Demographic Trends : Impact on Schools

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Abstract

Background: Singapore is experiencing great demographic change. These demographic trends show fewer young people and declining birth rates, greater longevity for ageing generations and an increase in the number of non-Singaporean residents. Statistics also show that more than half of the total population increase in the last decades was contributed by non-resident (non-Singaporeans). These demographic trends have far-reaching implications for schools and educators.

Aims: The paper looks at how key demographic trends will reshape Singapore's schools. The paper focuses on three key factors-mortality, fertility and migration-and their impact on schools.

Method: The analyses are based on existing demographic data and trends. The data is taken from Singapore Department of Statistics, 2008.

Results: The first two factors, namely ageing population and declining birth rates, lead to the need to develop lifelong learning skills. The third factor of immigration leads towards multiculturalism in education for hybrid identities to work, think, and play across cultural boundaries.

Conclusion: It is necessary to ensure that the school structures are responsive to changing needs, so that it can evolve in a timely manner to prepare the learners meaningfully. Schools in Singapore have to incorporate a wider range of activities that can help to develop 21st century skills without compromising the rigor and quality of the original school and curriculum structure which has served the needs of the students in Singapore well.

Keywords: demographics, lifelong learning, multicultural

人口統計趨勢對學校的影響

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摘要

*背景：*根據2008年人口統計數據，新加坡人口結構有着顯著的變化：年輕人口的增長率下降，嬰兒出生率銳減，高齡人口壽命延長，外來移民人口數目劇增。過去半個世紀以來，外來移民人口占全國人口總增長率的一半以上。從這樣的趨勢看來，對學校和教育家將產生很大的影響。

*目的：*這份報告主要針對目前的人口問題，探討如何重塑新加坡的學校。重點將從死亡率因素、生育率因素和新移民因素三方面提出論證以及這些因素對學校的影響。

*方法：*論文依據現有人口統計數據與趨勢進行分析。數據取自2008年新加坡統計局。

*結論：*從人口老化與出生率下降的因素，確認發展終生學習的能力是必要的；新移民因素，則帶出適應多元文化教育的課題。

*總結：*我們必須確保學校的結構能順應這種變化與需求，以便學習者有意義地為長遠的未來作好準備。新加坡的學校應該在原有的嚴謹的教育體系和優質的課程結構下，納入更廣泛的活動，以期為21世紀的發展做好準備。

關鍵詞：人口統計，終生學習，多元文化

Demographic Trends - Impact on Schools

Demographic prospects will certainly add challenges to the growing pressures to schools. Singapore and the developed world population are experiencing great demographic change, with fewer young people and declining birth rates. At the same time, life expectancy is also undergoing change. These demographic trends have far-reaching implications for schools. What is needed to prepare for these demographic changes? What sets of values, skills and knowledge will teachers need to produce the best social outcomes? What school environment is required to foster these changes? What kind of school culture is needed to help everyone to achieve their potential in a changing world?

While some regions will struggle to provide education, especially quality education, others will engage in a "battle for brainpower" (Wooldridge, 2006). The new knowledge society requires a steady turnout of an increasingly highly qualified workforce as well a pool of competent knowledge producers. To be able to accomplish these tasks, the education system needs a critical number of student intakes. Projections by the Organization for Economic Co-operation and Development (OECD) alert us to shifts in the number and the nature of the student population by 2050 (OECD, 2009).

The paper looks at how key demographic trends will reshape Singapore's schools. The paper focuses on three key factors-mortality, fertility and migration and their impact on schools, focusing mainly on the primary and secondary schools. The analyses are based on existing demographic data and trends. Although other factors that impact schools and teaching, such as technology and globalization are undoubtedly important, the focus in this case is distinctly on the people factor.

