2016

MENDAKI
Policy Digest

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Policy Digest 2016

CEO's Foreword

Singapore's Malay/Muslim community has made tremendous educational and socioeconomic progress over the last few decades. More Malay/Muslim students have qualified for tertiary education, and an increasing proportion of Malay/Muslim workers are represented in the PMET (professionals, executive, managers and technicians) category. This year, we are proud to note that a record 518 Malay/Muslim students were recognised for excellence in national examinations, at the annual Anugerah MENDAKI award ceremony. This achievement is testament to the hard work and dedication demonstrated by all parents, teachers and tutors in giving our students the fullest support. We are confident that the community will sustain this momentum and reach ever greater heights in the future.

At MENDAKI, we are here to walk the learning journey with Malay/Muslim families and, through our programmes and initiatives, help propel and resource the community to success. In June this year, we launched our Raikan Ilmu (Celebrate Knowledge) campaign in the hope that the community will embrace Life Long Learning. The campaign has proliferated to include a Pledge A Book segment in which we encourage our beneficiaries to contribute their pre-loved books for others to read.

Our recently published guidebook publication entitled 'My Early Adventure', is targeted at parents with children between zero and six years of age, and includes topics spanning nutrition and promoting stronger parent-child relationships. We are also focusing our efforts on preparing our young for the future economy. Our Future Ready Unit works to promote SkillsFuture and the importance of lifelong learning to the community, and, this year, it has reached out to Malay/Muslim secondary and tertiary students in order to better understand their hopes and aspirations.

In this light, the theme of MENDAKI Policy Digest 2016 is 'Reimagining the Future Learning Landscape'. This is especially apt, given that much of the national and global discourse on the world of education and work has converged on the phenomenon of digital disruption.

Though 'disruption' may not be a positively viewed word according to traditional norms, a certain degree of disruption is much needed to create new innovative value network and thinking (Think Uber!). For the community to move forward and stay relevant, innovative thinking has become fundamental not only as an economic tool but also towards empowering the future of learning homes and schools. The papers in this volume seek to trigger innovative thinking among our stakeholders; especially families, parents and learning organisations, of the possible changes in the future learning landscape. Through more advocacy on future readiness and embracing 'disruption' as the new norm, it is hoped that as a community we will be more future ready in our efforts to strike a positive partnership with our digital natives, younger generation of learners.

Enjoy the read.

Tuminah Sapawi
Chief Executive Officer
Yayasan MENDAKI

Editor's Note

I have high hopes for the difference that the MENDAKI Policy Digest can make. It has been 16 years since the first one was published in 2001 and we have been encouraged by the positive feedback received over the years. The policy digest is designed to be an asset for community leaders, practitioners, policy makers, aspiring and experienced activists, members of the community and Singaporeans at large.

The theme "Reimagining the Future Learning Landscape" is apt as we welcome 2017 against a backdrop of looming economic restructuring and slower growth and prepare ourselves for the future economy. Prime Minister Lee Hsien Loong has reassured Singaporeans that we are in a "much better situation than other developed countries facing slowing growth and an uncertain economic outlook". Hence, this year we saw the Government striving hard to improve the lives of Singaporeans especially in the areas of education, skills upgrading and social support. This is evident through the SkillsFuture where students and workers can learn new skills through schemes such as professional conversion programmes, the Career Support Programme, Place-and-Train and Adapt and Grow initiatives.

The MENDAKI Policy Digest 2016 will continue to stimulate discussions and reflections on issues affecting the Malay/Muslim community in Singapore. This year's edition consists of two sections. The first section will discuss trends, issues and observations along the theme of the future landscape. Each article discusses the future learning landscape and its impact on future jobs, educational achievement, early learning, youths' future readiness, parenting, self-efficacy, culture of learning and social-emotional learning. In the second section, the key policy initiatives for 2016 are summarised and analysed.

I would like to thank all contributors in this policy digest especially to the external contributors, Associate Professor G. K. Randolph Tan from SIM University for his article that touches on future jobs and Professor S. Gopinathan from the Head Foundation for sharing his insights on educational achievement through a face-to-face interview. My gratitude also goes to Madam Tuminah Sapawi, CEO MENDAKI, for sharing the lessons from her study trip to Sweden and Finland as well as Madam Sharifah Fairuz Alsagoff, Deputy Director MENDAKI, on her article that captures the Care Pedagogy for MENDAKI's Teaching and Learning Framework.

Last but not least, special thanks are also extended to the MENDAKI Research Team led by Madam Sabrena Abdullah, who conceptualised the theme, contributed thinkpieces and coordinated the successful publication of this book.

Aidaroyani Adam
Editor

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Preparing for Future Jobs through Applied Study

By G. K. Randolph Tan

Abstract

In the two years since the publication of the recommendations of the committee which undertook the Applied Study in Polytechnics and ITE Review or ASPIRE in August 2014, the labour market has experienced dramatic changes. Job creation has slowed, and redundancies have risen. In a worrying development that contrasts with previous episodes of jobs weakness, some PMETs who have good qualifications and have been laid off are now finding they do not have the skills required to take on jobs that are available. These changes take place against a backdrop of major longer term demographic and labour force shifts as well as a history of good labour market performance. The policy foresight in the ASPIRE recommendations emphasised the importance in focusing on workers being equipped with the right skills for the future economy. Although policy foresight alone will not solve the problems of the labour market, it has given Singapore workers an important early start in anticipation of the current weakness. In September 2014, during the debate in Parliament on the ASPIRE report, I argued that the key to the ASPIRE report was its implicit emphasis on preserving the capacity of the economy to create jobs. This article is adapted from my speech in that debate.

Introduction

Several of the articles in Mendaki Policy Digest 2014 have already discussed the ASPIRE recommendations from the perspective of changes in education and training in Singapore, as well as explored their deeper connection with youths whose aspirations the recommendations have the most immediate apparent impact on.

Since then, the labour market has experienced dramatic changes. In light of the increasing focus on the impact of technological disruptions on future jobs and skills, it seems timely to revisit the issues raised by the ASPIRE report[1] from the perspective of jobs creation.

The theory of endogenous technological change implies that the evolution of future jobs and future skills are closely interlinked and the availability of skills is not divorced from the quality of jobs being created[2].

The ASPIRE committee's recommendations contained important underlying implications for economic restructuring, a fact which I believe has been given less prominence than its educational thrust. Here, I identify three of these implications.

Singapore has enjoyed half a century of sustained jobs creation, with steady resumption of employment growth after each downturn. The longer this continues without interruption, the greater the danger of believing – falsely - that we are specially endowed with recovery abilities denied to other countries all-too-familiar with widespread joblessness.

The recoveries that our labour market has been able to stage arise from nothing more than the basic philosophy imbued in our workers that productive workers and successful companies work together to create jobs. The ASPIRE recommendations are a responsible and necessary step forward, but more importantly, reiterate this guiding philosophy. We must approach their implementation realistically, without expecting a panacean change. The experiences of other countries make it clear there are difficult challenges to be confronted. We should continue to bear in mind the circumstances within which Singapore's economy are required to operate.

I will elaborate on the implications, before describing some practical concerns which I believe would have to be addressed in implementing the recommendations.

Employment of Degree-holders

First, I see the recommendations as recognising that knowledge penetration in the economy can occur through both academic excellence as well as accumulated experience, and by degree-holders as well as non-degree holders.

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[1] Ministry of Education (2014). Applied Study in Polytechnics and ITE Review (ASPIRE) Committee Report. http://www.parliament.gov.sg/lib/sites/default/files/paperpresented/pdf/2014/Misc. 3 of 2014_0.pdf
[2] Acemoglu, D. (1998). Why do technologies complement skills? Directed technical change and inequality, QuarterlyJournal of Economics, vol. 113, pp. 1055-1090.

I would argue that the ASPIRE committee has not gone out to dispel well-established notions about the importance of university degrees. Its recommendations also do not constitute a challenge about the importance of university education. The fact is that degree-holders and degree aspirants should not need anyone to argue on their behalf.

Instead, what I see is a warning against leaving our students unprepared for the rigours of the workplace that is set to become more and more competitive over time.

The ASPIRE report recognises that the ultimate aim, regardless of whether an academic study or applied study pathway is taken, is to equip students to make an impactful and fulfilling contribution when they enter the workforce. Being fully prepared for the workplace is the key, and the reality is that given the right vocational training, some of our students will likely enjoy an equally – if not more - rewarding career over their university-trained counterparts. On the other hand, students who rush headlong and unprepared into a university degree without taking time to decide on what is most suited to their aptitude and inclination may not achieve their full potential, and may actually fall behind their vocationally trained counterparts. There is growing concern about this not just here in Singapore, but many advanced industrialised economies as well.

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In Singapore, the statistics on the labour market performance of degree-holders already contains some warning signs. For example, resident degree-holders are the only group with a re-employment rate below 50 per cent[3]. This means a majority of residents succeed in gaining re-employment after losing a job, except for degree-holders. This is why it is important to work with students on applied pathways to help them to understand that merely getting a degree does not place them at the leading edge in the competition for jobs.

Addressing Our Economic Vulnerabilities

Second, ASPIRE also addresses key economic vulnerabilities which could be attributed to our size limitations. Our size limitations prevent us from relying heavily on foreign manpower. However, in the transition to more self-reliance, we have to be careful not to end up in a precarious position which compromises our economic competitiveness, especially in the area of employment creation.

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[3] Ministry of Manpower (2016). Labour Market Report Second Quarter. Published by the Manpower Research and Statistics Department.

The Singapore economy has developed to a stage where further progress depends on access to manpower with deeper sets of skills and a broader range of capabilities than the resident workforce alone at the present state can supply. Without free

access to foreign manpower, the economy's manpower needs cannot be satisfied by depending on education and training through the academic pathway alone.

Driven by their bottom line, employers have to be very discerning when it comes to skills. The voracious hiring appetite over the last decade or so has been caused by employers relying on manpower to increase their productive capacity. Choosing manpower augmentation instead of investment in new capital or technology when expanding the scale of production could be a sign that employers are uncertain about the appropriate entry point they should make into new technology. Some of this could be signs of a persistent shortage of skilled manpower, which could explain why some employers are blaming the tight labour market for forcing them to curtail expansion plans.

Regardless of the opinion one holds about our reliance on foreign manpower to make up the gaps, the fact remains that there has been a significant numerical shortfall in the availability of local manpower to meet the needs our economy. For example, unemployed degree-holders number only about one-tenth the number of employment pass holders. You would need to integrate all economically inactive residents with at least diploma qualifications before you match the employment pass numbers we now have, something that is clearly impossible. This is what I interpret the emphasis of ASPIRE on broader and deeper skills to mean: our resident workforce must broaden and deepen its skills sets and have the range to cover more positions as we continue towards further labour market tightening.

Hence, I am particularly encouraged by the ASPIRE recommendations for a place-and-train scheme to improve the ability of new entrants to the workforce to meet employer needs. This brings employers into the picture earlier and involves them in the training process. In order for Singapore to have a more secure manpower policy that does not involve excessive reliance on foreign sources, we need to build up the technical and academic skills of our workforce. The recommendations delivered in 2012 by the Committee on University Education Pathways Beyond 2015 (CUEP)[4] put

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[4] https://www.moe.gov.sg/committee-on-university-education-pathways-beyond-2015

us on a path to seeing half of each cohort achieving a government-subsidised degree education by 2020. However, even if we were at that level of cohort participation rate now, it would be insufficient for the economy we have managed to create (based on the numerical comparisons I mentioned earlier).

We already have an existing ITE and polytechnic educational infrastructure that is performing well, but the excess demand for graduates could be attracting more of these graduates to go for a degree without them first making a distinction about whether the prospects they gain will result in an improvement in their employability and their long-term ability to contribute to the economy. The ASPIRE recommendations fill that gap.

The emphasis on alignment with employer needs will enable ITE and polytechnic graduates to gain a first-hand understanding of what is valued at the workplace. This will help to inform their choices should they decide to invest valuable resources into pursuing further education.

Preserving the Capacity of the Singapore Economy to Create Jobs

Finally, I see in the ASPIRE recommendations a recognition of the need to preserve the economy's jobs creation capacity.

The process of jobs creation does not easily lend itself to policy fine-tuning. If it did, you would not see the massive rates of unemployment many OECD economies have been struck by since the great recession.

For some time now, we have been constantly reminded of the lengths to which these economies have had to resort to address their unemployment woes as observers guess at the chaos that could accompany the withdrawal of quantitative easing. As we move to moderate the pace at which jobs are being generated by the Singapore economy, we have to be careful to avoid severely impairing the jobs creation process. Once it is jammed, even literally throwing money at it may not even work.

The situation is not, I believe, catastrophic, but we cannot ignore the fact that after four years of increase in foreign worker levies and tightened quotas that some businesses have been squeezed hard. Hence, being responsive to their needs when it comes to the shortfalls they experience in the manpower

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supply is important. When employers can rely on well-trained, highly skilled, reliable workers, they have the confidence to invest in better equipment and technology. This produces a virtuous cycle which leads to better productivity performance, and in turn encourages further jobs creation. The economy as a whole benefits from improved competitiveness. This is the celebrated achievement of Germany's model which has attracted worldwide admiration.

Challenges of Implementation

But, we cannot understate the difficulties of implementation. We will face them, and we should set in place performance monitoring and quality assurance systems to detect and handle them.

Countries mentioned in the ASPIRE report have agencies which spearhead research into and monitor the outcomes of their vocational training programmes. Such monitoring has revealed issues such as a lack of interest from students in certain occupations, poor completion rates and insufficient training positions provided by companies. The effectiveness with which such issues can be dealt with will improve with early detection.

Unlike Germany, we have not had the type of relationship between employers and trainees which recognises the latter's future value to the company they train in. This trade-off would affect whether employers decide to take trainees under their wing. Without a longer-term association between the two, say if trainees have to move through multiple employers because of relationship issues, the costs could very well outweigh the benefits.

In addition to getting employers to support and participate in the scheme, we will need qualified trainers within the participating companies. Other countries who also considered adopting Germany's model, have

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discovered that this key ingredient – the close relationship between its employers/ trainers and training providers – was not something that could be easily replicated.

Despite its highly celebrated status now, Germany's apprenticeship scheme has also seen its share of ups and downs. In the early 2000s, for example, it was stung by criticism over poor performance of its students in international PISA assessments. Throughout, it is this solid arrangement of having a tradition of qualified trainers that saw it through.

We have to convince suitable students such a scheme is worth the commitment, especially when they begin making comparisons with their former schoolmates in the academic pathway. After they have given their commitment, however, we must not underestimate the difficulties involved in juggling family commitments, coursework and a full-time job.

Conclusion

Half a century ago, at independence, workers in Singapore tended to be less educated, and accepted low wages because of the excess of supply over demand. As many have already argued, the same principles inexorably govern the demand and supply of graduates, across all specialisations, so that excess supply will always result in the same predictable outcome.

When addressing the challenge of unemployed graduates, there are further dimensions, namely the number of years and amount of money a person has spent earning a degree. Where has that sacrifice of time and resources gone when a graduate can no longer be matched to the positions available in the job market? This is not an easy question for policymakers anywhere to answer, and other economies are also grappling with the same issue. Getting an even higher degree is one potential avenue, but that requires further (even more substantial) investments of time and resources, which a person who already has one degree may be hard-pressed to come up with. In addition, if a person is not suitable for existing graduate-level positions, having a postgraduate degree could possibly exacerbate his problems (because there would be even fewer of those).

Such a challenge must therefore be tackled at its root, with the focus set on ensuring that further education continues to enhance the human capital of Singapore's next generation of workers, instead of confounding their chances. The ASPIRE recommendations demonstrate a conservative and responsible concern for this challenge.

