Chapter 6
Social Change and Education Reforms in High Performing Education Systems: Policy Lessons from Singapore and Hong Kong

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Abstract Both Singapore and Hong Kong have been ranked top (first and second) in international rankings such as the Programme for International Student Assessment (PISA), Progress in International Reading Literacy Studies (PIRLS), and Trends in International Mathematics and Science Study (TIMSS) in recent years. As such they are thus widely admired as high performing education systems (HPES) and, not surprisingly, among the best education systems in the world. The success stories of Singapore and Hong Kong education have aroused widespread attention among different stakeholders such as policymakers, researchers and practitioners internationally to see if it is possible for their policies and practices to be learnt and borrowed by other countries. Moreover, we stress the importance of context in understanding policy phenomena and possibilities for policy transfer. The two HPES are also encountering problems arising from globalisation and social change, and how well they deal with these problems will determine if their present international standing continues into the future. In addition, as both Singapore and Hong Kong are in the stage of post-developmental states, this chapter provides a critical review of education policies and reforms in both Singapore and Hong Kong to see how they can be refined and adjusted in order to cope with challenges facing both education systems.

Keywords Education reforms · The programme for international student assessment (PISA) · Globalisation · High performing education systems (HPES) · Hong Kong · Progress in international reading literacy studies (PIRLS) · Singapore · Trends in international mathematics and science study (TIMSS) · Social change

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Social Change and Education Reforms in High Performing Education Systems: Introduction

Since the beginning of the new millennium, a series of education policy initiatives have been adopted in Singapore and Hong Kong. Comprehensive education reforms, which address the importance of twenty-first century skills in the age of globalisation, are being carried out with the aims of cultivating a culture of lifelong learning, educating students with creative, innovative and critical thinking skills, broadening students' learning experiences, and preparing students to be "future ready" and to be global citizens (Education Commission 2000; Goh 1997). Curriculum, pedagogy and examinations have been restructured in order to enhance students' autonomy in learning and to get rid of the traditional examination-oriented and teacher-driven learning culture (Gopinathan and Mardiana 2013). The quality and social status of the teaching profession has been improved substantially with higher entry requirements, strengthened teacher education and sophisticated professional development mechanisms (Tan 2012). Education pathways have also been diversified at the school level and to better integrate national economies with the global economy to provide more opportunities for students to receive postsecondary and tertiary education. Both governments have endeavoured to transform Singapore and Hong Kong as education hubs with a more globalised outlook in line with the trend of internationalization and to better integrate national economies with the global economy (Lee 2010). Further, apart from being educated as global citizens, schools have been consistently reminded of the importance values and national education for a strong sense of national identity and belonging (Gopinathan 2015; Gopinathan and Lee 2013; Leung et al. 2017; Tan 2008, 2010a).

Nevertheless, there is a dilemma that while Singapore and Hong Kong students perform very well in those international rankings, their top performance is ironically achieved by rather traditional methods of teaching and learning in societies which are still very much examination-oriented in tandem with the strong influence of high-stakes public examinations, which are often used for selection purposes (Deng and Gopinathan 2016). Although there has been steady and remarkable improvement of both Singapore and Hong Kong's performance in those international comparisons, high achieving students in both cities have been found to lack confidence and interest in core subjects like mathematics, science and reading, together with a high level of test anxiety among high performing students (Davie 2017; OECD 2017; Zhao 2015). Moreover, how to achieve more equitable outcomes has become another concern with widening income gaps and social class differences in both Singapore and Hong Kong; individual's educational achievement or success seems to be increasingly related to social class and family backgrounds. It is argued that the problem of inequitable educational opportunity would be one of the most important issues to be tackled by policymakers in both Singapore and Hong Kong (e.g. Chua and Ng 2015; Gopinathan 2007, 2015; Ho 2010; Ng 2013; Tan 2010a, b, 2014; Yuen 2017).

By reviewing and examining recent education policy developments in Singapore and Hong Kong, this chapter argues that apart from maintaining top ranks in international comparisons, it is equally important for policymakers to deal with shortcomings and drawbacks in both the education systems. The following questions will be examined and discussed: What are major shortcomings facing the education systems in Singapore and Hong Kong today? How can these shortcomings be rectified with education policies and reforms? What policy choices face these two governments? Apart from sustaining high performance, what education goals should Singapore and Hong Kong aim for in the face of changes and challenges arising from globalisation and technological disruption? Through this discussion, it is expected that crucial lessons can be learnt from responses of the two governments which would be of interest and use to the global education community.

Following this introductory section, there are five sections in the remainder of this chapter. The second section provides a brief overview of the socio-political context of education development in Singapore and Hong Kong. It is followed by the third section examining major challenges facing both education systems in Singapore and Hong Kong and examines how they are similar or different within the present socio-economic context. Then the fourth section turns to focus on what policy actions are needed to deal with these challenges in both places. The penultimate section provides a discussion on what policy lessons can be learnt from the development of education policies and reforms in Singapore and Hong Kong when both of them are in the post-developmental state stage.

Socio-Political Context of Education Development

Being dominated by the Chinese population, both Singapore and Hong Kong have significant similarities and important differences. In spite of lacking any natural resources, they are important port cities and financial hubs, which were once under British colonial rule for about one and a half centuries since 1819 and 1842 respectively. The economic fortune of Singapore and Hong Kong was similarly founded on proximity to large, resource rich Southeast Asia and China as their hinterlands respectively. In geopolitical terms, both cities had administrations that committed themselves to economic growth in order to build legitimacy, similar to other developmental states, Japan and South Korea in East Asia (Castells 1988; Gopinathan 2007). This is especially true of Singapore whose efforts to be part of a larger political entity, Malaysia, failed in 1965, when it found itself a "reluctant" independent nation.