Demographic Prospects

Singapore, a former British colony gaining independence some four decades ago, is located off the southern tip of the Malay Peninsula. Singapore's development over the past three decades has established it as one of the newly industrialized countries. It is locked simultaneously into the international capitalist marketplace as well as the global network of communications and trans-cultural forces, and as such is open to a multiplicity of influences. Although geography has played a part in the success of Singapore, its mainstay is its people. Singapore has a population of 4.3 million people. Many of Singapore cultural roots extend beyond the island to China, Malaysia, India and to many other parts of the world The largest being Chinese with 77%, 14% are Malays, and 7.6 % are of Indian origin (Singapore Department of Statistics, 2006). Even today approximately 20% of the population consists of expatriates working and living in Singapore (Singapore Department of Statistics, 2006). Without natural resources, human resources have been its primary resource and therefore carefully crafted human resource policies are necessary to cater to growth areas. Investment in education and enhancing human capacity underpinned Singapore's economic transformation and growth. Singapore's Senior Minister Goh Chok Tong said:

> Apart from people, we have no other natural resources, hinterland or agriculture. Our livelihood depends on enterprise and hard work. It depends on our wits too, and our ability to adapt quickly every time the environment changes... to compensate for Singapore's natural resource deficiencies, (the government) emphasized the human

factor: policies were designed to affect the behaviour of people and to maximise their individual potential and contribution to the country. (Goh 2005)

According to Singapore's Department of Statistics, Singapore is faced with challenging demographic changes. These demographic trends show fewer young people and declining birth rates, greater longevity for ageing generations and an increase in the number of non-Singaporean residents (Heng & Tyng, 2004). Statistics also show that more than half of the total population increase in the last decades was contributed by non-resident (non-Singaporeans) Education is deeply implicated in these demographic prospects. The stagnating and ageing residential population will lead to a declining number of school-age children. Demographic prospects, coupled with relevant educational indicators, raise serious policy questions.

Singapore's Ageing Population and Declining Trends of Fertility

In developed countries with the welfare extending ''from cradle to death'', ageing of the population have adverse effect on economic growth. There are concerns about political effects of ageing: as the voting population becomes older, the pressure to influence social and economic spending in favour of the elderly will increase. A by-product of this could be a decrease in the spending on the young, specifically, on their education (Gradstein & Kaganovich, 2003).

The resident population in Singapore is ageing. Between now and 2030 Singapore will witness a profound age shift. In 2007, one in 12 residents was 65 years or older. In 2030, one in five residents will

be 65 years or older. Singapore's population is still relatively young today but this will change over the next 6-24 years. Table 1 shows the age profile of Singapore's population in 1997 and 2007.

The 2007 age structure distribution shows 18.9 % of the population that are 0-15 years, 28.5% in the age bracket of 15-34 years, 43.9% in the age bracket of 35 to 64 years and 8.7% that are 65 years and older. The average life-expectancy of Singaporean men and women has risen. Over the decade, the number of people below 15 years decreased. Adding to that some 35,500 babies was born in 2006 compared to a high of nearly 56,000 when the country gained independence in 1965. The number of births per female fell to 1.24 in 2006, compared to 4.66 in 1965 (Asian Economic News, 2008). This reflects the declining trends in fertility with corresponding increase in the proportion of older Singaporeans. With the ageing population, the ratio of working-age resident to elderly residents has declined. In 2007 the ratio of residents 15-64 years for every resident aged 65 years and above is 8.4 as compared to 10.5 in 1997 (Singapore Department of Statistics, 2008). It has been recognized that such an increase in expected longevity have profound policy effects. Attention has shifted to focus on the need to reform the health and welfare system.
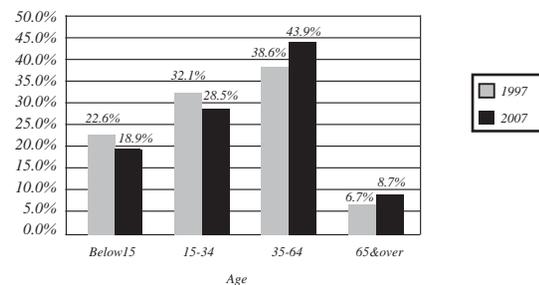

Table 1: Age Structure Distribution in 1997 & 2007 (Singapore Department of Statistics, 2008)

Challenges of Ageing Population and Declining Fertility on Education

Demographic change will influence educational spending in potentially two ways. On the one hand, the decline in the number of school-age children should alleviate the financial pressure. On the other hand, the theoretical/empirical literature has established that the increasing proportion of elderly in the population can influence the education budget. Recent empirical findings (Gradstein & Kaganovich 2003) show that per child public education spending is lower in the US jurisdictions with larger number of elderly residents. Does this also carry the implication that longevity and decline in fertility will lead over time to decreasing political support for funding of public education? The preferences and needs of the older population differ in comparison with the younger population.