At the end of the day, there are only about three and a half million Singaporeans and I believe the ASPIRE recommendations offer a valuable alternative to maximise each individual's worth, without displacing the importance of degrees. However, they are only a starting point, and the implementation will be a long undertaking which requires the support of all stakeholders. We should aim to continue to keep the economists arguing about what has made Singapore succeed. Half a century of sustained jobs creation is not long enough, and it is still too early to consign the record to history. I would like to state my strong support for the recommendations, and I look forward to their successful implementation.

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The Role of Social and Cultural Factors in Educational Achievement: A Summary of S Gopinathan's 'PISA and High-Performing Education Systems: Explaining Singapore's Education Success'

By Sabrena Abdullah & Hafeeza Hussain

Singaporean students have been producing good results in Programme for International Student Assessment (PISA) tests, thereby positioning Singapore as one of the high-performing education systems (HPES) in the world.

The good showing by students in HPES has been the subject of research by various scholars and academics who have been keen to explain this phenomenon. Various factors have been identified, including quality of teachers, capable and highly qualified school leaders, wider system characteristics such as academic expectations and teaching standards, and reforms to educational policies. These aspects, which have been emphasised in the literature, have been picked up by policymakers in other countries in an attempt to boost the PISA performances of their respective nations. However, these researchers' causal linkage of good PISA scores to the above mentioned factors has been criticised for being too simplistic vis-à-vis its failure to consider other possible reasons for students' good performance in PISA, such as the wider social, cultural and institutional contexts of HPES.

a broad, macro view of the education system, placed within its social and cultural context, has to be taken in order to fully understand a country's success at PISA

Building upon the criticism that past literature has taken a narrow approach in explaining good PISA scores by HPES, Deng and Gopinathan examine Singapore's historical background and the factors which have shaped Singapore's educational landscape so as to better understand the wider social and cultural backdrop which has enabled Singapore to be ranked amongst the HPES in terms of its PISA score. The researchers examined the educational policies which were crafted after Singapore achieved independence and found that these policies which were developed with the aim of meeting the political, economic, social and educational needs of a young, underdeveloped nation have greatly shaped Singapore's current education system. In addition, the researchers identified two characteristics of Singapore's education system which contributes to its high ranking in PISA, namely a standardised national curriculum which emphasises students' proficiency in subjects which are tested in PISA – mathematics, science and languages – and a common belief in academic excellence, measured through nationwide high-stakes examinations, as a pathway to economic success.

This leads to the first main thrust of Deng and Gopinathan's argument, which is that a broad, macro view of the education system, placed within its social and cultural context, has to be taken in order to fully understand a country's success at PISA. Zooming in on decontextualised factors and hailing them as the reason for high PISA scores results in a myopic understanding of a country's success at PISA.

The second thrust of Deng and Gopinathan's argument relates to the consequence of a system which emphasises good performance at high-stakes examinations: teaching and learning methods tend to be skewed towards practices which will be able to guarantee good outcomes at such examinations. This has led to a situation where one-way transmission of knowledge from teachers to students has become the primary pedagogical style in Singaporean classrooms. A recognition that these traditional pedagogical practices tend to produce students who have difficulties thinking out of the box has spurred the Ministry of Education to push for pedagogical changes that focus on the development of higher order thinking skills through interdisciplinary learning and the usage of information and communications technology (ICT). However, based on various research studies, top-down policy shifts do not necessarily translate into changes in the everyday lived realities of the classroom.

The final thrust of Deng and Gopinathan's argument problematises the PISA test itself. PISA positions itself as a test for real-life skills and competencies which are important for the 21st Century, yet its pen-and-paper format and time-based setting have arguably been incapable of accurately gauging such competencies.

Interview with Professor S. Gopinathan

Q: Besides PISA, in what other ways would you suggest Singapore measures its education system? Do you think that PISA is still relevant in measuring education systems?

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> **PISA seems to suggest that there are certain factors like quality of teachers that is a very important variable. We are not denying that that is important. But we are saying that there are other things that are equally important. I use a simple framework: context, culture, capacity.**

In some ways, PISA is hated by academics and loved by policymakers. Academics are always finding that, methodologically, there are issues. Can you compare a complex system like America with Singapore? Can you aggregate all the differences into a matrix or a metric that says that in reading and maths and science, this is the norm; this is above; this is below; this is your ranking. And people get fixated on ranking. Our argument really is, insofar as PISA exists, PISA seems to suggest that there are certain factors like quality of teachers that is a very important variable. We are not denying that that is important. But we are saying that there are other things that are equally important. I use a simple framework: culture, context, capacity.

Culture: First thing is the culture part. We were all essentially economic migrants, and economic migrants tend to say, "We sacrificed, we left home countries, we left the comfort zone so that you

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> **One of the key features of the middle class is that they invested in education. Also, 75% of the population is Chinese, so there's a Confucian work ethic that is very strong.**

children can do better than us." And you arrive in a place like Singapore and the only way you do better is through succeeding in education. So there was a big push. And Singapore, for a number of reasons, got off the industrialisation part fairly quickly. And part of that was because of the Vietnam War, and the fact that we had a port economy. The '60s was also the start of the big oil exploration boom, so shipbuilding, ship repair were things that Singapore could do, so our industrial base had some advantage in that. And then we rapidly started building a middle class. One of the key features of the middle class is that they invested in education. Also, 75% of the population is Chinese, so there's a Confucian work ethic that is very strong.

So you combine those cultural elements and you get a good seedbed for things to take hold.

Context: Why was the government so focused on building human capacity and high quality education? Simply because, and you've heard this story many times before, human resource was the only one that we had. It's different from practically any other country, unless you are thinking of a tropical island like Bermuda, Jamaica, Gibraltar or Cyprus. Even Laos has more natural resources than we have. So there was a clear focus on education right from the very beginning, and the context was survival, because Malaysia failed and we had our Konfrontasi with Indonesia. The question of whether we could survive was a real question. So the answer was "yes, we could", and the way to do it was through education.

So education was our prime focus also because the first Cabinet was fairly well-educated people, with S. Rajaratnam, Goh Keng Swee and so on. A commitment to high quality education, not just thinking, "Oh, you go to school, that's great." Instead, they were more focused on what students were learning in the classroom and whether they were progressing. There were no apologies about creating an elitist system if it meant that Singapore could tap into the top 15-20% who would lead Singapore forward. So there was a particular, in my view, political ideology around performance.

> **In the Singapore system, we don't make a law if we cannot enforce the law. If we announce a policy, it gets done**

Meritocracy was part of that. Meritocracy basically meant what? It pushed you towards excellence. Because you only went into secondary school if you passed your PSLE; you only went to JC if you did your O Levels well; you only went to university if you did your A-Levels well, and out of a cohort of something like 30,000, maybe 200 get into Medicine. So all those factors basically signals to the population at large that education is the way to go. And quite frankly, you couldn't have made your fortune as a musician, as a football player. In other countries, you can drop out of school if you could play the guitar or you could play football or whatever. It was possible to make a good life. There are footballers who are earning $100,000 a week. That's not possible in Singapore. So context and culture work together. But more than that is, I think, capacity.

Capacity: One of the things we noticed about other countries is that they can make policies, but they'll find it very difficult to implement policies. In the Singapore system, we don't make a law if we cannot enforce the law. If we announce a policy, it gets done. And so, in the civil service, we've built up a certain capacity for looking at complex problems, for working together. For example, we have SkillsFuture. It's Education, it's Manpower, it's a number of government ministries working together.

So the argument in the '*PISA and High-Performing Education Systems: Explaining Singapore's Education Success*' paper was not just that good teachers are important, but there are

other larger sociocultural issues that also have to be factored in. And these issues are different for different countries. So Britain can try and say, "Okay, we're going to do what Singapore did, we're going to train our teachers in the same sort of way." But Britain is very decentralised. Britain is a multi-party system and every 5 years, you get some change. So in the paper, we are just highlighting that there are those variables, so it is a much more complex picture as to why countries develop high performing systems. And it's not something like, "Oh, Singapore has this Maths textbook and that's why they do well. All we have to do is buy these Maths textbooks."

But if you don't train your teachers, if the kids don't do their homework, if you don't have assessment that is rigorous, and if it doesn't matter whether you pass or fail, the textbooks are not going to solve that problem.

Q: To what extent is Singapore's PISA ranking important in measuring Singapore's education system?

I think it's still important, but we shouldn't focus solely on it. Unfortunately, this is an era in which ranking has come to stay. It's not just in education. It's in ease of doing business or corruption index. So there are indexes all over the world. You just have to be very sensible about saying, "Okay, this gives us certain signals, but it's not the whole story". But to arrive at that position, PISA collects a lot of data. That data, studied honestly to say, "This explains why, for example, there's a gap between our top performers and our lower performers. What can we use that data to do?" So the data is the useful part.

In fact, PISA is going to be announced in December. I was interviewed by BBC in anticipation of that because they said that the reason they were doing this is that when the results come out, there is a huge controversy in the UK and a lot of hand-wringing on why the UK is 84 and Singapore is, say, number 2 and Shanghai is number 1. So they want to know how we do it.

There will be some discussion around what explains the PISA ranking because, in a sense, education quality is a proxy for economic quality because it speaks to the quality of your labour force. One of the problems in America is technology is driving out certain old jobs but it is creating new jobs which require a level of education. If they don't have the level of education, some of the jobs that are being created, you can't access them.

So, in that sense, part of the American unemployment problem or the British unemployment problem is the quality of the labour force. And the quality of labour force is, to some extent, rooted in the quality of the education that's available. There are always the elite who will do well in the British system. But there will be a middle band and a lower band that are not doing well, that are not educated for the new technological society.

Q: So with SkillsFuture as our national policy, how relevant is educational attainment for students currently, considering that they are being told a slightly different narrative?

I can understand, from the government's point of view, the biggest policy challenge that's going to confront developed economies is going to be jobs – quality of jobs and the so-called skills match between what education seems to provide and what

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employers say they need. It manifests itself in different ways and contexts. It's not exactly the same in all countries. There's a huge unemployment rate in Korea, and yet it's one of the most successful economies that you can find. So the government is basically responding to tell Singaporeans not to worry about jobs because they have a set of policies in place, such as SkillsFuture. They are fairly innovative in some sense; the government is able to fund it, which many countries are not able to do; involves joint collaboration within the government, which means that the Ministry of Labour and the Ministry of Education are all working more closely together than in other contexts, and basically saying that this is our potential solution to the problem of jobs.

However, the government is also signalling that in the future, it is no longer the government's responsibility to give you a job. It's the government's responsibility to a certain extent to skill you and then to give you the resources to reskill yourself. If you don't reskill yourself, then you have to take some responsibility for that. And in a sense, the government is saying, "Look, we cannot be depended on for everything." So that's a philosophy. So SkillsFuture, basically, is working on that.

How it will work out, whether it will be adequate, remains to be seen. Already, people are saying, "Yes, I've got $500 in my account and yes, I think I want to do this but I'm working full time. I go home, I've got family commitments. Where am I going to find time to go into this programme?"

So there is a response now: flexi-hours. But the SMEs are saying that they are the ones who need this labour the most. They only have 15-25 staff and everybody is needed. They have no fat to send three of their staff to go off for a training course for a week. Who's going to do their job for them? So the government has got to work these things through.

But the policy response in Australia or the UK or Germany might be different. Maybe there are some lessons to be learnt from this experience from other countries.

It's the same sort of thing in education. So people are often asked, you know, what is it that one can learn from Singapore? You can't replicate Singapore's small size. You can't replicate Singapore's wealth. You can't replicate Singapore's one-party system for 50 years which has led to consistency of policy.

But does that mean you can never learn from Singapore? No. If you continue to say education is important, then you must have credible people running the Education Ministry, capable of making intelligent decisions about policy. If you say education is important, you must have budget to resource it. You need to understand that education is a complex, long term phenomenon, which means that policy must be sustained over time. There must be policy consistency.

Look at, for example, bilingualism. Singapore has maintained it. When it started off, it wasn't very easy. 1965, it wasn't very easy to say that English should be the main medium of instruction. A weaker government might have said 8 or 9 years later, "We must go back to something else." The government didn't say it. Today, our English levels of proficiency are a result of that policy consistency, even though political expediency might have suggested doing something else.

A lot of people say that the tracking system is a form of early selection and that students are over-tracked. The government says, "Look at the number who basically stay on in school till the end of Secondary 4 even though we have no compulsory education up to Secondary 4." Why? Because we've created these pathways and educational environments in the IP schools, specialist schools, schools for weaker students, that enable students to say that, "Right, I can still learn something here." So that's what we want to advocate: learn from Singapore's experience but don't seek to copy Singapore's experience because you can't.

Q: Don't you think the same would apply to Singapore as well?

Yes, but Singapore does learn from other countries as well. I think my own interactions with the Ministry have been that they don't look at PISA and say, "Okay, we did well again." They say, "It's nice that we're doing well again, but what can we learn from this? How can we do better the next time around? There are some areas we have done very well but there are some areas that we can still improve on."

I think a lot of external commentators have come to Singapore and said, "We have looked at the Singapore system and one of the things that we've noticed about the Singapore system is that they are constantly seeking to learn from other countries. They don't say 'We've got all the answers.'"

Even when we did SkillsFuture, they went to Hong Kong, they went to America, they went to Europe to see how the problem of skills, lifelong learning and skills

deepening are being addressed. To some extent, we expect our education system to help us reinvent ourselves. And so, it has always got to be seeking to improve. It's always got to be lifelong learning for the individual. The system has to commit itself to lifelong learning. Why? Because if the system falls into disrepair, you can be quite sure Singapore no longer... you know?

Q: So it's the survival thing again?

It's the survival thing again. It's the background template. But I would argue that there is a bit more confidence now that Singapore can survive. 1965, "Singapore can survive" was a bit of bravado. We didn't quite know. But 50 years on, we can say, "Right, we somewhat know how to establish stability, to establish legitimacy, to be pragmatic rather than ideological and to move forward. It may not to be everybody's liking, but that's the way we do it and there are certain plus points."

There are people who criticise Singapore for their death penalty. As you know, ministers and the ministry say, "No, this is the way we do it, there are reasons for doing it, and we believe it's worked for us even though it might violate, in your view, some essential human right." And Singapore doesn't give ground, because that's the nature of the system.

Now, PISA doesn't take all that into account. PISA doesn't look at that context in which these policies operate and why fidelity to mission is so important.

Q: It's just a generic data collection tool, in that sense.

Yes. It's nice to have, nice to do well in, but PISA ranking should not be the be all and end all of what we do.

Q: Considering the government's push towards Singapore as a 'Smart Nation', in what ways can classroom pedagogical methods be changed in order to develop students who are able to thrive in this new economy?

In my view, the future nation is really about understanding what opportunities technology provides us with and how technology potentially will and can transform education. And we can see examples of that. Even though we have had three IT Masterplans, in many ways, there's a sort of traditional view of technology use.

The children now are on mobile, social media, which is far more diverse and creative than what is possible within the classrooms. So the key challenge would then seem to be, to what extent is it possible to leverage on what the kids are already using to access information to help them support their learning? To what extent, in the Singapore context, is anytime, anywhere learning through mobile technology feasible?

So it seems to me now that technology is there and you can use it, but technology is used by human beings and they have certain preferences in the way they use it. I

might use my technology for reading apps about newspapers. I'm not on Facebook, I don't use Twitter, I wouldn't know how to send an Instagram. I have an iPhone 6 – it's top of the range – but I don't use it for all those things because I don't see the need for it. Some time ago, somebody told me that they signed me up for LinkedIn, but I have never once responded to a LinkedIn invitation because everyone wants to be my friend but I've got more than enough friends. So to me, if I friend you, if I know you're doing this, what am I supposed to do next? The only sense would be if you know somebody that I don't know, but want to know. I can't manage that. So that's how I do it. But you may be on Facebook, another person may use Twitter, and somebody else might do something else. So all of us have these affordances in the handphone but we all use it differently.

