

Cultural and societal factors in high-performing jurisdictions

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Introduction

This short report aims to provide insights into some of the cultural and societal contextual factors that influence education systems, using a number of high performing jurisdictions as case studies. Considering the education and assessment systems of high performing jurisdictions has become a strategy of some interest during education reform and/or development. However, it has been noted that when doing so, societal and cultural features of the jurisdictions need to be considered (e.g. Elliott & Phuong-Mai, 2008; Alexander, 2010; Oates, 2010; Barber, Donnelly & Rizvi, 2012) as the effects of a particular educational system may well be influenced by such factors, and as a result the system of one jurisdiction will not necessarily transfer the educational and achievement benefits if simply replicated in the jurisdiction undergoing change.

This report has been written using various secondary sources such as relevant articles, books and reports, newspaper articles, blog posts and other online material. A number of researchers have previously summarised and analysed the features of high performing jurisdictions, including some of the cultural factors, to identify the possible reasons for the high achievements of students (at least on some of the measures that have been influential, such as PISA, TIMSS and PIRLS). Such work, key examples being the work of the Center on International Education Benchmarking and the OECD produced book '*Lessons from PISA for the United States: Strong Performers and Successful Reformers in Education*', was particularly useful to the current report.

Six jurisdictions have been chosen as the focus for this exploration of cultural and societal factors. The focus jurisdictions are: Alberta, Shanghai, Hong Kong, Singapore, Victoria, and New Zealand. A few additional jurisdictions for which cultural issues of interest were also noted during literature review for this project are also mentioned briefly later in this report.

A section for each jurisdiction will now be presented, summarising known aspects of the culture and society that relate to education. These include themes identified by previous explorations of high performing jurisdictions. After these 'case study' sections, a final section brings together some of the cultural and societal themes that appear to be common to some of the jurisdictions of interest.

Alberta, Canada

Canadian students perform well in international comparisons regardless of their socio-economic status, first language or if they are a recent immigrant (Mehta & Schwartz, 2011). Alberta is one of the higher performing states. Alberta is one of the richer Canadian states, and there are fewer 'new Canadians' in Alberta than in some other states (e.g. Ontario has more immigrants and special efforts are made to support language learners for this reason, Mehta & Schwartz, 2011).

The success of Alberta in international tests is attributed by some to the competition within their education sector (Flanagan, 2011). There is competition between public (secular) schools and public Catholic schools and there is competition between public schools and private schools (religious and secular) (ibid). Private schools are 60% or 70% funded by the government and supplemented by fees, which makes private education fairly affordable (ibid). (There are also some private schools not subsidised by the government that follow special programs rather than using the Alberta curriculum (ibid).) Additionally, there are charter schools founded by groups of parents; these are public schools but may charge fees for extras such as additional tuition (ibid). With these various options and private school being a relatively affordable option, public schools have acted to compete to maintain their student numbers by improving what they offer via various strategies such as introducing special programs (ibid).

There is a culture of inclusiveness and cooperation in Canada, and a focus on peace, order and good government as collective concerns (Gaffield, 2012). Thus education is seen in terms of the impact on society, and is allocated substantial public funds (ibid). There is a generally shared view in Canada that society is collectively responsible for educating all its children (Mehta & Schwartz, 2011). Within this context, teachers feel they have an obligation and responsibility to ensure that all students are educated. Education and teachers are valued, and there is high selectivity for entry into teacher training (ibid). A news article described Canada's educational culture as follows: "Being Canadian is ... about being cooperative and inclusive and about valuing shared community and public life. It's not this or that province's policy that makes Canada such a strong educational performer, but a social fabric that values education and teachers, prizes the public good, and doesn't abandon the weak in its efforts to become economically stronger" (Hargreaves, 2011).

Education in Canada is decentralised, with each provincial or territorial government responsible for education policy and curriculum development (CIEB, 2013a). However, the importance of high standards and best practice is recognised and the Ministries of Education in each province tend to look to one another when making policy decisions (partly through collaboration via the council of Ministers of Education) and thus there are similarities in policies (ibid). School boards oversee the running of clusters of schools (the clusters are based on area but also school type, e.g. religious). The system of school boards was inherited from the USA, via immigrants moving to Canada in the 1700s (Peters, 2011). Local matters were dealt with locally, with those in local towns and villages running schools, though state government might offer support (ibid). When Alberta became a province in 1905 there were 602 school districts and schools were usually small one-room affairs serving 4 mile by 4 mile rural areas (i.e. districts) (ASBA, 2010). The number of districts increased over time (to almost 4000 school districts by 1937) and in the 1930s efforts began to consolidate into larger schools, though such reforms stalled during the Great Depression and the second World War to be continued later (ibid). There are now 41 public school boards, 16 separate school boards and 5 francophone education authorities (ibid). Historically, the school board structure has led to the current continued decentralism.

Alberta saw many educational reforms in the 20th century due to changes in government and changes in the educational practices seen as in vogue (e.g. progressive education was

introduced and later abandoned. See Eil, 2002 or Matsumoto, 2002, for more historical detail). In the 1990s some teachers and others expressed concerns about the constant reform, and parents complained about the quality of education their children received (Matsumoto, 2002). There were also various challenges around budget cuts for education in the 1990s (ibid).

Most provinces have a policy of high selectivity in teacher education programs (CIEB, 2013a). In Canada, teachers are valued, they must undertake a professional program of university-based training, and working conditions for teachers are good (e.g. acceptable pay, good availability of professional development) with teachers given discretion to make professional judgements (Hargreaves, 2011). In Alberta, the government has funded a program to support innovation projects in schools, and thus it could be described as allowing a 'bottom-up' approach (ibid).

Canada scored well above average for reading in the PIRLS 2011 results and the degree to which parents engage their children in literacy activities was high (Bradshaw, 2012). Around 70% often read and talk about books before their children start school and children with this experience scored better in PIRLS than those without, suggesting a connection (ibid). Canadian children are more likely than others to read daily for pleasure (Tibbetts, 2007, cited in Mehta & Schwartz, 2011). Parents are supportive of their child's education and are seen as an asset to schools (Mehta & Schwartz, 2011).

There is a strong culture of internal assessment in Canada and there is not the same kind of questioning or distrust of teachers' assessment judgements as there is in the UK. Alberta is unusual in that exams determine 50% of high school Diploma grades – only Alberta and Quebec use exams as part of Diploma grades and Alberta places more weight on them than Quebec (Anonymous, 2011). Some feel 50% weighting of exams is too much and question the validity of some of the tests, for example, questioning the appropriateness of multiple choice questions for some subjects where they are used (ibid). The relatively high use of exams in Alberta is intended to prevent bias and inflation of marks, and provide standardisation (ibid). Interestingly given the high results in international tests, a public survey across Canada by the Canadian Education Association (CEA) found that respondents in Alberta were most likely to say that the education system needs significant change (64%) (CEA, 2012). Whether this relates to dissatisfaction with the use of external assessment and this being culturally more unusual is difficult to say. The 50% weighting of external exams in final Diploma outcomes has been in place since 1983 (Matsumoto, 2002), so is hardly a new feature of the educational landscape in Alberta.