Significant differences lie in the fact that Hong Kong is a part of China and thus to some extent constrained by mainland imperatives. Singapore's independent status gives the government considerable freedom to set policy. Secondly, Singapore, even though being Chinese-dominated, is considerably more multi-ethnic and multi-lingual with the presence of Malays, Indians and Eurasians. Since its independence in 1965, a key imperative in education policy in Singapore has been using the

Table 6.1 Singapore and Hong Kong education at a glance (2018)

	Singapore	Hong Kong
Land area (sq km)	721.5	1106.7
Political status	Independence since 9 August 1965	Special Administrative Region in China since 1 July 1997
Total population (million)	5.61	7.39
Ethnic composition (%)		
Chinese	76	94
Malays	15	n.a.
Indians	7	0.4
Others	2	5.6
GDP per capita (US$)	57,710	46,190
Unemployment rate (%)	2.2	2.8
Human Capital Index (2017 Rank)	11	n.a.
Index of economic freedom (rank)	2	1
Global competitiveness index (rank)	2	7
Gini coefficient	0.458	0.539 (2017)
Education institutions		
Number of primary schools	185	587
Number of secondary schools	143	506
Number of publicly-funded universities	6	8
Student enrollments (2017)		
Primary school students	228,700	372,500 (2018)
Secondary school students	152,700	325,500 (2018)
Publicly-funded polytechnic students	71,400	n.a.
Publicly-funded university students	69,300	85,100
Government expenditure		
Total government expenditure on education	S$13.1 billion	HK$110.5 billion
	(US$9.6 billion)	(US$14.1 billion)
Ratio of total government expenditure on education to total government expenditure	16.6	20.6
Ratio of government expenditure on education to gross domestic product (GDP)	3.6	3.9

Sources: Census and Statistics Department, HKSAR Government (2017, 2018), Education Bureau, HKSAR Government (2019), Ministry of Education, Singapore (2018), Ministry of Finance, Singapore (2019), Singapore Department of Statistics (2018a, b), The Heritage Foundation (2019), University Grants Committee, HKSAR Government (2018), World Economic Forum (2017a, b, 2018)

school system, in institutional and curriculum terms, to promote racial harmony and social cohesion by inculcating people with a strong sense of Singaporean identity.

As a consequence of resource scarcity, both Singapore and Hong Kong invested heavily in education to build human capital, the only resource available for both cities' economic growth and development (see Table 6.1). Singapore moved

decisively from a strong British style academic curriculum, to a strong emphasis on English, Science and Mathematics and invested heavily in polytechnic and vocational education, from the 1970s onwards. Since the 1990s the two cities have similarly made significant policy changes in curriculum and pedagogy to take advantage of globalisation's opportunities. In the twenty-first century, it is the stock of human capital that fuels inward investment, significant growth in knowledge-intensive manufacturing and services. Singapore and Hong Kong graduate students are bilingual with the highest standards of English proficiency in the region. Moreover, they confront challenges to strengthen citizenship and civic identity. A distinctive Hong Kong identity, different from the mainland would be very difficult to achieve; Singapore's multiethnic nature means that social cohesion and racial harmony is always a work in progress; it is made particularly difficult in the present context of regional and international identity politics.

Major Challenges Facing Education Systems

Singapore and Hong Kong have demonstrated a strong ability to consistently improve their education systems. They continue to outperform more developed countries in Europe and North America, in various international rankings and comparisons in educational performance, such as TIMSS, PISA and PIRLS (see Table 6.2). Their outstanding performance can be attributed to the high quality of their schooling systems which depend on the availability of well-developed teacher education programmes and stringent selection of teachers and principals (OECD 2019), timely self-renewal of curriculum and pedagogy in response to emerging needs of the global economy, the effectiveness of educational administration by competent leadership in the education ministry and through the substantial investment in education with high efficiency in education spending. We also need to acknowledge the support provided to these policies by cultural values and norms, notably Confucianism which values learning, effort, and respect for authority. Since Singapore and Hong Kong are migrant societies, social mobility is valued and parent's expectations for education success are high.

Their "success stories" have been widely documented and studied by other countries, both developed and developing ones; these countries have been highly interested to learn from their education policies and practices in these two HPES and see if they could be borrowed and adopted to provide policy solutions to improve the effectiveness of their education systems. Nevertheless policy borrowing, which has become more common in the age of globalisation, cannot be carried out blindly without taking into consideration the borrowers' local contexts. A more cautious attitude towards policy borrowing is needed in order to determine which policies and practices can be adopted and refined before their implementation (Forestier et al. 2016; Morris 2016; Rizvi and Lingard 2010). Even the two HPES in Singapore and Hong Kong are not immune from being affected by new changes and challenges.

