in 1873.

These schools, consistent with a parallel administration, did little to interact with the lives of the peasantry or those outside the royalist ruling elites. Any educational pathways for locals was directed at undertaking study in Paris, a practice that reinforced the reliance on French systems and the ethos of the civilising mission of the French colonial rulers. Even in the colonial regime Cambodians were educated in the *wat* and others in the elite received an education identical to that received in France. Ayers argues that the "it is questionable whether the French were ever truly serious about providing peasants with modern education" (2000, p. 25). Utilising a parallel system meant that any expansion came from the resources of the village communities and the absence of administration support limited options for poorer Cambodians. The French did little to build the local system until 1900 with the number of schools in 1932/1933 being 225, increasing to 908 in 1938/1939. In 1935 only 294 students graduated from primary school when there were over 60,000 students in Cambodia (Ayers, p. 25). In 1935 secondary school was opened in Phnom Penh but the Cambodian system was still small and the students tended to go to Saigon or Paris.

After independence there was a strong emphasis on expanding schooling opportunities and there was an intense period of expansion when enrolments rose from 432,649 in 1958 to 667,310 in 1962 (Ayers, 2000). But the hegemony of French curriculum and methods frustrated any attempts to open the system to the needs of

the majority of Cambodians. This was compounded by a failure to develop local textbooks, train enough teachers and strengthen administrative and support systems. Reforms introduced in 1963 sought to replace the French orientation and introduce content related to the Cambodian context including the teaching of the Khmer language. The post-independence government under the mercurial leadership of Prince Sihanouk stressed an expansion of schooling as part of the modernisation and development of the Cambodian society.

While the rhetoric of expanded opportunity underpinned the policy messages of the post-independence era, it was not accompanied by expanding opportunities for the growing number of participants. The expansion placed added stress on the limited resources of the government and the pathways were more often directed towards employment in the public sector where there was limited employment. Rather than education acting as a site for stability the unmet expectations of students acted as a source of discontent and spawned dissent that aligned with growing social and economic divisions in Cambodian society. From 1966 onward Cambodia experienced, a coup, economic stagnation, growing inequalities, intense US bombing of it borders and internal insurgency as it became embroiled in the Vietnam war.

The impact on education and schooling, particularly in the period from 1975 to 1979 under the Khmer Rouge was catastrophic with the virtual destruction and closure of a recognised education system as the nation descended into the chaotic genocide of Pol Pot's regime. Almost two million of seven million Cambodians perished at the hands of this despotic regime and three quarters of the educated population were killed (Dy, 2004). Under the Vietnamese occupation (1979–1989) and the United Nations Transition Authority in Cambodia (1990–1993) Cambodian education experienced an intense period of reconstruction, unlike any other country. A teacher described the reconstruction task in the wake of the great loss of life and resources in the Khmer Rouge period.

> 1979–1981 was a period of restructuring and rehabilitating of both infrastructure and human resources. By restructuring and rehabilitation I refer to collecting school-aged children and putting them into schools despite the poor conditions. Classes were even conducted in makeshift, open-air classrooms or under trees. We appealed to all those surviving teachers and literate people to teach the illiterates. We used various slogans such as 'going to teach and going to school is nation-loving' and so on. There were no official licences or any requirements for taking on the teaching job. We just tried to open schools and literacy classes, regardless of their quality mostly through the intervention of UNICEF and other international non-government agencies. (Dy, 2004, p. 96)

The presence of international agencies, as well as the involvement of the World Bank and the International Monetary Fund in the reconstruction of Cambodian society generally has seen as promoting an emphasis on the creation of markets to stimulate and sustain economic growth within a global market context. Ayers summarised this as a situation "based on the principle that the state is the 'manager' of development in 'partnership' of the private sector" (Ayers, 2000, pp. 164–165). This is in stark contrast to the consensus around development implicit in the Washington orthodoxy that allocated an important role to the state in facilitating development.

This market orthodoxy sees the development of an orientation towards private education, a reliance on foreign agencies and overseas providers. There is also a reliance on foreign donors, non-government organisations and charities to provide services for children with many organisations assigned various regions. This tends to fragment and disperse delivery. This has created the use of methodologies and curriculum from overseas sources rather than the development of local curriculum. There are questions of whether this market orthodoxy will address of inequalities in access to education that has advantaged the urban elites, as has been the historic legacy. For Cambodia the task is made more difficult owing to the enduring legacy of the genocide seeing 30 % of children with no father and 10 % with no mother (Bray, 1998).

The opening of Cambodian education to international providers is clearly an attempt to build internal capacity and this has implications beyond expanding study opportunities and places. The arrival of international providers has also seen a growing presence of English as the language of instruction and there is a proliferation of English language courses in Cambodia. Like other nations in Asia, English language proficiency has been linked to images of developments and prosperity. In this way English language is seen as a vehicle for the transformation of the Cambodian economy. This transformative potential for English is well summarised in a speech to teachers by the US Ambassador Joseph A. Mussomeli.

> You are doing more than just teaching a foreign language. You are teaching a life skill that will be crucial to the future prosperity of this country. English, as I have often stressed, is no longer a language. It is, instead, a tool, a weapon, a vehicle. A tool to build a stronger society, a weapon to combat poverty and ignorance, and a vehicle for those who possess it to travel anywhere they choose throughout the world and be understood and understand. (Koji, 2008, p. 2)

There is no question that Cambodia is experiencing a transformation from a low base of development and education where the possibilities of migration, study abroad and higher earning jobs are sought after. Globalisation has seen also growth in areas such as manufacturing in clothing, textile and footwear manufacturing. The key challenge in Cambodia is the neglected and deficient literacy rates amongst girls and women, particularly in rural areas, which according to some sources, has an impact on child mortality.

According to GB Oxfam, the female literacy in Cambodia, or the ability to read a newspaper or write a letter is only 22 %. The gap between the literacy level of men and women is estimated at 20.6 percentage points with women's literacy at 56.3 % and men 71.3. In the rural communities it is estimated that over 50 % of women are illiterate. Those women over 65 years are worse with only 15.7 % of females. The low literacy rates are attributed to drop-out rates of students in primary school with the Cambodian Independent teacher union estimating that only 60 % of students completed primary school in 2003. The capacity of girls to complete their schooling has been influenced by stereotyping that sees a women's role as a home maker. This sees girls being directed into domestic work in the home rather than completing their schooling. This is not assisted by the absence of schooling opportunities in many regions in Cambodia and the poor quality of educational resources. Schools have few resources, teachers are not well paid and many teachers have to ask for extra

fees to purchase basic texts, pens and other equipment. In poor rural communities these fees are an additional financial burden on families. The education of women is seen as important in addressing some of the issues associated with continued cycles of poverty. The World Bank argues that

> higher levels of education has a correlation with lower infant mortality as women with a formal education tend to have better knowledge about health care practices and, are less likely to become pregnant at a very young age, tend to have better spaced pregnancies, and seek pre and post natal care. (World Pulse, 2009, n.p.).

This is of critical importance as Cambodia has a rising infant mortality where the rate of infant death per 1,000 births has risen from 115 in 1990 to 143 in 2005 (World Pulse, 2009). There is an urgency to expand the participation of women and girls in education and there is a need for scholarships and financial support for daughter. However, before these initiatives can work there needs to be a change in the stereotypes about the roles of women and girls. Many non-government agencies are developing evening and night classes involving literacy programs, agricultural programs and small business principles. These classes run parallel with the other responsibilities of women and tend to operate on a limited basis for 2–3 evenings or afternoons a week. The potential for change is enhanced with programs that promote mother and daughter learning and study groups to build a sense of solidarity and provide support across generations and families.

Laos

Neighbouring Laos parallels many of the developments in education with its history of colonisation by France and the shared origins of literacy from the Buddhist *wat*. Like Cambodia, Laos is a developing nation which has profound challenges in lifting school attendance and literacy rates. The objectives for Laos are well summarised in the statement of education of children and youths, urging that education must be considered as a significant tool of proletarian dictatorship to build a new generation, new men (sic) and the country (Evans, 1998). Like Cambodia the literate tradition in Laos emerged from the aural traditions of monks memorising Buddhist texts. Tambiah argues that "there was of course no mass literacy, but a literacy of specialists who were in touch with the higher learning of Buddhism, with the gods and codified curative knowledge, and in more recent times with the government (Tambiah, 1968 cited in Evans, 1998, p.154). The development of state sponsored schooling was delayed by the reliance on the Buddhist tradition. Like Cambodia, the French colonial system educated an elite section of Lao society, first opening a school in 1896 for young aristocrats but most of the local elite were send to France for education. In 1902 local schools were opened in Vientiane and Luang Prabang and over the next 10 years there was an integration of monastery schools into a national system. This had the result of shifting schooling outside the *wat* but

there was no really effective national system of education. With independence there were attempts to develop and build a national system with enrolments in elementary school growing from 200,000 elementary school students in 1969/1970 from 30,000 in 1953/1954 (Evans, 1998, p. 156).

There were also attempts to develop a more localised system with the use of Lao language, local teacher training and curriculum developments. Like Cambodia, the Indochina war disrupted the development of education, although the experience of Laos under the Pathet Lao was not as catastrophic as that of Khmer Rouge. In common with Cambodia there was an absence of qualified teachers with almost 90 % of trained teacher's becoming refugees to developed countries in the aftermath of the liberation (Evans, 1998, p. 158). Despite the devastation of Laos as a result of the saturation bombing by the American forces, after 1975 the quantity of Laotian schools grew but the quality of schooling was poor with many being nothing more than "flimsy bamboo structures" with a young and often untrained teacher. Remote and minority areas were the worst equipped schools and there were few resources and text books. The new regime directed most literacy education towards enabling the transmission of the new socialist message and the inculcation of revolutionary values. The policies of the Royal Lao Government were removed or discredited and the neo-colonial and American references and influences in education were aggressively challenged and maligned. The material, of course, had political content that was strongly anti-American and centred on the war, eugolising the contribution of many revolutionary martyrs. The ideology of revolution was transferred within youth organisations that had an important role in building solidarity and political education. New textbooks taught the virtues of socialism and the revolution and railed against the evils of capitalism and the need to purge individualism and materialism and strive for a pure socialist state.

Although the production of primary school material was relatively simple secondary education was to prove more of a challenge. Secondary schools were subject to overcrowding and poor facilities. The training of teachers and technicians involved travel abroad to Eastern bloc countries and other sympathetic countries such as Cuba. However, often the skills learned were difficult to transfer to the local setting where infrastructure and industrial capacity were undeveloped. Many Laotians who were fearful and frustrated by the new regime sought to migrate and flee the country and Laos experienced an exodus of the educated elite in the initial phase of the revolution up to 1989.

The collapse of the Soviet bloc led to the need for the regime to re-establish a national identity rather than the internationalised message of communism. However, there was a new form of internationalisation facilitated with a reengagement with the west with many students attending US, Australian and international universities and colleges. This internationalisation led to criticism that the "new regime" was similar to the old royalist regime because, like the former regime, only the rich could afford an education (Evans, 1998, p. 163). The post 1990 era saw a rapid shift from instruction in Russian to English and the development of new text books that shifted the emphasis away from the anti-imperialist mantra, introducing aspects of

Buddhism. The new textbooks emphasised themes associated with obedience, order, stability, sanitation and hygiene with moral themes and there was an absence of references to the Lao People's Democratic Republic. The moralistic tone of these textbooks and the growing emphasis on English have strong commonalities with other nations such as Indonesia, Malaysia and Singapore. Like Cambodia and Vietnam, Laos developed stronger connections with its capitalist neighbours such as Thailand, Singapore, Malaysia and Indonesia. But at the turn of the new century Evans argued that the new regime had failed to "build a robust education system, meaning that many Lao remain politically agnostic, but at the cost of considerable political, social and cultural amnesia" (Evans, 1998, p. 167).

Indonesia

Indonesia's education system has been influenced by the combination of local schooling systems developed over centuries and those imposed by Dutch colonial rule. Development of education in Indonesia occurred over five distinct periods. Each contributed to education in Indonesia today.

Pre-colonial Era (Pre -1600s)

Although Indonesia has a long history of learning it was not until the decline of the original Buddhist and Hindu influences and the rise of Muslim culture in the region around 1300 that education took on any importance. Islamic *pesantren* proliferated, particularly in Java (Christano & Cummings, 2007). These village-based dormitory schools aimed to graduate young men and women who demonstrated moral values of sincerity, simplicity, solidarity and individual self-control based on the principles of Islam. These schools charged fees but parents sent their children because of the Islamic teaching undertaken in these schools and a perception that these were good quality.

As p*esantren* were unregulated private schools, this quality was variable. However, the *pesantren* have been a powerful force in Indonesian education for more than 400 years. This influence is most apparent in the modern organisation of education in Indonesia. Instead of a single education authority, the Ministry of Education and Culture (*Kementerian Pendidikan dan Kebudayaan* or *Kemdikbud*) **and** the Ministry of Religious Affairs (*Kementerian Agama* or *Kemenag*) are responsible for administering education.

Since the middle of the twentieth century many *pesantren* have introduced secular subjects and government sponsored curriculum. These changes have meant that many *pesantren* have come under government scrutiny and control. More recently, after the 2001 Bali bombing, these schools have come under international scrutiny as a principal source of violent jihadist thinking and action.

Dutch Colonial Era (1600s–1942)

Under the Dutch, schooling reflected a restrictive social hierarchy. Initially, quality schooling was only provided to the children of the minority Dutch and European families and a few Indonesian aristocrats. As with other colonial powers, the latter were only educated to work in colonial administration. The language of instruction was Dutch. Village *pesantrens,* teaching a strictly Islamic curriculum for the indigenous population who could afford the fees, ran in parallel. Schooling children outside these groups was "generally either…unequal, or entirely non-existent" (Christano & Cummings, 2007, p. 124).

There are four major legacies of education under the colonial power of the Netherlands. First, was the introduction of primary or elementary education. While this was initially limited to a specific subset of privileged children, by the late nineteenth century folk schools were established for indigenous students, which increased or broadened participation.

The second legacy is a structure, which broadly resembles modern education in Indonesia. This structure consisted of:

- Primary schools for Europeans and Indigenous (separate)
- Middle school
- High School
- Pre-university.

Third, the Dutch established several universities, principally on Java, to educate a very small group of intellectually elite Indonesians. These institutions were "based on European academic models and traditions" (Singgih Tri Sulistiyono, 2007, p. 2) and used Dutch as the medium of instruction. Graduates from these universities supported the Dutch colonial administration and helped to fulfill a growing demand for highly skilled professionals in the burgeoning global trade of the Dutch East Indies.

Finally, by 1930 the Dutch introduced universal primary education to most provinces of Indonesia opening up education to more than two million students. An ironic outcome of universal education and the promotion of an indigenous elite class was the rise of nationalism and calls for independence that eventually saw the end of the Dutch colonial era.

Japanese Wartime Occupation Era (1942–1945)

Initially the Japanese closed all formal schooling but with ambitious plans to colonise Indonesia, they began transforming the Dutch colonial system towards a less socially stratified national system that would support a Japanese post-war administration. Included in this transformation was a reduction and eventual prohibition of instruction in Dutch and a move towards Indonesian or Malay as the medium of instruction. The Japanese also added a school of Pharmacy to the Medical school and upgraded the status of the Dental College. In addition, they established an

advanced institute for civil administration in Jakarta and introduced military training. The move to arm indigenous people as a result of this training was to prove vital in the post war independence movement.

Independence and Reconstruction Era (1945–1966)

Under Sukarno's leadership the government recognised the role education would play in an Indonesia that needed to be united in diversity. Due to the failure of the Dutch administration to invest in education for the majority indigenous population literacy rates were still very low. Difficulties the administration faced included: illiteracy in the majority of children and adults, no national language, very few school books in Indonesian, a large population spread over a vast geographical area, lack of financial resources, degraded school infrastructure, insufficient trained teachers and adequately educated and experienced administrators. In developing a new education system the Indonesian leaders needed to address the concerns of secular and Islamic groups and individuals.

In the post-independence era schooling was explicitly the "mechanism for nation-building and functioned to unify and integrate societal differences of race, ethnicity, and class" (Christano & Cummings, 2007, p. 126), like other Asian nations.

New Order Era (1966–1997)

Nation building continued to be a focus of education administered and controlled centrally. Despite Suharto's heavy-handed, corrupt and nepotistic rule, Indonesia made great gains in education in this era. A proportion of profits from the 1970s oil boom was allocated to universal primary school education. In a 6-year period 61,000 primary schools were built. In this era high rates of economic growth resulted in reduced poverty and improved health and education outcomes. The centralised education system allowed for no local variation although the *pesantrens* still flourished. The collapse of the Suharto regime as a consequence of the economic crisis of 1997 and the growing calls for reform of government in Indonesia significantly effected education and schools in the post -Suharto era. In late 1997 Indonesia plunged into a monetary crisis. World Bank conditions for aiding the country had disastrous effects on the economy, including funding for education. Although policies suggest that there has been a move toward decentralisation there is little firm evidence that this has occurred.