There is some controversy about the grading of student assignments. School boards, and even individual teachers, can make their own decisions about how missing work is scored (Slobodian, 2012). It is not uncommon for a missed assignment to be indicated as 'not handed in' without this lowering a student's overall grade, thus students could choose to 'play the system' and skip work without penalty (ibid). There are calls for the government to create uniform policies on this issue (ibid).

Shanghai, China

In China, education is traditionally highly valued (Elliott & Phuong-Mai, 2008; Cheng, 2011). From 603 AD to 1905 the Civil Examination system was used to select officials to government jobs (Cheng, 2011). This system was highly competitive and hence contributed to attitudes around the importance of learning (ibid). The exams involved writing essays of political relevance, with reference to the Chinese classics texts (the *Four Books and Five Classics*); hence there was an emphasis on rote-learning of these texts (ibid).

Over time, stories about poor scholars who endured hardship but achieved success in the Civil Examination became part of folklore (Cheng, 2011; CIEB, 2013b), and it was indeed the case that a large percentage of those passing the national exams were from ordinary families (IQAS, 2007). Thus, the system was seen as encouraging upward mobility (Cheng, 2011). Within this setting, this has led to parents having high aspirations for their children (or at least for their sons) and to an ingrained view that hard work and putting up with hardship is the route to success (Cheng, 2011). This relates to the common Chinese belief that *'diligence can compensate for stupidity'*, or in other words, that it is effort and hard work that determine success not innate ability (Cheng, 2011; Ellis & Bratu, 2011; CIEB, 2013b). Chinese culture has also been influenced by the Civil Examination in that education is very focused on examination results as the only way to validate learning and as the only route to upward social mobility (Cheng, 2011). Therefore 'education' as a term in China is synonymous with 'exam preparation' (ibid). The perceived importance of exams has transferred to the contemporary context, and private tuition and attendance at tutorial schools is common (ibid). Confucian philosophy claims that proper education is important to social harmony, that education should be available to all, not just the privilege of an elite few (IQAS, 2007). The goals of education being to realise an individual's potential and discourage unethical behaviour (ibid).

In Chinese society, families look to their children for support in old age (CIEB, 2013b). This is a factor in families supporting the student in their educational efforts and having high expectations of them (ibid). Within this setting teaching has become a high status occupation and students are willing to put significant effort and time into their studies (ibid).

The People's Republic of China was established in 1949 and in the decade that followed a national curriculum and teaching materials were introduced (Soviet model) (Tan, 2012). From 1966 to 1976 China experienced the Cultural Revolution - an effort by government to prevent inequality and stop those with privilege passing this on (Cheng, 2011; Hays, 2012; Tan, 2012). Universities and conventional schools were closed (Cheng, 2011; Tan, 2012). New schools were run by workers, peasants and soldiers, and academics and those with some degree of education or privilege were sent to villages, rural areas or factories for 're-education' (Cheng, 2011; Tan, 2012). Some educated youngsters who had been moved to rural areas during the Cultural Revolution had become teachers during this time, although they did not have teacher training (Cheng, 2011; CIEB, 2013b). The Cultural Revolution left China's education system and curriculum in need of being totally rebuilt in the late 1970s/early 1980s, and with a lack of trained teachers (Cheng, 2011). The widely shared belief in the importance of education, and the view that effort is more important than inherited intelligence, were assets in the aftermath of the Cultural Revolution (CIEB, 2013b). A programme of retraining for under-qualified teachers was instigated after the revolution, though one of the challenges was that once trained many teachers gravitated towards the towns and cities, leaving village schools with even less expertise (ibid). New teachers were attracted by offering priority admissions to universities (ibid). The Teachers Law was passed in 1993 to prescribe minimum educational qualifications for different levels of teaching (IQAS, 2007). By 2010 new primary teachers must have a *zhuanke* qualification (from a postsecondary institution) and new junior secondary teachers must have a *benke* qualification (from a teachers' college, normal university or other relevant higher education

institution) (ibid). Some senior secondary teachers have graduate education from a university (ibid). Thus the qualifications of teachers have dramatically increased since the Cultural Revolution. In addition to initial teacher training, all teachers are required to engage in 240 hours of professional development activities over a five year period (Cheng, 2011).

Raising teacher pay and upgrading teacher education has been an important element of recent education reform in Shanghai (and also in Hong Kong) (Cheng, 2011). Teacher salaries in towns and cities are seen as providing a stable income and although not high, they have increased and there are ways in which teachers can supplement their incomes (CIEB, 2013b). This has increased the desirability of teaching as an occupation (Cheng, 2011). Almost all officials in government education offices were originally teachers, meaning that teaching is also seen as a route into government (ibid).

Teaching is organised centrally (Cheng, 2011) and lesson plans are drafted by teaching study groups (CIEB, 2013b), each of which is supervised by the teaching study office of the relevant Education Bureau, and in turn by the municipal or provincial government (Cheng, 2011). Many hours go into lesson planning, and teachers are regularly observed giving planned lessons (CIEB, 2013b). More senior teachers demonstrate lessons as part of professional development for other teachers (ibid).

Another element of the system is an initiative ('empowered administration') that pairs a weaker and stronger performing school to help the weaker school (CIEB, 2013b). A management team is sent into the weaker school, and strategies include good teachers demonstrating good lessons based on a lesson plan (ibid).

Shanghai has a certain amount of autonomy from China as a whole with regard to education and from the mid-1980s was permitted to set its own entrance exams for higher education institutions (CIEB, 2013b). This prompted changes to the exams and curriculum away from memorisation (and multiple choice questions) towards problem-solving and drawing on deeper understanding (ibid). Ongoing curriculum reforms since 1998 have focused on preparing schools to meet the needs of economic developments in China (Tan, 2012). One aim is to change the learning style away from an exam-focused knowledge transmission approach towards: increased real-life experience; teamwork; problem solving; exploration; critical and creative thinking; and with learning being more independent and student-directed (ibid). The slogan 'return class time to students' is being used to reduce the time spent with teachers' lecturing and increase time allocated to student activities (Cheng, 2011). Subjects are grouped as 'Foundational Subjects', 'Expanded Subjects' and 'Inquiry/Research Subjects' to promote more diverse skills and experiences (Tan, 2012). However, only the Foundational Subjects are assessed by exam and the dominant exam-oriented culture and pressure means that parents, students and teachers still see the exams, and thus the Foundational Subjects, as most important (ibid). This may be limiting the success of the effort to change the kind of learning taking place (ibid). Some educators comment that examination pressure still prevails as examination scores are seen as the most scientific and fair basis for decisions (Cheng, 2011). Many still consider students in Shanghai to lack independence, creativity and innovation (Hays, 2012; Tan, 2012; CIEB, 2013b) and some argue that children are rarely left to learn in a way of their choice, are 'spoon fed' their learning, and thus they have not learned *how* to learn (Cheng, 2011).