Andrew Mason (2001), senior fellow at the East-West Center (EWC) in Honolulu and a professor of economics at the University of Hawaii, notes that Singapore "has reached 1.2 births per woman … (and) it will soon begin to experience rapid aging" The Singapore government is aware of the growing birth rate decline problem and has advanced numerous policies in the past few years to attempt a solution, including improved maternity leave, childcare subsidies, and baby bonuses. The decline in birth rates will lead to a decline in school going children. The declining number of young people obviously has a direct effect on the education system. The effects of the decline in the number of pupils on education finance are therefore of interest. Gradstein and Kaganovich (2003) investigated the hypothesis that increased social welfare spending competes with spending on education. Is funding for education likely to decline in proportion to the decline in school-age children? This will present the education system with completely new challenges. The Singapore education system will have to demonstrate that it is capable of dealing with a reduction in resources without sacrificing efficiency. This will be no easy task.

Singapore has, for many years, invested heavily in education. Investment in education was, is, a key national strategy for economic competitiveness.

> Singapore started from a low base in education and skills in *1965*. At that time, our literacy rate was *60* per cent. Only three out of *100* of each year's cohort went to university. Today, *40* years later, our literacy rate has gone up to *94* per cent. And one in five of each cohort makes it to university. We continue to invest heavily in education. Our government budget for education is almost 4 per cent of GDP. (Goh, 2005)

With longer life expectancy, today's school leaver can expect to work in a variety of occupations rather than follow a single career path, as was typically the case 30 or more years ago. Instead of working for a single industry or even a single employer throughout their career, people entering the workforce now can look forward to several changes of career, whether they are part of the newly emerging creative class or working in the service, industrial or primary sectors. To be able to handle such changes in skills demand, each worker will need to cultivate a mindset for life-long learning such that 're-skilling' becomes a continual process. This broadly implies a return to education, formal and informal, accredited and non-certificated, as they navigate their individual career. The nature of work itself now requires a broad

transdisciplinary outlook anticipating that technical knowledge learnt one year may be obsolete the next.

With an ageing population, employers will need to turn to the mature workforce amongst other strategies. However, to take advantage of this source of talent will mean considering flexible work arrangements, investment in re-skilling, a new approach to employment contracts and a different approach to superannuation and retirement benefits. In older workers, retraining and updating to prevent know-how from becoming outdated requires a different development approach from the development schemes that target younger workers. Initiatives were launched to support the ageing and mature workforce. The programme **ADVANTAGE!** piloted in late 2005, aims to encourage employers to hire and retain older workers. It consists of a package of incentives which includes grants to companies when they redesign their jobs for older workers and send their older workers for training (Ministry of Manpower, 2006).

Longer life expectancies generated considerable interest in developing lifelong learning values, skills and attitudes. The term 'lifelong learning' has become ubiquitous in educational policy documents over the past ten years in Singapore. There is a general agreement that 'lifelong learning' is needed in order to survive in a world where there is ready access to rapidly changing knowledge and where technological developments have sharply reduced the need for people to undertake routine or repetitive tasks.

Need for Lifelong Learning

The term lifelong learning has been used in different contexts and in policy application for a wide variety of purposes and initiatives. Singapore's approach to lifelong learning is pragmatic and rational. The Singapore Government has lifelong learning as a strategic priority both in schools as well as with the workforce. For the past number of years it has encouraged schools and the further education sector to pursue lifelong learning goals, often with the improvement of the nation's economic competitiveness as a key objective. "Lifelong learning is no longer an option but a necessity" (Lee, 2001). It is one of the economic drivers used by policy makers to enhance Singapore's competitiveness and is viewed as an antidote against unemployment. With the emergence of a more integrated and interdependent global economy, the premium placed on ideas and continuous learning becomes critical.