Present Era (1998–Present)

The Suharto regime operated with a highly centralised model with little local autonomy. This centralised system sustained the regime and influenced curriculum, class numbers, teacher recruitment and deployment and every aspect of schooling

in Indonesia. With the advent of democratic government in Indonesia the decentralisation of government administration was seen as an initiative to support the democratisation. The priority during the post Suharto era was to support programs that would promote devolved school management and the development of limited localised curriculum. In 1994 prior to the fall of Suharto, the stranglehold of centralisation had been broken with a proposal for local content curriculum to become 20 % of curriculum content. This ambitious goal was not achieved because there was no funding or training in implementing new curriculum. There were problems regarding teachers' perception of their role as public servants and there was a reluctance to demonstrate the initiative to support reform (Christano & Cummings, 2007, p. 135). These initiatives, as with others in East Asia during the late 1990s were thwarted by political and economic instability but the implementation of these moves were accelerated in the early part of the twenty-first century.

By 2003 the Law on National Education System (20/2003) was enacted in response to the World Education (2000) *Education for a All* (EFA) initiative. This new law provided "a legal framework for the development of education" (Firman & Tola, 2008, p. 72), guaranteeing fee-free basic education programmes to ensure accessibility. The law also provides central oversight for quality but shifts daily management of schools to local districts.

By 2007 the role of Indonesian education had been significantly reformed to a point where the "role of the central government [is now] restricted to establishing national education policies that define minimum guidelines for educational standards" (Christano & Cummings, 2007 p. 137). This reformist era has meant that education gives prominence to enhancing its "performance in the framework of equal and even distribution of educational opportunities" (Hadis, 2005, p. 1).

In terms of the impact on local schools it has meant that the Indonesians are moving to School Based Management and are now responsible for determining "class sizes, schedules, curriculum content, textbook selection and school maintenance" (Christano & Cummings, 2007, p. 137). The reforms also created conditions where teachers are now employed by local education authorities, rather than the central administration and there is significant local autonomy in regions outside Java. Even though these measures have increased local involvement the system in Indonesia is still hampered by limited resources, poor teacher quality and an absence of high quality curriculum. Indonesia's progress is reflected in its PISA and TIMSS student achievement that is well below other nations in East Asia.

Conclusion

This chapter explored the background and context of several countries in East Asia. These sampled nations, while diverse, have all experienced the impact of colonization on their education systems which has had a profound effect on the way school systems and higher education are organized. This colonial legacy has also profoundly impacted on the economic and educational opportunities in these countries

well after they achieved independence. In many nations the colonial legacy restricted education as an entitlement and a privilege for an urban educated elite and left bureaucratic regimes committed to retaining rigid centralized curriculum and examinations systems. Also the colonial legacy has shaped policies on language and literacy, introducing complexities and dilemmas between multilingualism and the quest for national unity around the concept of a national language.

Many of these countries, now independent for several decades are experiencing difficulty in making education accessible to many of their citizens and ensuring that the benefits of the East Asian miracle are distributed more widely and more equitably. This challenge to the region and its influence on language and literacy is the subject of the next chapter

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Chapter 8
The "East Asian Miracle" Economies, Inequalities and Schooling

Several nations of East Asia have been portrayed as "tiger" economies and the source of spectacular global economic growth. This has been characterised by the term "The East Asian Miracle" to explain the sustained boom period from the late 1960s until the early twenty-first century. This long period of economic growth was briefly interrupted by the 1997 economic crisis however there has been a progressive rise in the gross domestic product of many nations in the region. This continued overall growth has disguised growing inequalities across nations in East Asia. There have also been profound inequalities within many countries in the region and these inequalities have an important relationship to educational access and opportunity. Essentially, those with better education those with a better education and skills are capable of more complex and demanding jobs, enabling them to be more highly renumerated. Conversely those without access to educational opportunities have to compete for low skilled jobs in a large pool of untrained and uneducated workers.

Krongkaew and Ragayah (2007) argue that while there has been sustained regional economic growth, this preoccupation has overshadowed concerns about economic inequalities and the distribution of wealth. These commentators summarised how this disregard for equality has emerged, arguing that:

> no one cared if his/her personal income was lower than others as long as it was rising. But this growing inequality could be the pretext under which the rich or the top income group were able to engage in inappropriate and unsustainable economic activities which brought about economic crisis and disaster later. (Krongkaew & Ragayah, 2007, p. 1)

They argue that while there has been growth in the Asia region there has also been a deepening of inequalities which has seen the plight of the poorest become progressively worse as access to government programs that could be expected to address these inequalities diminishes. The reliance on growth to promote social advancement for the poorest in many Asian countries does not account for many of the embedded structural inequalities in the economy which mitigate against the very poorest, those living in rural areas, those belonging to ethnic minorities and women.

There have been some impressive developments in the levelling of economic opportunities in the early period of the East Asian Economic Miracle. A good example of this is Indonesia where the number of poor people declined from 54.2 million, or 40 % of the population in 1976, to 22.5 million in 1996, or about 11.3 % of the population. Further, the poorest group shrank from a high in 1999 of 48 million persons, or 23 % of the population to 37.3 million or 17 % of the population by 2003. At the same time Indonesian exports rose nine times. Another example is China's GDP growth rate which has exceeded 10 % per annum from 1980 to 2000, a pattern that has been continued throughout the twenty-first century. Despite the global financial crisis, China continues to have growth rates no lower than 8 %.

Neo-classical economists have attributed the East Asian Miracle to a consequence of minimal state intervention, a vibrant private sector, policies that promoted export-oriented economic activities and a business environment that facilitated entrepreneurialism. This view has been challenged, by others who have argued that the success of countries such as Taiwan, Malaysia, South Korea has benefited from direct government intervention, internal trade barriers and the ability to benefit from open access to overseas markets in developed nations (Kell & Vogl, 2007). The explanation advanced by the World Bank suggests that the East Asian Miracle was a function of three policy choices that include the attainment of basic economic fundamentals, selective intervention and the existence of stable financial institutions such as banks.

It is difficult to make universalised claims about any recipe for economic success across the region as there are distinctive features across and within the region which are explanations for the nature of economic growth as well as the inequalities that typify individual countries. Some countries such as Korea and Singapore are industrialised and advanced economies whereas Indonesia, Malaysia, Thailand and the Philippines are seen as developing middle income countries on the cusp of developing a sophisticated industrial structures and institutions aligned to global capitalism. China and Vietnam are socialist nations that have reformed their economies and dramatically realigning them towards the globalised market economy. China has not just emerged as a regional economic power but has also assumed a global status.

In some countries there is strong regulation and prudential regulations. Financial management in Singapore and commodities such as ICT products, tourism and its status as a logistic and financial hub has seen this nation survive the 1997 crisis and the Severe Acute Respiratory Crisis Epidemic (SARS) in 2003 relatively unscathed. The government has, in comparison to other nations, a safety net and social welfare systems such as subsidised housing, health and education as well as universal pensions. But these are not targeted at the low-income groups. The tax system tends to favour the rich and those in the private sector with either low tax or flat tax. There are inbuilt biases that tend to favour middle and high-income earners. Singapore had, throughout the global financial crisis in 2010, responded with a wide range of bursaries and scholarships. Some were promoted as responding to the needs of low socio-economic groups. However, Mukhopadhaya (2002, p. 71) observes that various merit scholarships and bursaries were aimed at the brightest pupils and rather than reducing inequality these initiatives have exacerbated them.

These merit-based scholarships do not account for the fact that that best and brightest mostly come from more affluent groups, have a better education environment and generally have educated parents. Rich and middle class families benefit from these schemes often at the expense of low socio-economic students and those from ethnic minorities. This pattern also exists in centres such as Hong Kong where the commitment to meritocracy and the need for individuals to "earn" support are part of the ethos and culture around notions of equal treatment. This position is opposed to measures that are designed to compensate for inequalities which are structural and spread across large numbers in the community.

Education features as one of the most crucial catalysts in addressing inequalities in some countries but it is seen as part of a package of measures to reform tax, ownership and price mechanisms. The Philippines is one of the countries in East Asia where inequality of the most profound exists, despite enduring economic growth. Better access to quality schooling clustered with agrarian reforms, investment in land improvement and the removal of price distortions are seen as crucial in reducing persistent inequality.

Like other nations education becomes crucial to Singapore's future as workers with low and unmarketable skills will be losers in an economy typified by high technology and new industries such as communications technology, multimedia as well as professional and managerial positions. Income disparity in Singapore is already distorted because those in managerial and professional positions in the public and private sector are enjoying considerable advantages over those in technical and blue-collar occupations. The reliance on foreign workers in low skilled occupations such as domestic work, construction and manufacturing has also depressed local wage levels.

Even countries such as South Korea with export oriented heavy engineering and manufacturing sectors are experiencing growing wage differentials which are defined by educational attainment and qualifications. In the periods of economic crisis, in 1997 and again in 2009–2012, young and uneducated workers with low skills experienced unemployment and more unfavourable circumstances than those with education and qualifications. This pattern, suggested by Krongkaew and Ragayah (2007), could be due to a skills based technological change and international trade, especially in relation to exports that are concentrated on skilled labour intensive products (Krongkaew & Ragayah, p. 12).

China has grown dramatically in real terms since 1978 when Deng's policy of "*Let some get rich first*" first emerged. The overall level of wealth has grown considerably and the incidence of rural poverty has fallen from 260 million in 1978 to 34 million in 2001. But China has profound inequalities between the rural west and the urbanised east. This is the so-called dual structure of the Chinese economy. In terms of resource mobilisation, employment generation, tax treatment, public services and government spending there are deep disparities between the urban east and rural western regions. This urban-rural gap has widened and was about 2.8 times in 2000 and has grown to four times when the value of social welfare received by urban dwellers area is factored in. This has been sustained at a ratio of 3.2 to 1 (Krongkaew & Ragayah, 2007, p. 10).

These disparities, particularly in the rural areas, have caused the migration of workers to the industrialised cities and provided, until very recently, a good labour supply for export and manufacturing industries. More recently the quality of this work force has been questioned and there are concerns that, as China moves into more complex high technology industries, the labour supply lacks the skills, capabilities and attitudes needed for these new industries. At the other end of the occupational spectrum several recent controversies have identified deficiencies in Chinese management as well as the labour force.

There have been ongoing controversies such as the treatment of workers in the Apple smart phone manufacturing plant in Shenzhen, which indicate entrenched repressive industrial practices that fail to account for the nature of changes in the global labour market and business environment. High quality management training, which includes ethical business practices to eliminate entrenched corruption, continues to be an area of crucial educational provision, particularly as corruption involving international corporations has dire implications including international sanctions and penalties. Corruption in China, for example, is seen as a major impediment to social advancement with tax evasion being used as a means of accumulating wealth through illegal means. Corruption undermines the confidence and bonds of trust within Asian societies and if left unaddressed is a source of discontent and instability. Local civil disturbances and spontaneous protests at administrative decisions have emerged as a source of concern by central authorities in China's anti-corruption measures and has been linked to the continued viability of China's progress within the globalised economy. Protest has emerged across China as a response to perceptions that the benefits of the boom are not being distributed evenly or fairly.

In this context decisions about the balance of China's economy have been made to stimulate internal consumption rather than address demands on China to revalue its currency by China's trading partners such as the United States and the European Union. The Chinese government took this decision because there is a need to redirect effort to address these internal perceptions about inequalities and corruption, as well as the need to stimulate consumption for consumer goods while overseas trading partners are subject to low growth or are recessions.

As mentioned earlier in this book the education system, and more particularly progress through the examinations system, is a seen as the chief avenue for social advancement. However, as mentioned, this route has lost its lustre and attraction. Access to technical and vocational education has assumed a new importance as the Chinese economy, like in other Asian nations, where there is significant investment in vocational education and training during the global financial crisis. Access to vocational education is an important initiative in addressing inequalities as this training gives direct access to the types of jobs that are emerging in manufacturing, the services sector and personal services and entertainment, requiring flexibility, creativity and problem solving skills.

Education is not the only component in reducing inequalities as there are also important reforms that are needed in other areas including labour laws, tax policy, investment allowances, land ownership, health and welfare safety nets and

other whole of government initiatives that are instrumental in improving the life chances of all Asian citizens. In addition, the importance of eliminating systemic corruption has been identified as another factor in improving opportunities for social improvement.

Attempts by government in many countries in Asia to redress these issues have either been inadequate at bridging gaps in economic opportunity, or have tended to reaffirm and consolidate inequality. There is a need for broad and holistic reform, including attempts to address the living conditions of those living in cities in Asia. Krongkaew and Ragayah (2007) suggest that large-scale reform by government which spans economic regulation and a role for the state is needed, saying:

> Future sustainable economic development should be characterised by a reasonable rate of growth of the economy, with price stability, a satisfactory employment situation, adequate consumption growth of the right kind, stable government with sufficient public revenues, an appropriate and efficient public expenditure system, natural concern for the preservation of the environment, and good prospects for future growth and development. (Krongkaew & Ragayah, 2007, p. 2)

The challenge in East Asia concerning disparities between nations in that region is identified by the Human Development Index (HDI), which is a measure of the standard of living compiled by the United Nations Human Development Program (UNHDP). It provides a perspective on the opportunities and challenges in the region in relation to life spans, educational opportunities and income levels.

The Human Development Index (HDI) in East Asia

The Human Development Index (Table 8.1) is a collection of statistics that indicates the progress of nations in areas such as life expectancy, education, income and general welfare. The HDI in East Asia highlights, for example, the differences between the four developed nations of Japan, Singapore, Hong Kong and Korea. HDI indicators are comparable with European nations and other nations in the region. The majority of countries in East Asia, including China, Thailand, Philippines, Indonesia, Vietnam, Laos and Cambodia fall in the medium category. Malaysia is the only nation in the high category. East Timor is also the only East Asian nation in the low human development category.

The level of development and diversity is well illustrated by the disparity between Gross National Income (GNI) across the region. The GNI can be interpreted as a measure of individual earnings. In Japan this figure is $US32,295 which is a figure which compares well with the UK on $US33,296, France on $US43,017, Finland on $US32,438 and Switzerland on $US39,924. In comparison to the Japanese figures, Cambodia's GNI at $US1,848 sits just above nations in the low human development category such as Burkina Faso at $US 1,141, Chad $US1,105 and Mali $US1,123. East Timor's GNI is $US3,005. However, other indicators such as

Table 8.1 The Human Development Index and its components HDI (2011)

Global HDI ranking	Country	Status	Human Development Index[a]	Life expectancy[b]	Mean years of schooling[c]	Expected years of schooling[d]	GNI[e]	GNI per capita[f]	Non-income HDI[g]
12th	Japan	Very high	0.901	83.4	11.6	15.1	32,295	11	0.940
13th	Hong Kong (SAR)	Very high	0.898	82.8	10.0	15.7	44,805	−4	0.910
15th	Korea	Very high	0.897	80.6	11.6	16.9	28,230	12	0.945
26th	Singapore	Very high	0.866	81.1	.8	14.4	52,569	−22	0.851
61st	Malaysia	High	0.761	74.2	9.5	12.6	13,685	−5	−0.790
101st	China	Medium	0.687	73.5	7.5	11.6	7,476	−7	0.725
103rd	Thailand	Medium	0.682	74,1	6.6	12.3	7,694	−14	0.714
112st	Philippines	Medium	0.644	68.7	8.9	11.9	3,478	11	0.725
124st	Indonesia	Medium	0.617	69.4	5.8	13.2	3,716	−2	0.674
128th	Vietnam	Medium	0.593	75.2	5.5	10.4	2,805	8	0.662
138th	Laos	Medium	0.524	67.5	4.6	9.2	2,242	4	0.569
139th	Cambodia	Medium	63.1	5.8	9.8	9.2	1,848	11	0.584
147th	East Timor	Low	0.495	62.5	2.8	11.2	3,005	−14	0.499

[a]**Human Development Index:** A composite index average achievement in three basic dimensions of human development – a long healthy life, knowledge and a decent standards of living

[b]**Life expectancy at birth:** Number of years a newborn infant could expect to live if prevailing patterns age specific mortality rates at the time of birth stay the same through the infants life

[c]**Mean years of schooling:** Average number of years of education received by people aged 25 and older, converted from education attainment levels using official durations at each level

[d]**Expected years of schooling:** Number of years of schooling that a child at school entrance age can expect to receive if prevailing patterns of age specific enrolment rates persist throughout the child's life

[e]**Gross national Income GNI per capita:** Average income of an economy generated by its production and its ownership of factors of production, less the income paid for the use of factors of production owned by the rest if the world, converted to international dollars using purchasing power parity (PPP)

[f]**GNI per capita minus HDI ranking:** Difference in rankings by GNI per capita and by the HDI. A negative value means that the country is better ranked by GNI than the HDI

[g]**Non income HDI:** Value of the HDI computed from the life expectancy and education indicators only

life expectancy (62.5years) with a mean years of schooling (2.8 years), give East Timor a higher GNI than HDI. This makes East Timor one the world's lowest ranking nations along with Angola, Sudan, Burkina Faso, nations where there have been recent and devastating civil wars.