Whilst China has a top-down education system, with the Ministry setting out instructions to local bureaucrats, which are passed down to school administrators and then to teachers, some effort to devolve education from the central to local level has been part of the educational reform policy post Cultural Revolution (Hays, 2012). Indeed, the reform in Shanghai has been positively affected by a number of 'bottom-up' initiatives, but with control and intervention from the municipal government as considered necessary (Cheng, 2011). Another element of the 'control' comes from the Chinese Communist Party; whilst the

government has authority over the education system, the Communist Party has played a management role since 1949 (Hays, 2012). There is a designated Communist Party secretary in every school, often in a management role, who is responsible for guiding their school in line with party policy (ibid).

Society is perceived as a vertical hierarchy with parents wanting their students to be first in the class and to achieve 100% in results (Cheng, 2011). Parents often have perceived rankings of higher education institutions and want their students to go to the best one (ibid). Shanghai is a popular location for students across the country to come for Higher Education (ibid). This has increased the sense of competition despite a generous quota for local students (ibid).

As part of China's heritage, students' belief in needing to work hard to succeed leads to a high level of engagement in learning, with students in Shanghai typically fully attentive and engaged during lessons (Ellis & Bratu, 2011). This is reinforced by a lack of tolerance by teachers of non-attention and the cultural expectation that students must concentrate (Phillips, 2010). However, the motivation to study amongst Chinese youngsters is thought to be primarily extrinsic, driven by family and wider expectations rather than by genuine interest (Cheng, 2011).

Homework is considered important and parents expect students to study each evening and this dominates family life (Cheng, 2011). Schools encourage parental involvement in their child's learning; home-room teachers visit their students' homes at least once a year and parents reinforce student's school progress at home (Barber, Donnelly & Rizvi, 2012). Because of the burden placed on students many local authorities, including Shanghai, have placed a limit on the number of hours of homework that schools can assign (Cheng, 2011). An estimate of over 80% of children are sent to tutorial school for extra sessions/classes, with a strong focus on teaching students how to pass the examinations (ibid). At an example school quoted in the press (Ellis & Bratu, 2011) students study 12 hours a day, including 3 hours homework after dinner. There is homework allocated for every evening including weekends, and students study through the holidays to prepare for college entrance tests.

Shanghai participated in PISA for the first time in 2009 and was ranked first in the results for Maths, Science and Reading. Andreas Schleicher, OECD, considers Shanghai's performance on PISA particularly impressive in that there is a low level of variability between test scores from different schools (Ellis & Bratu, 2011). This could relate to the initiative of pairing a weak school with a stronger one to aid improvement (ibid), as mentioned earlier. It is also noted that the performance in Shanghai is unlikely to be representative of China as a whole. In rural areas not all students have access to school and for those that do the quality of school facilities is worse than in Shanghai (ibid). Many fewer rural children go on to college compared to in Shanghai (Ellis & Bratu, 2011; Hays, 2012). David Barboza, writing in the New York Times in 2010 (cited in Hays, 2012), summed up education in Shanghai as follows:

“The Shanghai students performed well, experts say, for the same reason students from other parts of Asia — including South Korea, Singapore and Hong Kong — do: Their education systems are steeped in discipline, rote learning and obsessive test preparation. But many educators say China's strength in education is also a weakness. The nation's education system is too test-oriented, schools here stifle creativity and parental pressures often deprive children of the joys of childhood, they say.”

Hong Kong

Because Hong Kong used to be under British rule its education system has historically had a similar structure to that of the UK though affected by Chinese culture (OECD, 2011a). Hong Kong was returned to China in 1997 (after a 99 year lease ended) but maintains a considerable level of independence under the banner of 'one country, two systems' (ibid).

There were very few public schools in Hong Kong until the 1950s, and until the 1970s/1980s some schools did not have their own premises but had to use vacant spaces (e.g. rooftops) (OECD, 2011a). Education only became compulsory in Hong Kong relatively recently; six years of primary education became compulsory from 1965 with the addition of three years lower secondary in 1978 (ibid). The Chinese belief that it is hard work and not family background that brings achievements is exemplified in Hong Kong, with high performing students from varying backgrounds entering universities around the world (ibid).

There was much dissatisfaction about schools in the 1990s (OECD, 2011a). There were excessive amounts of homework, much of which was regurgitation, and parents were generally unhappy with the education received and would send their children to international schools if they could afford to (ibid). Teachers were dissatisfied with reported declining standards and motivation of learners, and employers were unhappy with the calibre of local graduating students (ibid). Such dissatisfaction led to long term education reform which began in 1999 (ibid) and is due to be completed in 2016 when the first cohort finishes undergraduate study (Barber, Donnelly & Rizvi, 2012).

Interesting elements of this reform include a high level of consultation with the public about their ideas for what education should be like, as well as extensive consultation with, and involvement of, relevant experts (OECD, 2011a). The reform was informed by contemporary theories of learning (ibid). The reform strategy and its implementation were carefully planned; a logical sequence for execution of elements of the strategy was ensured and all elements were linked to the overarching goal of improving teaching and learning (Barber, Donnelly & Rizvi, 2012). One of the major themes of the reform was to change the focus from 'teaching' to 'learning' and reduce the emphasis on memorisation of facts (OECD, 2011a).

As well as consulting the public in early stages of planning reforms, the government went to considerable efforts to engage the public on changes to the curriculum introduced in 2009 and to develop teacher buy-in and ownership (OECD, 2011a; CIEB, 2013c). Day 'retreats' were held with senior representatives from 12 schools at a time, and later with groups of middle managers in order to prepare schools for implementation (OECD, 2011a). These sessions involved guest speakers talking about societal change (i.e. the need for educational change), and curriculum developers outlining curriculum reform and discussion of strategies for implementation (ibid). Sessions began four years before implementation of the new curriculum (ibid). In addition, briefings were held with the press in order to help engage the public with the changes (ibid). This constitutes an unprecedented campaign to involve a large number of citizens and professionals in public discussion about educational goals (CIEB, 2013c). The result has been a widespread commitment to the new curriculum and education agenda (ibid). This may have brought some challenges for teachers as they have been responsible for finding ways to implement the reform in schools, but has also pushed them into exercising professional autonomy to adapt the reforms to their students (OECD, 2011a).

The Hong Kong Diploma of Secondary Education (HKDSE), which was introduced in 2009, is taken (usually) at age 17 years. It is interesting that the top available grade (5**) is worth more UCAS points than an A* at A level (145 and 140 points respectively) (Ma, 2013).

Hong Kong has attempted to move away from an exams-centred education system and from rote learning and embrace skills such as critical thinking and creativity, and provide well-rounded students (Hong Kong Higher Education, 2007). There is greater emphasis on group projects and open-ended assignments (Wikipedia, 2013a). There have also been efforts to gradually make more use of technology in the classroom in order to make learning more interactive (Li, 2012). However, the education reform has not eliminated the focus on 'quantity' of education or eliminated examination culture, with testing seen as a necessary element of education (Hong Kong Higher Education, 2007). Students in Hong Kong do well in international tests, but evidence suggests that their interest in learning and confidence that they can learn are relatively low (Li, 2012). Hong Kong primary students were ranked first in reading by PIRLS but close to the bottom for reading satisfaction and interest (Chan, 2012). This has been attributed to Confucianism by some, in that students are expected to work hard to meet their parents' expectations, but this does not necessarily convert to interest in learning (see Li, 2013).