Table 6.2 International Education Rankings

	PISA-Science (2015)	PIRLS (2011)	TIMSS (2015)			
			4th Grade Maths	8th Grade Maths	4th Grade Science	8th Grade Science
Singapore	1 (556)	4 (567)	1 (618)	1 (621)	1 (590)	1 (597)
Hong Kong	9 (523)	1 (571)	2 (615)	4 (594)	5 (557)	6 (546)
China	10 (518)	n.a.	n.a.	n.a.	n.a.	n.a.
Chinese Taipei	4 (532)	8 (553)	4 (597)	3 (599)	6 (555)	3 (569)
Japan	2 (538)	n.a.	5 (593)	5 (586)	3 (569)	2 (571)
South Korea	11 (516)	n.a.	3 (608)	2 (606)	2 (589)	4 (556)
Finland	5 (531)	2 (568)	16 (535)	n.a.	7 (554)	n.a.
France	26 (495)	29 (520)	35 (488)	n.a.	34 (487)	n.a.
Germany	15 (509)	16 (541)	24 (522)	n.a.	20 (528)	n.a.
Netherlands	15 (509)	13 (546)	19 (530)	n.a.	29 (517)	n.a.
Russia	32 (487)	2 (568)	7 (564)	6 (538)	4 (567)	7 (554)
Spain	28 (493)	30 (513)	31 (505)	n.a.	28 (518)	n.a.
UK/England	15 (509)	10 (552)	10 (546)	10 (518)	15 (536)	8 (537)
US	25 (496)	6 (556)	14 (539)	10 (518)	10 (546)	10 (530)

Note: Rank (Score)
Sources: Mullis et al. (2011, 2016a, b), OECD (2015)

While Singapore and Hong Kong are praised as being among the most competitive economies in the world (see Table 6.1 and also The Heritage Foundation 2019; World Economic Forum 2018), both East Asian financial and trading hubs are not free from such social problems as poverty and income inequality with widening income gaps. Singapore has the highest Gini coefficient on household income among advanced economies (World Economic Forum 2017a), despite the figure having dropped from a high of 0.482 in 2007 to 0.458 in 2016, the lowest in a decade (Singapore Department of Statistics 2018a). In comparison, the Gini coefficient on household income in Hong Kong was in general higher than Singapore as it was recorded as 0.533, 0.537 and 0.539 in 2006, 2011 and 2016 respectively (Legislative Council 2016; Census and Statistics Department, HKSAR Government 2018). Both Singapore and Hong Kong's figures are relatively high and above 0.4 the international inequality threshold alert line, with 0.4–0.5 fairly inequitable and above 0.5 considerable disparities.

Therefore, the policy challenge for both governments of Singapore and Hong Kong is to sustain economic growth and to contain income inequality at the same time. Policy responses in education have included an emphasis on lifelong learning and skill upgrading, considered essential to improve productivity and thus economic competitiveness. Additionally, public expenditures on social welfare and transfers have been enhanced for assisting the lower income group through such means as providing additional preschool education subsidies and reducing university tuition fees (see e.g. Lee 2019). However, issues related to educational disparities, lack of

job opportunities, negative impacts of the influx of immigration, and social immobility have become more critical that may cause harm to social stability if they are not dealt with properly. It is therefore necessary to be aware of all possible unfavourable impacts arising from the policies and practices being adopted in these two newly developed East Asian economies.

Economisation of Education

One of the most remarkable ant changes and challenges facing education in Singapore and Hong Kong is the reinterpretation of the aims and uses of education from an economic-driven perspective, which Spring (2015) labels as the "economisation of education" for it suggests:

> the increasing involvement of economists in education research, the evaluation of the effectiveness of schools and family life according to cost/benefit analyses, and the promotion of school choice in a competitive marketplace. (pp. 1–2)

With the economic value of education being emphasized, the relationship between education and economic development has given rise to a vast literature and this has been utilised by policymakers to justify continuing education investment and reform. Substantial investment for education is justified in that it works to educate and equip the labour force with new knowledge and skills to cope with the ever changing needs arising from globalisation, especially economic, and automation and technology-driven disruption. This is also the most common rationale for education reforms in many countries in the world, including Singapore and Hong Kong (Education Commission 1999, 2000; Goh 1997).

The relationship between education and economic development is also reflected in international benchmarking mechanisms such as those managed by OECD like PISA with an assumption that high performance in these comparisons is a prerequisite for economic growth and development. Nevertheless, this claim has been challenged as some critics have questioned if there is a positive relationship between high performance in international education benchmarks and economic productivity and innovation. It would appear that notwithstanding high test scores, both Singapore and Hong Kong are not seen as societies in which their economies at the present time are innovation-driven ones. Economic productivity as suggested by other scholars may be more a function of efficient governance, market-favourable policies, and investment in education (Morris 2016; Zhao 2015).

Furthermore, the application of economic reasoning in policymaking makes education more likely to be seen as a commodity or an industry. This is reflected in the increasing use of market mechanisms such as accountability, competition, choice, cost-effectiveness, league tables, managerial efficiency, market relevance and responsiveness, performance indicators, quality assurance, and "value for money" (Mok and Tan 2004). These terms also denote the core themes of the public sector reforms, which also cover education, prevailing in both Singapore and Hong Kong

since the 1990s with the ultimate goal of enhancing both education quality and effectiveness. For example, more autonomy has been devolved to educational institutions through the implementation in Singapore of the independent schools initiative and later the School Excellence Model in Singapore and School-Based Management in Hong Kong in exchange for greater accountability to different stakeholders like government, parents and students (Chan and Tan 2008; Ng 2008; Sharpe and Gopinathan 2002; Tan 2006).

Through the processes of diversification and customisation since the late 1980s, with the creation of independent, autonomous and specialist schools and the introduction of integrated programmes in some independent schools and junior colleges in Singapore (Gopinathan 2007; Tan 1998, 2006), and in Hong Kong, the launch of the Direct Subsidy Scheme (DSS) schools, parents and students have been given more choices in the quasi-market of education, in which the state sector or government remains a major player acting as a financier, service provider or regulator (Tse 2008; Tsang 2011; Woo 2017). Marketisation has given rise to inter-school competition which had once been encouraged with the release of league tables as the case in Singapore and the disclosure of quality review reports to the general public in Hong Kong. As a consequence, schools have narrowly focussed on areas which are directly related to the rankings in league tables and quality assurance exercises. These ranking and quality assurance outcomes have often been utilized by schools for their marketing and publicity activities to attract high achieving students (Tan 2006; Tse 2017).