For life-long learning to occur students must develop a desire and an ability to learn. These include an inquiring mind as well as developing a set of higher order process skills. There are two interrelated impediments to schools focusing on lifelong learning. The first is the influence of high stakes assessment and the other is the reluctance or inability of some teachers to change from a 'transmitting' to a 'facilitating' approach to teaching (Stiggins, 2006). Rote learning has resulted in many local students getting straight As (Teng, 2008). In Singapore, the educational system, high stake assessments and societal pressure has led students to focus on examinations more than learning. Student's impressive achievements in school may be due to "exam-smart" skills rather than cognitive intelligence (Teng, 2008). A profile of the Singapore student done ten years ago shows these characteristics: passive, highly motivated extrinsically motivated with success in examinations rather than cognitive drive being the motivational force, concentrating their efforts on what is within the syllabus and exams (Chang, 1994). The skills of discovery and independent learning appear

to be lacking.

Within a formal education structure where great emphasis is placed on performance in high stakes assessments, students are encouraged to memorize a lot of content (American Institutes for Research, 2005). This leads educators to emphasize the content itself rather than process skills necessary to facilitate learning. These elements of high stakes assessment pose a significant deterrent to the cultivation of lifelong learning. A second difficulty in orienting schools to a lifelong learning approach is that influential people -teachers and parents- are often reluctant or unable to change their attitudes to education. Traditionally teachers have been the final arbiters of student's progress. Many teachers find it difficult to modify these traditional approaches so that they can have a more collaborative way of working with students. In addition to the constraints of the curriculum, parents have expectations of graded assessment. Parents want to compare their own child's result with other students at the same level. In this way teachers are pressured to focus on more summative, comparative kinds of assessment rather than assessment which does not categorize students and which focuses on students' learning goals.

For an education system to a focus on lifelong and quality learning, it requires students to 'take ownership' of their learning and the teachers to 'let go' of results. Engaged learning has to be nurtured. Philosophically, a student who obtains a good grade but does not appreciate the learning process would imply that the education system has failed, at least for this student. However, a student who develops a passion for learning more and learning continuously would mean that the education system has succeeded for him (Ng, 2007).

In 1997, the Senior Minister Goh Chok Tong, then Prime Minster of Singapore, announced Ministry of Education's vision of "Thinking Schools, Learning Nation" (TSLN). This vision describes a nation of thinking and committed citizens capable of meeting the challenges of the future, and an education system geared to the needs of the 21st century. Thinking Schools is a vision of a school system that can develop creative thinking skills, lifelong learning passion and nationalistic commitment in the young in schools. Ability Driven Education (ADE) was launched as part of TSLN vision with the aim of developing creative, innovative and life-long learners who will rise to the challenges presented by a knowledge economy. These policy changes allow greater flexibility and choice in educational programmes. The ADE consists of two components (Teo, 1999)

- Identification and Development of Individual Talents and Abilities.
- Harnessing of Talents and Abilities.

The Ministry of Education, Singapore has modified the exam system, trimmed the school curriculum and increased the use of ICT in the classroom. Schools are encouraged to provide the foundation knowledge skills; attitudes and values needed in our society that offers 'a pathway to lifelong learning'. More emphasis is placed beyond academic activities towards developing resilience, team spirit and resourcefulness in the students. Moreover, in enabling students to acquire skills which will sustain lifelong learning and active citizenship, schools play a role in ameliorating educational disadvantage (Chapman et al., 2005).

The Ministry of Education has also embraced a broader notion of success and to send signals to the society to encourage the society to do the same, the

following newspaper report on the release of the 2004 national examination results illustrates:

> The Education Ministry has departed from its usual practice of releasing the list of schools which had 100 per cent of their students scoring five or more O-level passes. Nor is it telling which schools showed significant improvement in percentage passes. It is doing so, its spokesman said, because it wants to make the point that success in education should not be measured by academic results alone. Instead, it wants to focus on 'system-wide achievements' which are impressive. (Ng & Davie, 2004)

There is a need to focus on expertise and continual updating, openness to work in a community (not just school) setting, use of technology and an understanding of its pedagogical potential, and the capacity to adapt and collaborate within school and networks. As Martin (2001) points out, lifelong learning is an inherently vacuous term and that learning should be about 'learning for living' as distinct from merely 'learning for a living'.