Parents have high expectations of their children (Barber, Donnelly & Rizvi, 2012). Taking extra tutorial sessions is common (statistics suggest a third of secondary school students had private tutoring in 2004-2005, Wikipedia, 2013b, whilst current quotes suggest that 70% of secondary school students have private tuition, Adamson, 2013). Cram schools or tutorial schools attract many students for classes on exam technique, practising responses and tips on topics that may come up (Wikipedia, 2013a, 2013b). Some of the tutors have become very popular with celebrity status ('star tutors' or 'tutor kings/queens' whose photos may appear on billboards and advertising, with some having their own stylists and photographers to increase their popularity) (The Hong Kong Standard, 2012; Wikipedia, 2013b). Such tutors may receive much higher salaries than secondary school teachers but may not have trained as teachers. (For more on the celebrity status of some tutors, see The Hong Kong Standard, 2012).

Enrolment on study camps during school holidays, and/or asking teachers for additional texts that students can study during breaks is not uncommon (Mao, 2008). These kinds of activities are perhaps motivated by a strong desire by parents for their children to do well and not to need to work the long hours that they do when they enter employment - it is not uncommon for adults to work 70 or 80 hours a week (ibid) (the average is 49 hours a week, according to a report by UBS, see Wikipedia, 2013c, and Hong Kong had the fifth longest yearly working hours of the countries studied). The pressure to 'get ahead' and high parental expectations appear to foster a culture of test results mattering more than underpinning understanding (Mao, 2008). Competition between students for job and advanced school placements is fierce with access based on rankings in tests (Wikipedia, 2013a).

Hong Kong has invested resources in upgrading the quality of its teaching professionals (OECD, 2011a; Wikipedia, 2013a). Various undergraduate and postgraduate programmes are available for in-service and pre-service teachers (Wikipedia, 2013a). From 2002/3 all principals were required to undertake 50 hours of CPD a year, and from 2004/5 aspiring principals have to attain 'Certification for Principalship' (ibid).

An interesting feature of the majority of Hong Kong schools is their strict codes of discipline and 'Demerit Points Systems' through which disciplinary offences are recorded (Wikipedia, 2013a). The record is included on students' report cards. Points can lead to suspension, expulsion and ultimately jeopardise whether students graduate and thus their future prospects (Wikipedia, 2013a).

The education system in Hong Kong has been described as 'spoon-fed' (Wikipedia, 2013a). Recent reforms are attempting to address this but whether teacher practices have changed substantially so that this is really no longer the case is difficult to tell from the available

information. There are also some concerns that there are significant differences between schools in the quality of implementation and in performance (CIEB, 2013c).

Singapore

Singapore has developed from a poor island, with high illiteracy and few natural resources (except for its deepwater port), to a thriving economy with a high standard of living within 50 years (CIEB, 2013d). Singapore became independent from Britain in 1958 (Spar, 2009), then briefly part of Malaysia from 1963 to 1965, when it was expelled and became independent again (Stewart, 2011; Wikipedia, 2013d). On independence, Singapore was potentially politically and economically vulnerable (Stewart, 2011). This led to a certain sense of urgency over policy making (ibid). Politically Singapore has been very stable, for example, it had the same Prime Minister, Lee Kuan Yew, from 1959 to 1990 (Spar, 2009). Lee set ambitious economic goals and knew that education would be an important part of achieving them (CIEB, 2013d). Policies were informed by global benchmarking, were designed to support existing related policies and were carefully executed (CIEB, 2013d). There is a high degree of government intervention in societal affairs (e.g. enforced savings, Spar, 2009; cases of demanding use of proper English rather than 'Singlish' in TV shows, see Srilal, 1999). However, generally the government seem to be popular and respected as: goals are well communicated and largely well met, mistakes are admitted/resolved and the government listens to views and responds via a complaints department/ministry (Spar, 2009). The government promoted Confucian values (e.g. hard work and obedience to authority) and a culture of a Singaporean being someone who works hard and contributes to national economic success (ibid). Singapore is openly described as a meritocracy in which high educational achievement, and test results, lead to advancement and good positions, and thus there is an intense focus on education and exams (Spar, 2009; Chia & Toh, 2012). Parents have high hopes for their children (e.g. aspirations for them to become government administrators) and thus education is very important to Singaporean families (Spar, 2009). Parental involvement is seen as integral to students' success according to the education strategy in Singapore (Barber, Donnelly & Rizvi, 2012).

From Confucian values, there is a culture of it not being a case of intelligence, but of discipline and studying hard to do well. Confucianism also promotes respect for authority, which for students will relate to respect for their elders (Spar, 2009). The motivation to succeed generally comes from the home environment and parents instil in children the need to do well in school (Larkin, 2012). There is intensive parental involvement in their child's education (ibid). Arguably, education has been the key to success for economic growth in Singapore, and this has been facilitated by Confucian values (ibid).

The government in Singapore is highly efficient with a focus on strategic planning and detailed execution (Stewart, 2011). Their policy development and implementation has been characterised as 'Dream, Design, Deliver' (ibid). At the point of independence, Singapore had multiple religious groups, ethnic groups and no common language (ibid). Lee believed in building a national identity and achieved this through various strategies such as mixing ethnic groups in government-built housing and determining four official national languages (ibid). Additionally, schools promote values of unity and national pride (ibid). In a country of few natural resources, its people are seen as the main resource and as providing the capital for economic growth (ibid).

Singapore's education system has developed in a number of phases. These have been described (Boon & Gopinathan, 2006; Stewart, 2011) as:

- **Survival-driven phase: 1959 to 1978.** At the time of becoming independent most Singaporeans were illiterate and unskilled, with only the rich having their children educated. Thus, this initial phase focused on increasing the number of schools, teachers and access as quickly as possible to provide basic education. Primary education was universal by 1965 and lower secondary by the early 1970s. However the quality of education was not high and there were high drop out rates.

- **Efficiency-driven phase: 1979 to 1996.** In 1979 the education system was revised into multiple pathways to reduce drop out, improve education quality, and develop a more technically-skilled labour force (to meet new economic goals to become a capital and skill-intensive country).
- **Ability-based, aspiration-driven phase: 1997 to present.** With the world economy changing and emphasis shifting to innovation, creativity and research, there were shifts in the education system to address this. A new educational vision was set out, 'Thinking Schools, Learning Nation', encompassing a range of initiatives including a focus on students developing creative thinking skills, a broadening of subjects, changes in school management and developing career paths and incentives for teachers.