Table 8.2 shows the global human development rankings at the regional level, East Asia compares well against other regions coming third in the HDI after Europe and Central Asia and Latin America and the Caribbean. In life expectancy East Asia is second to Latin America and the Caribbean and, in expected years of schooling, the Asian region ranks third. In the ranking of GNI, East Asia ranks fourth after Europe and Central Asia and Latin America and the Caribbean and the Arab states. In the non-income HDI, East Asia is third after Europe and Central Asia and Latin America and the Caribbean (UNDP, 2011, p. 130).

In general the East Asian region performs well against other regions, but the HDI index is restricted to indicating the disparity between countries. The index does not adequately represent the disparities and inequalities that are evident within countries. The most disadvantaged people in Asian countries are rural dwellers, those not speaking the local language as their first language, those from ethnic minorities, the disabled, women and girls and young people. Young people experience profound inequalities. The next section of this chapter documents the marginal status assigned to them as well as some of the attitudes and aspirations of young people in the region (Tables 8.1 and 8.2).

Young People, Inequalities and the Quality of Life

The impact of globalisation has differential impacts on the people of Asia. The most vulnerable are the young, those living in rural and regional areas and women. There are an estimated 700 million young people living in the Asia Pacific region that accounts for 45 % of the world's population between the ages of 10–24 (UNICEF, 2010, p. 1).

While the region is the fastest growing region in the world this does not guarantee that young people will share in the generation of wealth with young unemployment hovering at 10 % which is three times greater than the rate for adults. Young people in the Asia Pacific, particularly in developing nations are particularly vulnerable, in terms of education opportunities, housing, health, welfare and they are subject to exploitation. Almost 1 in 5 unemployed in the Asian region is aged between 15 and 24 years and the unemployment rate for the young in East Asia is five times higher than the rate for adults (UNICEF, 2010, p. 1).

Despite the claims of economic miracles in the region, it is young people in East Asia who are most likely to be unemployed. Many are locked out of the labour market and are often forced into working in the unregulated informal sectors of that economy. This contributes to their exclusion because they experience poor working conditions and are often subject to exploitation. In general the protection

Table 8.2 World regions HDI index (2011)

Region	Human Development Index	Rank	Life expectancy	Rank	Mean years of schooling	Rank	Expected years of schooling	Rank	GNI	Rank	Non-income HDI	Rank
Arab States	0.641	4	70.5	4	5.9	4	10.2	4	8,554	3	0.643	4
East Asia and the Pacific	0.671	3	72.4	2	7.2	3	11.7	3	6,466	4	0.709	3
Europe and Central Asia	0.751	1	71.3	3	9.7	1	13.4	2	12,004	1	0.785	1
South Asia	0.548	5	65.9	5	4.6	5	9.8	5	3,435	5	0.569	5
Latin America and the Caribbean	0.731	2	74.4	1	7.8	2	13.6	1	10,119	2	0.767	2
Sub-Sahara Africa	0.463	6	54.4	6	4.5	6	9.2	6	1,966	6	0.467	6

of young people's rights in these workplaces is poor owing to an absence of legislative frameworks and labour laws in many Asia economies.

In contrast to those in Europe and North America, young people in the Asia Pacific have few avenues to influence policy and government and remain remote from the mechanisms of government. This marginal status is summarised by the regional overview of the *Year of the Youth in 2010–2011* stating that:

> Asian and Pacific youth often remain at the margins with regard to participation in the creation of development policies. Such lack of inclusion in the decision making process could partially explain why large numbers of Asian and Pacific youth engage in risky behaviour. With the right policies and programmes in place, however Government might be able to stem this. (UNICEF, 2010, p. 1)

This vulnerability of young people is because the health and welfare of young people, even in the most advanced nations in East Asia, is jeopardised by living in conditions where hygiene, sanitation, food and air quality, as well as personal security, are subject to risk. Increasingly children in the East Asian region are living in large urban landscapes, characterised by high density multi-story occupation with limited space as well as limited recreation and leisure areas. Cities are often typified by poor and overcrowded living conditions which mean that even in the best and most advanced cities there are pockets of poverty.

Many cities are virtual magnets for migrant workers from the regions and this increasing mobility as well as the high demand for cheap accommodation means that squatting and illegal occupation are the only options for many poor people. This means that in the glitzy global cities of Asia there will often be large numbers of young people living in slums in poor temporary "shanty towns" with no permanent utilities such as electricity and running water. In these areas there is often considerable illegal activity including organised crime and there is an absence of any presence and profile from the policing and legal functions of the state. This means that young people often live in insecure, unregulated and unsafe areas.

While many young people are living in what is attractively named global cities, their own experience is typified by poor inadequate relatively expensive transport, focussed on the needs of residents in more established and richer localities. There are few options for recreation outside organised sport, which is often expensive and run by and elite clubs. There are few green spaces and free recreation space that is suitable for young people to gather in are infrequent in Asian cities. Many of the expansive shopping complexes that typify these global cities are the only source of recreation and meeting places for many young in the Asia Pacific. The disadvantages of living in global cities are also linked to their intense settlement patterns, congested transport routes and traffic and the growing presence of emissions and pollution. Few cities seem to be taking action in the growth centres of China, India as well as Bangkok, Kuala Lumpur and Hanoi where traffic, pollution and overdevelopment typify new urban landscapes.

However, in the rankings of liveable global cities, many Asian cities rank highly. Although many of these rankings are designed principally as guides for expatriates and foreign multinational corporations, they do reveal some of the strengths and weaknesses of Asian cities. For example Hong Kong, consistently ranks as one of

the most liveable cities in the world having good education, transport, infrastructure, personal safety and security, leisure facilities and community networks, which are all features of these indexes on global cities. However, Hong Kong has recorded the third worst global score for any Asian city following Beijing and New Delhi for air quality and this has negatively influenced its global ranking. Likewise the so-called "haze" generated from the annual forest burning-off in Indonesia on the island of Borneo blights the atmosphere of Singapore, Kuala Lumpur, Jakarta and Bangkok. This air quality manifests itself in pollution and permanent smog for several months of the year that is responsible for many respiratory ailments and illnesses. It is a controversial and sensitive political issue where monitoring of the levels of air quality are subject to intense public scrutiny.

The East Asia and the Pacific Opinion Poll entitled, *"What young people think?"* conducted by UNICEF gives a region wide perspective on what young people think about their future, what values they think are important, what they aspire towards and what they view as impotent issues to them. The survey also provides information that enables an analysis of the differentiated nature of attitudes as well the impact of change and modernisation.

In some countries in the region, young people are disproportionality represented in high-risk occupations such as sex work and are exposed to drug use and unprotected sex that is contributing to high HIV rates. The vulnerability for young people to the conditions manifesting HIV is related to repressive laws where policies and practices discriminate against those who are most vulnerable such as gay, transsexual and sex workers. In addition, moralistic laws in some nations forbid preventative education programs and information for young people. The absence of education and information in some countries amplifies the vulnerability of young people, a point emphasised in the UNICEF East Asia and Pacific opinion poll.

What Young People Think in East Asia

The poor level of participation by young people, mentioned earlier in this chapter, was confirmed by the UNICEF poll with a total of 39 % saying that their opinions did not matter in community decisions. A total of 15 % said they did not know but 49 % of those surveyed in the Asia Pacific did say that the opinions of their friends and themselves mattered. Those polled from Vietnam (74 %), the Philippines (73 %) and East Timor. Laos, Mongolia, Myanmar and Korea were all positive with over 50 % believing that their views did matter in community decisions. Others from Macau (70 %), Hong Kong (67 %) and Thailand were not positive about their views making a contribution to decision making (UNICEF, 2009e, p. 2).

The feelings and opinions of young people in the home were also seen not to be given enough, or any, consideration in Cambodia (70 %), and China, Malaysia, and Korea, all polling over 50 % (UNICEF, 2009e, p. 1). Further, the subordinate status of children in the family means that when they are scolded a third of them do not seek to explain themselves or the situation and remain silent (UNICEF, p. 1).

The UNICEF poll suggests that most young people have a positive attitude to their lives and the future. A total of 52 % of young people see themselves as happy "all the time" and 47 % are "sometimes happy" (UNICEF, 2009d, p. 1). The youngest urban dwellers tend to be the happiest. Success in schooling and getting good grades were cited as reasons for being happy by one third of those polled in Cambodia, Hong Kong, Macau, Malaysia, Singapore and Viet Nam. "Feeling sad" was also associated with doing badly at school particularly in Cambodia, China, Macau, Singapore and Vietnam. Other reasons for "sadness" were "being left alone" in Cambodia, Laos, and Philippines as well as death in Australia, East Timor and Papua New Guinea (UNICEF, p1).

Most young people have a sense of optimism about life and their future prospects despite the difficulties that many of them experience. Four out of five expect their life to be better or much better off than their parents and only 1 % thought it would be worse (UNICEF, 2009a, p. 2). Rural participants were more optimistic than those in the cities with a high degree of optimism being expressed by young people from China (91 %), East Timor (94 %) and Vietnam (92 %). Only in Australia (57 %) and Cambodia (54 %) did the expectation that things would be better poll at less than 70 % (UNICEF, p. 2). As many as 20 % of young people in Australia, Singapore, Cambodia, Macau, expect their lives to be about the same as their parents, a sentiment that 14 % in the overall poll agreed with (UNICEF, p. 2).

In terms of attitudes, respect for elders enjoys broad consensus, but respect for authority figures is lower and much more problematic than would be expected in countries such as South Korea and Hong Kong. However, surprisingly in Macau and Hong Kong where deferential attitudes to authority prevail, there is low respect of authority figures. Youths in South Korea also had negative attitude to both elders and authority figures (UNICEF, 2009c, p. 2).

Some of the participants in the East Asia and Pacific poll expressed reservations about establishing a sense of self-esteem and self-worth. In the context of the much vaunted economic miracle, the poll also identified some links between happiness and materialism, with money being seen as important by 31 % (UNICEF, 2009c, p. 2). The importance of a sense of individualism was seen as low in importance in China, East Timor and Mongolia, all countries with a strong socialist and collective ethos. There were high levels of self-esteem in the Philippines and Vietnam and low to very low levels of self-esteem in Cambodia, China, Mongolia and Papua New Guinea. In Australia self-image was high and this was also linked to an ability to enjoy and express freedom.

Not stealing is seen by 85 % of children as an important value and is followed by respecting others (76 %), telling the truth (74 %), and helping others at 61 % and free expression at 42 %. There was a high degree of commonality of these ranking of values across age, gender and countries (UNICEF, 2009a, p. 1).

There are strong affiliations amongst Asian youth with their families and relatives. Young people in the Asia Pacific tended to most admire their mothers (21 %) and fathers (19 %). In Thailand mothers were most admired by 35 and 30 % in the Philippines and Indonesia. Fathers were admired most in Mongolia (38 %) and East Timor (35 %) (UNICEF, 2009a, p.1).

In China (16 %), Vietnam (15 %) Mongolia (13 %) young people most admired music and pop stars. The cult of celebrity was also strong in Australia (13 %) with sports stars and actors in that country polling high. In the Philippines (17 %) comedians are the most admired. However, closer affiliations with young people featured strongly in Cambodia and Laos, with friends and neighbours polling 25 and 17 % as the preference respectively. Political and religious figures did not feature strongly except in the case of East Timor. In Hong Kong and Macau nobody is admired with responses of 20 and 29 % respectively. Singapore and Laos being on 12 % (UNICEF, 2009a, pp. 2–3) on this indicator.

The greatest area of ignorance amongst young people is in sexual relations with 54 % of them lacking any knowledge, 44 % were also unaware of HIV/AIDS and the danger of drugs was not known by 42 % of the young people polled. The knowledge about these is highest in older children, and those who are urban dwellers. However, in several countries such as East Timor (94 %), Laos (70 %) and Indonesia (60 %) rates of ignorance about AIDS/HIV (UNICEF, 2009d, p. 1) is highest.

In this UNICEF poll, a total of 68 % of those polled identified that unprotected sex is instrumental in transmitting HIV/AIDS. Also 49 % identified that shared needles and drug use are responsible for transmission of the disease. Only 20 % nominated infection of children during or before childbirth as another factor contributing to the transmission of this disease (UNICEF, 2009d, p. 1).

With the exception of East Timor and Macau, the lowest percentage of knowledge about the transmission of HIV/AIDS was found in children polled from China (39 %), Myanmar (42 %) and South Korea (24 %). While the polling indicated that there is a high proportion of children with knowledge of HIV transmission, there are some alarming trends. In Thailand, for instance, 10 % of children said AIDS could be transmitted by touching an infected person. This myth about AIDS was also repeated in Malaysia (15 %) and in China (10 %) (UNICEF, 2009d, p. 1). While 60 % of respondents knew the purpose of condoms, the poll reported that there were stark differences across the region in understanding this. The recognition ranged from as low as 4 % in East Timor to as high as 100 % in Australia, and 80 % in countries such as Cambodia, Hong Kong, Macau, Malaysia and Singapore. Knowledge of these matters associated with HIV/AIDS was highest amongst boys who lived in urban centres (UNICEF, p. 2).

With regard to employment, most polled young people wanted to be a teacher (15 %) or a doctor (14 %) with other jobs such as policeman (8 %) and engineers (5 %) falling well behind these occupations which are held in high esteem in Asian societies. There are differences in the preferences of girls and boys with teaching and being a doctor more popular with girls. Boys are more likely to want to be in the military or police. Teaching is also more popular with rural young people than those in urban areas (UNICEF, 2009a, p. 2).

Asked about what governments should do about schools and education many suggested that access to education for the poor and marginalised was in need of improvement. Many thought scholarships for the poor (14 %) followed by building schools (8 %) and equal opportunity to education (3 %) was important (UNICEF, 2009a, p. 3).

Other perspectives on the future include having amusement parks for children. This is a popular choice in Hong Kong (15 %), Vietnam (11 %) and Korea (22 %). The supply of stationary, clothes and other accessories for children was also seen as important in East Timor (33 %), Indonesia (22 %), Mongolia (17 %) and Cambodia (12 %). Interestingly, 22 % of young people polled in China believed the need to create a good living environment was very important (UNICEF, 2009a, p. 3).

Ten per cent of children said they found it "difficult" or very difficult to discuss school matters with teachers. This was especially so in Korea (31 %) and Vietnam (21 %). Discussing school matters with teachers was also difficult in Indonesia, Mongolia and Australia. The reason for these difficulties was a view by the students that "teachers did not listen to them" (UNICEF, 2009e, p. 1).

The UNICEF polling confirms many of the structural inequalities that facilitate social conditions where passivity, compliance, deference and an inability to influence decisions are evident. Some youths are pessimistic about their future and many are ignorant of matters such as HIV/AIDS that may directly impact on their wellbeing.

While many young people and children have respect for family members and authorities there is some questioning of authority figures. Young people in Asia see success in school as important in gaining the respect of elders and gaining affirmation and recognition. There are many young people and students who express feelings of disengagement and alienation, in school and society. This tends to contradict many of the taken for granted assumptions about life in Asian societies where deference and obedience are norms that are valued strongly. In fact young people do know they have the right to education, the right to express ideas and opinions, the right to play and the right not be hurt or be mistreated. In Hong Kong, Macau and Thailand young people recognise and recall these rights more frequently than those in East Timor, Indonesia, Myanmar and Vietnam (UNICEF, 2009b, p. 1). This gap is reflective of the disparities in living conditions and development discussed in the next section.

Inequalities in Schooling in East Asia

The East Asia region is characterised by a polarisation of indicators of human developments with evidence of significant gaps between the outcomes in developed and developing nation in the region, as well as disparities within many countries. The indicators for the wellbeing and education of children, including infant mortality, nutrition, universal primary education, school completions and employment in East Asia suggest, as was evident from the UNDP Human Development Index, that some countries in East Asia were at the lowest level of development.

The UNESCO global monitoring report entitled *Education for All* estimates that on average 31 of every 1,000 children born in the region will not live to the age of 5 years (UNESCO, 2009, p. 1). There are large differences in child mortality levels under the age of five. This varies from 4 % in Japan and Singapore to 97 % in Myanmar. Gaps between rich and poor are most evident in Indonesia where child

death rates among the poorest 20 % of the population are more than three times those of the wealthiest 20 % of the population (p. 1). Child malnutrition is concentrated in Cambodia, Laos and North Korea with 40 % of children under 5 years experiencing moderate or severe stunting as a consequence of malnutrition.