So it's very simplistic to some extent to say, "Alright, you've got all these things, therefore education is going to be transformed."

And so when you then take it to the context of the school, on one hand, teachers are inclined to think about how they can tap into the universe of knowledge and expertise outside the classroom and bring it into the classroom. That means what? That means allowing students to use their laptops. Some teachers say, "Well, I don't know that if I allow you to open up your laptop, you will basically be doing what I asked you to do". Now I walk into a lecture theatre and I see people with laptops. When I started 30 years ago, I knew that everyone would be writing. Now, I see only the back of the laptops and I don't know what they are doing. And even for somebody like me, it's disconcerting.

> **So it seems to me now that technology is there and you can use it, but technology is used by human beings and they have certain preferences in the way they use it.**

When you walk into a typical classroom, there is a lesson plan and content of a lesson, which is in sequence. How do you then transform that pedagogy? How and when do you use technology?

It requires quite a bit of serious rethinking. I'm not saying nobody is doing that rethinking. You can rethink the pedagogical method, but to convert a majority of the 30,000 teachers to think in different ways is going to be a challenge because habits die hard. Pedagogical habits are embedded. "This is the way I teach, this is the way I think Maths ought to be taught and I've been reasonably successful at it. Why would I want to change? What incentive would there be for me to change?"

I think that question would be answered differently by younger people because they are a bit more adventurous, they are a bit more open. They themselves were students who wished that they could have used technology, so they are open to it.

But I think for older people, you will have a hard time persuading them to change those practices which are very economical in terms of time, of the tasks that need to be completed in one period, over a term or over a semester. If I'm playing around with technology, and I teach the students for 20, 25 minutes and let them spend the rest of the lesson sourcing for material, collaborating, sharing and explaining among themselves, I don't know what the results will be at the end of it.

So to some extent, because you have a syllabus, a curriculum, a time frame, competencies and standards to achieve at the end of the semester, the present industrial model works well. So why change?

But we know that the industrial model is basically being phased out outside the classroom.

So it's a challenge, it's a dilemma, but it's also an opportunity. But it would be facile to think that just because there is a plan, sufficient funding and technology, therefore the transformation will happen. In some classrooms, under an inspiring teacher who is very comfortable with technology, knows when to use it and knows when to get students to switch off, it could work. At other times, it may not. So I don't want to give a facile answer: "Okay, we have a Smart Nation, we have 3 Masterplans, we have this much money, and therefore, it should happen." The question is, why is it not happening? Or why is it happening very sporadically?

And I think the teacher, not the tool, is the key. It is capacity-building and confidence building of the teacher that is important.

But I have no doubt that over time, this will change. As I said, when this generation of students go into teacher training, I hope NIE lecturers will be young enough to say, "Yes, we can have a live streaming and we can look at this!" For example, I was coming into work today and there were reports of a 1-metre tsunami in Fukushima, Japan. Now, if you were in school today and if you were a geography teacher or a physics teacher, you would basically say "Look, guys, look at this phenomenon and talk about it." But do we do that? We don't. But that's really the immediacy of the event, that there is weird climate change phenomenon going everywhere. This would be wonderful to teach climate change, but there is something else in the syllabus that ought to be taught in the third week of the term and climate change is later. By that time, that phenomenon has gone. That teaching moment, that teachable moment, and that stimulus from the outside which can make learning much more engaging, much more real, much more authentic, we somehow miss it because of the structures around how we teach and what we teach for. In theory, everyone from Primary 1 to Primary 6 can look at the same phenomenon, but we think of our content and the sequencing of it. "Oh, we teach this at Primary 1, we teach that at Primary 2." You know? It is built up over time. So I think that's the way the potential of technology can

disrupt, but how teachers manage that process of disruption in pedagogical ways is a bigger and more challenging question.

Q: You earlier mentioned that systems must change over time. Earlier this year, changes to the PSLE system were implemented. Do you think that the O-Level or A-Level exams should be slightly tweaked too, maybe in a few years to come?

People describe Singapore's education system as a high-stakes examination system: PSLE, O Levels and A-Levels. But why does Singapore stick to this when other systems have what they call continuous assessment, school-based assessment and so on?

I take it back to a political context. Why did Singapore leave Malaysia? Why were there fundamental disagreements? It's because of affirmative action in Malaysia and the fact that affirmative action in Singapore was not politically possible because the Chinese formed 75% of the population. So in some ways, the flipside of that was going to be meritocracy: everybody will be given a chance, schools will be equally resourced, every school will get the same type of trained teachers, and then you have to demonstrate merit. And merit will be tied to performance and in turn tied to rewards. How do you then, in an unbiased way, judge merit? Through standardised exams like PSLE, O Level and A-Levels.

My own view is that we've stuck to that for too long. Next year is the 20th anniversary of 'Thinking Schools, Learning Nation'. A good question would be, "What has changed?" And I'm not saying that nothing has changed. I think quite a bit has changed, but at the same time, quite a bit remains.

And some of us argue that the high-stakes exams create, to some extent, a certain ceiling on what teachers think they are about. So you have an agenda of reform, of pedagogic change, of critical and creative thinking, of ICT involvement, but there are other hangovers, as it were, from that industrial model.

I'm not arguing on behalf of the government, but their view would be that this system has worked well for us because it signals meritocracy in that opportunities are available to those we can identify as deserving and able to benefit from it. But now that has got to coexist with how we want a pedagogy in which a different or "incorrect" answer is, in some way, a beginning to a correct answer, rather than having one correct answer per question.

Take a look at a book that I edited called Globalisation and the Singapore Curriculum. It's got about 12 chapters, all based on classroom data across a whole domain of subjects. And the basic conclusion is that, yes, there is some dialogic, Socratic questioning, teaching and those sorts of things. But in the end, a lot of teachers are very conscious of the sort of right answers that will be required in the exam paper.

And the tuition centres are, in a sense, feeding that anxiety.

As I said, what we understand as teaching and learning are deep rooted. The teacher might be experimental. The parents, on the other hand, might be resistant to it. Or one teacher might be experimental, but other teachers, including the head of department, might have different perspectives. So it's a situation where we're trying to transit from one embedded, entrenched, successful model into something which is exciting, but we are not certain that we can live in that degree of uncertainty because these exams are, as per the word, high stakes. Because if you give a creative answer but that was not the answer the markers are looking for, *habis!*

It's very hard. And the older teachers, in many ways, are the sort of gatekeepers. They might say, "This is how this school has always taught Maths and we always did well. What are you trying to do?" Can you change? And one teacher can't change it. It has got to be a whole new generation of teachers and principals backing that change, having confidence that what needs to be covered for the exam will be covered but that's not the entirety of pedagogy. So how do you find the balance? How do you find more effective ways of teaching?

And it may also be that we have relatively large classes. Maybe in order to create this culture of experimentation, you need a lot more individualised instruction, or at least small group instruction. And that is not easy. So, again, that may be a part of the reason that the system has not moved forward as much as had been expected.

And people are still asking, "So when are you going to get your next Steve Jobs?" Or, "When are you going to be so out-of-the-box that you're going to be creating something revolutionary?" And instead of one individual, can you have a number of individuals doing this?

And I think maybe the younger generation, who are much more open and willing to be experimental, and parents who may not be so anxious because, in a sense, they have built up resources, might be ones to spur this change. And they might say, "Okay, you don't necessarily want to go to university but you want to go to a music academy. Prove that you have the talent in the music academy." Look at the fuss we made over Schooling. But the amount of effort that kid put in is huge, right? I think more and more middle-class parents are prepared to say, "If you show me you have talent, passion and the dedication that would be required to be top of your class in the swimming pool, okay, go for it." Or kids are basically saying, "You want me to go and finish studying engineering? I finished my engineering course, here's your degree. Thank you very much, I'm going to do something else." And I think younger people – not so much the families, not so much the system – are saying, "I want much more purpose, I want much more meaning." Yes, it's a bit more risk taking, but the whole world is so unstable anyway, so there may be opportunities after all.

It may take another generation, yes. But that's not necessarily bad because most systems would be reluctant to leave something that they are familiar with, and the stakeholders must be prepared to say yes. If the stakeholders – who are largely the parents – say, "We are not confident", then the policymakers are going to find it very hard to go against them. If you get a huge backlash about why you're abandoning the PSLE – you might get half the population saying "great", you might have half the population saying "oh my god, why are you going down the way of failed systems" – then it will be difficult for changes to occur.

Q: Minister Heng once said that the challenge does not lie with the policy per se, but with changing the mindset of the parents and the teachers because as much as some of us think that it is unimportant, there are groups who have a different opinion. What are your thoughts on that?

Ultimately, as a politician, you have a constituency. If you cannot carry your constituency with you, then you can't do the changes that you want to do.

But there are other systems. If you want to look at assessment reform and innovation, look at Hong Kong. There are issues around school-based assessment – subjectivity and all the rest of it – but many systems live with it. We are so purist in saying, "We must be clean"; holier than thou sort of attitude sometimes. We live in a messy world. The fact that there may be one or two instances which are not what we would like doesn't mean that you trash the whole system, right? You can't.

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Using PISA as a tool to anchor and stimulate broader discussions on the socio-cultural and institutional contexts that shape the state of Singapore's education system today, this candid interview with Professor Gopinathan is on point in tackling some of the hard, long-standing questions on educational reform in the country in recent years. It leaves us with gems on thinking about how key stakeholders in the education arena can reconcile the tensions surrounding the system, through building human capacities and revisiting some of our deep-seated cultures. Although he makes it clear that change will take time, there is optimism in our younger generation to lead the way in seizing opportunities and exploring possibilities offered in this day and age, to realise an education system of the future that can still achieve, yet is inclusive and holistic in its goals.

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Navigating the Formal Education Paradox: Developing Continuities and Embracing Discontinuities in Children's Transition to School

By Siti Afiyah Mustapha

Abstract

This paper deals with the transition from preschool to formal schooling – a critical period marked by contemporaneous shifts in both a child's environment, and his cognitive and social capabilities. Widely recognized by policymakers, researchers and educators as a pivotal life event with far-reaching consequences for future educational engagement and achievement, research on children's transition has gained traction within the last two decades, with much attention directed towards studying them, developing policies, and implementing a range of practices and programmes to support effective transitions. Managed well, it can inspire children towards a virtuous learning cycle. In the Singapore context, transition to primary school has been characterised by an educational conundrum – to cultivate and sustain an ethos of holistic, lifelong learning in children, in the face of downward pressures of an academic-oriented primary school curriculum and education system. To navigate this paradox, this paper advocates for school transition strategies to strike a balance between (1) ensuring the two stages of education offer continuity in terms of holistic learning experiences, and (2) promoting the development of adaptive behaviours and instilling positive learning dispositions, beyond conventional academic skills, in children to cope with and embrace discontinuities. The implications of these transition strategies for the Malay Muslim community, and importantly, low income families will be discussed, considering these children are at greater risk for lower levels of academic and social preparedness for school.

Transition to school is a multiplex process for any child, and his or her family. From reconciling enthusiasm with expectations, the familiar with unfamiliar, the process of adjustment to school begins well before the child walks through the school gates. It is neither the first, nor the last of many transitions a person has to experience throughout life, yet it remains one of the most crucial. Early intellectual and social accomplishment at school can generate a virtuous cycle of learning and achievement (Burell and Bubb 2000). It is an influential determinant of children's adjustment to the demands of the new school environment and subsequent progress (Ghaye and Pascal 1988). Effective adjustment reinforces the child's enjoyment of school-based life, including play, learning, as well as relationships with other children and adults (Janus 2011).

Literature on school transitions considerably features the concept of "school readiness". Early conceptions of school readiness had been interchangeable with the basic cognitive skills required to begin formal education, and applied as a valid yardstick of verifying the child's right to school entry (Paro and Pianta 2000). These conceptions relate to the "five to seven year" age shift, an impressionable period in a child's life also termed as "the age of reason and responsibility" (Sameroff and Haith 1996). In Piagetian nomenclature, the shift corresponds to a progression from intuitive to concrete operational thinking, which hinges on an internal restructuring that enables the child to organise different perspectives simultaneously rather than to solely focus on an aspect of a situation at a time (de Lemos 2008). This juncture is when children are assumed to be more competent at exercising logical thinking, and are therefore 'teachable' (White 1996), even in societies where children do not attend formal school. It is no coincidence that the age between five to seven years signals the start of formal schooling for children in many countries. The most common school starting age in Western Europe and in Asia, including Singapore, is six; children in the United Kingdom, Australia and New Zealand start school on their fifth birthday, and at seven in countries such as Sweden and Finland (The World Bank 2015). At this stage, it is possible to distinguish several domains that are associated with a child's success at school: physical health and wellbeing, cognitive, socioemotional, language and communication skills (Janus 2011). This understanding of child development has since broadened to incorporate children's developmental health at the point of transition (Janus and Offord 2007), and recognise the complexity of neurological and social processes that contribute to it (Snow 2006).

As a concept, school readiness has had its fair share of criticism, with researchers labelling it as ill-defined or suffering from a narrow theoretical perspective. School readiness tests are argued to be a weak predictor of children's social development and behaviours in school (Paro and Pianta 2000), and of children with 'high risk' of failure in schooling (Centre for Equity & Innovation in Early Childhood 2008).

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[1] Children's transition to school is conventionally defined as children's move from a 'prior to school' setting – such as childcare, a playgroup or kindergarten – to a formal school setting (Centre for Equity & Innovation in Early Childhood 2008).
[2] Children enter Primary 1 in the year they turn 7.

Yet the concept is becoming increasingly synonymous with the capacity for academic success. There is a trend to measure a child's readiness for school solely in academic terms, where screening tests are used to pass these judgements (Paro and Pianta 2000), including introducing literacy standards in preschools (Wesley and Buysse 2003). Wesley and Buysse (2003) conclude that the weight accorded to academic readiness for school at the expense of other forms of readiness has pressured educators to 'find what's missing and fix it fast'. This pressure diminishes the capacity of kindergartens and impoverishes early education, as lesser attention is paid to the child's individual needs holistically and has progressively led to a "push down" of school curricula to prior-to-school programmes.

A growing body of literature has also reconceptualised school readiness as not only a question of maturation, and thus "readiness", on the part of the children concerned, but the accommodation of school, classroom, policy and community practices, where the needs and interests of children are embraced and built upon. As such, Bohan-Baker and Little (2004) advocate seeking 'promising practices' that derive from research evidence concerning the perspectives of one or more of the three main actors engaged in school transition: children, parents and carers, and educators. They cite Bronfenbrenner's ecological theory of school transition as an example of a 'promising practice', as widely suggested by other transition-to-school researchers.

Situated in this a dynamic, ecological model (Bronfenbrenner 1979), transition comprises a 'set of nested structures' (microsystems) connected in a network (the mesosystem), and influenced by the beliefs and attitudes of the broader society (the macrosystem).

Bronfenbrenner's model is a fruitful example of how optimal development can transpire through cohesive mesosystem links. Fabian and Dunlop (2007) highlights two of Bronfenner's hypotheses that are germane to school transition – (1) that 'the developmental potential of a setting in a mesosystem is enhanced if the person's initial transition into that setting is not made alone'; and (2) that 'upon entering a new setting, the person's development is enhanced to the extent that valid information, advice, and experience relevant to one setting are made available, on a continuing basis, to the other' (Bronfenbrenner 1979). This resonates with the work of Basil Bernstein (1990) on familiarising with rules, where success in the education system is predicated upon the children being informed of the rules of the system, for example, of the curriculum, pedagogy and assessments.