Singapore has emphasised raising the quality of its teachers during the development of its education system (CIEB, 2013d; Pearson, 2013a). Concerted efforts were made to raise the image of teaching and to provide training and better working conditions in the mid-1990s (Lim, 2012). Those entering teacher training are from the top third of their secondary school class (CIEB, 2013d). They receive training at a top Higher Education institution, where providing the appropriate values is emphasised as well as the appropriate knowledge and teaching skills (ibid). There is a concerted effort to recruit and nurture talent for teaching (ibid) (including efforts to recruit mid-career individuals from industry, Pearson, 2012). Teachers are entitled to 100 hours of continuing professional development (courses, conferences etc.) each year (Stewart, 2011; Pearson, 2012). Teacher pay is benchmarked against jobs in industry, schools have the flexibility to reward higher performing individual teachers or teams, there are several defined career tracks for teachers (e.g. leadership track, progression into the Ministry of Education, becoming a master teacher, becoming senior specialist teacher in a particular area) and there are national teacher awards (Stewart, 2011; Pearson, 2012).

The Singapore government is mindful of how certain students may require additional support (e.g. students in single-parent households, ethnic minorities) and thus set up local community councils to identify and support families in need (CIEB, 2013e).

The school system in Singapore is sometimes accused of being too focused on grades and test performance and hence, high stress, with many students taking enrichment classes or additional tuition (Lim, 2012). Some now feel that the culture has become too pressurised with students having little 'down time' between school, extra-curricular activities, and outside study, and that this makes students unhappy (Koh, 2012). This is viewed by some as an undesirable but unavoidable result of success being viewed in quantitative terms (ibid). The exams culture is promulgated by the Primary School Leaving Examination (PSLE). The PSLE is considered very important by parents, with some parents even taking a career break to support their child's preparation (e.g. Chua, 2012). PSLE results determine which school students can access and which stream students are assigned to (Express, Normal Academic, or Normal Technical). Some feel the PSLE and resultant streaming cause stress for parents and children (Yam, 2010; Chia & Toh, 2012), that the streaming is conducted at too young an age, and that it creates a climate of elitism (Yam, 2010). There is current debate about whether the PSLE should be scrapped or changed in order to reduce the pressure it places on students and the strong focus on exams (Chia & Toh, 2012).

A lack of flair, creativity and individuality amongst students has also been a criticism of the Singapore education system (Watson, 2012). The new vision for education titled 'Thinking Schools, Learning Nation' was launched in 1997 and encompassed a focus on encouraging active learning and critical thinking in schools (Barber, Donnelly & Rizvi, 2012). In 2004, an initiative, 'Teach Less, Learn More', was developed to try to reduce rote learning and repetitive tasks and move towards more problem-based learning and deeper learning (CIEB, 2013d). "Holistic education" has also become a focus with a push to move towards

cultivating creativity and innovation and being able to process information, as well as developing content knowledge (Lim 2012). Teachers are being given more leeway to find different approaches to learning and different ways to teach the syllabus (ibid). Education Minister Heng Swee Keat is quoted (by Watson, 2012) to have said the future is:

“less about content knowledge, as content will have to be re-learnt and even un-learnt during one’s lifetime....It is more about how to process information, discern truths from untruths, connect seemingly disparate dots and create knowledge even as the context changes. It is about developing an enduring core of competencies, values and character to anchor our young and ensure they have the resilience to succeed.”

The efforts to promote 21st century skills and competencies and to value a more holistic development of children through such initiatives appear to have had some impact (CIEB, 2013d). However, there may be a tendency for activities promoting the above to be secondary, or an ‘add on’ to covering the academic curriculum and exam preparation and a focus on the approved textbooks continues to dominate.

Stewart (2011) notes that some of the factors in Singapore’s success are: integrated and forward-looking planning; close links between policy, research and educators; policies that align with each other making implementation more successful; small scale; a commitment to equity and merit; focus on maths, science and technical skills; strategic selection and development of teachers; continuous improvement.

Victoria, Australia

In 1788, Australia was established as a British penal colony and settlement by Europeans began (CIEB, 2013f). Immigration by Europeans was actively encouraged for many years as Australia, with its valuable natural resources but sparse population, felt vulnerable to their neighbours (ibid). Wider immigration is now encouraged, though 92% of the Australian population are of European descent (ibid).

The teaching profession was demoralised by the depression of the 1890s with school buildings deteriorating and the curriculum in need of modernisation (Wikipedia, 2013e). In 1902 a Director of Education, Frank Tate, was appointed for Victoria and instigated modernisation, bringing in a child-centred pedagogy and broadening the subjects taught in primary school (ibid). Until after the end of World War II Australia traded mostly with Britain, but broadened their horizons later, including a much increased focus on trading with Asia (CIEB, 2013f). The long-standing focus on key countries in the West has made Australians keen on benchmarking, and thus they sought insights on how leading countries had encouraged economic growth in determining how to move forward themselves (ibid). This process identified that it would be important to their success to invest heavily in education and training to bring their standards up (ibid). Academic and vocational standards were created, the curriculum was developed and efforts were made to strengthen the teaching profession (ibid).

Post World War II, baby boom and immigration increased the school population in Victoria (Wikipedia, 2013e). Increasing class sizes resulted in the use of church halls and other temporary locations whilst new school premises were built (ibid). There were also teacher shortages which led to married women returning to work (ibid). By the 1970s Victoria's primary schools were evolving through child-centred pedagogy, school-based curriculum development, multiculturalism and genuine partnerships with parents (ibid).

To improve teacher quality as part of recent educational reforms, the Australian Institute for Teaching and School Leadership (AITSL) was set up in 2010 (Pearson, 2013b). They co-ordinated the establishment of agreed national standards and expectations for teachers. This was a challenging task given the diversity of backgrounds of different states/territories but was achieved by involving 6000 practising teachers and principals to ensure teacher engagement and buy in (ibid). The standards are currently being embedded. Teacher training is also being redeveloped to improve its quality and consistency (ibid). A national requirement for two-year postgraduate qualification as a prerequisite for teaching has been put in place and additionally those entering teacher training must be in the top 30% of the population for numeracy and literacy skills (ibid).

Education policy in Australia has been largely determined by the individual states and territories (CIEB, 2013f). However a national programme of assessment (NAP) began in 2008 and a national curriculum was adopted from 2011 (ibid). Victoria has merged their existing curriculum into the new national curriculum in order to retain the former's local character.

Whilst Australia performs well in international comparisons of achievement, there is a wide gap between educational achievements of those from privileged and disadvantaged backgrounds (Pearson, 2013b). Australia has put considerable financial resources into its education system in recent years and instigated a number of initiatives to help weaker schools (CIEB, 2013f). For example, one initiative focuses on increasing students' information and communication technology skills, and another on improving teacher training and retention through improved opportunities for professional development (ibid).

Indigenous children tend to perform less well than others on achievement tests. Whilst it has been hypothesised that this might be due to disillusionment with school, a 1995 survey found no difference in attitudes to school between indigenous and other groups (Marks, 1998). Some sources feel that teachers sometimes assume that aboriginal students are likely to do less well and have low expectations of them rather than promoting an attitude that such students have just as much potential as anyone else (see for example, Korff, 2012). In 2009 the State Government of Victoria published a strategy titled 'Education for Global and Multicultural Citizenship' (DEECD, 2009) to support schools by providing a renewed vision for global and multicultural education with emphasis on themes such as improving educational outcomes for all students, promoting social cohesion and enhancing the engagement, wellbeing and sense of belonging for all students.