Institutional programs for children under the age of 3 years vary across the region with official early childhood care and education programs existing in 13 of the 19 countries in the region. There were 37 million children in pre-primary programs in 2006, a level that has hardly changed from 1999 (UNESCO, 2009, p. 2). Participation varies from nine countries where participation is above 90 % to other countries such as Myanmar (6 %), East Timor (10 %), Cambodia and Laos are both on 11 % where the levels are very low (p. 2). The absence of the provision of pre-primary services by government in low-income countries has had an impact on school completions particularly in rural areas. According to UNESCO there are also alarming in inequalities in access for girls to early childhood programs in China.

Attendance in primary school has dropped across the region with five million less children entering school in 2006 than in 1999. This drop relates to demographic changes emerging from falling birth rates, particularly in developed nations. According to the UNICEF report this demographic shift gives governments in the region the opportunity to boost per capita investments in this sector. The net enrolment ratio has fallen from 96 % in 1996 to 93 % in 2006. Many children in the region are not in school, with East Asia accounting for 13 % of the worlds' out of school population, amounting to 9.5 million children. This is an increase of 3.5 million children from 1999. Countries such as the Philippines have some 953,000 children not in schools but other countries such as Cambodia, Myanmar and Korea have made good progress in boosting attendance (UNESCO, 2009, p. 3). Evidence about out of school children suggests that those in rural areas, and predominantly boys who work in agriculture are the most common non-attending children. In some countries such as Cambodia, Indonesia and Laos those who were out of school were most commonly girls.

UNESCO considers the completion of the primary schooling cycle is as important as the attendance rate because a large proportion of children never complete their primary education. The median rate of survival, or those that complete the final year of primary school, in East Asia was 79 %. Countries such as Cambodia and Laos had completion rates of 65 and 62 % respectively but countries such as Brunei Darussalam, Malaysia and South Korea had almost 100 % completion (UNESCO, 2009, p. 4).

While these national differences indicate a diverse pattern of achievement between nations there are also within-country disparities, which suggest that children from wealthier families had better chances of completion than those from poorer families. Household surveys from Cambodia, Indonesia and the Philippines indicate that the wealthiest 20 % of the community have completion rates equivalent to 90 %. Children from poorer families are commencing school but tend to drop out of school earlier and this means that over 50 % of the children who are not attending school in the Philippines and Indonesia are from the poorest 25 % of the community. In Vietnam the poorest made up almost 60 % of the quartile not

attending school. The chances of completion are influenced by a number of factors which compound disadvantage. These include living in rural areas which means that these children are more likely to drop out of school, than those from urban centres (UNESCO, 2009, p. 4).

The disadvantages are increased if children do not speak the language of instruction in schools or if they come from slums because high levels of disease and illness that typify slums, has the effect of limiting participation in education. According to UNESCO initiatives that target the poor and those in "hard to reach areas", of slums and remote areas are needed as well as programs that address the needs of minority groups and girls. Most importantly UNESCO identifies the recruitment of child labour as one of the factors that impedes the progress of meeting universal participation in primary school. Estimates by UNESCO suggest that 122 million children in the labour force are in the Asia Pacific. Child labour contributes to early dropping-out and delayed entry meaning that child workers only have a 17 % chance of completing school (UNESCO, 2009, p. 4). Practical programs such as school meals, financial incentives for attendance and social payments to parents for school attendance as well as legal and punitive measures as disincentives for employing children are seen as important in changing the reliance on child labor in countries such as Cambodia, Laos and other less developed nations. Other groups experiencing disadvantage and barriers to participation in school are those with disabilities who are considered the most marginalised with the worst attendance rates.

In 2006 a total of 162 million students enrolled in secondary schools in the Asia Pacific. This was an increase of 29 million since 1999. The completion of secondary school varies from 99 % in Japan 96 % in Korea and 90 % in Brunei, to Laos with 35 % and Cambodia 13 % (UNESCO, 2009, p. 5). The transition from lower secondary school to upper secondary school is recognised as a critical point in the completion of post primary education and progress to tertiary education. In 2006 the Gross Enrolment Rate was greater in lower secondary with 92 %, than in upper secondary school where there is 58 % (p. 5). Many of the factors contributing to dropping-out of primary schools are also evident in secondary schools. Overall these factors are triggers for non-participation. Dropping out and non-completion creates a situation where nearly 113 million adults in the Asia Pacific "do not enjoy the right to literacy" (p. 6). In the quest for universal primary and secondary education in Asia there have been major gaps in the provision of adult education for young people. Inadequate funding has contributed to the failure of governments to see adult and vocational education as a priority. This has acted to reduce avenues for young people to enter higher paid skilled labour markets and break out of the cycle of low-paid and low-skilled insecure and often dangerous jobs.

Key to developing more equitable educational and social outcomes is responding to the challenge of illiteracy. In the region the groups with the highest rates of illiteracy in the Asia Pacific are in rural and indigenous populations in the poorest countries. For example, in Vietnam the literacy rate for the general population in 2000 was 87 % nationally, but only 17 % for ethnic groups and 5 % for Indigenous groups (UNESCO, 2009, p. 7).

In establishing overall outcomes for students, UNESCO has argued that, "while international assessments consistently spark intense political debate, less attention is paid to absolute level of learning" (UNESCO, 2009, p. 9). The evidence suggests that in many countries, even though there has been improvement in attaining universal attendance, many students are only attaining competence in basic skills. In Cambodia a grade 3 assessments of Khmer language skills involving 7,000 students placed 60 % of student in the very poor to poor achievement band.

There are wide spread disparities between children across national systems which see Korea, Hong Kong, Macau and Singapore consistently perform well in the top groupings of international tests such as PISA and TIMSS. This is not replicated in other countries, particularly developing nations. Educational outcomes in many countries are poor in international tests with 62 % from Indonesia and 46 % from Thailand scoring in the lowest level one group or below. These tests are administered to children in school but the overall levels of achievements are worse when non-attendees are considered, because their skills levels tend to be worse than the official results (UNESCO, 2009, p. 9).

UNESCO considers that redressing these inequalities is in broad system improvement which create better curriculum and learning materials, infrastructure development, information systems, improvements in governance and teacher training and teacher quality. Improvements are also needed in student support through scholarships, endowments and tax incentives. The task seem to be a simultaneous approach to improving access to school as well as providing health and nutritional assistance in poorer nations. This is well summarised by the UNESCO report which indicates the situation where:

> in the Philippines, teachers report that one in seven children has to walk more than five kilometres to attend school and one third or more students attend school with insufficient toilets. Teachers in eleven countries report that at least 9 % of children come to school with an empty stomach. (UNESCO, 2009, p. 9)

UNESCO sees that the challenge of improving educational outcomes in East Asia relates to increasing the quantum of qualified teachers, reducing the pupil to teacher ratios and lifting teacher quality in the Asia Pacific. There 9.7 million teachers in the Asia Pacific. The number of primary school teachers has increased since 1999 but it is estimated that the region will need to recruit an additional four million teachers by 2015. One of the key challenges is to reduce the pupil to teacher ratio (PTR) to levels not exceeding 40:1 which is recognised internationally as the ceiling. Some countries have made large strides in reducing the ratio such as Macau and Vietnam where they reduced the ratio by ten percentage points to a ratio of 21:1. Others such as Cambodia have increased to a ratio of 50:1.

There are shortages of trained teachers in the Asia Pacific as a consequence of low investment in education and an inability to provide incentives to make teaching an attractive career. The inequalities between urban and rural schools are amplified, as untrained or inexperienced teachers tend to be concentrated in rural and poorer village schools. In urban schools there are often higher PTRs than in rural schools but the higher PTRs in poorer schools tend to amplify inequalities particularly when government schools have higher PTRs than private schools.

Other factors include teacher absenteeism, low teacher morale, low pay and poor working conditions as well as the effect of HIV/AIDS on teacher mortality.

Without financing and government programs that redress these inequalities, the disparities discussed in this section, the under resourcing of education in many nations, will perpetuate unequal outcomes between nations and within them. The median level of investment in education is 3.6 % of GNP but there are variations between countries which see Cambodia allocating a mere 1.8 % of GNP and Malaysia with 6.6 % of GNP. While most countries have increased their investment in education, the balance between public expenditure and private expenditure, reveals the extent to which governments are committed to reducing inequalities in school opportunities. This balance varies from 9 % of government expenditure in Japan to 25 % in Malaysia and Thailand (UNESCO, 2009, p. 14).

Conclusion

East Asia has experienced an economic miracle that has seen spectacular economic growth. While the region has been identified as the source of the economic Asian miracle, the benefits of the boom have not been experienced universally. This chapter has documented that inequalities have been consolidated in this period of growth and entrenched poverty and dispossession. Young people in the region have diverse experiences of schooling, language and interactions with each other, adults and teachers and their lives are universally impacted by dynamic change that typifies globalisation, new technologies and changing norms and values. The East Asian miracle has been premised on an alignment with a continuum of growth, employment and political stability. Most recently the inequalities in East Asia have been exacerbated by unemployment of graduates and school leavers and their plight has been attributed at poor preparation for employment in this schools and College education. The next chapter looks at how the region may respond to the growing gap between the capabilities of graduates and the expectations of employers.

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Chapter 9
Literacy and Workforce Capabilities

This chapter explores some options and ways in which systems can respond to the lack of connections between examination driven systems and preparation for work. This chapter looks at the experience of Australian universities implementing graduate attributes as a way of identifying some of the generic employability skills that employers see as being essential in working in the new globalised economy. The chapter discusses and documents some of the background for developing graduate attributes and identifies some attributes that have been developed in the Australian context. Their relevance and transportability to the Asian context is explored.

Debates debates around what skills graduates should bring to the workplace have been influenced by shifts in the labour market. The shifts in availability of job opportunities and the level of unemployment have shaped the way in which universities and other education providers have been forced to respond to expectations on which skills gradates should possess.

In Australia there has been a dramatic shift from the 1990s when there was high unemployment and fewer employment pathways to the situation in contemporary Australia where there is a skills shortages across the occupational profile. In the 1990s debates were centred on a perceived "failure" of the education system to develop "work ready" graduates with the "right" skills. In many countries this theme has continued and has surfaced in East Asia, in the early twenty-first century. The blame was placed on the education system and teachers generally. In addition, there was a view that curriculum was not focussed on industry needs. Unemployment was attributed to a deficit view of the skills of graduates but there was no questioning about the macro and micro conditions of the economy that produced high unemployment.

In the 1990s and 1980s debate on curriculum reform was dominated by the introduction of competency-based training (CBT). It was a period described as "new vocationalism" where there was a policy priority on vocational education and training and preparing for work when it appeared job opportunities were actually diminishing as unemployment grew (Kell, 2004). Many of the arguments that were expressed in Australia have resonance with those that are emergent in East Asia.

Competence, Quality and Crisis in Higher Education

The introduction of CBT in Australia was designed to promote a convergence between general and vocational education and enable the development of a world-class workforce. Arguments at the time were dominated by a critique of traditional curriculum as being remote from the needs of the workforce and identified it as not preparing young people for the "real" work of work. The adoption of CBT was most influential in the technical and vocational education sector where most post compulsory schooling was undertaken. Competencies were established for industries, developed by industry advisory councils and endorsed by state training agencies, giving them links to the workplace.

They were included in the curriculum for various trades and occupations. CBT in vocational education stressed the application of competencies in a vocational setting and emphasised the ability of trainees to be assessed in a workplace setting rather than an institutional classroom setting. The application of CBT has been criticised as favouring instrumental and behaviourist perspectives on skills and failing to account for the diversity of workplace settings. CBT was reliant on the development of units of competence and performance criteria. There was resistance to CBT in universities and also in the schools sector. Schools saw CBT as being unable to respond to the need to recognise senior schooling and skills acquisition in a developmental paradigm and had difficulties with the binary of competent and not competent assessment processes.

Schools also had difficulty in developing authentic workplace settings although this has largely been overcome with almost 50 % of senior school students in Australia undertaking VET programs in their final 2 years of school. Universities were however reluctant to introduce CBT and many of the arguments against them tended to replicate arguments that polarised liberal and instrumental views of education, reproducing the divides between working class and middle class education. Some of these themes of resistance have a familiarity with the conservatism of Asian universities.

However, many professional associations had adopted what are termed professional competencies associated with various professions such as accountancy, nursing and teaching. The adoption of these competencies was also evident in professions where there was an element of training conducted in the vocational education and training sector such as nursing and accountancy. In teaching, for example, Australia has a set of professional standards that are recognised nationally.

The tension around competing views about how to determine competence and readiness of graduates for the workplace were also complicated by competing views between those favouring "generic" skills and those arguing for "specific" work related skills. Supporters of specific skills favoured the application of vocational competencies and supporters of generic skills focussed on applying skills to a specific job. Supporters of generic skills favoured broader non-specific and transferable skills that can be applied in a range of employment settings. They also saw the role of schooling and universities in producing graduates with skills that would have

multiple applications across a range of vocational settings that would be value added by additional training in the workplace. The Australian education system adopted a compromise that enabled general education to be aligned with the needs of the workplace with seven identified key competencies. These strongly favoured generic competencies.

> Each area of skill will consist of applications of knowledge and skills in the workplace context. Each application will be referred to as *a competency* accompanied by a set of *criteria* for judging achievement of a competency. Within each area, competencies will be arranged in order of difficulty within *strands*. This will enable the identification of a range of performance standards each consisting of a similar order of difficulty. The resulting matrix will be called a *key competency structure.* (Mayer, 1992, p. 3, cited in Kell, 1998)

The seven set Employment Related Key Competencies generally included:

- Collecting, analysing and organising information.
- Communicating ideas and information.
- Planning and organising activities.
- Working with others in teams.
- Using mathematical ideas.
- Techniques solving problems.
- Using technology.

Although developed, an eighth competency, cultural understandings, was not included in the key competencies framework. Critics argued that these generic competencies were less to do with actual skills and more to do with the development of the attitudes and behaviours needed for a compliant and passive workforce. These generic competencies were adopted for post compulsory education in school and vocational settings and were highly influential in establishing a template in the higher education system variations of graduate attributes even though that system was largely resistant to these developments.

Concurrent with the advent of this "new vocationalism" was a growing conservative critique of the quality of higher education and the work readiness of university graduates, which is now replicated in East Asia. There was a persistent criticism of universities by "conservative" commentators that they were in crisis. Their critique centred on demands to demonstrate greater accountability and evidence of meeting the needs of key stakeholders. Under the broader banner of accountability universities and government embarked on introducing quality systems to audit the ability of universities to produce work ready graduates as well as the performance of universities in meeting needs. This emergence of a quality agenda occurred at a time when the Australian university system shifted from an elite system to a mass system and experienced growth in undergraduate education. Paradoxically this period of growth was underpinned by a reduction in spending that was initiated through the amalgamation of higher education providers into 30 providers in what was termed the unified national system. The purpose of higher education was also being redefined with the social role of the university being subordinated in favour of view that saw the system's role servicing the economic needs of capital and producing a high skilled workforce for industry.

Aspects of quality and system performance were collapsed into the development of a series of processes designed to determine and measure graduate attributes. The urgency for the need to identify specific attributes was also a response to a view promoted by conservative commentators, some who were employers, that the university curriculum was captive to trendy causes and progressive educationalists. The result of this trend was a failure to equip graduates with a "rigorous" tertiary experience. Evidence of this erosion of centred on allegations of poor academic benchmarks and a failure to demonstrate basic skills, including poor literacy, poor grammar and inability to perform basics mathematics and writing tasks. The attacks on university graduates were part of an overall attack on what was seen as progressive education by conservatives who argued for a more static view of curriculum based around "standards" and "content". Overall most of the demands for change emerged out of continued attacks on public education by the right. Much of the quality movement and the development of graduate attribute have emerged as a consequence of the cyclic "crisis in public education" promoted by right wing "think tanks" and "independent analysts".

Part of the motivations for change came from the way in which surveys of graduates had been used to identify the quality of courses and rate their experience as students as well as outcomes after graduation. In Australia every graduating student is requested to complete a course experience questionnaire that is administered by the Graduation Career Council six months after graduation. This data has been used with great effect to develop de-facto profiles of institutions performance and as a proxy measurement of quality. The data from exercises such as the Course Experience Questionnaire (CEQ) and the Graduate Destination Survey (GDS) have also been used as ways of developing comparative rankings and developing league tables of universities. The best-selling *Good Universities Guide* has used this data as a source of information for prospective students but university administrators have selectively used this as a way of profiling and marketing positive aspects of their performance. The *Good Universities Guide* has also developed a university of the year award. The impact of this development has been to concentrate attention on the outcomes of the university experience and to assess the success of graduates in achieving employment outcomes as well as making evaluations and judgements about commencing salaries. The focus on attributes, employment prospects and starting salaries has been significantly clustered and linked to institutional performance and the relative status and prestige in which universities are held in, relative to others.