Likewise, the higher education systems in Singapore and Hong Kong have been placed under much greater pressure to cope with various ranking league tables, like the ones conducted by QS, Shanghai Jiaotong University in China and *Times Higher Education Supplement*, which provide service users or "consumers" the information on these institutions' reputation and international standing. Moreover, universities in Singapore and Hong Kong play a more important role in contributing to the development of regional education hubs through bringing in a larger number of international students to study and eventually work in both cities in order to remedy their "brain drain" problem. It is also noteworthy that both Singapore and Hong Kong have put in tremendous efforts and resources to build up a solid foundation of higher education institutions since massification began in the 1990s. As a consequence, the privatisation of higher education is less apparent in Singapore and Hong Kong where state or publicly-funded institutions are dominant.

Educational Disparities

While choice and competition have been encouraged through the economization and marketisation of education in Singapore and Hong Kong, there have also been increasing concerns over issues related to educational disparities in recent years. A more diversified schooling system comes with a growing hierarchy of schools and social stratification. In Singapore, the highly limited number of independent

secondary schools, which are less than ten, selected by the government are well-established, prestigious, and academically selective when the policy was at first implemented in the late 1980s. Apart from enjoying greater autonomy in school management and resource utilization, it is much easier for these independent schools to attract students with the highest academic ability because of their reputation and influence in the society as well as their distinguished alumnus. Two of three Singapore's prime ministers studied at Raffles Institution. The institutionalisation of integrated programmes and the Direct School Admission scheme since the early 2000s strengthened these independent schools' advantages to admit top students based on their academic and non-academic track records (Tan 2014). The creation of independent schools was supposed to provide outstanding examples for other schools to follow and imitate so that all other schools could also improve their education quality (Ministry of Education 1987); there is little evidence that this in fact happened. With the persistence of a highly selective school environment in Singapore, the socio-academic elite is reproducing itself and jeopardising the much vaunted meritocratic ideal that underpins education and society in Singapore.

A similar scenario can also be found in Hong Kong where the DSS was firstly introduced in the 1990s, when it initially catered for the incorporation of a small number of private schools, including a few "left-wing pro-China patriotic" schools during the British colonial period, into the mainstream public subsidized schooling system subject to the regulations of the government. In the early 2000s, the scheme was modified to attract not only new schools to join DSS but also traditional and top-notched grant schools, which were set up by missionaries or religious bodies between the mid-nineteenth and early twentieth centuries. These schools are also well-established and top-notch schools in Hong Kong (Tsang 2011). Different from the independent schools in Singapore, they were not selected by the government to join the DSS but their sponsoring bodies could opt to join the scheme, subject to the government's approval. Moreover, they can increase tuition fees up to a limit set by the government and also receive subsidies per headcount from the government (Lee 2009).

Additionally, these DSS schools are granted greater autonomy in management, staff recruitment, student enrolment, curriculum, and also the medium of instruction. This reflects a possible way out for these schools to be getting away from the negative impacts of the ongoing education reforms. Although the government explained that the "revised" DSS was aimed to create a more diversified schooling system by allowing more choice for parents and students, some "new" DSS schools which are also traditional top schools charge relatively high tuition fees, up to over HK$50,000 per year which is an amount even higher than local subsidized university degree programmes'; this in effect, means that only middle or upper social class students can afford fees, regardless the provision of student assistantship or scholarship by those DSS schools as stipulated by the government (Tse 2008; Tsang 2011; Woo 2017). In this sense, therefore, these top "new" DSS schools automatically exclude students from lower income families. Meanwhile, the interests of this group of top schools can be protected through the "new" DSS policy for they are financed

by students' tuition fees and subsidized by the government simultaneously to maintain their competitive advantages (Lee 2009; Tsang 2011).

Another aspect of educational disparity concerns ethnic differences or segregation found in the Singapore schooling system. As a consequence of the streaming policy introduced in the late 1970s, a much larger proportion of Malay and Indian students are streamed into lower ability streams. This is in large measure due to education disadvantage in the early years of schooling due to poverty, low income, and lack of participation in early childhood education (Shamsuri 2015). Malay and Indian students are underrepresented in the most prestigious and top schools, where most students are Chinese and from wealthier family backgrounds (Gopinathan 2015; Tan 2014; Zhang 2014). In addition, Malay students have had a lower percentage of mathematics and science pass rates in public examinations over many years. This correlates to relatively low percentage of Malay students enrolled in the junior colleges and universities (Tan 2010a, b). The government responded by setting up the Council on Education for Muslim Children (Mendaki) in the early 1980s to provide financial and educational assistance to Malay students. While dropout rates were reduced significantly and their performance in public examinations were improved, and the gap narrowed between ethnic groups, a gap with Chinese students persists (Shamsuri 2015; Tan 1997, 2014). This reflects the link between social stratification and academic stratification which requires more policy attention in Singapore (Gopinathan 2015).