A report commissioned by the Prime Minister's Science, Engineering and Innovation Council (PMSEIC, 2009) suggests that Australia has an attitude problem with regard to learning. Anti-social behaviour is reportedly becoming more evident both inside and outside of schools, with increasing numbers of children who are inattentive, disruptive, disengaged and under-motivated (APPA, 2008). There is a lack of enthusiasm for learning and the traditional cultural attitude to learning in Australia is a relaxed 'he/she'll be alright' approach (Milburn, 2010). There are examples of how a proactive Head teacher can turn around a school through the 'no-excuses model', which opposes the view that socio-economic status and innate ability are the main determinants of success, and places greater emphasis on the quality of teachers (ibid). This may include focussing on encouraging different teaching methods, raising expectations, and raising student attainment which in turn improves parents' attitudes to education by seeing their child's improvement (ibid). This perspective advocates teachers placing high expectations on themselves as well as on their students. However, such practices may be relatively rare, and teachers do not feel that their own efforts to improve their teaching would be recognised (ibid).

The PMSEIC report calls for a cultural shift in attitude with society needing to value education (Milburn, 2010). A campaign to lift the status of teaching is recommended, and another to make it part of the Australian identity to value education (ibid). Some argue that it will take specialised support and additional resources to reverse student underperformance and family attitudes towards learning in schools with high numbers of disengaged students and parents (ibid).

New Zealand

Primary education became compulsory in New Zealand in 1877 when an education act was passed (Wikipedia, 2013f). By 1900 there were fewer than 10% of students who went on to secondary school (for which there were fees) (ibid). As the 20th century progressed there was increased need for skilled tradespeople and administrators and the secondary sector expanded (ibid). In 1914 another education act was passed and secondary schools were required to offer free education to all who could pass a proficiency exam (ibid). By 1917 the percentage of students attending secondary school had increased to 37% (ibid). The schools were similar to grammar schools in England with a traditional curriculum suitable for those intending to go to university (ibid). Technical Schools were introduced as a result and were intended to offer a 'relevant' alternative and to have equal status (ibid). However, these tended to have a stigma attached to them and the balance of attendees at the two school types tended to run along class lines (ibid). The Thomas Report of 1944 resulted in a common, core curriculum drawing on academic and practical areas, aimed to be appropriate for students of varying ability, interests and background. Schools resisted this change by streaming students by ability (ibid).

Although New Zealand once had one of the strongest economies in the world (at the end of the 19th century its raw materials and privileged trade relationship with Britain were to its advantage), by the 1980s New Zealand was in financial trouble with rising inflation and unemployment, partly due to dramatic increases in oil prices and heavy borrowing from abroad for major projects (CIEB, 2013g; Wikipedia, 2013g). The national education system had a good reputation both internally and externally, but was nonetheless reformed as part of (Labour) government policies to address the economic situation (CIEB, 2013g). In 1989, the reportedly bureaucratic and out of touch Department of Education and its regional offices were replaced with a much smaller Ministry of Education (ibid). The ethos driving this was to move governance towards the school level, with each school having its own board (ibid). The National Party replaced Labour in 1990 and emphasis turned towards using market mechanisms to make education effective and to good management being key to school success (ibid). However, Labour's 'Tomorrow's Schools' are still the basis of today's New Zealand schools (ibid). Devolving responsibility to the local level strengthened some schools (usually those serving financially better off and better educated parents), substantially weakened others (usually those serving communities with less well educated parents, where the school boards found it harder to recruit good teachers), and for others made little difference (ibid). Whilst 'Tomorrow's Schools' have widened the gap between weaker and stronger achievement, overall achievement levels remain fairly stable, and performance on international comparisons, such as PISA, is high (ibid).

Of OECD countries, New Zealand has a relatively equal income distribution with less poverty than elsewhere (CIEB, 2013g). Additionally, New Zealand has a long history of national welfare provisions; for example, it is 8th amongst 39 countries in percentage of GDP devoted to family benefits (ibid). New Zealand has a relatively high number of 3 to 6 year olds in early childhood education and day care with relatively more of this provision funded by the government (ibid). Thus, children in New Zealand may be starting primary school with a developmental advantage over peers in other developed countries (ibid).

In the early 1990s the New Zealand Qualifications Authority was set up as a separate body to the ministry and with authority to create a comprehensive Qualifications Framework ranging from high school leaving qualifications to doctorates, including vocational qualifications (CIEB, 2013g). This harmonised framework has the advantage that higher education institutions and employers recognise these qualifications and students know that their achievements will be recognised (ibid). This strong system of qualifications is thought to have a positive influence on the quality of teaching in New Zealand schools and incentivise students to work hard (ibid). The main qualifications taken by secondary school students are

the National Certificate of Educational Achievement (NCEA) which are available at three levels. Some schools offer IGCSEs, International AS and A levels through CIE, though these are not registered on the National Qualifications Framework (Wikipedia, 2013h).

New Zealand also has strengths regarding reading instruction. They use a system known as 'Reading Recovery' which helps teachers identify children struggling to read and write, and provides teachers with skills in tutoring techniques to help these children (CIEB, 2013g). This has reportedly been very successful with a positive influence on the teaching of reading beyond just those students in need of particular help (ibid). Arguably, addressing literacy problems early can prevent knock-on problems for students across subjects and through their schooling so the effects of this system are thought to be far reaching (ibid). In addition, Numeracy and Literacy Development Projects in 2000 and 2004 supported improvement in teachers' content knowledge in these areas (ibid). Also, in 2008-9, a programme began to update national standards for literacy and numeracy with accompanying national assessment (ibid).

New Zealand culture is strongly influenced by British and European customs but there is also a strong influence from Māori and Polynesian traditions (Wikipedia, 2013i). Māori settlers arrived on the islands first (before 1300) but Europeans, arriving considerably later (around 200 years ago) had a dramatic effect (ibid). The Treaty of Waitangi was signed in 1840 to facilitate peaceful relations between Māori and European New Zealanders (Pākehā) (ibid). However the treaty was not initially effective and the New Zealand land wars broke out in 1845 (ibid). This had a negative impact on the place of Māori culture, but its influence has been regained in recent decades (Wikipedia, 2013i). In order to promote understanding between Māori and Pākehā, biculturalism and the Treaty of Waitangi were made part of the school curriculum in the late 20th century (ibid).