Anxieties about literacy standards and communication strategies have sparked calls for exit examinations for students to test their generic skills. These tests are mooted as independent of the discipline specific awards of the university and are proposed as ways of finding out if university graduates have the skills that they need in the workplace. The principle problem with them is that they are seen to be subject to the practice of "teaching to the test" and there are arguments about who will pay for the tests. There are also problems regarding the utility of written tests in disciples such as music and theatre where there is less emphasis on traditional writing and communication. Several proposals have emerged in the US and Hong Kong for governments to check the performance of the universities (Kammer, 2006).

Combined criticism of business and concerns about the quality of graduates, despite evidence to the contrary, created the circumstances for universities to more overtly and explicitly identify the employability and capabilities of their graduates. The emergence of the movement for graduate attributes has been strongly influenced by shifts in the perceptions about employability skills and personal attributes that characterise corporate enterprises.

The conceptualisation of the ideal employee has aligned with an individualised and idealised notion that profiles a self-actualised, self-contained and self-motivated professional. While skills and expertise are viewed as important, attitudinal and behavioural traits are seen as equally, if not more important than professional expertise. Capabilities in problem solving, teamwork and dealing with complexity are seen as important in meeting the challenges of technology. However, much of the discussion on attributes is characterised by rhetoric about desirable qualities which include being "self-starters", "go-getters" and having "star quality" that enable them to work under pressure to deadlines in a "multitasking environment".

There is a series of contradictions concerning the tensions between individualism and corporate and team loyalty, which have been particularly strained as a consequence of the notion of the portfolio worker. The portfolio worker suggests that workers will have array of skills and capabilities that are capable of being "sold" or "auctioned" within a competitive labour market. The possession of certain skills and the ability to secure market power are seen as concepts that are aligned. The illusion of this perfect sellers' market is unrealistic in the context of growing casual and contract employment that has not automatically resulted in higher returns to employees. Rather it has seen them subject to more intensified work and uncertain work lives. The ideal post-industrial employee is therefore seen as being able to move seamlessly across multiple labour markets and is able respond to the challenges of working simultaneously in local and global settings. In these settings skills in languages and "cultural mastery" are seen as important but there are real questions about how universities respond to these demands. In Australia less than 3 % of university undergraduate students study Asian languages and there has been some resistance to diversity training with critics labelling such programs as examples of political correctness (Kell & Vogl, 2007). The need for what has been termed soft skills to complement "hard" technical skills was promoted as an important development.

In the Asia Pacific region proficiency in English has been seen as important criteria for graduates and this has created a level of concern over the language capabilities of graduating students. With the growing presence of multinational organisations in the Asia Pacific skills in written and spoken English has assumed a new importance and is seen as a pre requisite for many occupations. However, many graduates may have learned English in school and university but have limited skills in workplace settings. The need for experience in English that is situated with a vocationalised or occupational setting is regarded an important attribute for participation in the global knowledge economy.

Shifting Labour Markets and Shifts in Views
on Graduate Attributes

In the first decade of the twenty-first century the domestic supply of graduates and trainees has not been enough to fill expected vacancies. Shortages of qualified workers in Australia are estimated in the region of 200,000 workers. There is broad agreement across industry, unions and employers that Australia is experiencing a critical shortage of qualified professional and technical workers. Critics argued this is a consequence of disinvestment in higher and technical education and a failure to expand the higher education system to respond to a growing regional economy in the Asia Pacific. This change from an economy with a surplus of labour to one where there are considerable shortages has also seen changes in the way in which notions of graduate employability and readiness are viewed by government and business.

The urgency to fill vacant positions has created a situation where employers and government question both the duration of courses as well as the functionality and validity of qualifications. Consistent with the notion of flexible specialisation, the notion of a broad ranging vocational qualification has been questioned. The importance of long-term preparation has been questioned and industry has advocated a "fast tracking" of training to meet the shortages in a range of professions and occupations. In this context employers have questioned the need for qualifications and have introduced the idea of a portable "skills set" as a substitute for qualifications. Skills sets are proposed as enabling regarded workers to be fast tracked and are seen by employers as eliminating redundant aspects of training which have no direct application to current work practices and market demand. These skill sets are as more compact and concentrated representations of attributes directed to greater specialisation. Critics argue that this breaches and uncouples the linkages with qualifications payments and represents attacks on the pay for which training is rewarded through the industrial relations system. There is resistance to fast tracking from unions, guilds and professional associations but there are also key questions about who pays for training. Employers generally take the view that "generic" qualifications and skills sets should be a cost met by the state or individuals themselves and that employers could meet the costs of specific job training for employment.

Another response to the skills shortage has been a dramatic boost by the Australian government of its skills migrant intake and expanded the use of temporary work visas under the section 457 visa program. The abilities of migrant workers to seamlessly integrate into the domestic Australian domestic labour market have been impeded by several factors. These include poor support for arriving migrants places pressure on newly arrived migrants to accept any job. This situation is exacerbated when there are delays in process recognition of qualifications by local authorities and qualified professionals are unable to gain work in the areas for which they have been assessed and selected by migration authorities (Kell, 2005). This absurd situation has been an ongoing issue and has resulted in an agreement between the Australian government and the states to conduct a one off assessment of migrants work skills overseas and to ensure that there are nationwide standards.

The experience of migrant workers in Australia who find it hard to have their skills recognised suggests that access to employment is not exclusively determined by the possession of attributes but is mediated by social, cultural and structural conditions. From the experience of skills migrants in Australia the possession of attributes recognised by employers in themselves are not a guarantee of entry into employment. Success in achieving employment outcomes has also been heightened by work placements to enable new entrants to become familiar with English within a vocational setting. Language, culture and an ability to understand the secret knowledge of the way in which employment and work really works is an important determinant in success.

Graduate Attributes in Australian Universities

At the University of Wollongong graduate attributes are linked to teaching and learning, notions of how learning should be conducted in a university and what graduates need to be able to do. The University Wollongong site describes this link as:

> The characteristics or qualities that the University expects of all its graduates; they are a key measure of the University's achievement of its core functions and therefore should be developed while students are completing their studies. Supporting each graduate attribute are more specific tertiary literacies that indicate a student is developing skills relevant to that attribute. (University of Wollongong, 2007)

The notion of appropriate learning in its broadest sense is also linked to the earlier discussion on literacy with the concept of tertiary literacies. All Wollongong graduates are required to have passed a literacy test which is conducted in a self-managing mode on line. Further, the development of courses and programs at this university have to demonstrate how they contribute to developing tertiary literacies and conform to the overall framework of tertiary literacies. The domains of the University of Wollongong nine key attributes and are integrated into teaching (Fig. 9.1).

The University of Melbourne, one of the oldest and established universities, has identified its attributes as enabling students to be academically excellent, have knowledge across the disciplines and demonstrate leadership. The global mission of this university is evident in the attributes associated with being attuned to cultural diversity and also the notion of the global citizen. These attributes are summarised as being:

> Attuned to cultural diversity:
>   *value different cultures
>   *be well-informed citizens able to contribute to their communities wherever they choose to live and work
>   *have an understanding of the social and cultural diversity in our community
>   *respect indigenous knowledge, cultures and values
>   Active global citizens:

Attributes of a Wollongong Graduate

Attribute 1		A commitment to continued and independent learning, intellectual development, critical analysis and creativity.
Attribute 2		Coherent and extensive knowledge in a discipline, appropriate ethical standards and, where appropriate, defined professional skills.
Attribute 3		Self confidence combined with oral and written skills of a high level.
Attribute 4		A capacity for, and understanding of, teamwork.
Attribute 5		An ability to logically analyse issues, evaluate different options and viewpoints, and implement decisions.
Attribute 6		An appreciation and valuing of cultural and intellectual diversity and the ability to function in a multi-cultural or global environment.
Attribute 7		A basic understanding of information literacy and specific skills in acquiring, organising and presenting information, particularly through computer-based activity.
Attribute 8		A desire to continually seek improved solutions and to initiate, and participate in, organisational, social and cultural change.
Attribute 9		An acknowledgement and acceptance of individual responsibilities and obligations and of the assertion of the rights of the individual and the community.

Fig. 9.1 Attributes of a Wollongong graduate (Hoban et al.)

*accept social and civic responsibilities
*be advocates for improving the sustainability of the environment
*have a broad global understanding, with a high regard for human rights, equity and ethics. (University of Melbourne, 2007)

Other Australian universities have developed attributes that also convey broader roles and responsibilities for university graduates. Charles Darwin University (CDU), a newer university in Northern Australia is a cross-sectoral university with higher education a VET sector presence has attributes that include a sophisticated and complex linkage with employability skills. CDU's attributes include core attributes, generic attribute, a descriptor and a section on how the attributes align

with employability skills. The CDU core attributes include personal and practical attributes, citizenship and worldview. The CDU attributes define a graduate with characteristics of citizenship as:

> Able to apply equity values, and has a sense of social responsibility, sustainability, and sensitivity to other peoples, cultures and the environment. (Charles Darwin University, 2007)

In contrast to the broader vision of attributes the University of Sydney another one of Australia's more established universities has a set of attributes which are more related to the internal aspects of the university. Sydney's attributes and the link to employment are discussed as:

> We want to help you develop a broad range of knowledge, skills and attitudes valued by employers in addition to the degree-specific content knowledge and skills you develop as you study as part of our learning community. We have developed University-wide graduate attributes to unify our vision of what our graduates will know and be able to do. In conjunction with feedback from employers, the Faculty of Economics and Business has developed discipline specific graduate attributes which should be read in conjunction with the University of Sydney policy link on generic graduate attributes. (University of Sydney, 2007)

Although many institutions claim to have different missions and specific roles and relationships that identify them as unique, graduate attributes tend to have a universal and generic quality and tend to be expressions of what might pass as uncontroversial "common sense". The earlier discussion and the paucity of evidence about the lives of graduates suggest that there needs to be an examination of these issues.

Attributes and Employability

The establishment of attributes and employability skills is generally determined by views about what employers require and tend to be skewed towards their perceptions of the skills and attitudes they value (Brennan, 2004). These perceptions often lack comparability, are anecdotal and have a universal quality in valuing such virtues such as honesty and integrity etc. Brennan also highlights the interplay of accumulated life experience that is not recognised or appreciated as providing a foundation for employability.

> Experiences that when taken singly may not add up to much, may when taken in combination, represent a period of life marked by huge demands and complexities and by personal achievements in coping with it all. But is anyone – in higher education or employment – fully recognizing these achievements? Roles and identities of student, worker, wife, and mother are held simultaneously rather than experienced serially. Is there a lot of learning going on here that we are failing to see and to celebrate? (Brennan, 2004)

Functionalist and lineal interpretations of the student experience fail to capture the complexity of life—the way in which formal and informal learning might integrate and the difficulty in assessing the relative impact. Patterns of employment that see regular and cyclic job changes also imply that there are dynamic qualities about the

experience of graduates. In particular, there may be a transition period in which a graduate establishes their career direction. Brennan argues that little is known about the experiences of graduates.

> We know that there are a lot of job changes, further study for many, and periods of unemployment for a significant minority. It might well be that the decisions taken and the experiences gained in the three years after graduation are as important for future employment success as the three years spent within higher education. Yet we know little about them. (Brennan, 2004)

This indicates that the initial point of further research might emerge from the experience of graduates and that a situated approach is a more fruitful starting point than trying to apply generic characteristic to diverse settings and experiences.

> There are assumptions about the environment into which graduates seek employment that tend also to under estimate the importance of the employment environment. There is the assumption that wages, conditions and opportunities have little or no influence in determining the success and behaviour of new graduates and their employment patterns. (Brennan, 2004)

More particularly, graduate attributes are also not formulated and developed in a cultural and ethical vacuum. They are influenced by social and cultural norms. How these norms are replicated and reproduced is an important question that is unanswered in the quest to establish "sets" of attributes, many of which are identical but referenced to very different institutions with diverse institutional cultures and settings. There is also little attention paid to the interplay between power and dominance that is exerted in the form of the politics of accountability imposed on universities by regressive and conservative commentators. The emergence of graduate attributes is an attempt to react to a critique and apply uniform criteria onto an increasingly diverse and discursive employment environment.

Putting School to Work in Hong Kong: A Case Study

Hong Kong has been a global city that has been subject of considerable change. Once the conduit for capital to and from China in the cold war, Hong Kong developed a reputation as an international site for global capital. This role remained throughout the period of British colonisation. However, the return of Hong Kong to China in 1997 has changed this relationship. In an increasingly open economy Hong Kong has few advantages and centres such as Shanghai have overtaken Hong Kong as China's financial capital. The Hong Kong and Shanghai bank returned its headquarters to Shanghai in 2010 for the first time since the Chinese communists assumed power in 1949. There are anxieties over these changes as well as the ambiguous nature of relations with China under the "one country two system" policy. Autonomy in migration and internal affairs for Hong Kong will expire in 2047 and many in Hong Kong remain unconvinced about their future in China as they strive to retain an independent identity. Maintaining connections with the global economy through finance, transport, and tourism have been identified as important in sustaining the autonomy and independence of Hong Kong.

This ambiguous relationship is evident in Hong Kong's ambivalent adoption of the three languages policy where Mandarin, Cantonese and English are the three official languages. Many in Hong Kong who speak Cantonese as their first language are reluctant and resistant to learning Mandarin and have a preference for speaking Cantonese or English. Many of Hong Kong's citizens have fled from China and are antagonist to China, even after nearly 16 years since the handover in 1997. Much of corporate Hong Kong is focussed on external international markets rather than the mainland and has little more than symbolic attachments with China. This relationship and attempts to ensure Hong Kong remains viable with the global economy has driven education reform in Hong Kong. In 2000 the Hong Kong government developed significant reforms to align the Hong Kong system with international standards in senior secondary curriculum as well as seeking to increase participation and retention in secondary schools. The development of the New Senior Secondary Schools curriculum (NSSS) provided broader options and pathways for students including elective options in subjects called Applied Learning and Other Learning Experiences. These were designed to give students learning experiences that prepared them for the world of work and enabled them to achieve employment capabilities, as well as provided a more diverse learning experience. These programs and more particularly Applied Learning provided the basis for vocational education in the senior secondary curriculum in Hong Kong.

However, few schools were equipped with the specialist facilities for vocational education and were dependent on programs provided by the very well resourced Institutes of Vocational Education. The reliance on subcontracting arrangements was partly a response to the absence of vocational education facilities in schools focussed on academic programs but also there was not curriculum and learning materials that schools could use. Subcontracting largely leaves the core activities and ethos of secondary school unchanged as vocational education remains outside the school. This means that the exam driven approach remains unchallenged and the status assigned to vocational education and the development of employability attributes are marginal and at the periphery. Industry and schools also remain separated and there is little connection between them where employability and generic competencies can be negotiated. There are powerful social and cultural forces that perpetuate this situation. However, some schools recognise the need to provide meaningful experiences and diverse pathways for their students that went beyond preparation for university. The need for this was more urgent because the new education reforms in Hong Kong also introduced caps on the places available for university study.

The task for reformers seeking to implement work related or vocational education in secondary education in Asian settings such as Hong Kong is to not only confronting profound cultural conflict that values scholarly outcomes but also an absence of learning materials. They also have disadvantages in terms of not having the curriculum, guides, learning and assessment materials that make up so much of the Asian schooling system. Without this, teacher support for innovations and change is unlikely and is doomed to consolidate cynicism and resistance to changes in schooling. Reformers also have to reshape the pedagogical practices away from passive learning to active and situated practices where students are "learning by doing".

One independent school in Hong Kong undertook this challenge by accessing government funds designed for innovation. In 2009 the Church of Christ in China Kung Lee College in Causeway Bay applied for government funds to develop an innovative approach to senior schooling through the Hong Kong government Quality Education Fund (QEF).

In partnership with the Hong Kong Institute of Education (HKIED), Kung Lee College and its staff developed an ambitious initiative to develop work-based learning. Key leaders in the initiative were Professor Richard Bagnell formerly from HKIED and Ms Susan Ha the Principal of the College. The reforms at CCC Kung Lee College were not simply about introducing work-based learning but involved changes to the curriculum, the timetable and the role of teachers. In the absence of curriculum the college developed their own qualifications for accreditation by the Hong Kong Council for Academic and Vocational Qualifications. The school, as part of the project, developed Diploma level qualifications at level 3 in Business and Information Technology. The College offered not only the Hong Kong Certificate of Education but also a range of vocational programs that had been developed by the school. This is very different to other countries where vocational qualifications were under the direction and control of industry groups. The College developed within its own resources and created programs that included a Diploma in Business and Information Technology and Diploma in Hospitality and Tourism Management at Qualifications level three.