The child's living and circumferential environments – the family, educators in both preschool and school, and the community – should thus be accounted for, as strong relationships between children and these vital actors can ease the discontinuity of transition to formal schooling (Rimm-Kaufman and Pianta 2000). Transition practices – initiatives that establish and enhance these relationships – have been demonstrated to predict better learning and adjustment in school (Margetts 2007; Ahtola et al., 2011).

Inclusion of such perspectives is important because, at the outset of formal education, there is a large proportion of variance between and within children with regards to their skills and early experiences. The child brings to school the outcome of his or her first six years of life with a family, within a particular neighbourhood or social milieu, in an idiosyncratic combination with the child's age, personality and gender (Meisels 1999; Janus 2011). Therefore, what has to be captured by the concept of school readiness is not an assessment of a specific skill or competence; rather a consideration of the child's holistic development in adjusting to the new environment. By and large, strategies to facilitate children's transition should aspire to (1) Create respectful relationships between children's home, their intended school and – if relevant – any attended Early Childhood (EC) services; and (2) Meet the additional and specific needs of children with disabilities and children from disadvantaged backgrounds (Centre for Equity & Innovation in Early Childhood 2008).

Despite the complex amalgam of variables, a trawl of the research literature on creating a positive start to school for children converge around two themes – starting school is a significant moment for children and their families, irrespective of the school entry age; and access to high quality early childhood settings can positively influence a child's success in school. An OECD study of 35 counties (2005) revealed that steady investments in universal early childhood education and care boost children's long-term educational outcomes. Specifically, attendance in high quality early childhood settings can benefit children's development in their schooling years (Alexander, Entwisle and Kabbani 2001; Wildenger et al. 2008).

Perspectives on School Transition

In discussing school transitions, Fabian and Dunlop (2007) advocate for the role of human agency and its potential to empower children, families and professionals to be 'agents of change', rather than subjects of transition outcomes beyond their influence. Numerous studies have consulted the views of preschool teachers, primary school teachers and parents on school transition, and they have been found to constantly differ.

An Australian study, for example, showed that teachers prioritized children's adjustment to the school setting, attitudes and feelings towards school and learning, more than actual knowledge – parents however accorded greater importance to the latter (Dockett and Perry 2004). Other studies in South Africa (Margetts and Phatudi 2013), Germany (Arndt et al. 2013) and China (Chun 2003) reflected similar parental sentiments towards knowledge and academic skills. Research in New Zealand showed that parents favoured a larger extent of preschool structuring as a way of preparing children for school and to ensure some degree of continuity, for instance, in their established routines or in stressing cognitive development (Peters 2000). In the USA, preschool teachers were inclined to view the child's preparation as scaffolding to meet the social demands of school, such as following directions, communicating their thoughts and aspirations, sharing, and taking turns, stressing the development of these competencies over academic skills (Lin, Lawrence, and Gorrell 2003).

Preschool and primary schoolteachers' beliefs and practices were also shown to diverge. A study in Iceland exposed differences in perceptions of the level of control and autonomy children have over their learning, where preschool teachers are more predisposed towards empowering the children (Einarsdottir 2006). They discovered that stronger continuity between both phases had no long-term impact on school-related attitudes, suggesting rather that school structures and support provisions throughout the transition period appeared more pertinent, than fixating on children's difficulties. Collectively, such insights inform designers of transition to school programs not to assume that parents and educators view education in the same way; and while it can be difficult, finding common ground in their views on education is paramount if transition practices are to be judged successful by these key actors (Centre for Equity & Innovation in Early Childhood 2008).

Less studied are children's views on school transition, which admittedly, offer a refreshing insider perspective on the variations between preschool and formal school settings. Yeo and Clarke (2006) summarised common concerns shared by children, regardless of country or starting school age. These include acquainting with new school rules and norms, forming peer relationships, managing school work, and connecting with teachers. Children can also experience a loss of skill and competence upon entering school, having failed to draw upon the activities designed to bridge kindergarten and school (Broström 2003). These children grappled with personal and social skills, and found it challenging to work with educator-initiated activities. Their educators, in turn, depicted those children as insecure and less engaged at school, despite having been independent and active inquirers in kindergarten.

International research suggests that transition can even be traumatic for some children, particularly for those with 'less than optimal circumstances', for example, children with special educational needs or from dysfunctional families (EASE 2013).

Transition Experiences in Singapore: The Dilemma between Downward Pressures of Formal Schooling and Propagating Holistic, Lifelong Learning

Research on transition to formal schooling in Asia has taken on a distinctive trope, homing in on the difficulties encountered by primary school children that are characterised by elevated academic demands and expectations. Studies on Hong Kong and Singapore note that formal school marks the onset of academic pressure, as schools tend to focus heavily on academic adjustment in an examination-oriented education system (Sharpe 2002; Wong 2003; Yeo and Clark 2005). In their study, Mian and Karuppiah (2016) discovered that preschool teachers and parents in Singapore felt academic skills were imperative for a child starting Primary 1, a view counterbalanced by primary schoolteachers who did not seem to stress academic capability as a readiness skill for primary school. Both preschool and primary schoolteachers encouraged parents to develop children's non-academic competencies for starting Primary 1, such as social, emotional and self-help skills, language and communication, as well as the ability to sit, listen and concentrate (Mian and Karuppiah 2016). Transition practices

utilised by most parents in their study were enrolling their children into preparatory/enrichment courses, conducting self-teaching at home, following a timetable akin to the Primary 1 schedule, exposure to more words for reading and spelling, and educating about money.

Yeo and Clarke (2005)'s study showed that Singaporean children lamented over longer school hours, completing homework, being scolded by teachers, and being able to do the work expected of them. The authors highlighted that school was seen as a serious place of learning wherein the best aspect of school was to learn and score well in subjects, and the worst was not being able to deliver work expected of specific subjects. Children in Hong Kong raised similar concerns about 'the amount of homework they had to finish every day and the endless tests and examinations they had to face during the year' (Wong 2003). Teaching styles in primary schools differed from preschool (Ebbeck et al. 2013). The ability to manage and thrive academically appears to be a benchmark of school success and positive adjustment for primary school children in Asia (Yeo and Clarke 2006).

This is expected in Singapore's context, given its education system's rigorous standards and high-stakes gateways dedicated to grooming talent and, lately, promoting the entrepreneurial and innovative spirit. Academic qualifications are highly prized, and the ordinary school-going child is regularly assessed with examinations at least twice a year in the formal school system; where education in the primary level culminates to the national Primary School Leaving Examinations (PSLE) in Primary 6.

Discourses on formal school transition in Singapore notably points to two mutually reinforcing challenges: (1) The downward pressures of formal schooling, marked by a sharp discontinuity between both pre- and primary school curriculum and pedagogies; and (2) Parental expectations of preschool education and enrichment classes as a means of academically readying children for formal schooling (Ang 2012). Both challenges are thought to contradict the holistic development agenda of nurturing young children to become active, lifelong learners.

In the first month of Primary 1, pupils in Singapore undergo a screening test to determine their proficiency level in pre-requisite literacy and numeracy skills. Pupils identified as academically at-risk based on this screening test are enrolled into intensive, subject-specific instructional programmes called the Learning Support Programme (LSP), for English or/and Learning Support for Mathematics (LSM) (MOE 2016). Children with sufficient improvement in these subjects in the school's curriculum-based continual assessments are discharged from LSP. Children with poor grades in English at the end of Primary 1 will resume LSP in Primary 2, while LSM stops at Primary 1. If the learning difficulties persist despite the intensive, supplementary support, the child 'may be referred for a psychological evaluation when specific learning difficulties are suspected' (Yeo and Clarke 2006).

The downward pressures of the formal curriculum are intensified by curriculum and pedagogical discontinuities between the early childhood and formal school settings. Adjustment to a highly structured, formal curriculum may prove to be daunting for children who were previously acquainted with a more play-oriented learning environment. Within the last decade or so, reforms to early childhood education were enacted by the Singapore government, in a bid to curb against the "trickle-down" effects of the formal school curriculum, and inculcate a culture and practice of holistic, lifelong learning in the early years, in hopes of easing children's transition across levels within preschool, and from the early childhood setting to primary school. In 2003, the Education Ministry (MOE) published the Framework for a Kindergarten Curriculum in Singapore that the preschool curriculum is not 'just a preparation for the next stage'; the kindergarten chapter should be treated as an inherently rewarding phase and 'should not be confused with trying to accelerate learning in the kindergarten years by providing children with a simplified primary school curriculum' (MOE 2003). It developed a set of desired outcomes that espoused the 'whole development of the child' through character building, acceptable social behaviours, a sense of self-worth and learning dispositions befitting of an innovative society and economy (MOE 2003). The new curriculum repositioned learning from an academic rote, to a more experiential approach that champions thoughtful exploration of ideas and lifelong learning. Then-Education Minister Tharman Shanmugaratnam (2003) affirmed that children must be nurtured in their early years 'to be innovative, to be flexible, and to have a passion for learning that takes them through life'.

Concomitantly, training – a bedrock of the government's reform strategy –, sought to equip principals with knowledge of leadership, management and early childhood teaching so there would be productive leadership within kindergarten settings, and to facilitate children's successful adjustment in primary school (Tan 2007). The 'Nurturing Early Learners' curriculum framework (MOE 2003, 2008) was recommended to preschools, and mandated the training of teachers and leadership training for principals, to raise professional standards and improve the quality of preschool education (Tharman 2003).

In 2008, MOE released a new curriculum guide that built on the 2003 framework and to delineate between 'Child-directed play' and 'Teacher-directed play' (MOE 2008; Nyland and Ng 2016). The guidelines hinged on six principles, or ITEACH – integrated learning, teacher support for learning, engaging children through play, ample opportunities for interaction, children as active learners and holistic development (MOE 2008). This signified a shift in educational philosophy, in which the role of the teacher – previously the sole bearers of knowledge to be imparted to passive learners – has been transformed to one of scaffolding children, now viewed as active learners, who construct knowledge for themselves in an integrated and holistic manner (Zulkifli 2008).

Adapting to new curriculum guidelines, however, meant that teachers are to alter their mental models and practices in working with children. Transforming practices include adopting informal teaching approaches and collaboration with others, which may not necessarily be well received in Asian contexts where the teacher is customarily looked upon as the 'dispenser of knowledge rather than as a co-constructor' (Ebbeck and Chan 2011). On a personal level, resistance can arise due to habit, a fear of the unknown, threat of existing relationships or conflicting personal goals of the subject matter (Ebbeck and Waniganayake 2003); whereas organisationally, it can be attributed to the prevailing organizational climate, structural rigidity or concern about conflict within the staff (Ebbeck and Waniganayake 2003; Fullan 2006; Rodd 2006).

This resistance is compounded by a second, more palpable challenge that relates to the views of the parent population. Nyland and Ng's (2016) interviews with Singapore early childhood teachers noted that there were a handful who expressed optimism about using their training to implement a play curriculum in practice. However, many remained irresolute and maintained that, in Singapore's context, play could not take the place of 'academic rigour' and, on account of parents' demands, hesitate to remodel their existing practices and routines. Teachers cited that 'Play is good ... but it is difficult to implement as Singaporeans are competitive and also parents' expectations have to be met'. Another stated that training did not help as 'I don't apply much of what I learned in this school. Parents still demand to see worksheets. We do a lot of worksheets to show parents'. Parents' held a limited appreciation of 'play', which 'tended to be equated with having fun' (Nyland and Ng 2016). Nyland and Ng (2016) reiterate that while the philosophy of play as an instrument for learning has had a long-standing history in Early Childhood Education (ECE), play does not automatically cohere with the 'knowledge economy paradigm' and its corresponding view of children as 'human capital'. It became apparent that kindergartens and its teachers are compelled to concede to parental demands, and there is little breakthrough in communicating the values and objectives of the new framework (Ebbeck and Chan 2011).

In fact, tensions between the pursuit for a more open, play based curriculum and parental expectations, in addition to teachers' hesitance to welcome change, prompted the Education Ministry to announce an overhaul of the exam-based system by scrapping examinations at Primary 1 and 2. It is substituted with the PERI Holistic Assessment (HA), which relies more on consistent feedback of students' progress, strengths and weakness than raw test scores, and students are assessed through means like 'show-and-tell, drama, theatre and role play' (AsiaOne 2010; TODAY 2012). Except for some initial difficulties, such as 'the low assessment literacy of teachers and other teething problems', the execution of HA in schools has been going well (Lee et al. 2014). The TODAY article (2012), "No exams, no worries – 'Yes' to P1, P2 Holistic Assessment", indicated that, 'despite initial reservations', parents and teachers approved of the new system after seeing its benefits. Yet, naysayers claim that abolishing exams was merely putting off the unavoidable. The policy was a cause for concern for parents who insist children's learning would be compromised without exams. While there are parents

who believe it is vital to let children enjoy their preschool years without pressure and maintain that schools should be ready for children, others felt that inadequately preparing children for the realities of formal schooling and the eventuality of exams, where skills such as literacy and numeracy are prioritised, is only setting them up for failure.

Parental anxiety towards school transition often causes them to take preventive action, hallmarked by parents' preoccupation with enrichment programmes, with some even investing in preparatory courses to give their pre-schoolers a head-start to Primary 1. Preparatory classes in Singapore, with fees ranging from $350 for a 10-week course to more than $2,500 for a year-long programme, saw a hike in demand by at least 30 per cent since 2015, especially from parents who have grown more aware of its benefits and are ready to spend on their children's education (The Straits Times, 28 Dec 2015). This trend is indexed by a Straits Times-Nexus Link survey of 500 parents that shows nearly 40 per cent of parents with children in preschools have tuition for them (The Straits Times, 4 July 2015). About 70 per cent of parents enrolled their pre-schoolers in English lessons, followed by mathematics and Chinese. The main reason for tuition – specified by more than half of the parents with children under seven – was to keep in step with others. Another rationale was that it would be simpler to 'lay the right foundation from the start', than to 'undo bad habits, grammatical sloppiness and wrong vocabulary associations later on' (The Straits Times, 28 Dec 2015).

Straughan (2013) states that this engrossment with tuition has not so much to do with the quality of formal education in Singapore, but with parents' ambition for their young to be at the forefront as they embark on a race of a lifetime. On the other hand, there are parents who enrol their children in private tuition, precisely because their learning and confidence-building are stymied by the system's inability to slow down for weaker learners. Children are expected to attend class with strong literacy skills, not as a blank slate, and where they do know all the answers, teachers are forced to drive up the standards. While pre-literacy and pre-numeracy skills are useful for children starting their first semester of primary school, experts warn against hothousing young children and giving them a heavy workload. Parents can enrol their children in enrichment classes to fulfil their aspirations for their children, increase their exposure through fun and innovative activities that capture their attention and ignite their sense of inquiry; it could further benefit children whose home environments are not rich in stimuli. But an imbalance in learning priorities may cause children to become very dull, bored and even 'dislike learning', to the point that it would be 'difficult to make them love learning again' (The Straits Times, 28 Dec 2015). No matter how academically capable a child is, poor relationships with teachers and peers, trouble outside of the classroom, inappropriate challenges, and low expectations can negatively affect learning (Peters 2010).