Opportunities for Singapore Education

Globalization, competitiveness and need for a flexible workforce with the skills by employees and the development of new skills were regarded as essential if people were to cope with rapid technological change and innovation in the workplace (Chapman, Gaff et al., 2005). The Singapore education system has shown over the years that it is capable of producing students with a very competitive set of values and skills that have placed them firmly in the top echelon of the global workforce (Shanmugaratnam, 2003). However past success is no guarantee of future achievements, and that the paradigm can shift with each new development. Such advances have been gathering pace since the advent of the Internet and ICT, it is imperative that a successful education system seek to continually reinvent itself to stay ahead. In this respect, Singapore schools have a solid foundation upon which to explore learning opportunities and development, especially given its current rigour and internationally recognised strengths (Shanmugaratnam, 2003).

At the system level, there is a need to take the lead in galvanising an international collaboration aimed at developing a comprehensive set of assessment tools for 21st century skills. The results from this project can potentially form the basis upon which an effective school curriculum can be developed. They can also provide pointers to the development of appropriate pedagogies that can best equip teachers with the skill sets to deliver such a curriculum. At the school level, exploration of partnerships to further the relevance of formal education and to extend the learning of students can be expanded. For instance, it is useful for schools to develop alumni learning services to provide learning opportunities to former students especially for newly introduced skills and knowledge. This can help to share the continual learning load of the system as a whole. A further possibility is for schools to forge partnerships with several industries in order to provide an extended learning environment for their students.

In partnership with research centres and, perhaps science centres or their equivalent, the schools can help to form part of the link that brings important research results, particularly in the Sciences, into

the classroom. This translation of discovery into the classroom serves two main purposes. First, it provides the basis upon which human learning progresses as new and improved ideas replace earlier understanding. Second, it equips the students with the new knowledge that will give them a competitive edge in the job market. Given the increasing pace of technological advances, it becomes necessary for the translation process to match this pace in order for students to learn the new ideas in a timely fashion. Thus far, the 'end point' of this process resides within higher education, but it is anticipated that the learning will need to 'filter down' to the school system, and that this needs to take place seamlessly. For this to happen, a structured partnership amongst innovators (scientists), teachers and teacher educators is necessary. The translation will need to take the new ideas through a pedagogical process with inputs from the key partners so as to bring them into the classrooms. This represents a distinct opportunity to expand the reach of formal learning to beyond the classroom.

Singapore's Immigration Trends

The economic, cultural, political and social aspects of globalization, the related spread of new communication technologies, awareness of marked international differences in risks and opportunities in life, and strong political, ethnic, economic conflicts between and within nation states seem to have changed fundamentally. A new "age of migration" (Castles & Miller, 1993) and "world in motion" are said to have emerged, whereby not only the quantity, but also the quality of international migration is changing (Massey et al., 1998).

The settlement of immigrants in Singapore is not a recent phenomenon. Singapore had only a few Malay fishermen as inhabitants at the time of its founding as a British trading post in 1819. It was subsequently, and quite rapidly, populated by immigrant peoples, primarily Chinese but also Malays (from Sumatra as well as Malaya) and Indians (who took advantage of common British governance to migrate to Singapore in search of better employment).

Today as the economic and social aspects of demographic ageing become apparent, we see that increased immigration flows are not only inevitable, but are increasingly necessary to meet the needs of the labour market. Supporting the migration of foreign talent is one of the cornerstones of Singapore's economic development strategy and their presence is impacting the country's economic and social organization (Lee, 2006). Increased immigration can contribute towards meeting the needs of the labour market. It can also contribute to spreading out the effects of demographic change, over a longer period of time. The process of migration and settlement of transnational professionals is also reflecting wider dynamics of cultural change that are taking place as a result of global mobility.

Immigration trends represent a significant force in shaping population characteristic in Singapore. With a larger inflow of non-Singaporeans, the non-resident population grew more rapidly than the resident population (Singapore and permanent residents) - 9.3 percent compared with 1.8 percent per annum. Among the resident population, the growth rate was boosted by a large increase in the number of permanent residents (Table 2). The number of Singapore citizens increased by only 1.3 percent. There are proportionately fewer Singapore citizens in the population - 74 percent in 2000 compared to 86% in 1990.