The material also included modularised learning units, learning guides and assessment tasks, utilising CBT and modular approaches. The school reshaped its staffing, hiring specialists in industry training in the areas of hospitality and retail, both growing areas in Hong Kong. It also developed strong collaborative partnerships with industry. However, until 2010 most programs did not have a work based component and were consistent with most Asian practice in vocational education by having a high level of internal institutional training and very little external industry based learning.

In contrast the CCC Kung Lee College initiative launched in 2010 had a significant work based component where students were involved in a continuous manner in the real world of work. The work based learning involved placement of 23 students hosted by 15 industry partners in a 15 week placement which involved the students working in the enterprise for 3 days a week. The total program was 360 hours and gave the students nine credits for a level three qualification in Hospitality, Tourism Information Technology and Business (Kell et al., 2011a, 2011b).

The 25 students were placed with several employers including major hotels and retail chains, clubs travel agencies and other service centres. Workplace mentors as well as staff from the College who liaised with the students during their placements supported the students. The days at school were designed as opportunities to reflect on and prepare for their placements. The students were formally assessed for their program by the school and their mentors. Prolonged engagement with the workplace enabled students to gain an informed perspective on their career choices as well as valuable experience in a workplace. Often students had a very limited and clichéd views of work and their experience provided a more realistic views of what the job

is about. Some had difficulties negotiating the politics of the workplace and the protocols of communications in the workplace. Others in the travel and hotel sector found they had to use foreign languages such as English and Mandarin. The students experienced all the challenges of working including the discipline of early starts, long hours and the need to manage and plan to be prepared for work. Some worked in teams and experienced the demands of working with others, something that the schooling system does not emphasis in an examination based environment (Kell et al., 2011a, 2011b).

While work-based learning was seen as an important initiative they also had to keep up with their normal lesson in the initial phases. This practice shows the durability of the examination based system and the challenge reformers have in changing the customs and practices of the school system. All students had to encounter the fact that their program did not exempt them from submitting school assignments.

The students, many who were fatigued by their new routines, had long days starting early in the morning. Recognising these difficulties and the risk that students would pull out of the program, the College rescheduled assessment until the end of the work-based program. The College found it needed to restructure some of its staffing and the way they respond to students and organise their learning. Work-based learning meant that much more of the learning was managed independently by the learners and teachers functioned more as learning managers and facilitators. Teachers also had to maintain links with the employers and the workplace mentors to monitor the progress of the students.

To conduct such activities means that schools have to develop and sustain a network of employer and industry links to place students in suitable enterprises. In addition preparing and training the mentors and workplace supervisors occupies and important role of the school to ensure that they were prepared for a structured and systematic program that met agreed objectives. The teachers also had to work in consultation with industry specialists in negotiating the programs and supporting students to achieve successful outcomes in both the placements and their school program. One teacher reflected that her experience of the program in work-based learning was to:

> Contribute to the students' whole personal development through the development of generic skills and the work readiness skill, aptitudes and understanding. Moreover, work based learning provided an opportunity for students to explore different careers, and help them to build social and business networks for finding jobs in the future. (Kell et al., 2011a, 2011b, p. 10)

A similar positive sentiment was expressed by one of the students:

> I discovered my weaknesses and my strengths through participating in work-based learning. My weaknesses were that I could not speak confidently and concisely. I could not handle problems properly. However, my strengths were that I was punctual for a week and I am a responsible person who is willing to learn. Kell et al. (2011a, 2011b, p. 8)

Another student described the overall benefit of the program as important because,

> Working in the real work environment can gain precious work experiences. It is beneficial to the students. After this program I became self-confident and independent. (Kell et al., 2011a, p. 8)

The implementation of work-based learning at CCC Kung Lee College was largely seen as a success as all the students completed the placement and attained their chosen awards. In 2011 a second cohort of students was prepared for placements. Parents saw the value in giving students real work experience and pathways to future employment. Employers saw the participation in the program as part of a social obligation to assist young people to develop employability skills as well as being a way of sourcing future employees. Many of the participants found employment with the firms where they had undertaken their work placements. The school saw this program as an opportunity to engage students who were disinterested in academic work, yet many of the students, after their work placement had recommitted towards an academic pathway (Kell et al., 2011a, 2011b).

Conclusion

The CCC Kung Lee College innovation highlighted the fact that work-based learning had complemented academic learning and provided practical opportunities to apply their classroom learning. Many of the students had used English and Mandarin, had used mathematics in calculating bills, had developed and designed promotional material and prepared shift rosters and programs for their work locations. All these tasks involved learning by doing and reinforced the acquisition of academic skill as well as building confidence in the employability skills that many saw were absent from school graduates. While this initiative challenged the dependence on traditional views of schooling, it should remembered that this is an isolated incident initiated by an independent school and that there is still a pressing need to extend this type of program so that its is system wide and involves a wider range of schools and students. This small case study highlights initiatives can be developed to broaden the curriculum to incorporate employability capabilities, or what is seen in Australia as graduate attributes, as well as breaking the nexus between examinations schooling. The Hong Kong example suggests that there is an important role for school, leadership and partnerships with industry and the academy. The Hong Kong case study situates language and literacy within a context of learning by doing with practical and situated examples and experiences. It also situates student learning within a multilingual paradigm, which as the final chapter will discuss, is one of the key findings for the future.

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Chapter 10
The New Dynamic and Shifting Approaches Literacy and Language in East Asia

This final chapter will identified the policy forces surrounding education at a national regional and global level and will discuss how broader dynamic social forces create the conditions where approaches to literacy will be reshaped. Many of the changes are specific to the East Asian region, but are generally a product of the trends discussed earlier in this book and are a feature of the contemporary forces of globalisation. The same forces that have created the image of a seamless global economy are also influencing the nature of language and literacy and the way that people communicate and read. It also means that literacy is not simply about proficiency and reading. It is about engagement with aspects of society. This suggests that new approaches will need to engage with social change as well as economic advancement. It will mean that of these challenges some of the dominant discourses surrounding schooling, learning and social practices in East Asia that concentrate on economic growth, prosperity and stability will have to change to respond to very different circumstances in the post-millennial era.

Approaches aimed at creating better futures are not simply related to improvements in reading proficiency and achievement of students in examinations. Nor is it simply providing graduates with better communications skills and the attributes to enable them to get jobs in the global economy. While these are important objectives nothing can really change unless there are initiatives and approaches that promote broader social change that reshapes the way societies in East Asia are organised and addresses the inbuilt inequalities that characterise many nations.

This means that the key to changing literacy practices and outcomes is to develop changes in the broader economic social and political environment of young people and their families. The challenge of the future is not simply responding directly to many of the tensions and dilemmas identified in this book about literacy and language but is related to the broader dimensions of social change in East Asia and a recognition of the shifting environment that typifies contemporary East Asia. From this perspective literacy is connected to a series of interrelated dynamics and approaches that are located beyond the classroom, beyond schools and are wider than the school systems. These approaches are about reform to the social conditions

and economic arrangements that characterise the experience of people in parts of East Asia. It is this challenge to create the conditions for wider changes at a societal level that comprises the discussion in the final chapter in this book.

The Global Dynamics of Policy Trends, Competition and National Development

This final chapter provides some conclusions about literacy and language generalised around some of the trends and circumstances in East Asia that have been identified in earlier sections in the book. The generalised conclusions in this section are an exploration of macro-level trends and incorporate a regional analysis, which challenges some of the assumptions about literacy that have shaped the policy discourse where literacy proficiency and economic development are related.

While this section deals with a regional perspective on literacy and language, it also recognises, that each nation has specific historic legacies, cultural, economic and political contexts that shapes the nature and character of the schooling and education systems. These features, described in Chap. 7, influence the way in which literacy is accessed, interpreted, valued and taught. However, these specific features are increasingly influenced by the dynamic nature of language, communications and commerce and the global dimensions of learning. As economies are now interdependent and increasingly integrated so too are many features of the policy settings in education where curriculum, teaching methodologies and assessment strategies are being swapped and are migrated from one country to another.

Many of these trends have been promoted by global agencies such as the World Bank and the OECD and these have a generic quality that sees these policies adopted in vastly different contexts. From countries as diverse as South Africa, Russia, Dubai, England and Finland there is often an identical policy menu. In East Asia, the subject of this book, the same policy responses have been implemented in countries as large and as wealthy as China, as well as others such as smaller and poorer countries like East Timor. Regardless of whether those countries are recognised as performing well, or are one of those that are at the bottom of the world rankings, the identical recipes for system improvement are recommended by many global agencies.

These universalised trends have orthodox ideology that values increased monitoring and accountability measures and quantified indicators derived from standardised testing. This orthodoxy also values the ranking of schools and the performance of students, as well as teachers, against each other. This essentially places schools, students and teachers in competition against each other in a market context where recognition, status and reputation determine a relative global market position. Testing and ranking facilitates and normalises the distances and gaps between good schools with high achieving students and those labelled as being bad schools and underperforming. This stratification tends to undermine a sense of unity and coherence and fragments schooling systems even in smaller and

higher performing systems. This competition diverts resources away from the needy and concentrates them in the better performing schools, which often have the advantage of better community resources. Siphoning of resources, justified through competition, creates outcomes that consolidate the advantages of wealth, class, and location.

Distortion generated from the test taking culture discussed in the earlier chapters of this book is justified as an imperative to monitor the effectiveness and efficiency of the school systems. Governments justify the value of education spending based on this distorted data. Numerical ranking of schools is promoted by supporters of public choice as being necessary for the community and for parents to make informed choices about options for schooling. As mentioned in this book, the quantitative nature of many of these measures creates the impression that they are objective, scientific and unbiased. These so-called technical and scientific measures provide an image of what appears to be simple and unquestionable processes and technical fixes to complex social situations. This has the effect of creating the conditions under which important issues concerning access, inequality and distribution of resources are depoliticised. Under the guise of the merit principal the processes of ranking tends to uncouple more complex social and political issues concerning inequality and present them as simply as questions of performance. In this way schools in rural and remote regions with little infrastructure are treated identically those from the high developed global cities of Asia.

There is a paradox as the cluster of measures designed to increase accountability have a tendency to actually reduce choice and diversity because they favour a technical and instrumental bias towards narrow outcomes and outputs. This orientation tends conflate the purpose of education to meeting predetermined outcomes and actually confines choice rather than expanding it. It means that options for a broader school experience are sacrificed in an effort to perform better in tests. The arts, sports and many community engagement activities in schools have disappeared or are considered less important that test preparation.

We are also witnessing a narrowing of choice in public policy as governments have a growing preference for the combination of standardised curriculum, increased accountability and devolved decision-making in schools. Neo-liberalism is the ideological foundation of these clusters of global policies. They affirm the dominant role of the market in mediating and distributing the resources in formulating government policy. The orthodoxy of the market and the superiority of the notion of competition as a way of mediating claims on the resources of the state have colonised East Asia. This trend has undermined the steering capacity of the state and the willingness of some Asian governments to intervene on behalf of any generalised concept of the benefit to society.

Reform of school systems has also incorporated aspects of competition and established internal markets within national school systems. One of the key aspects of system reform favoured by many global agencies is the devolution of authority and autonomy to school leaders away from centralised bureaucracy. Devolution is seen as enhancing the opportunities for community control, entrepreneurialism and maximising the potential for schooling to meet local needs. In many situations this

devolution has used the metaphors of entrepreneurialism and business to describe the role of schools. This shift to devolution has been a feature of many reform programs in East Asia, most notably in Indonesia in the post-Suharto era, where the objective was to reduce the bureaucratic centralised control of the education system and align schools with the growth of democracy of Indonesia. The push towards devolution shifts the focus of control to the school community but also focuses on the role of the school leader, which unless managed well, can subvert and undermine initiatives to build democratic practices.

The notion of the self-managing school has been popularised as a way of promoting diversity and enabling communities to determine the nature and character of schooling rather than the school being subject to control and authority of outsiders. In countries such as Indonesia it has been linked to the reform and democratisation process as well as introducing market reforms. While these claims about the potential of devolution have been optimistic the implementation of self-managed schools has not been unproblematic. Without appropriate training, skills and capabilities many school leaders have found it difficult to manage the multiple and often contradictory expectations of devolved schools. Many systems have found that the legacies of power and influence emanating from the centralised bureaucracies have proved to be enduring and have frustrated attempts to unlock the strangle hold on power.

Devolution has created the conditions where competition and the fragmentation of education systems are normalised and seen as the natural and necessary conditions for school systems to respond to modernisation. Devolution is seen as part of the trajectory of schools systems that are needed to respond to the global markets. This is articulated in the need for the system to demonstrated greater flexibility and responsiveness. In general the emergence of devolution represents a critique of the capacity of the state to steer education. Whilst it was originally championed by the right wing of politics, it has been enthusiastically adopted as orthodoxy across the political spectrum as a way of modernising national systems.

Yet within the systems themselves devolution, in its purest forms, has created a segmentation and fragmentation of the system and the de-facto privatisation of part of what was previously state owned resources. This has tendencies towards stratification and fragmentation and has created the conditions where inequalities are consolidated and made permanent and do little to prepare nations for the challenge of modernisation. In fact they contribute to instability and division as the expectations for social and economic advancement do not materialise and people become frustrated and resentful of the government's ability to deliver prosperity.

The final element of the introduction of neoliberalism is the internationalisation of schooling and the alignment of schooling to international markets. This new stage of development sees participation of state systems previously limited to their own national boundaries now participating within a global market of schools and school systems. Individual schools are being subject to international comparison and aligned to maximise positioning within the global education market. This operates as several levels and includes facilitating the mobility which includes inbound

and outbound students as part of the global flow of students for post school study opportunities. This amounts to 2.7 million students globally and is a market where 42 % of all students studying outside their own country are from the Asia Pacific. East Asia participates in this global market as both a source of outbound students, with China being the largest out bound nation, as well as having reformed its higher education system to have international students study in its newly reformed select universities.

Some countries have reconfigured their system to be international study destination. The most notable in this has been Singapore with the creation of the global school concept where education opportunities was expanded by the provision of education by international providers. This has dramatically expanded post compulsory student opportunities in the island nation and has also made it a destination for students from within the region. The advantages of location and proximity, the impression of stability and security and the presence of high quality international providers have seen the growth of Singapore as a destination for students in the Asia Pacific. Other nations such as Malaysia and Hong Kong, in an effort to capitalise on some of the same advantages, as well as being cheaper destinations, have marketed themselves as "education hubs". These ambitious plans are also designed to position these nations as internationally competitive and centres for research and innovation. The presence of foreign providers, international corporations and students from across the globe are intended to a signal to the world that these centres, mostly city states, are at the forefront of global developments.

There are now pressures on all systems to internationalise and develop pathways for students to participate in globalisation. As part of this alignment curriculum, instruction techniques and teaching methodologies are proposed to be common with those of the destinations for students. Most importantly is the language ability of students and proficiency in English that is recognised as the international language of instruction in higher education. Competence and proficiency in this global language is recognised as one of the preconditions for study and/or migration within most major school systems in the Asia Pacific such as China where English and Mandarin (Putonghua) are the only languages taught in schools. Some countries, such as Malaysia, have enthusiastically embraced English as a vehicle to globalisation and then returned to preference for the local language. Early in the twenty-first century the Malaysian government introduced English as the language of instruction for mathematics and science. After considerable difficulties the language of instruction reverted to Bahasa Malaysia. The barriers to using English were a shortage of proficient teachers and an exacerbation of inequalities between rural and city schools. This shift illustrates some of the tensions and dilemmas that systems will experience as they simultaneously respond to the new era of globalisation and the preservation of the identity of the nation state. Addressing this challenge and attaining a balance between the international and the national will be an important focus for many of nations that have enthusiastically embraced internationalisation. A key part of this will be ensuring that the differentiated qualities of internationalisation do not exacerbate and consolidate the inequalities that this book has described.

Changing the Dynamics and Approaches to Standardisation and Examination Regimes

Standardised curriculum operates in tandem with standardised testing, often reducing the opportunities for diverse notions of knowledge and presenting knowledge as static with defined and agreed boundaries. This approach to curriculum synergises with the paradigm of testing. It is a perspective that fails to see knowledge as an evolving and organic concept. Nor does it see knowledge as socially constructed and emerging from community, or from groups outside those that are established and powerful factions in society. It concentrates power and authority around what counts as knowledge and knowing. The popularity of examinations, has been identified as a products of cultural and historic legacies but it also the product of institutional ensembles that derive direct benefit from the preservation of the status quo.

The most troubling feature of these institutional ensembles is the link between standard testing regimes, the corporate interests of global publication corporations and the practices associated with what is termed "bundling". This means publication of textbooks, curriculum, teaching guides and learning material are developed as integrated packages. The monolithic education bureaucracies that characterise many education systems in East Asia have long established mutual interests with publication firms and they have worked in alliance with many powerful cartels. It is a mutually beneficial relationship between the corporate sector and bureaucracies that frustrates reform and impedes changed approaches to literacy and literacy teaching. Typically bundling places a stranglehold on teaching and curriculum that is structured around preparation for examination success. These resources are directly linked to examination preparation rather than acting as resources and sources of information that provides broadening options for learning and developing of understanding that underpin autonomous learners.