On this subject, there are concerns that Singapore might be moving in the direction of Asian counterparts Hong Kong and Japan. Japan, for example, has been experiencing frenzy over preschool-age exam preparation, spurred by primary schools' affiliation with prestigious universities (Clark 2005). Hong Kong parents, on the other hand, have

been known to register their pre-schoolers for tuition, but this trend has gone upstream with lessons for babies as young as six months (The Straits Times, 9 July 2015). Studies additionally highlight the strong support networks Asian parents provide for their children and the implications for later learning in school, for subjects such as mathematics (Sharpe 2002). Parental expectations are also shaped by their cultural and social expectations, which in turn, fashion their views when looking for appropriate childcare centres (Ebbeck and Chan 2011). Ebbeck and Gokhale (2004) posit that increased accessibility via information technologies have enabled parents to be promptly informed of latest developments in the early childhood landscape, scrutinizing teaching and caring practices more thoroughly now, to find the most suitable type for their children.

Indeed, heavy investments in educational resources are seen as essential for accessing Singapore's meritocratic system geared towards raising global economic competitiveness through an ability-driven curriculum. The meritocratic ideology, underscored by a staunchly anti-welfare government, is 'deeply internalised' by Singaporeans – where the competition begins in the early years and escalates with every subsequent level of national examination (Straughan 2013). Singaporeans have witnessed or experienced the high returns of investments in formal education in the form of upward social mobility, against the backdrop of the country's rapid transformation to first world within an impressively short period of fifty years. Both global and local economic competition, restructuring and downturns have also instilled fear or concern into parents and into governments over how the relevance of their children's skills, and the country's future workforce. In that circumstance, a parent might say, "I want my child to secure a good job, without which my child would not have a good life. Where does the child stand relative to others, and what can I do to prepare the child?" – and the answer often winds up fixating on specific skills, earlier and earlier (Nyland and Ng 2016).

It is, in fact, one of the compelling reasons why parental perspectives continue to monopolize the early childhood scene in Singapore, where the perceived requisites of successful primary school transition to primary school push kindergartens to administer curricula that reflect an academic approach to learning. Therefore, in supporting children's transfer from pre-school to primary school, the test for policymakers and educators is to reconcile the 'complex dichotomy' that besets early education and learning – in which the 'pedagogic vision is for a less academic and informal experience of learning, but parental and societal pressures are forcing the curriculum

into a more formalised model of learning' (Ang 2008; 2013). Still, the aspiration is to deepen parents' understanding of the nature of children's learning in the early years, through meaningful parental involvement in the matter of curriculum reform, so that they can eventually embrace some of these changes (Ebbeck and Chan 2011).

To navigate this paradox, the following sections explore how school transition strategies ought to strike a balance between (1) ensuring the two phases of education offer continuity in terms of holistic learning experiences, and (2) promoting the development of adaptive behaviours and instilling positive learning dispositions, beyond conventional academic skills, in children to cope with and embrace its discontinuities.

Ensuring Continuity in Transition through Holistic Learning Experiences

In a nutshell, current transition practices to prepare for Primary 1 in Singapore generally occur in the final six months of Kindergarten Two (K2). Common practices adopted by preschools include primary school orientation visits that brief children and parents about school rules, regulations, routines, curriculum and a tour around the school premises (Choy and Karrupiah 2016). These visits can only materialize if schools are supportive. Even then, typical orientation programmes organised in most schools are insufficient in facilitating understanding in K2 children of Primary 1 life (Choy and Karrupiah 2016). Transition-to-school programmes ought to allow children to visit, observe and experience the concrete setting and primary school life for a longer duration and to a greater extent (Dockett and Perry 2003; Yeboah 2002). One month prior to commencing Primary 1, parents are to complete a Starting School Booklet, which provides information on their child's skills in the following areas: physical/motor, independence, social interaction, language, and academic skills (Yeo and Clarke 2006). A parent-child activity book, containing tips and activities to encourage meaningful conversations between parent and child, was introduced in 2016 to parents of all Primary 1 pupils to help them reinforce the values and routines their children will learn in school (Channel NewsAsia, 2016).

A "child-ready school" should, however, go beyond these standard measures. It is a school that is able to take the child's perspective, to understand the child's needs, and to create an appropriate learning environment (Brostrom, 2000). Its transition programmes should account for the diverse socio-economic and cultural background of children, and partner with families and communities to address any adjustment difficulties prior to starting school (Margetts 2007). Rather than a thoroughly seamless transition which is neither entirely viable nor desirable, "ready" schools should retain an appropriate curriculum that esteems the whole child approach, yet is versatile to cater to the diverse backgrounds and learning needs of children stepping into formal education for the first time. This endeavour would at least establish continuity in holistic learning experiences between the both educational stages, allowing for transfer of positive dispositions gained from a quality early childhood, assuming the child has benefited from one.

In this regard, the Lien Foundation Report 'Vital Voices for Vital Years' proffers for cohesion in national policies and government provisions to facilitate children's primary school transition, especially if early childhood is, at the policy level, envisioned as a fundamental bridge to primary schooling (Ang 2012). This recommendation necessitates policymakers and educators to agree on common educational philosophies and purpose, based on a comprehensive appraisal of the curricula at both preschool and primary levels. More than cognitive or academic achievement, this purpose should encompass children's individual and social development in areas like self-efficacy, confidence, joyful learning, and learning how to learn. The establishment of Early Childhood and Development Agency (ECDA) in 2013 is a step towards this vision, by integrating the regulation, planning, professional development and public education functions of the Ministry of Education's (MOE) Pre-School Education Branch and Ministry of Social and Family Development's (MSF) Child Care Division. In 2014, the Education Ministry further entrusted a team that designed its Lower-Primary curriculum to develop its kindergarten curriculum (TODAY Online, 2014). With this being the first time the Ministry has developed a kindergarten curriculum, which is still being fine-tuned, it remains to be seen whether it can moderate the downward pressures of primary school curriculum from spilling over into its early childhood programs; and if it can be implemented effectively and meaningfully in the classroom. O'Gorman (2008) rehashes other researchers' concern that if preschools attempt to forge a seamless transition to school, they may – intentionally or otherwise – focus on children's 'school readiness' when orienting their curriculum towards the school curriculum.

To advance this agenda, the Report also suggested that educators cultivate 'a shared professional understanding of the learning approaches and culture that underpin a curriculum' fit for young learners, by encouraging free-flowing dialogue between the two groups of educators (Ang 2012). This includes valuing the pedagogical insights and instruction children gain from their early childhood experiences, and integrate them into the curriculum development and implementation. Further, early childhood can be reconceptualised as spanning the age range of 0 to 8 years, where educators on both ends can 'build on a common body of knowledge and professional practice' to support a holistic, continuous learning environment 'from pre-school, up to at least the first two years of primary schooling in Primary 1 and 2'; this also means strengthening the role of preschool teachers as an indispensable feature of mainstream schooling, and vice versa, to provide opportunities for primary school teachers to be trained and engaged in preschool practices and pedagogies (Ang 2012). On the whole, this outlook requires a robust and profound rethinking of the overall goal of education between the different school levels – what it is for and the role it plays in society, so that every child can achieve his or her potential.

Embracing Discontinuities in Transition: Developing Positive Learning Dispositions in Children

Mitigating the downward pressures of formal schooling through curriculum and pedagogical continuity presents only one side of the equation in navigating this transition conundrum. The other facet lies with allowing young children to meet with such discontinuities, as offered by transitions, early in life. Discontinuities in transition serve as a marvellous opportunity for children to realise and develop a personal toolkit to cope with the uncertainties and challenges that lie ahead in adulthood (Walsh et al. 2008), and should be rightly seen as part of the continuum of life and learning (Page 2000). Niesel and Griebel (2000) endorsed views that question the utility of solely seeking for continuity in transition, and concluded that it is 'not a philosophy of fostering continuity that seems necessary, but coping with discontinuities'. Youngsters are tougher than we give them credit for, and they relish appropriate challenges arising from uncertainty and change. If undergoing a transition is 'a learning skill in its own right', it is imperative that children develop resilience to change, but are also lent support to help negotiate change (Fabian and Dunlop 2007). Ghaye and Pascal (1988) suggest that the kind of support children receive when facing discontinuity may prove more crucial than preserving continuity, although not to the extent of emotional cosseting them. Preparation and support may come in the form of respectful, reciprocal relationships between peers, the adults involved, and with teachers, by taking time to understand children's cultures and backgrounds, look for promise instead of shortcomings, as well as recognise and expand on their prior learning. Effective relationships permeate other key themes for success, including a stronger identity and engagement as a learner, and sense of belonging and fulfilment at school.

Importantly, the ability to embrace discontinuities entails a recalibration of mindsets of all key actors of school transition towards learning and education. Taking cue from Claxton's (2002) sociocultural perspective on the future of education, the purpose of education is not, fundamentally, about the 'transmission of specific bodies of knowledge and skills'; but to thrive on uncertainty. More specifically, he argues that education is about the 'development of understanding and the formation of minds and identities' – minds that are robust and nimble enough to engage with the unpredictable demands of the future; adaptive identities that acclimatize to the changing needs of communities, as well as responsibly partake in their activities, and henceforth benefitting from their transformation. The focus should therefore be on the development of 'positive learning capabilities and dispositions', rather than on domain-specific skills or substantive knowledge. The 'development of a mind to learn' is necessitated by the challenges and competitions emerging from globalisation and the new economy in this day and age, where artful use of knowledge, communications and information technology is essential to economic and social advancement (Claxton 2002). Claxton (2002) rationalises that the way minds grow is not 'through didactic instruction and intensive training, but through a more subtle kind of learning in which youngsters pick up useful (or unuseful) habits of mind from those around them and receive guidance in reconstructing these resources in order to meet their own and society's current

and future concerns'. This harks back to Dewey's conception of 'informal education', where the child learns primarily through experience, observation, and participation in activities with their elders.

It is prior to and during the process of early transitions that positive lifelong learning dispositions – such as resilience, resourcefulness, and confidence – can be cultivated, effectively becoming a vital part of the child's personal toolkit to embrace uncertainties and challenges in life. These dispositions ought to be borne within families and the nurturing rightly begins at home with the child's parents. For families especially, belief and conviction in such an approach towards education and learning as a consistent and continuous, yet well-paced process that starts from birth, will ensure that preparations for transition are not left to the last hour.

Resilience, Resourcefulness, and Confidence

Resilience, a key quality of effective real-life learners, is the ability to stay 'intelligently engaged' with complex, unpredictable circumstances (Claxton 2002). Resilient individuals are inclined to pursue learning challenges with uncertain outcomes, to persist with learning despite momentary distress or demoralization, to recover from setbacks and failures, and to recommit to the ventured task. Its antonym, 'fragility', is the susceptibility to feel defeated and retreat at the slightest difficulty, and to switch from 'learning mode' into defensive, guarded frame of mind. Besides parental warmth, guidance, advice and quality time spent with the offspring, the type of language children's parents, teachers and elders use to comment – for the most part informally – on children's learning activities, and at crucial moments of difficulty, failure or success, bears great influence on the development of resilience. Claxton (2002) demonstrates this,

> "'There, there, never mind; let's have a cuddle' may teach the child that frustration will, unless actively soothed and managed, naturally lead on to upset – and such reactions may therefore, paradoxically, make the child more fragile rather than less in the face of future difficulties – especially where external comforting is not available, 'Oh, you stupid girl', or 'You are a clumsy child' encourages the child to take on for herself an internal, constitutional attribution: the idea that she simply doesn't have what it takes. 'Come on, you can do it', or 'Let's think of another way of tackling this' models for the child the idea that success may come as a result of greater persistence or ingenuity, and thus coaches her to appropriate and internalize these interpretations for herself."

Another effective lifelong learner disposition is resourcefulness – the propensity to scope for utilities and resources in the everyday environment that might enhance current learning. Maternal resourcefulness and the child possessing a positive thought pattern, has been found to be predictive of resourcefulness in children (Zauszniewski et al., 2002). Claxton (2002) argues that environments 'afford' resources, but these resources do not become useful accessories for 'intelligent learning' unless they are recognised as such by the learner. He illustrates this using the PEEL initiative – the Project for the Enhancement of Effective Learning – in Australian schools (Baird and Northfield 1992) where teachers created learning situations that are 'manageably "messy", with respect to problem-definition as well as the resources needed, thus giving students valuable experience in deciding what resources they are going to make use of, and how' (Claxton 2002). With educational institutions differing in their practices, he substantiates that the role of intuition, for example, tends to be slighted, and thus underused, in schools; and 'tightly scripted' classrooms may help students to achieve, but could also deprive them of the chance to develop their own resourcefulness (Claxton 2002).

At the heart of effective lifelong learning is confidence. Illustrating their argument with examples from well-known 'creative collaborations' and from work on high school and adult students learning a second language, Mahn and John-Steiner (2002) stressed the importance of caring support from colleagues and mentors in enabling people to be risks-takers in initiating new ideas and pursuing new directions. This ethos can be extended to children, where joint activities prior to and during the school adjustment process are enhanced when the interactions between child and parent, or teacher, are reinforced by 'the gift of confidence' (Mahn and John-Steiner 2002). Emotional scaffolding is pivotal to the gift of confidence, including constructive criticism, the sharing of risks in proposing new ideas, and establishing a safety zone. It has become ever more crucial, in an era of "teaching to the test", that parents and teachers understand and consider the child's lived experiences, knowledge and feelings in their collaborations, to create environments conducive to transformative learning and teaching.

Supporting Our Malay/Muslim Children in School Transition
The contributions and resources of family and peers are indeed important considerations when developing intervention strategies and supporting children's preparedness for school. Likewise, it carries salient implications for community organisations and policymakers to craft meaningful programmes and educational opportunities that are instrumental in supporting healthy transition for children, especially from low income families. In 2015, it was reported that 99 per cent of children aged five to six in Singapore were registered for preschool, an increase from 97.6 per cent in 2008 (The Straits Times, 2013; TODAY Online, 2015). Yet of the students who have not been exposed to early childhood education, a significant population from low income households were not school ready (Ting 2007).

In 2013, the Suara Musyawarah committee voiced the importance of Malay Muslim children gaining access to quality preschool education to establish a strong learning foundation for primary school. Upstream interventions were recommended to 'break the vicious cycle' while allowing for moral and Islamic values to be inculcated in children (Suara Musyawarah 2013). The Committee (2013) urged for vulnerable families to be supported in terms of early childhood interventions to ensure regular preschool attendance, with an emphasis on building children's English oral communication skills. Addressing the disparities in learning becomes all the more crucial in preventing harmful self-fulfilling prophecies from being triggered, especially when children adopt the negative views of others towards their own educational potential, and start to reify them.

Of interest is Yeo and Clarke's study (2006) that investigates the impact of specific background home factors on children's adjustment to school. It was found that a larger number (40%) of children in the "Low Adjustment" group spoke Malay at home compared to only 4% of the children in the "High Adjustment" group. Primary 1 pupils from Malay-speaking homes were at a significant disadvantage across all academic subject areas – English, Mathematics, and Mother Tongue – compared to their schoolmates from English or Chinese-speaking homes. Children from Malay-speaking homes in this sample were also overrepresented in LSP. Speaking English at home is advantageous in an English-medium education system, and is associated with higher academic grades and less reliance on additional learning support (Yeo and Clarke 2006).

Moving forward, practices for transition to school for our Malay Muslim children – from disadvantaged backgrounds, or otherwise –, can be viewed as threefold: (1) Ensuring good access to and participation in high quality preschool programs through public education and outreach, (2) Bridging processes and activities between prior to school settings and school that involve parents, and (3) Promoting practices that foster a healthy learning environment at home.

At the community level, public education and outreach to our Malay parents-to-be and parents with children in the early years must be consistently mounted and strengthened, prior to transition. There must be recognition that academic skills should not be underplayed in Singapore's educational context, albeit developed alongside socioemotional and other competencies. Given that the literature that shows the value of high-quality early childhood education, this is something to be impressed upon.