Singapore's immigration policy can be described as one that "maximises the economic benefits

of immigration while minimising its social and economic costs". For instance, early immigration policy emphasized a lot on the immigrant's potential economic contribution As the country's labour needs changed, so did its sources of foreign talent. Currently, skilled workers and professionals are sought from different parts of the world while unskilled workers are predominantly sought from the Asian region. Under the Singapore Employment Act, a foreigner must have a valid work visa to be able to work in Singapore. Today, foreign work force in Singapore is categorized into two broad groups: **foreign talent and foreign workers**. Foreign talent are skilled employees that have professional business or educational background, whereas foreign workers are the unskilled labour force.
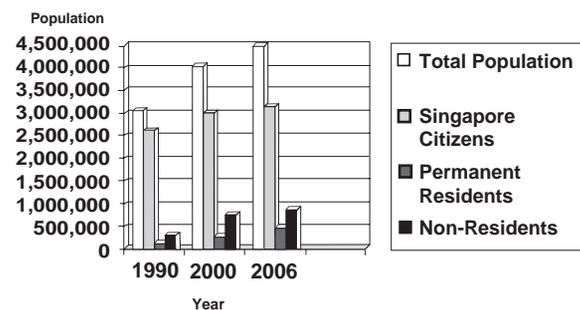

Table 2: Population by Residential Status for 1990, 2000 & 2006 (Source: Singapore Department of Statistics)

Immigration numbers are also affected by Singaporeans leaving Singapore to build their homes in other countries. "Singapore is losing about 1000 capable people every year and the numbers are growing," said Singapore's Minister Mentor Lee Kwan Yew on the issue of brain drain in Singapore (Oon, 2008). The skills lost through brain drain are not easily replaced given the limited capacity of

higher education and training. Given the emphasis Singapore government places on education and the funds channeled into education every year, it would be a huge waste of investment if Singapore is unable to retain her talents. People will also still yearn for a strong sense of belonging to a community. Singapore will still need a people willing to stay and defend the nation if so needed.

Challenges of Immigration Trends on Education

Ensuring the integration of migrants is a complex issue. It means addressing widespread concerns about immigration. People worry that immigrants will take jobs and undermine the Singaporean culture. Combating discrimination in all aspects of life, and promoting respect for cultural and religious diversity, especially in today's climate, is crucial. The Singapore society is becoming more diverse and multicultural with the need to address differences of culture, religion, capability, language and social preferences. All this occurs in a context of significant political and international change that is confronted by terrorism, war and poverty.

Education plays a vital function in providing immigrants with opportunities for economic and social mobility. At the same time the immigrants bring an additional layer of ethnic, cultural and linguistic diversity to the education system. This multifaceted diversity represents a big challenge for education. An important challenge for the school is to guarantee that every student, regardless of its ethno-cultural origin, has equal chances for social and economic mobility. The concept of 'multiculturalism' as basis and goal of education and as a notion that emphasizes 'the value of diversity' becomes critical to social cohesion.

In the last few decades one characteristic associated with the economic growth of Singapore

has been a growth in the numbers of multinational companies and international organizations. Against a backdrop of rapidly growing global mobility and interaction across countries, the concept of 'international' is one which impinges more and more upon the lives of increasing numbers of people. The number of international schools in Singapore that cater for the children of globally mobile professionals from many different national and cultural backgrounds has grown. There are about 40 different international schools in Singapore. There is a severe shortage of places at these schools due to the booming economy, which has attracted many more foreigners to the region. The expatriate population has grown from 798,000 in 2005 to 875,500 in 2006 (Singapore Department of Statistics, 2006). As international schools become increasingly full, with long wait lists, expatriate parents are turning to local schools. This has added diversity to the local schools. For example one popular primary school in Singapore has children from 39 different nationalities (Forss, 2007). There has been strong demand for places in privately as well as publicly funded schools. The Government strongly supports plans to expand to cater to increasing demand.

Diversity within the classrooms in Singapore should be of special interest to all education professionals because it indicates that there is a need for change within the realm of education. Social cohesiveness, racial and religious harmony and close relationships among many Singaporeans of diverse cultural background has been the result of Singapore's approach to promoting multi-racial, multi-cultural, multi-lingual and multi-religious society. Schools help build culturally inclusive communities where, students understand and appreciate cultural diversity as well as feel a sense of belonging and community with Singaporeans of other cultures and races.