In Hong Kong, with over 95% of the population Cantonese-speaking, there are also similar concerns about two specific groups of non-local students' educational performance. One group is the so-called "new immigrants" from the Chinese mainland who come to Hong Kong largely for family reunion. There new immigrant students were born in China with one or both of their parents residing permanently in Hong Kong. Some of these children face difficulties in adapting to the Hong Kong curriculum, in particular the learning of the English language, together with a very different living environment and culture as compared with the Chinese mainland. This, however, does not rule out good academic performance accomplished by these immigrant students, some of whom performed even better than local students in PISA 2012. Ho (2017) explains their good performance as a result of their parents' strong desire to improve their living standards through their children's academic performance creating upward social mobility in the future. As most of these children's parents are from the lower income group, it is rather difficult for them to afford additional expenses for co-curricular activities, private tutoring and those DSS schools which charge high tuition fees. Another group is the descendents of South Asian minorities who have been permanently residing in Hong Kong. Unlike those new Chinese immigrants, these South Asian minority students face the problem of Chinese proficiency, which is a prerequisite for them to find employment in the government and other institutions in Hong Kong (Yuen 2017). Thus while there has been some progress, like Singapore, gaps persist. However, as Ho (2017) suggests with reference to PISA 2012 findings, Hong Kong has a better record than other countries like Singapore in providing education opportunity with relatively

high quality and high equity, regardless of students socio-economic and cultural backgrounds.

Meritocracy or Parentocracy?

Meritocracy has long been a core cultural value for Singapore and Hong Kong. This is because education plays a crucial role in identifying and selecting elites for both societies which consistently emphasize the importance of the principles of fairness, non-discrimination, and equality of opportunity. Meritocracy refers to the rewarding of individual merit with social rank, job positions, higher incomes, general recognition and prestige, and, in the education system, greater educational resources. It points to merit as a rule or principle that governs how the economy, society, and politics are organized. Individuals are motivated to do the best that they can (Lim 2013; Tan 2008, 2010b, 2017, 2018). Meritocracy, which ensures a clean and efficient government, is also a fundamental principle of governance guiding the selection of political elites through national examinations and scholarships offered by the government and its related institutions (Wong 2013). Former Singapore Prime Minister Goh Chok Tong has recently stressed that meritocracy must remain a key pillar of Singapore society to guard against social inequity and also the "greater dangers of nepotism and cronyism." The government would intervene and make appropriate policies to ensure meritocracy works in the country so that every citizen has equal opportunities at the starting line and a fair chance to succeed throughout life (Seow 2017).

Nevertheless, there have been concerns whether this meritocratic system is really open to all and run on a level-playing field or whether over time it has come to be dominated by the elitist class in the society. Singapore's founding Prime Minister Lee Kuan Yew, who believed in eugenics, upheld a view that there is a relationship between parents' educational achievements and their children's. This view was translated into a controversial policy initiative in that the better educated were encouraged to have more children. In other words, this implies that only individuals whose parents are well-educated and from middle or upper classes are more likely to succeed in this meritocratic and elitist education system, which focuses on elite selection and formation. Barr (2014) points out that a majority of top scholarship recipients in Singapore have been from certain elite schools such as Raffles Institution and Hwa Chong Institution. Meanwhile it is more likely for these top schools to admit students whose fathers are university graduates than neighbourhood schools and they are more likely to live in private property (Davie 2013). A similar situation can also be found among those DSS schools whose high tuition fees in Hong Kong probably exclude those students from working class and lower income groups.

One could argue that over the decades a paradigm shift from meritocracy to parentocracy has occurred. Education achievement is now more likely determined by their parents' wealth and social networks instead of their own ability and efforts

alone (Brown and Lauder 2001; Goh 2015; Lee and Morris 2016; Tsang 2011). Parents are playing a more prominent role in deciding their children's education pathways. The cultural capital available to upper and middle class parents is arguably more important in ensuring children's success in such a highly competitive education system like Singapore (Tan 2014, 2019a). Parents are able to use different means in ensuring that their children are admitted to top or elite schools, are able to move to areas near these well established schools, to volunteer in those schools, and to invest heavily in private tuition to prepare their children for public examinations like Primary School Leaving Examination (PSLE) and to get them into specialized programmes like the gifted education programme or integrated programmes offered in those elite schools (Ng 2013; Tan 2019a). Similar to Singapore, in Hong Kong competition in the schooling system has been getting tougher in recent years. Some wealthier households class are now more frequently sending their children to study in international schools or study abroad if they find it affordable.

Education Policy Actions for Social Change

In response to the challenges which have been discussed in the previous sections, governments in both Singapore and Hong Kong have responded to increasing concerns over slowing social mobility and growing inequality. New directions in education policies and reforms in both places are expected to provide students with sufficient and equal opportunity for receiving quality education, to enable every school to develop and strengthen its merits, strengths and niche areas, and to cultivate a culture of "compassionate meritocracy," as suggested by former Prime Minister Goh Chok Tong (Seow 2017), striking a right balance between educational competition and mutual help spirit in society. This section elaborates on these three policy directions which are applicable to both Singapore and Hong Kong under the present socio-economic context.

Education for Life

One policy initiative has been that to ensure all people, no matter how old they are, are entitled to enough and equal opportunity to receive education as a lifelong process to consistently renew the workforce with new knowledge and upgraded skills to cope with the ever changing global economic needs and also challenges from technological disruptions. While the notion of lifelong learning is not a new idea for education reforms, for it was at first proposed in Singapore and Hong Kong in the late 1990s when both places embarked under the themes of "Thinking Schools, Learning Nation" and "Learning for Life, Learning through Life" respectively (Education Commission 2000; Goh 1997), this remains a major policy goal to engage working adults to receive education on a lifelong basis in order to renew and

upgrade their knowledge and skill for improving the overall economic productivity and competitiveness as well as workers' employability and incomes. The launch of the Skills Future programme, together with the setting up of the Skills Future Council (which is currently known as the Council for Skills, Innovation and Productivity) in Singapore in 2014 is an example of the government seeking to integrate education, training and industry support for career advancement by collaborating with employers, labour unions and industries.