In 2015, ECDA announced new measures to develop the quality and professionalism of the EC sector through enhancements to ECDA's regulatory powers and baseline quality standards. Initiatives include the Partner Operator (POP) scheme to enhance the affordability and quality of child care services for parents; the Professional Development Programme (PDP) to develop the skills and improve career prospects of more EC professionals; and the proposed Early Childhood Development Centres Act (ECDCA) to raise the overall quality of the sector through a coordinated regulatory

framework for kindergartens and child care centres (ECDA, 2015). It was reported in 2016 that one-in-three preschools in Singapore were certified by ECDA under the Singapore Pre-school Accreditation Framework (SPARK), an increase from one-in-four in 2015 (ECDA, 2016). The policies are also meant to monitor a fragmented private preschool market, which Ang (2012) noted, might devolve into an 'apartheid system' if not conscientiously policed, where the financially able have the options of quality kindergartens or childcare services, while lower-income families are limited in preschool choices for their children.

MOE has been working with primary schools to identify children who are not attending preschool at the point of the Primary One Registration Exercise (Tan 2007). Assistance is henceforth extended to parents of these children to access preschools, and subsequently help children adapt to the learning environment. On this matter, cooperation between government agencies and community-based organizations should continue to be strengthened, albeit strategic. The intended outcomes of public education efforts on promoting quality early childhood education and learning, and collaborative early intervention programmes, must be clear among all stakeholders and agencies involved, and the roles in this outreach process should not overlap, but mutually enhance one another.

Public education also entails informing and bridging our families to national and community developmental programmes, and educational funding. The direct English language support programme, Focused Language Assistance in Reading (FLAiR), for example, selects K2 children for one-to-one or small-group intensive support in speaking, reading and other uses of English. Participation in parent-child programmes based on the principles of Mediated Learning Experience (MLE) can also benefit parents by increasing their knowledge and understanding of basic concepts on different subjects, while enhancing their confidence and skills in engaging their children in home-based activities.

In Singapore, several financial and learning support programmes – such as KiFAS and KidSTART– were introduced for preschool children from disadvantaged homes, and the Development Support Programme (DSP) for children with mild developmental needs, to redress the inequalities in early childhood education. Recent enhancements to KiFAS were made to increase the affordability of kindergarten education for low and middle income families (Ministry of Social and Family Development 2015). Over and above KiFAS, community-based organizations have rolled out a slew of financial assistance schemes to subsidise the cost of preschool fees for low income families (Ting 2007). The relatively recent initiative, KidSTART, is undergoing its pilot with children from low income families in Bukit Merah, Kreta Ayer, Boon Lay, Taman Jurong and Geylang Serai. The pilot, which include two main services — family preservation and family reunification lasting six and 12 months respectively — seeks to provide these children with support in healthcare, learning and other developmental needs (TODAY Online, 12 April 2016). In 2016, MENDAKI teamed up with ECDA to support vulnerable Malay Muslim families on KidSTART, and continues to resource

parents of low income families with skills and parenting toolkits to help impart the joy of reading and aid their children in preparing for school (Ministry of Culture, Community and Youth 2016).

Beyond academic and learning necessities, it is important that Malay Muslim parents communicate closely with preschool and primary schoolteachers on their child's needs, and to access pertinent educational information and support. Parents with strong self-efficacy and conviction in their capacity to influence their child's performance, will exhibit greater involvement in their children's education and school-related activities (Melhuish et al, 2008). Where home-school partnerships are concerned, parents' and children's active roles should not be understated; partnership models must transform from one in which the school controls learning and tries to recruit the home and family peripherally to deliver its agenda, to one in which school and home agendas speak to one another, and both resources capitalised to advance children's learning. Effective home-school partnerships further entail school and community leaders exercising patience and mindfulness in understanding reasons behind the underrepresentation of parents, particularly from disadvantaged families, in school involvement. After all, research shows that disadvantaged children have the most to benefit from school-parent partnerships (Henderson 1987). The changing demographic of modern parenting might also require harnessing of digital technologies to a greater extent in these home-school relationships.

On a micro-level, home-based parental involvement, or academic socialization, proves to be as important as school-based involvement (Fantuzzo and McWayne 2002). Taylor and colleagues (2004) impress that parents' own experiences in school could inform their approach to children's academic socialization. Parents who recall their school experiences as pleasant and supportive may have an internal working model that frames school as a positive place for their children, and may therefore pay proactive attention to events that relates to the child's progress; conversely, parents with negative attitudes may harp on or exaggerate potential problems (Räty 2007). The promotion of learning families is a positive engagement strategy that includes parent-child homework sessions, as well as whole-family participation in extracurricular school activities and learning excursions.

For a start, Ramey and Ramey (1992) have condensed a list of practices that informs parents, educators, and early interventionists on how to enhance children's everyday lives by encouraging positive cognitive development and attitudes. The proposed activities revolve around (1) Promoting exploration to acquire information about their environments; (2) Mentoring basic cognitive skills, especially by reliable adults; (3) Celebrating and reinforcing developmental accomplishments, especially by those they spend a great deal of time with; (4) Directed application and expansion of new skills; (5) Protection from negative incidents such as teasing, berating or reprimanding the child, or punishment towards normative or necessary behaviours during trial-and-error learning about their environments. Constructive criticism however can be used to correct socially unacceptable behaviours; and (6) Creating a rich and stimulating communicative environment where language is employed to relay information, extend social rewards, and motivate learning of new skills and materials.

Ultimately, while transitions are cyclic and occur throughout life, it is in the individuals' early years that positive input and strong support from families, educators and band the wider community can truly make a difference and warrants special attention; where in the context of schooling, it can set off a virtuous cycle of learning and packs the child's life with a sense of possibilities to keep mastering new subject matters over the course of a lifetime.

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In their seminal paper, Oxford researchers Carl Benedikt Frey and Michael Osborne (2013) posit that computerisation – the use of "computer-controlled equipment" with "sophisticated algorithms" to do tasks in "routine intensive occupations" – is a main driver of high unemployment in the West

MENDAKI Future Ready Conversations: A Summary of Findings

By Muhammad Farouq Osman

Abstract

MENDAKI embarked on a series of engagements between January and July 2016 with secondary and tertiary students in order to gauge Malay/Muslim youths' future readiness – in particular, their awareness of, and receptiveness to, SkillsFuture and lifelong learning. Besides gathering Malay/Muslim youth sentiments on education and skills-related issues, the conversations also attempted to get a sense of the youths' perception of the future in the broader context – such as their general concerns and aspirations. In a nutshell, the entire ground sensing exercise revealed that many of the Malay/Muslim secondary and ITE student respondents were unaware of SkillsFuture, compared to their JC and polytechnic counterparts. Most of the respondents – across secondary and tertiary levels – were also less likely to approach ECG counsellors in school. Furthermore, while the students generally had positive academic and career aspirations, they were often unsure of the steps to be taken to achieve them, as recounted during the focus group discussions.

Introduction

The phenomenon of digital disruption is a leitmotif in any discussion today about the future of employment and its implications on society. Harvard Business School academic Clayton Christensen defines disruption as a force displacing "an existing market, industry or technology" and producing "something new and more efficient and worthwhile" (quoted in Howard, 2013). The rise of robots and artificial intelligence has played a crucial role in the present technological revolution, rendering some types of human labour "unnecessary or economically uncompetitive" and creating "demand for new skills" (McKinsey, 2013). In their seminal paper, Oxford researchers Carl Benedikt Frey and Michael Osborne (2013) posit that computerisation – the use of "computer-controlled equipment" with "sophisticated algorithms" to do tasks in "routine intensive occupations" – is a main driver of high unemployment in the West. Frey and Osborne (2013) estimate that about 47% of jobs in the United States are at risk of being automated.

It is of no surprise therefore that the advent of emerging technologies, together with the attendant impact on the employment and education landscapes, have become a cause for concern for governments and societies worldwide. Already, private car hire services Uber and Grab – which tap user data to match supply and demand – are adversely affecting taxi businesses and drivers in many countries. Similarly, traditional manufacturing industries will have to increasingly contend with new, disruptive technologies such as "3D printing[1], the Internet of Things[2] and data analytics" (Lim, 2016) which will drastically transform the nature of production. Even white-collar employment is not safe from disruption (Pew Research Center, 2014): the financial industry now has to deal with 'roboadvice' – "algorithms that can recommend saving and investment products" (Williams-Grut, 2016), threatening to replace the human financial advisor.

Disruption was a key theme in Prime Minister Lee Hsien Loong's 2016 National Day Rally speech. Mr Lee cited the taxi and retail businesses as examples of industries being affected by e-commerce, but expressed optimism that disruption can present opportunities if Singaporeans are willing to equip themselves with "relevant skills which are in demand" (Prime Minister's Office, 2016). SkillsFuture is Singapore's answer to the changing economic context. It is a national movement to promote lifelong learning and the mastery of skills "by taking advantage of a wide range of opportunities" like the government-funded SkillsFuture Credit, which enables citizens to "pay for a wide range of approved skills-related courses" (SkillsFuture Singapore, 2016). Against the rapidly-changing economic terrain where new, low-cost technologies are being introduced at an unprecedented rate, SkillsFuture recognises that the kind of skills one prepares for at an early age "doesn't stay relevant very long", and the scheme therefore

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[1] McKinsey Global Institute (2013) defines 3D printing as "additive manufacturing techniques to create objects by printing layers of material based on digital models."

[2] According to the International Telecommunication Union's Internet of Things (IoT) Global Standards Initiative (2016), IoT refers to "a global infrastructure for the information society, enabling advanced services by interconnecting (physical and virtual) things based on existing and evolving interoperable information and communication technologies."

encourages "short-cycle learning that responds to the market" (Shanmugaratnam, 2016). Driving home this urgent message to youths, the government has strengthened Education and Career Guidance (ECG) for students across the secondary and tertiary levels, so that they can "make better informed education and career choices throughout school and beyond" (SkillsFuture Singapore, 2016).

Malay/Muslims, like the rest of Singaporeans, have been urged to equip themselves with the skills and knowledge necessary to face the volatile, uncertain, complex and ambiguous (VUCA) future economy. Calling SkillsFuture a "game changer" (Channel NewsAsia, 17 August 2015) for the community, Minister-in-charge of Muslim Affairs Dr Yaacob Ibrahim exhorted Malay/Muslims to take advantage of the scheme and remain relevant in the workforce. Indeed, such calls carried additional significance for the community: while Malay/Muslims have made tremendous socioeconomic progress in absolute terms, official figures show that they still trail their Chinese and Indian counterparts in performance at national examinations (Ministry of Education, 2014), whereas Malay/Muslim workers continue to be overrepresented among unskilled and semi-skilled occupational niches (Department of Statistics, 2011). The skills deficit in the community needs to be tackled as the "benefits of technologies (contributing to disruption) may not be evenly distributed", resulting in "widening income inequality" (McKinsey, 2013).

To complement national efforts, Dr Yaacob announced in 2015 that Malay/Muslim self-help group MENDAKI would establish a Future Ready Unit to promote SkillsFuture to the community. As part of the new department's plans to "better understand the hopes and aspirations of our community" (Ministry of Culture, Community and Youth, 2016), MENDAKI embarked on a series of engagements between January and July 2016 with secondary and tertiary students in order to gauge Malay/Muslim youths' future readiness – in particular, their awareness of, and receptiveness to, SkillsFuture and lifelong learning. Besides gathering Malay/Muslim youth sentiments on education and skills-related issues, the conversations also attempted to get a sense of the youths' perception of the future in the broader context – such as their general concerns and aspirations. This paper is a summary of the findings from the surveys and focus group discussions conducted. The data collected are crucial as they can be used to inform the future development of "more targeted and effective support" (Ministry of Culture, Community and Youth, 2016) for our youths and families.

Methods

This project was conceptualised as a ground sensing, exploratory study to ascertain Malay/Muslim youths' future readiness with regards to the changing employment and education landscapes. In all, using purposive sampling, 215 youths were approached to

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 Such a research focus on social process and social meaning requires "depth and roundness of understanding" in the respondents' "contextual accounts" (Mason, 2002)

participate in the MENDAKI Future Ready Conversations. Secondary students were represented by respondents from the MENDAKI Tuition Scheme (MTS) and Madrasah Aljunied (MA), as well as those who attended MENDAKI events such as 'Brunch with MENDAKI' and 'E.L.L.Y@SENSE'. Students from ITE College Central, Pioneer Junior College (PJC), Tampines Junior College (TPJC) and Republic Polytechnic (RP) made up tertiary level representation in the study. All respondents' "fully informed consent" (Lincoln and Guba, 2001) were sought and they were reminded that should they feel uncomfortable at any point of the process, they could request to withdraw immediately.

Surveys were administered to obtain quantitative data about the youths' awareness of SkillsFuture and ECG initiatives. Following surveys, focus group discussions of about 35 minutes per session were conducted with each student group to obtain qualitative data about the youths' personal aspirations, as well as their perception of future opportunities and challenges and receptiveness to lifelong learning. Such a research focus on social process and social meaning requires "depth and roundness of understanding" in the respondents' "contextual accounts" (Mason, 2002). Hence, the interview questions were semi-structured and the interview schedule merely served as a guide with much room left for free expression of views related to the topic, in order to elicit responses high in richness and complexity. At the end of each focus group session, the research assistants would collate the responses in verbatim and identify emerging themes from the conversations based on the frequency of certain keywords used. Together, the quantitative data yielded from the surveys and the rich, in-depth qualitative data from the group conversations contributed to a holistic view of the participants' thoughts on the education and career scene.

As with any research endeavour, this project had its own limitations. First, the relatively limited number of participants meant that the findings should not be taken as generalisable to all Malay/Muslim students. Second, the disproportionate number of female respondents raised the possibility of gender-biased narratives, although the research team had no control over the former – the selection of participants was left to the respective institutions. Third, while utmost care was taken to ensure that the transcripts from the focus group discussions match closely with what was spoken in verbatim, certain portions of the audiotape were unclear or inaudible. Notwithstanding all these, the data collected represents a viable starting point in understanding our youths' perception of the future.

Results

In a nutshell, the entire ground sensing exercise revealed that many of the Malay/ Muslim secondary and ITE student respondents were initially unaware of SkillsFuture, compared to their JC and polytechnic counterparts. Most of the respondents – across secondary and tertiary levels – were also less likely to approach ECG counsellors in school. Furthermore, while the students generally had positive academic and career aspirations, they were often unsure of the steps to be taken to achieve them, as recounted during the focus group discussions.

Survey findings[3]

Malay/Muslim JC students charted the highest level of SkillsFuture awareness, with as many as 78% of the respondents having heard of SkillsFuture. In contrast, ITE and the secondary groups had levels of awareness below 30%. Among those who have heard of SkillsFuture in the JC and ITE groups, a majority of them (71%) thought of SkillsFuture as relevant to their personal development, while the secondary groups mostly thought otherwise. The high level of awareness and positive perception among JC respondents about SkillsFuture could be due to their participation at General Paper (GP) classes where current affairs were most frequently discussed.

> **Malay/Muslim JC students charted the highest level of SkillsFuture awareness, with as many as 78% of the respondents having heard of SkillsFuture.**

Where seeking help from ECG counsellors is concerned, a slight majority among the secondary groups indicated that they would not approach such counsellors in school for advice. 67% of the respondents from 'Brunch with MENDAKI' said 'No' to approaching these counsellors; the figure was 56% for 'E.L.L.Y@SENSE' participants. This reticence could be attributed to a stigma attached to the term 'counsellor', which might connote a formal or authoritative relationship to students. Meanwhile, the Ministry of Education (MOE) announced that it will deploy a total of 100 ECG counsellors to secondary schools, JCs, Millennia Institute, polytechnics and ITE by 2017 (Channel NewsAsia, 30 October 2015). In addition, all polytechnics and ITE Colleges have set up their own ECG Centre in January 2016, with each centre housing six counsellors.