Multicultural Education

Multicultural education has formulated its position from a variety of constituencies, and it aims for increased educational equity for all students and for representation of their values and global views within the curriculum. Multicultural education is a wholehearted effort to offer balanced treatment of all students, beginning at the earliest levels of their intellectual and emotional development through the continuing influence of schooling. Multiculturalism as practiced within the school has been based upon the perceived need to serve an increasingly diverse population in Singapore (Lee et al.,, 2004) and to develop an understanding of the cultural thought and practices of populations across the globe. The first premise recognizes the cultural pluralism within the Singapore society and the demographic changes, through immigration and birth rates that affect school populations. The second premise is driven by the rapid growth in global communication networks and transportation that is drawing nations and cultures closer together, making schools feel the need to "globalize" the curriculum.

A recent survey was conducted by the MOE (Ministry of Education, 2002 c.f. Lee, et al., 2004) on activities in schools to promote inter-racial mixing and with that mixing greater knowledge and understanding of each other. The research concluded that in children's experiences of multiracial relationships in informal primary school settings, there was a clear finding that there was a tendency for children to group themselves by race. Some activities tended to have a greater participation by children of the same race. One of reasons for such a finding was noted as maybe the children wanted to be with their

own. Another reason was because children preferred to communicate in their mother tongues. Hence schools should promote activities that encourage them to mix. An 'intercultural proactive' school is one in which most teachers are constantly active in designing and implementing strategies to promote intercultural understanding and inter-relationships. They would place importance on dialogue, negotiation and working together with parents and friends of the school. Schools need to have a vision of the future that will prepare students and teachers for the changes of a globalizing era.

The concept of tolerance to diversity implies respect for different identities, values and lifestyles, along racial-ethnic, religious, class, gender, sexuality and ability lines. Tolerance is believed to be promoted indirectly in schools through socialization processesd – the processes of learning the values and norms of one's society (Bryan & Vavrus 2005). Education has been used as a tool for fostering and exacerbating in/ tolerance in many regions in the world, the question remains as to the degree and the conditions under which education can reduce intolerance and promote moral inclusion in an era of globalization. Managing the dual process of convergence (in the instrumental domains of culture) and divergence (in the expressive domains of culture) may well be among the most critical tasks of education for globalization (Gardner, 2004). More ominously, our world is unlikely to survive unless we become far more successful at fostering tolerant attitudes within and across nations.

Language needs

Language and cultural background are intimately related (Li, Nisbett & Zhang, 2004; Jiang, 2000). The ability of a new immigrant to learn the common communication language of the adopted country is often a strong indicator of his/her ability to adapt to the new culture (McPake et al., 2007). This, in turn, can facilitate or impede the new immigrant's acceptance into the adopted country.

An important challenge posed by the greater diversity of cultures within the local school system as a result of increased immigration is the need to cater to language needs. In Singapore's context of a bilingual policy (Koh, 2004, Dixon, 2005) within the formal school system, the learning of English as a first language as well as the mother tongue as a first or second language will likely be affected. At the system level, the current range of mother tongue languages being offered in the schools may need to be enlarged. The learning of English, on the other hand, continue to serve as a unifying language, by providing a common communication platform, as long as the policy requiring it to be learnt in schools remains unchanged.

A society which values and promotes linguistic diversity stands to gain in a number of ways. These include improved international relations and trade, cultural enrichment, social inclusion, educational advantage and linguistic advantage. In order to reap these benefits, linguistically diverse societies need to invest in educational provision to support and develop people's competences in the various languages to which they have access.

Opportunities for Singapore Education

One main consequence of multiculturalism is the increase connectedness amongst different countries, particularly in the business and service sectors (Cheng, 2004). With immigration providing a conduit for the long term relocation of people, cultural and language connectedness can become a significant dimension that re-shapes the fabric of the host society

(Massey, 2002). While, this can be a challenging situation in terms of potentially divisive cultural practices and expectations amongst residents and new immigrants, it does provide the opportunity for enriched learning within the school system. Rather than rejecting this possibility by striving to preserve current and past practices, it may be more useful to embrace the change and help guide it to suit the development of the nation.