Therefore, more emphasis and resources have been devoted to the promotion of applied learning and research being undertaken by brand new universities such as Singapore University of Social Sciences (formerly known as UNISim) and Singapore Institute of Technology, which are aimed to provide more opportunities for working adults and polytechnic graduates to receive higher education and also to encourage lifelong learning in line with the Skills Future initiative among the entire population in Singapore (Tan 2019b). In Hong Kong, on the other hand, there is the Qualifications Framework defining standards applicable to qualifications in the academic, vocational and professional education sectors and also assuring their programmes are relevant to industry needs so as to facilitate lifelong learning by working adults. In addition, the ideas of "applied learning" and "experiential learning" have been promoted to motivate students learning through attaining hands-on experience from apprenticeship and internship.

Apart from this, education policies need to address the difficulties facing disadvantaged or underperforming groups such as lower income families and ethnic minorities in Singapore as well as new immigrant students from the Chinese mainland and South Asian minorities in Hong Kong. Some government-sponsored institutions or voluntary and non-government organizations in both places dedicate themselves to providing financial resources and non-financial assistance like private tutorials to enable these "underprivileged" students to cope with their school work and assessments. For instance, the Singapore government also pointed out that Malay education performance as shown in public examinations has shown improvement in the past decade. However, the educational achievement gap between Malays and the ethnic Chinese majority remains significant. It is not known how effective such voluntary assistance would be to improve these disadvantaged groups' educational achievement. In Hong Kong, in face of the growing public awareness of educational disparity facing disadvantaged groups, the government is allocating more resources and refining policies to better cater to their needs. For instance, additional funding has been given to schools which enrolled at least 10 ethnic (mainly South Asian) minority students for teaching Chinese as a second language, as an alternative recognized qualification for their Chinese proficiency.

Every School a Good School

“Every school a good school,” a slogan created by then Singapore Education Minister Heng Swee Keat in 2012 when he identified six features of a good school, including studying and knowing the needs and interests of each student to help them grow; ensuring all students acquire strong fundamentals of literacy and numeracy; creating a positive environment for each student; having caring and competent teachers; having the support of parents and the communities; and caring for and providing opportunities to all students regardless of family circumstances, was intended to signal the ministry’s intention to remove perceived disparities between schools and diminish competition to get to the best schools (Heng 2012). These criteria thus serve as the basic guidelines for schools to achieve the goal of providing every child with the opportunity to develop holistically and maximize his or her potential. Nevertheless, it does not mean that all schools have to be good identically but they need to sort out their own ways to become good schools (Mathews et al. 2017).

Individual schools are expected to excel in different areas other than academic performance to meet the needs of different students. This policy direction is to facilitate the development of a much more diversified schooling system which contains a wide range of schools which are with different characters and uniqueness. Good schools therefore not only refer to those independent, autonomous, and Special Assistant Plan (SAP) schools but also a majority of neighbourhood schools which possess with their own areas of excellence. Moreover, good schools can enable students to possess skills in languages, mathematics and science as well as ability in problem-solving, persistence, collaboration and having curiosity. However, in Singapore, it is still likely for parents to choose schools based on academic performance even though they desire for character-building and other holistic areas of education in a more balanced education system (Mathews et al. 2017).

Despite the good intentions, it is not so easy to change parents’ mindsets to accept that all Singapore schools are equally good for parents still mainly refer to academic performance and achievements of individual schools as a yardstick for making choices for their children. Although it is a good policy intention to create a diversified schooling system, in which parents are able to exercise their choices, it may turn out to be those families from the middle and upper classes who possess more cultural capital are better able to choose between different schools. Therefore, as Ho Kwon Ping noted, a majority of students in the most prestigious primary schools in Singapore do not live in public housing, which is home to about 80% of all children in Singapore (*The Economist* 2015). Similarly, in Hong Kong, it is more likely for the middle and upper class families to send their children to study in the “new” DSS schools, most of which were converted from the most prestigious traditional grant schools, even though they charge very high tuition fees that the working class and lower income group find unaffordable. Further most parents are willing to spend much more money on private tutoring to get their children better prepared for getting into “good” primary and then secondary schools.

Regardless of the policy intention to persuade parents that every school is a good school that comparisons and rankings are considered not necessary, the competition between students, together with their parents, for getting into top schools is getting more intense. For instance, Mathews et al. (2017) found in a survey on parents' perceptions of the Singapore primary school system that over 70% of respondents indicated that it is important and even essential for "good" schools to have a record of high PSLE scores and have students being admitted into top secondary schools, even though most of them agree that schools should put more emphasis on students' character and values as well as discipline (pp. 21–22).

Amidst this highly competitive schooling system, there have been policy attempts recently made by the government to alleviate pressure facing students, such as streaming at secondary schools will be scrapped and gradually replaced by subject-based banding, and also a revamp of PSLE scoring system to allow students greater flexibility to develop their strengths and interests according to their individual performance in the subjects regardless of how their peers perform. It is also a means to reduce the stigmatization effect arising from streaming and high-stakes examinations (Ministry of Education, Singapore 2019; Ong 2019). Interestingly, only slightly more than half of the respondents agreed that independent, autonomous and SAP schools should be scrapped (p. 41). Meanwhile over 90% of the respondents agreed that government funding to non-prestigious neighbourhood schools should be increased with the allocation of best teachers to all primary schools (p. 42). These findings demonstrate that parents in Singapore remain conscious about how well "good" schools perform academically, regardless of the government's urge for them to focus on niches other than academic achievements of individual schools.