This also means that the skill of teachers to develop learning experiences that meets the needs of learners is also limited. Teachers in these bundling arrangements are deliverers of learning materials and do not generally develop learning materials and experiences themselves. Learning design that is situated and localised, and developed by teachers, has atrophied and as a result of bundling there is an entrenched reliance on pre-packaged teaching materials that can be taught through a teacher centred lessons. Students are positioned as passive learners with little scope to be involved in constructing their own learning and being engaged in exploration for themselves. East Asian nations are of course not alone in this as the combination of standardised testing and curriculum has become the default policy setting regardless of the achievement levels of students. But East Asian students are more at risk because they are under extreme pressure to perform well at school due to immense social and cultural norms which value achievement in schooling.

As documented in this book many East Asian students have an intensive regime of learning study in formal schooling as well as private tuition in cram schools and shadow education. The cycle of examinations and tests, indicators of achievement at school, dominate the family routine for many East Asian students. Families

quarantine large proportions of their time and disposable income to supporting their children through the cycle of examinations. The pressure on students is intense and the threat of disgracing the family through failure in examinations creates a situation where children are subject to high levels of anxiety causing profound alienation and in some cases depressive mental illnesses. In the face of some the challenges outlined in this book, students of display behaviours associated with disengagement from the living communities of which they are members. Affiliation and attachment with school becomes nothing more than a ritualised and symbolic act as disengaged children go through the motions of what is expected of them, but rarely get opportunities to engage in things that really matter to them. They are often in an endless cycle of programmed study activities that act to inhibit their growth as individuals. A major challenge for many nations in East Asia is to break with these confining and constricting cultural practices.

The failure of the school and examination system to deliver employment outcomes even as the regions experiences boom times, as discussed in this book, has potentially threatened the legitimacy of the status quo and now the toxic side effects of this are emerging. Many young people who strive to succeed in the traditional examination based system but fail to achieve employment outcomes are becoming disillusioned and alienated. There is growing crisis of legitimacy and affiliation that is posing a threat for many nations where a discourse of education, social and economic advancement, economic development and stability have been a unifying message since the emergence of the Asian boom in the 1980s. However, since the adverse impact of the global financial crisis on many Asian nations, assumptions about the role of education and schooling in facilitating prosperity and advancement are being questioned. In many countries the inequalities and differential economic outcomes that rapid growth has produced have entrenched and consolidated. This has an impact on the political stability of many regimes as young people who are most vulnerable in these circumstances create the potential for a resentful and disgruntled minority to destabilise the existing social and political arrangements in many states. It is something that governments and established interests have moved to avoid in Japan, China and other nations with moves to bolster and subsidise opportunities for graduate employment.

Changing the Dynamic and Approaches to the Quality of Life for Young People and Their Environment

Access to education for people in East Asia is strongly influenced by their class, where they live, their ethnicity and their gender. The UNICEF and UNESCO research cited in this book indicated that there are entrenched inequalities and disadvantages, particularly around young people who are poor, or live in rural and isolated communities. The situation is also worse for women and girls. Many in rural environments are further disadvantaged by a lack of basic medical and social services and access to formal post compulsory education and training. Many, particularly girls, are forced

into menial and low skilled jobs and do not complete their schooling. It is a trend that leads to inter-generational literacy problems. Some countries such as Laos, Indonesia, Cambodia and East Timor have the challenges of the developing world and need strong state intervention to initiate change.

The state has a vital role in mediating these inequalities but it often needs to rethink its role in supporting those experiencing disadvantage. The policies implemented in many countries actively contribute to the marginalisation of many groups. In some countries differential legislation profoundly affects the access of girls to education. Some countries fail to develop effective measures because they see equality as simply providing the same services to everyone. The same is not equal. This does not address the structural and societal nature of disadvantage and merely reinforces and consolidates existing barriers. This misunderstanding of compensatory measures and interventions needs to change. In some countries there are few services for disadvantaged groups and they are forced to comply with mainstream services and curriculum. In other countries special measures for selected groups tend to identify communities as deficient and confirm prejudices and stereotypes about those groups.

Many countries need to adopt an inclusive approach that involves meeting the learning needs of individuals. Some such as Hong Kong are introducing inclusive legislation but have to overcome the view that the same is equal. There is a need to train staff to assess and respond to the individual needs of students. Systems need to invest in resources and training to build staff capabilities and to challenge long held assumptions about disadvantage.

Inclusion is also impeded by language policies that exclude minority languages and fail to recognise the diversity of languages present in many communities. Even in Hong Kong where there is a trilingual approach to languages, minorities such as Punjabi or South Indian communities who are Hong Kong citizens languish without instruction in their own languages, much less specialist programs for them to learn Chinese. There are few compensatory programs to enable participation in Punjabi or Urdu and students from these communities are forced to learn in Cantonese, a minority language in greater China, with great difficulty and minimal resources.

The need to recognise the linguistic diversity and the presence of multilingualism is an important feature of the new discourses of the Asian state. As nations become more confident in their sense of national identity there is a need to shift from affirming the nation stridently through monolingual policies and to move to more pluralistic and inclusive notions of national identity. A pluralistic approach to language policy provides a firmer basis for societies that are characterised by diversity and should enable aspects of what has been recognised as bilingual education or "mother tongue" instruction in early years.

The limitation here is the resources available for material teacher training. This challenge provides an opening to develop locally based curriculum. Some countries such as East Timor, through a UNESCO program sponsored by the Alola Foundation a local non-government agency, are developing mother tongue literacy programs. These will provide confidence in literacy to students in their first language so that

they might achieve in other official and main languages such as Tetun, Portuguese, Indonesian and also English,

In urban centres young people experience crowded, congested and polluted urban landscapes where open areas or recreation space are limited. In the mega metropolis of Asia there are few spaces that are available for young people other than games arcades or shopping centres. The lives of many young people are almost exclusively and intensively occupied with preparing for exams in school and in after school tuition and cram schools. Engaging in pursuits that are extra-curricular and not related to achievement in school are for some young people a rarity. Many families see such pursuits as squandering time. These young people in the middle and lower middle classes lead lives typified by intensive work and high levels of anxiety in meeting the expectations of others. In many cases this existence is joyless and depressing. There is critical need to assist young people to have lives outside examination and school preparation and to develop a sense of success in other pursuits and past times such as hobbies and recreation.

Changing the Dynamics and Approaches to Learning and Teaching

Many countries in East Asia are moving away from production and manufacturing occupations as the economies move from developing to developed nation status. As these economies shift from a narrow agriculture and manufacturing base there is also a widening of job opportunities in areas such as human and personal services, design and education. However, in nations that traditionally espouse the need to boost training in science, engineering and technology as the best option for the future, there is evidence that the education system is producing disgruntled graduates with an inappropriate skills mix. It seems apparent that levels of resentment of unemployed graduates are unlikely to abate while the mix and attributes of graduates do not meet the needs of rapidly modernising economies that are typified by static and ossified curriculum and schooling systems.

A profound shift, reflective of the growing prosperity of an emerging Asian middle class in East Asia, is beginning to demand sophisticated clusters of services, such as education. It now means that educational planners in these countries need to plan for growing creative arts, design and human services, as well as science engineering and manufacturing. Indeed, some of the strategies associated with changing the nature of teaching and learning in countries such as China are centred on the humanities. Much of the heavy lifting in reforms look to have been attempted by private sector schools in the middle and senior years. Examples such as Xing Wei College are promoted as a good example being established by an American educated Chinese investor. This school is modelled on the US style liberal arts college where admission is through interview and portfolio as well as an entrance examination. This private College is seeking to create the dynamics for analytical and critical thinking by hiring international teachers and using a curriculum with subjects such

as "intercultural communication" and "social problems in global and comparative perspectives". Press coverage of this private sector initiative identifies the importance of creating an "educational environment where students' individuality and creativity could flourish" (Abrahamson, 2012).

Part of the problem in many of the nations covered in this book is the linkage between the labour market and school. Many countries such as China and Vietnam for example have an old Soviet style view of school producing industrial workers. Most countries have linked schooling and literacy as being preconditions for employment and national development and even those committed to neoliberalism subscribe to this view uncritically.

This book has documented the levels of graduate unemployment and the disconnection between the examination driven curriculum and the generic employment skills needed in the global economy. Many countries have now put in place strategies to create more freedom and opportunities for individuality to emerge, and in many cases they have paradoxically mandated for individuality. Many schools are promoting what is called "Avant-garde" teaching using less teacher centred activities driven by examination preparation. In some schools in China group work, class discussion and role-play are encouraged and there is an emphasis on communication skills rather than the traditional fact-absorption (Shepherd, 2007). Concern for the welfare and wellbeing of students and attempts to disrupt the elitist nature of the examination driven system is seen as the motivation for these reforms.

Abrahamson (2012) and others have argued that reforms designed to promote individuality are simply restatements of the same old goal of mass-producing more effective workers. New and more sophisticated approaches will be required.

These reforms demand engagement and endurance of teachers and students, who find the changes of style to student centred learning demanding and challenging and requiring greater self-discipline and concentration on learning in contrast to the ritualised traditional teacher centred methods. These reforms will meet with resistance, as have many before, if teachers are not provided with professional development and guidance on how to develop the pedagogies and methodologies that will sustain the reforms processes. More importantly is the question of how these reforms will be spread evenly across national systems. Most national reforms are promoted on the notion of "key" or "flagship" schools that are most often in major urban centres. Several schools in countries such as China are building international links with schools in countries such as Britain. From 2005 links with British schools in China have grown from 76 to 162 in 2007 (Shepherd, 2007). While there is a strong emphasis on private sector lighthouse projects leading system reform this needs to be critically analysed for its ability to spread reform and change more universally across national systems. Unfortunately the lesson in the past from lighthouse projects confirms the impression that the transfer to other parts of the system are often patchy, fragmented and lack a systematic strategy for broader adoption. In most cases such initiatives struggle for survival and are pre-occupied with sustaining their own operations, often in the face of widespread opposition and suspicion. One of the challenges that this book has identified for national governments is a

chronic need to resources and investment in rural and remote schools and schooling, including not only physical resources but also training teachers.

Reform in East Asia is characterised by broad futuristic plans and statements and has a tendency to leave schools and teachers without the resources to successfully implement them. Both Malaysia and Hong Kong have struggled to implement ambitious curriculum reform processes designed to develop more inclusive and constructivist curriculum approaches. In both countries these initiatives encountered opposition and ambivalence, not least from teachers who without perceived support and a pathway to future practices lapse into the practices of the past. This experience is no different to that in Australia with the faltering implementation of productive pedagogies in the state of Queensland in the early part of the century. Reformists cannot rely on "top down" management edicts and the unquestioning obedience of teachers and administrators. Professional development needs to be sophisticated and provide a scaffold for teachers to utilise situated and diverse sets of resources that are available through sources such as the Internet and the new technologies of learning. There are many claims that teachers can be retrained in less than 5 days (Shepherd, 2007) but the durability of these teachers to withstand the pernicious and overwhelming power of publishing corporations, community expectations and traditions associated with the examination driven is questionable.

Given the forces of opposition described here there are several questions that are important about what East Asian countries will do in the future. How might East Asian countries prepare for reforms and what nations might be a template for future reforms? What might be some other international models and what lessons can be learned from other countries? Since most of the East Asian nations are consistently on the top of the global rankings in student achievement it is very difficult to identify any countries that could be considered a good model to provide a template for improvement. Utilising western nations as a model for future action is made more difficult by impressions in the west that there is a "literacy crisis". However, one European country does stand out as a beacon, since it has a global performance equal to that of Asian nations. This country is the northern European nation of Finland, which since the first 2000 PISA rankings has been consistently in the same class as the top Asian nations in international achievement tests. It has some interesting features that are not dissimilar to some of the developments in East Asia but also has some features, which can be a guide to changing some aspects of culture, and practice that this book has identified as problematic.

Finland as a Model for East Asia?

When looking for other high performing systems internationally, Finland is a small nation in Northern Europe offering a possible template for the future. Finland went through a planned transition to assume the elite level status in terms of international achievement in PISA where it has ranked consistently in the top group of countries such as Korea, Hong Kong and Japan. In the 2006 PISA Finland was ranked first in

science and in reading literacy they were second after South Korea. In 2003 Finland was first.

The emergence of Finland one of the top countries in PISA 2000 was a big surprise in Finland. It's position in the elite group, as one of the few European nations that remain in the company of the top Asian nations, was not an overnight phenomena but the product of long-term planning that started in the 1960s. This was at a time when Finland's narrow industrial and agricultural economy required a different approach to educating a workforce for new jobs. For Finland, wedged between the Soviet Union and Western Europe during the cold war, survival depended on its ability to maintain prosperity and social cohesion in a buffer zone between two global power blocs.

The Finns developed an inclusive approach to education that was also part of the Nordic welfare state that emerged at the conclusion of the World War Two. Essentially, the Nordic welfare state saw Sweden, Norway and Denmark, as well as Finland develop a comprehensive program of social support by the state for its citizens. It provided a framework for reforms in education which Pasi Sahlburg, a former Director of Education in Finland, describes as a commitment to:

> a kind of an equity-based education and really took the equality of educational opportunity very seriously in this country to make sure that in the future everybody has an opportunity to progress and to be educated. So there were these two [things] – one of the kind of a political commitment, and then the kind of an economic reason that we need to educate everybody for our labour markets. (ABC, 2012)

Aside from developing a workforce, Finland's education reform process was created with a view to increasing participation in education and redressing some of the inequities of the former systems of education that Sahlburg described as one of the main reasons for Finland's reforms:

> In 1960, for example, we had only 4 per cent of our adult population having a higher education degree and nearly 90 per cent just had a basic education, which often meant about seven or eight years of education. We had a very rapidly increasing need for grammar school or lower secondary education after the war and we had probably half of our students went… When I started to go to school in 1970, in grammar school there were only about half of the kids, or less than half of the kids, did that, so it meant that for the majority of Finns, the education path finished at the age of 15 or 16. (ABC, 2012)

The Finns sought to develop a comprehensive system of education that did not separate academic and vocational streams until late in the career of schools children and provided equality in the standard of education irrespective of location and community resources.

Finland never set out to be a world beating system, on the contrary its motives for reform came from a heightened sense of urgency to transform the nature of it's narrow economic base. The initial stages of reform were directed by the central government in a top down mode and were the product of the steering capacity of the state. This approach was largely consistent with the fundamental features of the Nordic welfare state where the state occupied a role in maximising the benefits for its citizens of capitalism and at the same time ensuring their welfare and standard of living was protected. Finland, like others took what has been termed a "low voltage"

solution to responding to the cyclic crisis of capitalism by providing high social support in times of unemployment and training and education to prepare its citizens for the new times.

Despite the fact that Finland, along with the Nordic nations, is amongst some of the countries with the highest standards of living in the world, the education reforms were not immune from criticism. They were subject to considerable and sustained criticism from Finnish industry and business lobbies as well as conservative commentators. The reforms were "saved" by the surprise results in PISA 2000 but strident criticism did not abate until the second round of PISA in 2003. Part of the shifts that emerged through the period from 1980s to the 1990s was the progressive devolution of the education system to local government, which in the Finnish and Nordic countries is responsible for running schooling. There about 330 local government regions and each has responsibility for schools. Sahlburg describes the impact that this has on the nature of the curriculum.

> Every school and every municipality has their own curriculum – it's not the national, state curriculum like many other countries have, so there's a lot of variation in terms of the philosophy and ethos of schools and municipalities as well. It's a kind of a system where teachers and the principal community is the key in deciding how the schools will be run. (ABC, 2012)

Yet this diversity has provided the strengths that other systems have lacked. One of the strengths was that Finland's schools remained small around 200–300 students when other countries were implementing efficiency measures that made schools bigger. In some areas of Finland, particularly in the far North there are also schools that are smaller and have about 50 students. This has enabled a more individualised approach to the needs of students, ensuring that students are not lost in the system. Although there might be a difference in the size of schools, the Finns attempted to ensure that this diversity in size did not discriminate against the quality of schooling. According to Jussi Välimaa, from the Finnish Institute of Educational Research at the University of Jyväskylä this was reflected in the main goals of comprehensive schools to:

> create equally good schools no matter where they are located and no matter who are attending the schools. So they have been given equal resources and equally good trained teachers. And what is remarkable in the Finnish education system, or exceptional on the basis of PISA studies, is that even the worst Finnish schools are at the average international level. So the differences between Finnish schools is the smallest in the world. (ABC, 2012)

While Finland's education system is recognised as one of the best in the world the system is not without challenges, which are very common to other systems in the world. Finland achieved its success through long-term planning and long-term investments and some like Sahlburg are asking where the new vision for the future is. They argue that this is necessary, as the global dynamics have changed and Finland needs another vision for what might be happening in 2030. In some ways Finland is a victim of its own success according to Sahlburg.