Education towards multiculturalism will select for hybrid identities needed to work, think, and play across cultural boundaries (Suarez-Orozco & Qin-Hilliard, 2004). There will be increasing importance in multilingual competencies and trans-cultural sensibilities that will enable children to decode, and make meaning in diverse cultural spaces, and social fields. Towards this end, schools can play a major role by being a platform for social integration through providing common experiences for all students. To do this effectively, an increase in the awareness and understanding of different cultures is important. This requires a deep level of reflective studies and engagement for all concerned, not just a superficial collection of activities. Thus, wearing different cultural outfits and learning about different cultural food can only bring awareness of the cultures to a limited level of understanding and awareness. These need to be reinforced by shared experiences and the opportunity for different cultures to work together with mutual respect for differences in the different practices. For instance, schools need to enhance the environment to provide sufficient 'common spaces' where different cultural practices can co-exist productively. They will also need to provide activities that everyone can take part in, such as sporting events, adventure camps and international service learning. The aim is to enhance reflective practices where the school leadership, teachers and students can learn together through wider exposure and learning journeys. This provides schools with good opportunities to develop multi-cultural learning environments.

Immigration and globalisation also provide schools with the impetus to extend their growth beyond Singapore, especially the top schools who have consistently produce students who can be successful internationally upon graduation. This is perhaps one driving factor that has so far seen some of the top schools in Singapore establishing campuses and partnerships outside of Singapore. The Anglo Chinese School (ACS) International has, for instance, entered into partnership with the Sekolah Tiara Bangsa (STB) in Indonesia to form an overseas unit of ACS. Like its counterpart in Singapore, STB-ACS International offers a similar curriculum leading to the International Baccalaureate (Asmarani, 2007). Hwa Chong Institution, another top school in Singapore offering a curriculum that covers Grades 7 to 12, has recently set up a Beijing campus as part of its strategic initiative to set up satellite campuses in key cities in the world. They have also established a virtual campus offering online course as part of Stanford University's Education Programme for Gifted Youth (EPGY) (Lui, 2007). These strategic partnerships can potentially provide not only a cross-cultural learning experience for students, their ability to connect to a network of international campuses can also dramatically expand the learning horizon of the students by tapping into the different strengths of the respective campuses, thus truly educating the 'global' student. Such connectedness also means that the local schools will have a greater pull to attract the top students regionally and internationally to study in the Singapore campuses, further reinforcing the reputation of the top schools. It is, therefore, not surprising to see other top schools in Singapore exploring such possibilities.

Forging these networks and partnerships is not the sole purview of the top schools in Singapore. As

the schools in Singapore are consistently considered to be good schools as measured by various international studies (Dixon, 2005, National Centre for Education Statistic, 1999) they have sufficient credibility to engage overseas counterparts, especially in bilateral arrangements, such as student exchanges and collaborative student projects. Thus, various schools have already been proactively going overseas to develop partnerships, and to offer scholarships to top students from counterpart and other schools overseas. Rather than approaching overseas counterparts at random, most of these schools are selective and focus in choosing their partners.

Through these efforts, the immigration trends have enabled schools to grow beyond national borders. However, of the greatest potential benefits for such engagements is the opportunity for schools to take leadership in developing 'global' curriculum that are rigorous, competitive and relevant. These curricula do not need to be a one-size-fit-all curriculum, but may have various specialisations to cater to differing needs. Working from a platform of strong schools and quality education system, schools in Singapore do have a chance to build a reputation for educational innovation and leadership.

Conclusion

As Singapore faces dramatic demographic changes in the 21st century, many may wonder, what kind of diversity exists in classrooms? Local, national and global boundaries are shrinking, and communities are becoming more and more diverse. Students in classrooms today reflect diverse racial, ethnic, linguistic, socio-economic, gender, religious, and other cultural backgrounds. Every kind of diversity exists in classrooms, which should be of special interest to all professionals within the field of education because it indicates that there is a need for change within the realm of education (Forest & Alexander 2004).

It is necessary to ensure that the school structures are responsive to changing needs, so that it can evolve in a timely manner to prepare the learners meaningfully. Not only will schools need a new set of assessment tools, a potential partnership with non-school/non-formal education is also likely to become necessary. In recognition of these needs, schools in Singapore have begun to incorporate a wider range of activities that can help to develop soft skills. Efforts have provided a broader curriculum without compromising the rigor and quality of the original school and curriculum structure which has served the needs of the students in Singapore well.

Education plays a pivotal role in a society in which common ground between people – and their differences – is debated and understood. These provide the basis for democratic action based on principles of equality and social justice.

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