Pākehā culture has developed mostly from that of the original British settlers, but there are some distinct differences which have increased over time (Wikipedia, 2013i). An interesting feature is that Pākehā culture has a stronger emphasis on egalitarianism and anti-intellectualism (Keown, Parker & Tiakiwai, 2005) and the idea that most people can do most things if they put their minds to it (Wikipedia, 2013i). Intellectual activity is not particularly well regarded. The focus is instead on the 'kiwi ingenuity' of finding a practical 'what works' solution to a problem (Keown, Parker & Tiakiwai, 2005) rather than much emphasis being placed on applying a theory (Wikipedia, 2013i). Modesty is valued (Keown, Parker & Tiakiwai, 2005; Wikipedia, 2013i) which, on one hand, could potentially minimise any differential expectations of students and an attitude of equality in the classroom may be conducive to learning. On the other hand, valuing modesty and the distrust and dislike of those who boast of their own merits has been criticised as discouraging ambition and individual achievement (Wikipedia, 2013i). These are potentially conflicting influences on student attitudes to learning.

It is also interesting that one of the effects of European colonisation was that in the 1830s many Māori converted to Christianity and consequently learnt to read and write (Wikipedia, 2013i). In 1867 the Native Schools Act was passed (by a Pākehā dominated parliament) which required Māori children to be taught mostly in English (ibid). Additionally, most Māori parents encouraged their children to learn the English language to be able to function socially and economically (ibid). Whilst there was later dissatisfaction with this Eurocentrism and demand for equal recognition of Māori culture (which occurred in time) (ibid), these historical factors may have influenced current high performance in literacy and the emphasis on literacy through the 'Reading Recovery' method.

Up to the 1980s, New Zealand was claimed to be a classless society with a small difference between the salaries of higher and lower paid (Wikipedia, 2013i). Economic reforms in the 1980s and 1990s changed this due to international capital, commerce and advertising.

Cheap imports damaged local manufacturing and jobs were lost. The gap between richest and poorest New Zealanders increased (ibid). Some argue that ethnicity takes the place of class in New Zealand, as Māori and other Polynesians tend to earn less and have a lower standard of living and less education (ibid). According to a report by Mahuika and Bishop (2010), Māori students are treated differently in mainstream schools, often negatively. Bishop, et al. (2003, cited in Mahuika, and Bishop, 2010) found that teachers identified the main influences on the educational achievement of Māori children as the students themselves, their homes and/or the structure of the school, thus labelling lack of achievement in deficit terms and as not due to the classroom. Mahuika and Bishop argue that this influences the quality of teachers' relationships with Māori students and leads to teachers having low expectations of these children. Based on this study and other findings, Mahuika, and Bishop argue that deficit theorising by teachers is the main reason for the lower educational success of Māori students. They suggest that changing these positionings would allow teachers to realise their ability to affect the situation and cause change. There is now more common, but not universal, acknowledgment that Māori learners may have their own specific needs that are not the same as those of their peers (Mahuika & Bishop, 2010). Finding successful ways to deal with the differences, if acknowledged, is also partial (ibid). Mahuika and Bishop argue that teachers do not understand the role that culture plays in learning and educational assessment and do not know how to adjust for this in their teaching and assessment strategies, e.g. traditionally Māori people learnt through direct experience in the natural world and understanding particular ideas from this holistic perspective rather than learning in a decontextualised way which is common in Western classrooms. Arguably taking into account the different learning and assessment styles relevant to the culture would be beneficial (ibid).

Despite New Zealand doing well in international comparisons, the Ministry of Education is not standing still in terms of its ongoing educational aims. The New Zealand Ministry of Education published a recent report by the New Zealand Council for Educational Research focused on developing teaching and learning for the future (Bolstad et al., 2012). This document puts forward a strategy for developing 'future-oriented' or 21st century learning through 'unbundling' current school practices and rethinking them, drawing on existing examples of forward thinking practice, and focussing efforts around a number of key themes (personalised learning; new views of equity, diversity and inclusivity; a curriculum that uses knowledge to develop learning capacity; "Changing the script" – rethinking learners' and teachers' roles; a culture of continuous learning for teachers and educational leaders; new kinds of partnerships and relationships between the school and the community).

Summary of cultural and societal factors that may contribute to high performance

This section summarises some of the societal and culturally related factors that are common to some high performing jurisdictions. These factors could be amongst the reasons for the success of their education systems, though it would be unwise to assume simple causality. Various previous reports by different authors have identified overlapping subsets of these factors (e.g. Reynolds & Farrell, 1996; Green, 1997; Elliott & Phuong-Mai, 2008; OECD, 2011b; Tucker 2011; Economist Intelligence Unit, 2012; CIEB, 2013h).

Status of teaching as a profession / quality of teaching / teacher professional development

In most high performing jurisdictions teaching is a highly respected career and thus access to teaching courses can be selective and accept only those with high achievement. Often, teacher pay is good (e.g. Singapore, South Korea) or at least stable and reliable (e.g. Shanghai) thus making it an attractive option. There is rigorous teacher training and requirements for continued professional development (e.g. 100 hour annual CPD entitlement and designated career paths in Singapore; group lesson planning and lesson observations in Shanghai). The apparent importance of teacher development/quality/status to the success of education systems in high performing jurisdictions has previously been noted by the OECD's Andreas Schleicher (2011) and by Pearson's 'The Learning Curve' report (Economist Intelligence Unit, 2012). The latter argues that countries with the best performing teachers work to attract talented individuals and train them throughout their careers. They argue that the effect of good teaching goes beyond that of positive educational achievements, also influencing wider societal issues (e.g. lower levels of teenage pregnancy, greater tendency to save for retirement).

In a short summary of research findings on this theme, CEA (2011) conclude that four key factors that affect teaching quality, and thus learning, are: teacher knowledge of good/effective teaching and learning practices; a degree in the subject taught; teachers' verbal ability and literacy level; continuing professional development (which is necessary for improvements in teaching quality, particularly when there are changes such as to the curriculum or student population).

Cultural attitudes that highly value education, learning and hard work

In most high performing jurisdictions, education is highly valued and the 'cornerstone' of their culture. For example, in Eastern countries such as China and Singapore, Confucian values are culturally embedded and emphasise that hard work, discipline and perseverance bring success. This is very much in contrast with Western views that 'you're either smart or you're not' (Elliott & Phuong-Mai, 2008; Yeung & Yeung, 2008; Barber, 2012). The historical context of the Civil Examination in China and folklore surrounding it, has also influenced societal views on the value of education, leading to high aspirations (regardless of background). A side effect of respect for education in Chinese cultures is that there is often a supportive, pro-learning peer culture (Elliott & Phuong-Mai, 2008). The latter tends not to be the case in some Western cultures, where studying hard may lead to criticism or teasing from others (e.g. Elliott & Phuong-Mai, 2008). Finland is another example; here there is a long history of emphasis on literacy and reading skills and a societal commitment to high achievement (Andrews, 2010, cited in Oates, 2010). New Zealand is an interesting case as the anti-intellectual and egalitarian cultural perspective embodies both a view that most people can do most things if they apply themselves, and a negative view of anyone immodest or doing better than others.

Positive societal attitudes towards education have been identified as a possible factor by various researchers and commentators. Green (1997), for example, concluded that "the

essential difference between the compulsory school systems of the high achieving countries as compared with the lower achieving countries would appear to be that the former have both a culture and certain institutional mechanisms which encourage high aspirations and achievement among a wide majority of children” (p.122).