However, our JC and ITE respondents showed little interest in approaching ECG counsellors – almost none had done so. While a majority of the JC respondents (about 85%) were aware of the presence of ECG counsellors in their schools, more than half of the ITE respondents (58%) were not aware of the existence of ECG counsellors on

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[3] The survey results for polytechnic students were unavailable at the time of writing.

their campus. Perhaps, more could be done by ITE to publicise their career guidance office and services. For JC students, the low user rate of ECG services could stem from their immediate academic objective of passing the GCE 'A' Levels for university admission; hence the lack of priority placed on utilising ECG services for charting their career paths further down the road.

Focus Group Discussion: Emerging Themes

Findings from the focus group discussions with Malay/Muslim secondary and tertiary student respondents were grouped into eight topics: (i) Future Projections, (ii) Personal Concerns, (iii) Personal Hopes & Aspirations, (iv) Sources of Support, (v) Societal Challenges, (vi) Opportunities, (vii) Lifelong Learning: Skills for the Future, and (viii) Gaps to be Addressed. For each topic, the research assistants would record a transcript of the conversations and identify emerging themes, which are listed below.

(i) Future Projections

'Overdependence on technology' (18)[4] was the most frequently cited theme under this category. Having attended a prior presentation by MENDAKI officers on the future of employment and education, the students generally recognised that automation would displace human workers from jobs involving "rote, repetitive tasks" (Institute for the Future, 2011) which are overrepresented in the blue-collar sector. A polytechnic student expressed the concern that as a result of automation, "there would not be many jobs available for people." 'Increasing living cost' (17) was another scenario painted by the respondents, citing especially the impact property prices would have if Singapore's population were to reach 6.9 million by 2030.

(ii) Personal Concerns

Increased competition in the workforce due to the 'Influx of foreign talent' (51) and 'Glut of degree holders' (27) were uppermost in the minds of the students. In a sense, their concerns reflected those of the general population in Singapore. Nevertheless, the respondents recognised that it is only through continuous education and skills upgrading can one stay ahead of the competition. A JC respondent for instance noted that "only the most skilled ones will survive." Another JC student suggested that more work shadowing stints would be beneficial for students or new graduates seeking to enter an industry. Currently, such opportunities are only open to polytechnic and ITE students through the SkillsFuture Earn and Learn Programme.

(iii) Personal Hopes & Aspirations

Our respondents generally accepted the government's message on the importance of 'Lifelong learning' (48). For instance, many of the ITE students hoped to advance to polytechnic so that they can increase their competitiveness in the job market and be able to financially support their families. A respondent noted that there will be opportunities for upskilling when the employer sends its workers for further studies and training. The

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[4] The figure in parentheses denotes the number of times the theme was mentioned.

> **"**
> It should be noted too that many of these plans were aimed at ultimately supporting the goal of providing for their parents and family.

conversations also revealed 'Positive aspirations' (31) on the part of the students, which ranged from professional goals (becoming an engineer, doctor, teacher, online entrepreneur or others), to educational aspirations (studying philosophy, psychology or other subjects at tertiary level) and more general life targets (achieving financial stability, being able to travel extensively or other ambitions). It should be noted too that many of these plans were aimed at ultimately supporting the goal of providing for their parents and family. However, many of the respondents were not very clear as to how to achieve their stated aspirations.

(iv) Sources of Support

The focus group discussions revealed that many of our respondents, regardless of school level, relied on their 'Parents and family' (46) and 'Peers' (12) for support. One JC student mentioned that he spoke to his parents and siblings for advice on becoming an entrepreneur in the future, adding that "making my parents proud" was a motivation. However, while depending on one's immediate social circle and tapping on 'strong bonds' are good for socioemotional support, more often than not, social capital theorists (Lin, 2000; Granovetter, 1985) argue that it is the "weak ties" (Granovetter, 1985) – forming relationships with contacts outside one's own social circle – that enable one to access novel information and "unique and uncontested" (Bresman, 2014) opportunities needed to succeed in school and at work. A considerable number mentioned personal 'Grit' (29) as their source of support, which is a positive indication. Here, one is reminded of psychologist Angela Duckworth's research demonstrating that "passion and perseverance for a singularly important goal" (quoted in Scelfo, 2016) is a better predictor of success than IQ scores.

(v) Societal Challenges

The issue of 'Discrimination in workforce' (14) was brought up by some of the respondents. Quoting anecdotal references, a secondary student feared that she would face job discrimination later in life, since "people look down on us (Malay/Muslims) and think we are 'lazy'." Another student expressed interest in joining the police force or the nursing profession, but felt that the uniform policy which excludes the wearing of the tudung (headscarf) would deter many would-be applicants like herself. Such concerns are not new: similar sentiments were detected during the Suara Musyawarah: Conversations with the Community exercise (2013). Some students were also worried that advances in 'Technology would breed intensified competition' (7) in the job market, and wondered if a diploma or degree would suffice in the future.

(vi) Opportunities

The respondents also had a positive view of the future. Some believed that 'Technology would open more opportunities' (13) for everyone – resulting in more jobs created. A few secondary students expressed the hope that technology would make people's lives easier, and raised the possibility of the Singapore Armed Forces (SAF) taking advantage of machinery to reduce conscription time. Such sentiments reflect a positive expectation of the effects of technology on society, in that it would allow us "to define our relationship with 'work' in a more positive…way" (Pew Research Center, 2014). Others observed that the advent of social media would encourage 'More Networking and Interconnectedness' (5) between individuals of different backgrounds and skillsets, potentially opening up new opportunities.

(vii) Lifelong Learning: Skills for the Future

When asked about the type of skills they want to acquire, the respondents mentioned 'Interpersonal skills' (5), 'Languages' (5) and 'Technology-related skills' (3). The students recognised that in the age of automation, social intelligence or the "ability to connect to others in a deep and direct way, and to sense and stimulate reactions and desired interactions" is an asset that would give them "a comparative advantage over machines" (Institute for the Future, 2011). Students across all levels expressed interest in learning new languages like Chinese and French, envisioning for themselves a career that would involve constant interaction with peers from different cultural or national backgrounds. On the other hand, only a few of the respondents saw themselves taking up coding or programming in the future.

(viii) Gaps to be Addressed

The student respondents were posed a question about what more can be done by the government or MENDAKI to help Malay/Muslim students and workers thrive in the new economy. A few of the JC students suggested 'More financial assistance schemes' (15) to support university education. When probed further, they mentioned that they were unaware of the existence of MENDAKI's Tertiary Tuition Fee Subsidy (TTFS). The JC and secondary respondents also asked for expanded 'Internship stints' (9) and 'Mentoring programmes' (4), calling for agencies such as MOE and MENDAKI to channel information on these opportunities to students. Others felt that the government should take more proactive steps to deal with discrimination in the job market.

Discussion and Conclusion

The conversations revealed that many of the Malay/Muslim secondary and ITE student respondents were unaware of SkillsFuture, compared to their JC and polytechnic counterparts. Furthermore, respondents across all levels were less likely to approach ECG counsellors in school. This data echoes that of MOE's 2009 study on students' career decision making patterns, which found that "48% of our youth made their course or career decisions without sufficient exploration" (Ng, quoted in

Channel NewsAsia, 30 October 2015). While MOE and school authorities have spent much resources publicising ECG services to students, a more targeted approach might be

necessary to engage groups likely to underutilise ECG services – like secondary and ITE students. Similarly, special attention should be given to publicising ECG services to the parents of the above groups, since our focus group discussions showed that many of the Malay/Muslim students relied on their parents and family for education and career advice. The idea is to get the parents to channel their children to ECG counsellors in school – those who are genuinely knowledgeable about the various courses and career paths. It is only with proper guidance that our students can realise their positive aspirations and take crucial steps to achieve them.

Digital disruption is expected to unleash waves of automation, displacing many workers in the process. Indeed, industries' perpetual need for innovation to stay profitable requires workers who are nimble enough to learn new skills constantly. In the economy of the future, workers will need to understand that their existing competencies and even jobs may not be relevant for long. It is therefore imperative that we now prepare our children not only to acquire the 'hard', professional skills in their chosen discipline – like coding and programming – but also the 'soft', socioemotional skills so that they can weather hard times. The 2014 MENDAKI Education Review Committee for instance recommended the implementation of the Ethics of Care (EoC) framework into the MTS curriculum. The EoC concept, a brainchild of Stanford educational philosopher Nel Noddings, focuses on developing a caring relationship between the tutor and student, so as to boost the latter's socioemotional learning competencies and improve his or her academic performance. Such an emphasis is all the more pertinent, given that the majority of MTS students are from disadvantaged backgrounds. Similar innovative social-psychological processes have yielded positive results in American schools: by attempting to "change students' mindsets" and "showing them that their intelligence can grow through deliberate work", Stanford social psychology professor Carol Dweck (quoted in Kirp, 2016) successfully pioneered a method to improve maths grades among sixth-grade students. Perhaps, MOE can consider incorporating more systematically elements of socioemotional learning into Singapore's curriculum.

The future economy will be marked by the unprecedented reach of digital technology in many aspects of our lives, ranging from education to commerce and manufacturing. As for our Malay/Muslim students, the focus group discussions indicated that the respondents embraced information technology, as can be seen from their frequent references to using mobile applications and social media. A segment of them even envisioned becoming an online entrepreneur in the future, marketing their products and skills in design, fashion and hobby merchandising, among others. These

observations are not surprising: as digital natives, the students grew up at a time of expansive growth in the digital world, exposing them to computers and the Internet early on. There is therefore a need to equip students with the skills to navigate and harness the power of digital technology – not just as a subject learning tool in school, but to encompass the whole gamut of career and life skills. In line with Singapore's Smart Nation vision which aims to tap "the power of networks, data and info-comm technologies to improve living" (Smart Nation Singapore, 2016), MOE has piloted its Future Schools project in eight schools, engaging information and communications technology in teaching subjects like English and science (Straits Times, 8 February 2016). Beyond academic learning, MOE can consider innovative, technology-inspired strategies to help students prepare for the future economy. For instance, educational leaders in the US have suggested regular blogging as a way to discover personal interests and strengths (Lampinen, 2013), and leveraging video resume to distinguish oneself from other college or job applicants (Mack and Ojalvo, 2010).

The findings of the MENDAKI Future Ready Conversations offer a mixed view of our Malay/Muslim students' future readiness. However, all is not lost. The positive aspirations and enthusiasm of our youths can translate into something concrete if more education and career guidance is channelled towards them. In this aspect, MOE and schools would do well to promote ECG services to both students and their parents, incorporate socioemotional learning into the curriculum and harness digital technology for beyond-the-classroom learning. On MENDAKI's part, besides outreaching to parents on our education and youth programmes and assistance schemes, we will continue to encourage the Malay/Muslim community to take advantage of SkillsFuture initiatives, and act as an information bridge to national policies aimed at giving Singaporeans a leg-up in the face of digital disruption.

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Which Parents are You? – Raising Digital Natives to be Future Thinkers

By Khairun Nisa Yusni

Abstract

Parenting is an occupation and a job in itself but it is "unpaid", "un-appraised" and often denigrated by other people who may or may not be parents themselves. It has even become more daunting to be parents in this digital age whereby parents bear the additional responsibilities to create cyber wellness in the family unit and at the same time feels the competition (among their virtual peers) to raise children who could meet their expectations. Parenting however, like it or not, as numerous researches have shown, would determine the children's development, educational outcomes, behaviour, life values and even personal worldview. To understand how parenting styles could influence the factors mentioned, this paper seeks to revisit the contextual parenting models and the commonly known parenting styles and explore their applicability in this modern age to raise the next generation thinkers.

Introduction

In Islamic faith, when a child is born, he or she is considered pure and being likened to a white cloth. Parents, given the autonomy as the main carer for the child are responsible to inscribe colours, patterns or motif to beautify the cloth in such a way that the parents deem elegant. In other words, colours, patterns and motif here refer to the values, behaviours and perceptions that are instilled by the parents in the child, to be applied when the child steps into the world. This presupposition of parental values, goals, skills and attitudes that are passed from one generation to the next have been long debated by philosophers since the seventeenth century.

John Locke (1689) in his Essay Concerning Human Understanding interestingly shared the same posit that children were born with a "tabula rasa" or a blank slate by which parents and society could easily transmit their values and beliefs to their children. Similarly, Jean Jacques Rousseau (1762) believed that children were born "innately good" and that it is up to parents and society to uphold and further teach the values inherent in children.

Contemporary parenting perspectives however, took a further leap to understanding parenting approaches through the interactive socialisation process by which parents attempt to transmit their values, goals, skills and attitudes to their children (Spera, 2005). The process of socialisation refers to the manner by which a child, through education, training, observation and experience, acquire skills, motives, attitudes and behaviours that are required for successful adaptation to a family and a culture (Ladd and Pettit, 2002). It is a bidirectional process in which parents convey socialisation messages to their children but children vary in their level of acceptance, receptivity and internalisation of these messages (Grusec et al., 2000).

> **In the ground-breaking research done by developmental psychologist Diana Baumrind (1966), three archetypical parenting styles were identified; authoritative parenting, authoritarian parenting and permissive parenting.**

Characteristics of Parenting Styles and Parenting Practices

In many researches, the term parenting practices and parenting styles have often been used interchangeably (Maccoby and Martin, 1983). However, Darling and Steinberg (1993) suggest that to better understand the socialisation process, it is important to distinguish between parenting practices and parenting styles.

Parenting practices are defined as specific behaviours that parents use to socialise their children. For example, parents doing homework with their children and attending their children's school functions are part of socialising their children to succeed in school.

In contrast, parenting style is defined as the emotional climate in which parents raise their children.

In the ground-breaking research done by developmental psychologist Diana Baumrind (1966), three archetypical parenting styles were identified; authoritative parenting, authoritarian parenting and permissive parenting. Maccoby and Martin (1983) later expanded upon Baumrind's three original parenting styles by adding the uninvolved or neglectful style, which has the most pervasive negative consequences across all domains. While not every parent falls neatly into one category, these parenting styles generally correspond with the type of discipline a parent chooses to use with his or her child or children.

Parenting styles have been characterised by dimensions of parental responsiveness and demandingness (Spera, 2005). Parental responsiveness is defined as "the extent to which parents intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to children's special needs and demands" (Baumrind, 1966, p. 410, cited in Grolnick, 2003, p. 6) while parental demandingness is referred to as "the claims parents make on children to become integrated into the family whole by their maturity demands, supervision, disciplinary efforts and willingness to confront the child who disobeys" (Baumrind, 1996, p. 411, cited in Grolnick, 2003, p. 6).

For Baumrind, socialising child to conform to the necessary demands of others while maintaining a sense of personal integrity was the key element of the parental role (Nancy Darling and Laurence Steinberg, 1993). The three identified primary parental typologies according to Baumrind (1978) are;

Authoritative Parenting
Authoritative parents are warm and responsive, providing their children with affection and support in their explorations and pursuit of interest. These parents have high maturity demands (e.g. expectations for achievement) for their children but foster these maturity demands through bidirectional communication, induction (i.e. explanations of their behaviour) and encouragement of independence. This parenting type (high warmth/ high control) encourage independence in their children while at the same time placing appropriate limits on their behaviour. Open parent-child communication is encouraged and warmth and support are consistently displayed toward the child or children (Spera, 2005).

Authoritarian Parenting
Authoritarian parents are neither warm nor responsive to their children. They have high maturity demands for their children primarily because they are intolerant of selfishness or inappropriate behaviour. These parents are strict, expect obedience and assert power when their children misbehave. Harsh, punitive measures are often

used to ensure compliance with rules and standards (Bush & Peterson, 2007). They also have high expectations and high maturity demands for their children, which they communicate through rules and orders. For example, authoritarian parents might insist, "you better do well in school…because I said so." Little verbal exchange is allowed and displays of affection are kept at a minimum (Spera, 2005).