Compassionate Meritocracy

The importance of education in Singapore and Hong Kong lies in its close relationship with the core value of meritocracy as discussed in the previous section. The ruling elites believe that meritocracy provides equal opportunities to all in a non-discriminatory manner, regardless of socio-economic background. Those who perform well academically in the education system are rewarded with scholarships, university places and eventually lucrative careers in the future. Thus, both places seek to identify and select elites impartially for effective governance. Nevertheless, these meritocratic elites, once successful, will invest even more on their children's education so that they are advantaged to succeed in a competitive education system and thus more likely to become beneficiaries in the meritocratic system, which in turns contributes to a cycle of social stratification and reproduction across generations (Tan and Dimmock 2015). Moreover, with the Gini coefficient ranging between 0.45 and 0.54 in Singapore and Hong Kong respectively, which are among the highest among advanced economies, the problem of income inequality and social class difference and stratification is now accepted to be more serious in both places than other developed economies. This situation raised questions about the

meritocratic system not promoting equal opportunity or social mobility but social segregation in favour of elitism.

These negative perception and impact of meritocracy have been recently tackled, for instance, by the Singapore government to make use of a new term called "compassionate meritocracy", which was first raised by former Prime Minister Goh Chok Tong in November 2006, to ask those who benefited from the meritocratic system to contribute to society by assisting the less able and less fortunate (Anwar 2015). As shown in a survey conducted by the Institute of Policy Studies in 2013, most people in Singapore were in favour of a less competitive, more holistic education system, which is also more inclusive, thus enabling students to learn with others of different abilities and backgrounds (Amir 2013).

This shows that the government needs to be more responsive to the general public's reactions to major policy issues like ensuring meritocracy works properly with a level-playing field against the danger of nepotism and cronyism in Singapore society that Goh Chok Tong has addressed recently (Seow 2017). For instance, Finance Minister Heng Swee Keat announced in his Budget 2016 the allocation of around S$20 million to launch the 3-year KidStart scheme, which is aimed to benefit 1000 children aged up to six from disadvantaged families through regular home visits, enhanced health and learning support as well as placement in pre-schools (*The Straits Times*, 12 April 2016). The KidStart scheme is aimed to level the playing field for disadvantaged children and thus prevent social problems such as inequality and family dysfunction from becoming entrenched. This scheme will be made permanent as a means to break the cycle of poverty in Singapore (*The Straits Times*, 17 July 2017), and it will be further expanded to assist 5000 disadvantaged children over the next 3 years (Lee 2019). As what Prime Minister Lee Hsien Loong firstly put forward in his National Day Rally 2017 speech, children, regardless of their family backgrounds, will have equal opportunity to access quality and affordable preschool education, and the government will ensure this by providing more preschool places and upgrading the standards of preschool teachers (Lee 2017).

As in Singapore, there has also been growing concern in Hong Kong about the problem of social segregation slowing social mobility, both of which were considered to be one of the reasons beyond political factors explaining the involvement of a significant number of young people in political protest movements which cumulated with the Umbrella Movement in 2014 and, more recently, the Anti-Expedition Bill Movement in 2019, which turned out to be the most serious political and governance crisis facing Hong Kong after its handover in 1997.

In response to youth discontent, more resources were made available for students to receive tertiary education. This is partly done by providing financial subsidies to students who study in local self-financed degree programmes. More new permanent teaching posts are also to be created in order to accommodate a number of teachers who were originally hired on a contract basis (Lam 2017). In short, the government has recognized the need to be more responsive to the needs of the general public and to be more communicative in responding to the needs of stakeholders in making education policies. However, in a deeper sense, the effectiveness of these policies to entice the youngsters' national identity and patriotism towards China largely

remains an unresolved issue to be tackled by the government (Lo 2019). Meanwhile, a more proactive role of the government in making education policies to offer more educational opportunities for the disadvantaged groups, including students from low income families, new immigrant students from the Chinese mainland as well as South Asian minority students, is expected to ensure that fairness and justice can be achieved in Hong Kong society.

Policy Lessons Learnt from Singapore and Hong Kong

We have attributed the transition of both Singapore and Hong Kong from resource-starved entities to prosperous economies with GDP per capita in 2018 in Singapore at US$57,710 and Hong Kong at US$46,190 to their successful development and implementation of human capital politics. Obviously, the specific policies, rationales, implementation strategies are context specific, but it is, we believe, possible to step back and draw some general lessons for their development experience. We suggest a 3Cs framework comprising (a) context, (b) culture, and (c) competence.

Context

With regard to context, both Singapore and Hong Kong faced existential challenges. For Singapore, it was the failure of merger with Malaysia and the need to chart a new future. It was a small, vulnerable island in the midst of more populous neighbours, and with considerable internal diversity. For Hong Kong it was the rise of the Chinese Communist Party to power on the Chinese mainland since 1949 and the realisation of Hong Kong would in 1997 be "returned" by the British to China according to the Sino-British Joint Declaration signed in 1984, which stipulated that Hong Kong would be run as a Special Administrative Region according to the "One Country, Two Systems" principle.

We would argue that these threats focused attention on the need to survive and prosper. Indeed, in Singapore, the period 1965–1978 is known as the "survival" period. A development-oriented mindset took hold, with economic development given priority. High quality and relevant education were seen as essential in meeting economic objectives. Curriculum was rapidly modernized and both STEM (science, technology, engineering and mathematics) and TVET (technical and vocational education and training) subjects gained in prominence. As a consequence of the economic growth that followed and the redistributive policies of governments, such as investing in public housing and health, governments gained legitimacy to take unpopular decisions. An example from Singapore would be the decision to adopt English, the former colonial language as medium of instruction for all subjects. This was politically a very risky decision, given the hostility of the Chinese-educated towards English. But the government prevailed and Singapore was able to join the

global economy earlier and more successfully than other Asian countries whose language policies were more nationalistic in nature (Gopinathan 2015).