One piece of evidence that cultural views valuing education do affect performance is that Asian-American students tend to outperform their American peers even when ability and socio-economic status are taken into account (see Elliott & Phuong-Mai, 2008). Such students may be influenced more by the values of their parents and their own culture, than the (usually) anti-intellectual views of their class mates (ibid).

Parental involvement in education / parental expectations

In some jurisdictions where students perform well in international tests, parental involvement or expectations may be a factor. For example, in Shanghai parents have high expectations of students and a strong desire for them to do well, expecting them to study each evening; parental involvement in reinforcing students' learning is encouraged by schools. Parents in Hong Kong and Singapore also have high expectations of their children and in all three of these jurisdictions many parents send their children to tutorial schools or other forms of extra tuition. Parents make sacrifices for their children's education and expect them to repay the sacrifice (Elliott & Phuong-Mai, 2008). In Finland, learning begins in the home and early literacy is an important element of society (Oates, 2010). In 1686 literacy was made a requirement for marriage in Finland and this may be the background to continued emphasis on learning in the home, with early literacy providing the vehicle for further learning. In Canada the degree to which parents engage their children in literacy activities is also high. Positive parental engagement in students' learning seems to be less the case in Australia, despite its good performance in international comparisons. Though examples of strategic efforts (at the school level) to improve student performance have shown that a 'virtuous cycle' can be created with improvements in student abilities leading to parents having more respect for education and encouraging their children more.

Respect for authority and for the knowledge of teachers and parents

There is a culture of respect for authority and one's elders in some high performing jurisdictions, particularly those with Chinese heritage. Respect for the knowledge of their teachers may be a factor in student behaviour in school and tendency to pay attention in class. Respect for parents may be a factor in engagement in homework and extra tuition, and willingness to work hard to try to meet their parents' expectations.

An exam-driven culture, but with moves towards 21st Century learning

In some high-performing jurisdictions there has been a long history of education being focused on exam preparation and a view that only test results count (e.g. the history of the Civil Examination may be a strong cause of this in Chinese society). Whilst such culturally-embedded views may potentially place limits on the kind of learning taking place, they are part of a structure that reinforces the importance of studying in order to do well in the future, and a strong focus on exam technique may be one reason for the high performance of some jurisdictions in international comparative tests. In recent decades, policy makers in these locations have realised that students need more than rote-learned facts in order to compete in the global market and that skills in areas such as problem solving, application to real life situations, critical and creative thinking and teamwork are important. A number of initiatives have been instigated in Singapore, Hong Kong and Shanghai to encourage less didactic lessons with use of a wider variety of teaching methods and classroom practices, in order to facilitate the development of such skills.

Canada is a contrasting case, in that traditionally assessment has been classroom-based rather than exam-based. However, students have experience of provincial tests and take exams at age 18 years as part of their high school Diplomas.

Educating the 'whole student'

Tucker (2011) noted that high performing systems focus on educating the whole student. In Canada there are cultural values around societal harmony being important, perhaps giving an educational focus beyond exams and assessment. A specific example comes from Ontario where there are high numbers of 'new Canadians' in need of particular support with language. As part of the 'student success' strategy teachers meet to discuss students in need of support (or at risk of dropping out) and strategies for doing so are decided and then taken forward. Strong ethics and values are also important in Singapore and are seen as an important outcome of education in their own right. In Singapore there are also specific groups based in local areas to provide support for families whose students might do less well because of background. Moves towards wider teaching styles and broader goals for learning (e.g. 21st Century skills) also represent moves towards educating the 'whole student' in Eastern countries.

Involvement of teachers in policy making / teacher and school autonomy

Some high performing jurisdictions have made concerted efforts to involve, or at least consult, teachers and others in policy development and this may be a cultural or policy factor affecting the success of educational systems. Tucker (2011) has commented on this theme. Hong Kong is the strongest example of this with teachers and the public widely consulted on educational reforms. This helped with ensuring 'buy in' for the reforms and hence eased their implementation. Where education decisions are led by school level views in a 'bottom up' manner this may also have some advantages. The Netherlands and Hong Kong have high levels of school autonomy. China, whilst traditionally very hierarchical with a top-down education system, has made moves to devolve some power to the local level and Shanghai in particular has flexibility to pilot new ideas. In Canada education decisions have traditionally been under the control of district boards, with the state having a supportive role; there is no country-wide education department. Whilst there may have been some degree of shift towards central organisation, the boards still have considerable control over how they do things. In Ontario, teachers were involved in designing the agenda for reform, and thus were committed to its implementation.

However, engaging teachers in policy and decentralism are not common to all high performing jurisdictions. For example, in Finland there is a relatively low level of school autonomy, but high performance of students in international tests.

Cohort size

It is notable that most of the highest performing jurisdictions in comparative national tests are considerably smaller than the UK. There are around 670,000 16 year olds in the UK (JCQ, 2012), compared to about a tenth of that in some high performing jurisdictions e.g. around 60,000 in New Zealand (Education Counts, 2012), 46,000 in Alberta (Alberta Education, 2013) and 73,000 in Hong Kong (HKEAA, 2012).

Whilst it would be simplistic to assume that the scale of an education system has a straightforward inverse relationship with level of student performance, some elements of a successful small jurisdiction's education system may be difficult to scale up effectively and thus cohort size may be one factor influencing a jurisdiction's success. Alexander (2010) comments that at a simple level some of the best performing school systems appear to be

small (and rich), though emphasises that it would be 'grossly simplistic' to assume cause and effect and eludes to the complexity of factors involved.

Spending

Whilst investing funds in education is important and can contribute to improvement, there are other factors and it is not as simple as 'more spending equals better results'. Nisbet (2012) used UNESCO data to put a number of jurisdictions in order by percentage of GDP spent on education. The results did not give the same order as the rank order of jurisdictions by key international tests such as PISA and TIMSS. 'The Learning Curve' report (Economist Intelligence Unit, 2012) concludes that income does matter to education, but that the surrounding culture such as attitudes to learning may matter more and that cultural change in relation to education and ambition is needed to increase educational achievement outcomes.

Summary

This report has explored the cultural and societal context within which education takes place, with a focus on six jurisdictions whose students perform highly in international tests. A number of existing commentaries on the features of high performing jurisdictions which may contribute to their success were particularly useful, along with a wider set of varied sources.

Governments are increasingly looking to the education systems of other countries to improve performance in their own, but the cultural and societal contexts of jurisdictions must be taken into account before any simplistic 'borrowing' of policy. The success of any education system will be a result of a complex interaction of different factors. This report has drawn together some of what is known about the cultural and societal factors potentially aiding success in high performing education systems, though the interactions of different cultural and policy factors should not be forgotten in interpreting the list of factors above. In addition, the factors above are not universal to all high performing jurisdictions and confirming that particular factors are indeed causes of success is potentially difficult. Further to this, comparing features of weak and average performing jurisdictions would provide greater confirmation that the factors discussed here are relatively unique to high performing jurisdictions.

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