> I think an interesting challenge that we have, that has been created by this PISA hype that we have had now for the last 10 years, is that we don't have a very clear shared idea here in Finland how the Finnish school should look like in 2025 or 2030. In other words, the direction for the future is not very clear, because there are many people who think that if you

have a perfect system why should you change anything, because the thing that you change may be the one that is creating this good result. So we kind of are stuck in a situation where nobody's really able to, you know, open the box and say that we need to think about and create the kind of next generation Finnish school, and we don't have that at the moment. That's one of the things that can become very costly for us in the future. (ABC, 2012)

Two emerging challenges are the need to maintain and build secondary school completions so that students can undertake lifelong pathways in education and have options in a changing labour market. An issue here is the 5 % of students who do not complete senior secondary school. This suggests that the Finnish system has some work to ensure that segments of the community are not left behind. In addition there is concern that boys are falling behind. The group most at risk is adolescent boys, a trend that is not isolated to Finland. The difference between boys' reading achievements and girls' reading is one of the largest in the OECD. The performance of boys lagging behind the performance of girls undermines efforts to ensure that all young people complete comprehensive schooling and is on the way toward lifelong education beyond the school sector.

Another challenge for Finland is the global dynamic involving the mobility of people across the globe, which sees relatively small waves of migration to Finland, changing what has been seen as a relatively homogenous population. This has created issues for the school system as well as for the political consensus, typifying Finland's welfare state.

Population movement in Finland has, until very recently been almost exclusively been emigration with a small amount of immigration, and the country has received few refugees. Most immigrants have married Finnish citizens and arrive not as a consequence of immigration. Only 2 % of the total population has immigrant background and most immigrants are in fact of Finnish background. More than a third are from Russia or Estonia (Roe & Hvistendahl, 2006, p. 131).

Caldwell (2012) argues that Finland's multiculturalism is underestimated and cites the Saami, the Indigenous population of Finland, as evidence of Finland's ability to respond productively to diversity. The Saami, speak three Indigenous languages and are traditionally herders of reindeers that migrate across Norway, Sweden and Russia. In 1999 Saami gained the right of native language instruction for the 0.03 % of the population that speak Saami languages. In addition, they have a curriculum that is different from the Finnish and Swedish language curriculum. The Saami Institute provides language resources instruction, including instruction in Saami arts, handicrafts, literary arts and music.

The impression of homogeneity, seen as one of the reasons for Finland's success, tended to ignore the presence of Saami but also the diversity evident with a Swedish speaking minority on the borders. In the north these are centred on Haparanda and Tornio, and in the south the island of Aaland and the Russian speaking minorities on the south eastern Keralian border region. The localised approach to education applied in Finland provides opportunities for Saami communities, as well as others identified here, to maintain and their preserve culture with high levels of autonomy and control.

One of the hallmarks of the Finnish approach is the professionalisation of teaching and the consequent high esteem in which teachers are held generally within the

community. Entry into teaching is competitive and at the same levels as medicine with only 10–15 % of applicant being accepted for entrance to university. Teacher education for primary and secondary requires a 3-year bachelor's degree and a 2-year master's degree. The master's degree qualification is not new and represented one of the key initiatives of the reforms in the 1970s having been introduced in 1979.

In response to concerns about knowledge of science and mathematics the LUMA program was implemented in 1996 amongst youth. This program has several features, such as increased weight being given to mathematics and science subjects for entry into teacher education and aptitude tests for entry into teaching, and has increased amounts of science and mathematics teaching in primary teacher education through mathematics and universities developed subject modules. The net result has been higher achievement in TIMSS but also an increased level of applicants in science, engineering and technology courses in Finland.

Part of the reason for success of Finland is an environment where reading and literature is valued highly. Flynn in discussing this says

> there is a strong literary tradition in Finland which has endured even in our wi-fi, Play Station age. Most parents and children are members of the 400 libraries scattered across the country. Parents of newborns receive a government paid gift pack which includes a picture book. (Flynn, 2010, p. 2)

Schools are also more relaxed and informal where teachers and students address each other by their first name. Flynn describes the typical Finnish school as having no hats, no iPods, no uniforms and no mobile phones. Otherwise the system is not big on rules and regulations. Younger pupils rarely get more than 30 min homework per night; the focus is on collaborative work in the classroom (Flynn, 2010, p. 2).

A British teacher, Adam Lopez undertaking a study tour, describes in his own words the school environment and what makes it distinctive:

> The Finnish curriculum is far less 'academic' than you would expect of such a high achieving nation. Finnish students do the least number of class hours per week in the developed world, yet get the best results in the long term. Students in Finland sit no mandatory exams until the age of 17–19. Teacher based assessments are used by schools to monitor progress and these are not graded, scored or compared; but instead are descriptive and utilised in a formative manner to inform feedback and assessment for learning. (Lopez, 2012, p. 1)

One overriding theme is the level of trust at all levels where teachers and school boards are given considerable discretion and autonomy. There is a sense of collective responsibility and there is no need for punitive processes associated with inspection and accountabilities. On the contrary Sahlberg suggests the approach is consistent with the Finnish term *sisu* which means strength of will, determination and acting rationally in the face of adversity. Sahlberg refers to this, noting that "when things get tough in Finland, people get together and turn to each other. This is a small nation. There is a collective willingness to act in the national interest-to stick with sisu" (Flynn, 2010, p. 3).

There are some important features of the Finnish system that East Asian systems may be able use for future reforms The Finnish approach values teachers and high quality teaching as well as the culture of reading and these features have some

similarities with East Asian nations. Finland on the other hand does not have an exam driven system and nor is the system overly centralised. Diversity is easily accounted for in the devolved forms of organisation pioneered in Finland. Small school populations and the ability to develop local initiatives in manageable populations is a key feature of the Finnish model that East Asian nations might like to replicate. More important for nations experiencing the fragmentation that accompanies neoliberalism is the commitment to the notion of sisu or collective willingness that typifies Finnish society. This type of mutual obligation is in stark contrast to some of the stratified and differentiated practices that characterise some East Asian nations. Most important in Finland is the more relaxed and informal approach and in the absence of a highly competitive examination system that means that students have the potential to find schooling an enjoyable experience.

The Dynamics and Approaches of Work, Training and Literacy

The literacy debate in East Asia has been profoundly influenced by the discourses of employer groups, and government in many countries that labels graduates and students as not having the skills needed for the global workforce. This discourse of crisis is justified by citing evidence of the high levels of graduate unemployment suggesting that the unemployed graduates have the wrong skills mix for the modern world. Rather than see this as a market failure in a period of global economic crisis, industry groups and government have seen the issue of graduate unemployment as a quality problem. While there is clearly an element of shifting the blame onto the victims of this crisis-young people- there is an element of truth to these claims. As we have seen throughout this book there is compelling evidence that examination driven education does not provide the attributes and capabilities needed for the world of work.

There are persistent calls for graduates to demonstrate generic employment skills that include the ability to communicate, calculate basic numeracy functions, work collaboratively, problem solve and show initiative. These calls tend to ignore the fact that vocational elements of have been sacrificed in the test-driven environment of East Asia. Most systems have tended to stream vocational aspects of learning into what might be described unkindly as lesser ability pathways. This streaming has tended to replicate the cultural attitudes that value higher learning and university level studies. In the hierarchy of learning commerce and trades are considered below academic studies and entrance to public service career tracks. These are views that are heavily influenced by parental and community attitudes and perspectives as well as community values regarding work and careers. These attitudes are ingrained deeply and influence the allocation and distribution of resources in schools systems and schools. Its assigns high status to academic learning and devalues vocational learning.

In general vocational education is poorly resourced and co-ordinated and vocational education often lacks connection with the real world of work. Vocational

training is often conducted within the school setting and simulates the workplace. Most vocational education is skills based training within the academy and does not have connections with the academic curriculum and does not have pathways to higher education and tertiary learning. The example cited in this book of work-based learning in Hong Kong illustrates that the opportunities for students to undertake structured workplace learning in real work environments and companies has value in both the academic and vocational spheres of learning. Work-based learning within an accredited qualifications framework has the capacity, if applied systematically, to address some of the issues regarding graduate capabilities and attributes. Work-based and vocational education should not be positioned within a binary between academic and vocational learning. Rather the experience in the program in Hong Kong indicated that structured learning is capable of supporting and enhancing academic learning.

Students in the Hong Kong program found that the real world experience of work gave them opportunities to apply academic learning when they were involved in workplace settings. Using foreign languages with clients and customers, making reports, calculating keeping records and doing basic routine work tasks enabled them to apply what they had learned in school.

The Hong Kong project was a new program breaking new ground. Through based work placements the school was intensifying and broadening it's school programs but also its contacts with industry. This is a big change from traditional vocational education programs where there is peripheral contact with the workplace. In many cases from Hong Kong the introduction of vocational education involved subcontracting of technical institutions or to private providers. This subcontracting did little to change orientation and to challenge the schools to think about new pathways for their students.

The type of program piloted in Hong Kong will continue to develop as the school systems are forced to respond to the need to bridge the perceptions about skills gaps and start to prepare their students for the new global environment. However, in many countries, those living in poverty, women and girls, and those living in rural areas have limited access to the new workforce without basic education. One of the key dilemmas identified in this book is the relationship between economic inequalities, schooling and literacy.

The connections are very powerful, in particular areas such as communication skills involving reading, writing calculation and using foreign languages. Students in the Hong Kong program indicated that the lived experience in a real world setting has affirmed and consolidated their academic learning. Many were able to make more rational choices about career directions. Developing the attributes that will respond to the new globalised economy and provide a new workforce for the new Asian industrial structures has dominated perceptions of literacy. The boom mentality has distracted and distorted perceptions about the distribution of wealth in many growing economies. While the many Asian nations and Asian cities are some of the fastest growing and most prosperous, they are also some of the most inequitable societies on the globe.

This instrumental perception has been popularised by the international agencies such as the World Bank and the OECD and the Asian Development Bank.

The dilemmas and tensions around these issues is also evident in the role literacy plays in developing more democratic institutions and creating changes in the urban landscape and lives of young people in Asia. Literacy itself needs to be seen as a weapon in responding to ritualised and intensified schooling systems.

One of the key themes of this book is about building robust civil society and democratic institutions. This book has explored the nature of change and the lives of young people in East Asia. Too often young people have been depicted as uncritical consumers passively benefitting from the Asian boom. They are often seen as blissfully unaware of the dilemmas and challenges of the modern world and preoccupied with consumption. Conversely youth is also seen in a deficit paradigm, mostly around their immaturity and their inability to work in a global context and environment typified by dynamic and uncertain conditions.

As this book notes there are strident critiques of the preparedness of young people for the new world of work. There are also views that their lives are highly controlled and programmed and that young people get few options to explore their own potentialities. They seem, from much of the evidence presented in this book, to be imprisoned by the regime of exams and are unable to break free from the routines and rituals around education that surround and shape their lives. This capacity for autonomy and expression is frustrated but there is also pressure from some young people who want more than gratuitous consumption.

The discourse of development evident in Asia has stressed social stability and the sacrifice of individual benefit for collective prosperity. This ethos has spanned countries in East Asia with diverse political philosophies such as Vietnam, Singapore, Hong Kong, Korea, Japan and China. The pervasive discourse about the Asian nation state has been centred on unfettered growth, prosperity, compliance and stability. This has meant that the success of the newly emerging Asian boom has placed relatively rigid controls on civil rights and liberties. In the past, regimes were able to suppress or colonise radical dissent. However, now the inequalities of the boom have meant that the durability of the growth and stability formula is threatened.

Gaps between the rich and poor have grown and there have been developments such as those in China, showing how the poor have become vulnerable in a boom period. In China there is a large number of land seizures, pollution of arable land and air and water pollution, consequences of unlimited growth that have all created reactions. Protest movements have emerged in many countries as people, particularly in the middle class find their economic positions eroded.

Many are concerned about the urban environment, inequality and opportunity, and the corruption and nepotism that characterise some countries in East Asia and they want to change it. Increasing numbers of young people take an active role in confronting these challenges but they are frustrated and anxious about their opportunities and the future. There is a challenge for these young people in developing not only the confidence but also the skills and capabilities to manage a transition towards an active engagement in a civic society.

Many societies do not have a history of civic society but are on halting pathways to more democratic institutions and processes. Indonesia is the best example in East Asia of a nation that has moved from an autocratic and centralised regime to a

decentralised and devolved approach. It has moved from a repressive dictatorial society towards a more pluralistic and democratic country but still has immense challenges. The pressure for change is unrelenting and ubiquitous and is a feature of global capitalism where all parts of the globe are subject to the dynamic conditions of contemporary life. These pressures for change also highlight growing contradictions between market choice and how the freedom of consumption is colliding with the demands for personal and political autonomy. There are powerful forces that promote consumption as an individual act of freedom and choice but withdraw the application of the same rights in the civic and political space.

The status of young people in East Asia is an anachronism of the era of post-war development but now there is evidence that young people are wanting more. In the post-war period compliance, uniformity and acceptance of the direction of society was largely unquestioned. The benefits of continued growth and wealth suppressed criticism, with a few exceptions. Yet the contradictions and cycles of economic growth and collapse have created the conditions where assumptions about upward mobility through examination and success in education are being rigorously questioned. Large numbers of unemployed graduates in China and India alone indicate that the status quo and established order of things are under some threat. The reaction of the state has not always been benign and many young people feel suppressed and frustrated. In terms of literacy and language students will now be needing and demanding a wider repertoire of communication skills, which include engaging in civic society. New forms of activism will need new forms of literacy and communication. In China, for example, despite of a history of censorships and attempts by the government to create "the great firewall of China" to restrict the access of Chinese citizens to internet sources, Chinese are some of the most active users of the cyberworld.

Resistance to progress seems futile and reactionary. The real question is how to equip young people for the intricacies of contemporary life such as learning to discriminate between the complexities associated with the modern world. This means that reading will be important, as will the need to succeed in examinations. However, narrow notions of reading competence will need to be complimented with other aspects of social engagement. This will include a sense of global optimism and an awareness of the regressive responses to globalisation that promote mono-ethnic and mono-cultural nationalism. Regressive localism has no place in a region typified by diversity and increasing interdependence. Disputes, such as those over the sovereignty of islands in the South China Sea, illustrate the need for an informed citizenry. Similarly cyclic tensions between China and Japan illustrate the need for more inclusive dialogues based on a common and shared future. Responding to urban pollution and the crisis in the environment means that young people will need, as societies do more broadly, to enter into dialogues and discourses that are deep and engaging. Similarly, addressing the needs of ethnic and linguistic minorities will go a long way to reversing inequalities in many of the East Asian nations. Current forms of education are not servicing or responding to these needs and are simply reinforcing and reaffirming superficial learning which lacks engagement and gives people few opportunities and tools to grapple with contemporary issues that are confronting the new generations in East Asia.

Literacy has been seen almost exclusively as preparation for the world of work yet reading is one of the most popular past times in Asian cities. The popularity of reading and literature in Asian cities is evident in the size and frequency of bookstores and stationary chains such as the Popular bookstore chain in Asian cities and shopping centres. The residents of Asian cities are avid readers and consumers of popular magazines and newspapers, contradicting many of the trends in the west where traditional newspapers are threatened by new news media of the Internet. In many parts of the developed world newspapers are experiencing declining circulation and many are closing down. In Asia there are surprises that contradict these global trends which see popular media experiencing a boom.

In the Philippines, there is a boom in what has been described as Manila's "sexy gory" tabloids. These news tabloids "specialise in what has been called a dizzying assortment of sex and violence, gore, celebrity scandal and strange news, personal opinion and personal advice" (Whaley, 2012, p. 12). These contrast with the more established media. Part of the popularity of these down market publications is that they are not owned by large corporate and business interests and are independent and act as a form of criticism of the oligarchies and networks of cronies that typify the Philippines establishment. One owner describes his role in publishing one of these tabloids as, "I am an independent operator I am not indebted to anyone. I can write anything I want as long as it serves my readers" (Whaley, p. 2). The pattern experienced in Manila is replicated in other parts of Asia such as Thailand, Cambodia and Hong Kong where political schisms operate between the rich and the poor. While there is a growing demand for such papers, their growth is sometimes limited in China and is always subject to the censorship of many regimes. Some of these tabloids offer soft porn and operate underground but they indicate shifting reading practices which are not picked up within the human capital versions of the literacy debates.

The growth of these new and bizarre media outlets refelcts an encouraging development that sees readership of popular media growing as a source of entertainment and information.

The question is where literacy is situated in these developments and the quest to eradicate economic and social inequalities. In many countries without and active and critical press the new medias, the new technologies of social networking and the internet are playing a vital role in promoting social change and are amplifying the ability of groups and communities with few resources to maintain claims for improvement and change.

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