Thus, one lesson could be that the state made education policies on the basis of pragmatism not ideology, linked it closely to its development agenda and maintained sufficient control to ensure that its goals were met.

Culture

Both Singapore and Hong Kong are, given their Chinese majorities, Confucian-based cultures. Traditionally in this culture, scholars and scholarship were highly valued. This was valuable in the context of an emphasis on schooling and certification noted earlier. This orientation was strengthened with economic growth leading to the growth of a middle class who had high aspirations for their children and valued the social mobility that success in education produced. Parents take the education of their children seriously and have high expectations. Both parents and students know that to succeed in a competitive system, ability and effort are required. In both Singapore and Hong Kong a meritocratic ethos prevails. The downside is that both education systems have become excessively competitive and a potential source of socio-economic inequality; well-to-do parents invest in additional academic and non-academic enrichment activities for their children, thus strengthening their academic and cultural capital. Thus, Singapore and Hong Kong children are academic high achievers but anxious and stressed (Davie 2017; OECD 2017).

Additionally, it also takes into consideration a significant change in governance culture. Unlike other East Asian economies like Japan, South Korea and Taiwan where the authority and capacity of the state have been challenged by domestic political and international economic factors, Singapore is the exception in this post-developmental state era for the state remains relatively strong and has demonstrated its ability to keep the economy growing, albeit more slowly. As Gopinathan (2015) points out, Singapore has been shifting into an "adaptive developmental state" mode recognising that not only economic policy but also social policy is necessary in tackling inequalities and marginalisation which erode trust between ethnic groups and socio-economic classes. It is therefore essential for the government not only to raise economic productivity and competitiveness but also to maintain a cohesive, confident, compassionate and caring society. With a more well-educated middle-class society in Singapore, it is inevitable that governance changes from a paternalistic style to a more participatory or collaborative political culture, one that provides more incentives for people to engage in policy debate (Mahbubani and Teng 2017).

Competence

The Singapore model is characterised by a high level of administrative capacity. Singapore's political leaders, at the onset recognized the value of long term planning, the rule of law, planning on the basis of pragmatism and rational rather than sectorial interest. They sought to, and were successful, in attracting the "brightest and the best" into the civil service. Leadership of the Ministry of Education was often a sign of high competence; many education ministers have gone on to attain senior cabinet positions. At the time of writing, for instance, the current Deputy Prime Minister and Finance Minister Heng Swee, was once the education minister between 2012 and 2015.

Key features of how Singapore built up an underperforming education system in the 1960s and 1970s include the ability to take a "whole of government" approach, i.e. to include key stakeholders like finance, trade and industry and manpower in planning in major education reform initiatives, to take the long view and do incremental and calibrated reform rather than 'big bang' reform. Another feature of intelligent policy making in Singapore was the attention paid from early on to building capacity in school leadership and teacher professionalism. Singapore was able to take advantage of its small size to structure a close alignment between Ministry of Education and the schools in which the children were educated. A greater fidelity of ministry objectives was thus achieved in the case of Singapore. In addition, the calibre of Singapore teachers is respected both nationally and internationally and the cadre of school leaders it developed has been able to steer the system through the many changes introduced in the last three decades. It is not surprising therefore that in the Worldwide Educating for the Future Index conducted by the Economist Intelligence Unit in 2018, Singapore was ranked first in terms of the policy environment (The Economist Intelligence Unit 2018).

In contrast, Hong Kong has been facing a critical problem of political legitimacy crisis generated by the fact that the government is not voted in through universal suffrage. The past few years have witnessed ineffective governance or even a crisis of governance, which was reflected in several mass movements since the mid-2010s, for most of its policies were not effectively implemented due to a lack of a strong base of popular support and political legitimacy (Lee and Tse 2017). For instance, the unsuccessful implementation of the national education programme in 2012 demonstrated a lack of mutual trust from the general public in the government for its intention to propose a new national education curriculum was widely questioned (Leung et al. 2017). It is therefore more important for the government in Hong Kong to revamp its governance style to be more communicative by seeking stakeholders' viewpoints and opinions on the making of education policies. Moreover, as mentioned earlier, as the government is less trusted by the people in the case of Hong Kong especially through recent years of political disturbance and controversies, it is not difficult to see how policy implementation could be easily blocked by opposition from below, regardless of the good intentions behind the policy (Lee and Tse 2017). In the Worldwide Educating for the Future Index 2018, Hong Kong was

ranked twenty-second with reference to the policy environment (The Economist Intelligence Unit 2018). This shows a big difference from Singapore where the governance by the ruling party is in general trusted by the general public.

Conclusion

In this chapter, we have reviewed some important issues facing the education systems in Singapore and Hong Kong, two HPES in Asia. These are issues that cannot be revealed from international rankings like PISA, PIRLS and TIMSS, but they cannot be neglected. They include the increasing economization of education, educational disparity in terms of social class and ethnic inequality, and the shift from meritocracy to parentocracy. While both places are keen to uphold their top performance in international rankings of education, they also need to pay attention to those issues related to social fairness and justice like narrowing the gaps between educational achievements by different social classes and ethnic groups, as well as making sure there is equal opportunity for education and that upward social mobility remains feasible. In addition, the core value of meritocracy has been challenged for it does not always guarantee impartial selection of elites for they can be reproduced by the elitist captive of the education system. Meritocracy is seen to be increasingly overtaken by parentocracy which highlights the role of parents in bringing about their children's education success. There have been significant responses in both Singapore and Hong Kong, but it remains to be seen how successful these will be.

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