Permissive Parenting

Permissive parents are moderate in their responsiveness (i.e. some parents are high and some are low) toward their children's needs. These parents, however, are excessively lax in their expectations for their children's level of maturity and their tolerance of misbehaviour. When socialising their children, permissive parents are usually dismissive and unconcerned.

According to developmentalists, this category can be subdivided into two discrete groups – permissive-indulgent parenting (indulgent parenting) and permissive-indifferent parenting (neglectful parenting) (Maccoby & Martin, 1983; cited in Santrock, 1995). The indulgent parent (high warmth/low control) demonstrates warmth and emotional involvement with their children but make very little demands and place few, if any, limits on their behaviour (Santrock, 2005). The neglectful parent (low warmth/ low control) is the opposite of the authoritative parent, being low on both dimensions of responsiveness and demandingness. Like those in the indulgent category, neglectful parents place very few restraints on their children and there is little monitoring of their children's activities. However, they show very little warmth or affection and are typically uninvolved in their children's lives (Santrock, 1995).

Love-oriented vs. Object-Oriented

In addition to these typologies, Robert Sears and Eleanor Maccoby documented maternal disciplinary techniques – mothers' child-rearing practices including their style and use of disciplinary techniques in Patterns of Child Rearing (1957) into two distinct types; love-oriented and object-oriented. The love-oriented style consisted of maternal use of warmth, praise and emotional affection (and withdrawal of these) to respond to their children's behaviours while the object-oriented style consisted of maternal use (and withdrawal) of tangible objects such as toys or extra playtime to respond to their children's behaviour.

Sears et al. (1957) found out that these disciplinary styles uniquely impacted children's internalisation of parents' values. Children of parents who used love-oriented disciplinary approach were found to more likely to internalise the value of their parents than children who used an object-oriented style (Spera, 2005). Furthermore, parental use of love-oriented strategies was associated with children's display of self-control and self-regulation.

Children exposed to object-oriented approach on the other hand, spend their cognitive and physical energy trying to avoid object withdrawal (their parents taking away a privilege) – resulting to children not exerting sufficient cognitive effort to understand their parent's actions and ergo, do not internalise their parents' values.

Parenting Styles and Educational Outcomes

Through the long history of research on parenting, small but significant correlations have been found between parenting style, on one hand, and children's typical behaviours, on the other. Briefly, authoritative parenting has been associated with many positive outcomes in young children: adaptability, competence and achievement, good social skills and peer acceptance, and low levels of antisocial or aggressive behaviour.

One of the first studies to report the relationship between parenting styles and school outcomes was done by Baumrind (1967). In her longitudinal sample of children from preschool through adolescence, she found that preschool children of authoritative parents were more mature, independent, pro-social, active and achievement-oriented than children of non-authoritative parents. Preschool children of permissive parents, on the other hand, scored lowest on measure of self-reliance, self-control and competence (Spera, 2005).

Another study by Dornbusch, Steinberg and their colleagues explored the influence of parenting styles on adolescent achievement using large data-scale of over 6000 adolescents in Wisconsin and California; found that parents who displayed higher levels of authoritative parenting by providing their children with warmth, autonomy and high maturity demands had children with higher achievement levels (Steinberg et al., 1989).

In review of these findings, three reasons have been cited by Durkin (1995) to cause positive school outcomes from authoritative parenting style, first, he suggests that authoritative parents provide a high level of emotional security that provides their children with a sense of comfort and independence and helps them succeed in school. Second, he suggests that authoritative parents provide their children with explanations for their actions. Explanations provide children with a sense of awareness and understanding of their parents' values, morals, and goals (Spera, 2005). The transmission of these goals and values equips these students with the tools needed to perform well in school. Third, he suggests that authoritative parents engage in bidirectional communication with their children. This communication style nurtures skills in interpersonal relations and produces better adjusted and more popular children. These interpersonal skills, he suggests, helps children succeed in school, both socially and academically.

Despite the reasons cited and positive outcomes that yielded from authoritative parenting, research has shown that the relationship between authoritative parenting and school achievement is not consistent across families from diverse ethnic and socioeconomic backgrounds. Although authoritative parenting seems to contribute to the most positive outcomes for all European American children regardless of SES, ethnicity or culture, however, this type of parenting is less common among African American and Asian American. Among ethnic minority families, the authoritarian parenting style is more prevalent (Benson and Haith, 2010).

> **Although authoritative parenting seems to contribute to the most positive outcomes for all European American children regardless of SES, ethnicity or culture, however, this type of parenting is less common among African American and Asian American.**

According to Benson and Haith (2010), authoritarian parenting does not always have the same adverse effects on children of ethnic minority backgrounds, particularly in the case of low-income families. In neighbourhoods that are less safe, have higher levels of poverty and more frequent levels of antisocial activities, more restrictive parenting may serve an adaptive strategy by providing a high level of supervision and support. Another consideration is that the discrepancies between authoritative and authoritarian parenting for European American may not be relevant in other cultural contexts. The same definitions for authoritative parenting may not make sense when applied to other culture. For example, in many ethnic minority families a high level of control may be combined with warmth. This does not fit the European American definition of authoritarian and authoritative parenting.

Apart from cultural effects, research has also suggested that socioeconomic status might play a role in the relationship between parenting styles and adolescent achievement. Parent-child relationships in middle-class families are characterised as being child centred, accepting and egalitarian. Higher-SES mothers tend to exhibit warmth, more involved in their child's life and value the child's self-direction. Lower-SES families tend to be parent-centred and focus on maintaining control, order and obedience from their children (Benson and Haith, 2010).

Low-income families, which lack economic resources, limit the quality and quantity of goods the family can provide their children. For example, low-income families have less money to buy cognitively stimulating educational toys that are beneficial to a child's cognitive development. This may also be exacerbated by the low-income

families' poverty and economic insecurity, which negatively affect their mental health that can be translated into unsupportive parenting, sometimes exhibited by the low-income parents. With that premise, research shows that low-income parents are more likely to adopt authoritative and punitive parenting style compared to middle-class parents.

In the *Value of Children Study*, Hoffman et al., 1989) found that in families where the parents worked in a low SES job (e.g. manual or service sectors), these parents had a higher likelihood of enforcing strict rules than parents who worked in professional and managerial jobs. In a study by the U.S Department of Education (1998), researchers found that 25% of schools reported that cultural and socio-economic factors were a major reason for low levels of parental involvement.

Despite the variation of parenting styles in different culture and across different socio-economic background, Stevenson et al. (1990) found that nonminority and minority parents highly value school and high aspirations for their children and that parental aspirations, values and goals for their children do not vary dramatically by ethnicity.

Digital Parenting for Digital Natives

The rise of Digital natives – as Marc Prensky (2001) termed it, refers to children raised in a digital and media-saturated world whom require a media-rich learning environment to hold their attention, which also heralded the rise of Digital Immigrants - parents of digital natives or people who were not born into the digital world but have, at some later point in lives, become fascinated by and adopted many or most aspects of the new technology.

According to the American Academy of Pediatrics (AAP), American children and adolescents aged 2 to 18 years spend an average of more than 4 hours using electronic media daily, more than they spend on any other single activity except sleep. In another study by Kaiser Family Education (2010), those ages 8 to 18 spend more than seven and a half hours a day with such devices, compared with less than six and a half hours five years ago, when the study was last conducted. And because so many of them are multitasking — say, surfing the Internet while listening to music — they pack on average nearly 11 hours of media content into that seven and a half hours.

This is also reverberated with the case in Singapore which saw a sharp jump of 15 per cent of number of children using social media in 2015 (Channel News Asia, 2016), based on Zero-to-Fourteen Consumer Experience Study by Media Development Authority (MDA). According to MDA, 65 per cent of children surveyed used social media in 2015, compared to 49.8 per cent in 2014. A total of 79.8 per cent of children surveyed used the Internet last year, and on average, they started going online at 6.1 years old.

Riding on the study findings by Kaiser Family Education in 2010 (Lewin, 2010), heavy media usage is associated with several negatives, including behaviour problems and lower grades. Hence, digital parents play a key role in shaping how their children use the digital media; the parent being perhaps the first and most important mediator of digital use of children.

It is now nevertheless clear that with the rapid disruptions caused by technology, students of this age think and process information fundamentally different from their predecessors. Here, lies the big challenge, according to Prensky (2001), as these differences go far further and deeper than most educators suspect or realise. Digital Parents or Digital Immigrant Instructor as Prensky calls them, speak an out-dated language (that of the pre-digital age) and are struggling to teach a population that speaks an entirely new language. Presnky (2010) continued to describe digital natives as people who are used to receiving information really fast, like parallel process and multi-task, prefer graphics than text, prefer random access, function best when networked and thrive on instant gratification and frequent rewards.

Digital Immigrants on the other hand, typically have very little appreciation for these new skills that the Natives have acquired. For instance, Digital Immigrants do not believe that students can learn successfully while watching TV or listening to music because they know that they (the Immigrants) are unable to do the same. To confront this issue, Pernsky calls the need to reconsider both methodology and content – this requires a whole separate article.

To moderate this, according to Ramasubbu (2016) in his article *The Challenge of Digital Parenting Today*, a digital parent typically follows one of three mediation styles with regard to their children's digital usage; restrictive mediation that involves rules and prohibitions to content; instructive mediation, in which the parent advises and instructs on what to and what not to watch and; co-viewing, in which the digital media is experienced together, often perceived by older children as helicopter parenting.

The nature of parent-child relationship is important for the role of digital parents; as the amount of time young people spend alone with digital media increases, the availability time for parents' interaction decreases. With the fast-paced nature of developed societies, "quality time" between parents and children has become premium, thereby introducing the role of parent as participant in co-learning with children; using newly emerged platforms such as emails, instant messaging, social network sites and so forth, for better interactions between parents and children.

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Based on a nationwide survey conducted by American Academy of Paediatrics (AAP) in 2006, 59 per cent of parents used some form of mediation strategy, of which, 7 per cent allowed unlimited media use and engaged in no mediation. Eleven per cent of parents used instructive mediation, especially with younger children and 23 per cent used restrictive mediation.

The style of mediation differs with the gender, educational level and age of the parent and the child. For example, a study showed (Ramasubbu, 2016) that in terms of general internet use; parental mediation was more often directed towards younger children and girls than towards older children and boys. Mothers have been found to mediate their children more often in their media use than fathers.

Education level too, has a significant influence on mediation styles as well in that lower educated parents set more content restrictions on the child's Internet use. Furthermore, parents with more computer or Internet skills are more aware of safety issues of the digital media and often install apps for security and protection on the computer and other gadgets to ensure the safety of their wards. The perceived need for parental mediation also decreases with increasing age of the children; parents of older children are likely to report less engagement in parental mediation strategies than parents of younger children.

The rise of the digital parent has in turn changed the way the academic system interacts with them. Facebook pages, instant messaging and text messages are now being commonly used by schools to update the digital parent about the activities of the school and their children. Effective use of technology to bridge the information gap between schools and parents has somewhat blurred considerably the line between home and school.

Another way to arbitrate children's media usage, according to Digital Parenting Coach (2016) is that digital parenting technique is no different that the regular parenting style but doing these extra steps such as; communicating with the child and show interest in their digital world, teaching the etiquettes of using social media, set time limits and networking to finding current solutions to bad habits of gaming and cyber bullying, albeit seen as little but they will go a long way toward helping the children to becoming great individuals.

Transforming Digital Natives into Future Thinkers
Digital Natives – children of today and beyond- want and need to go beyond the education of the past. Their new world is no longer the world of repetition but rather of exploration. They need to be "engaged" differently than previous generations or that of their parents'. Hence, education today needs to invent new ways for students to not just learn but to become the good, effective and innovative people of the future.

In preparing our children to tackle the demands of the future, it is no longer about "mastering" the different disciplines of math, language, science or social studies but giving them the right skills according to Prensky in the *Handbook of Research on Engaging Digital Natives in Higher Education Settings by Pinheiro (2016)* which he identified the skills into 3 categories; thinking skills, effective action skills and relationship skills.

"Thinking skills" comprised of creative thinking, design thinking, integrative thinking, systems thinking, financial thinking, judgement, aesthetics, positive mindset, stress control and even self-knowledge of their own passions, strengths and weaknesses.

Over and above this, skills needed for "effective action" are leadership, agility, adaptability, making decisions under uncertainty, experimentation, entrepreneurship, resilience, patience, innovation and improvisation, strategy and project management while "relationship skills" include networking or socialising, listening, relationship-building, empathy, compassion, tolerance, ethics, politics, conflict resolution, negotiation, coaching and being coached and peer-to-peer mentoring – are all skills that will be so important in the future.

However, based on the current systems of education, these skills cannot be systematically taught if the education industry does not quickly respond to the changing landscape. It is time to move from the "academic learning" to "real-world accomplishment" as the primary means of education.

> **Digital Natives – children of today and beyond- want and need to go beyond the education of the past. Their new world is no longer the world of repetition but rather of exploration. They need to be "engaged" differently than previous generations or that of their parents'.**

Some directions of change in education curriculum might include; placing additional emphasis on developing skills such as critical thinking, insight, and analysis capabilities; integrating new-media literacy into education programs; including experiential learning that gives prominence to soft skills—such as the ability to collaborate, work in groups, read social cues, and respond adaptively; broadening the learning constituency beyond teens and young adults through to adulthood and finally but not limited to - integrating interdisciplinary training that allows students to develop skills and knowledge in a range of subjects.

Conclusion

Parenting styles and practices are not universal and are often influenced by social and cultural contexts. Each culture has unique socialisation patterns and traditions to achieve the childbearing goals of that society. For instance, certain cultures uphold the use of physical punishment whereas in other cultures, this is considered abusive.

Asian parents are dominantly the authoritarian parents – in which the Malays are involved. Although children of authoritarian parents tend to be more submissive, less socially adept, less confident and less intellectually curious but they often score reasonably well on school achievement. It is also prevalent among low socio-economic families as authoritarian parenting can play an adaptive and protective role for children growing up in low-income and unsafe neighbourhood.

Despite the differences and variation of parenting styles in different culture and across different socio-economic background, parents of authoritarian and authoritative highly value school and possess high aspirations for their children. As presented in one study *Living on a Tight Budget (2015)* by Yayasan MENDAKI on 25 Malay Muslim households that come from low-income and low socio-economic status, they similarly showed having high aspirations for their children to do academically well in schools despite their lack of resources and the know-how. In a nutshell, parenting style may differ from one culture to another, from one SES to another but the utmost importance that should be entrenched in parents is their desire, aspirations and efforts manifestation to ensure that their children would be prepared to face the world with countless uncertainties and adversities and only when they know how to conquer these parts of life, they would appreciate life and be leaders in their thinking approach.

Living in the digital world, parental responses to a child's questions and activities significantly influence the patterns of attachment that will guide the child's perceptions, emotions, thoughts and expectations in the use of the digital media. Digital parents are active partners in their child's digital life and must set an example for smart Internet use. Apart from teaching computer skills to children, the digital parent is best suited to guide the child on issues of online safety, and digital citizenship. The traditional parenting style applies to digital parents who differ in their intensities of controlling media usage by their children. However, it is clear that for parents to exercise digital parenting, it takes concerted effort by governments, education institution, society and families to enable such a transition.

Singapore Malay/Muslim community, which has relatively a large youth base at 45 per cent out of the local Malay population (State of Malay/Muslim Community in Figures, 2016) should be reminded of the importance of parental roles in the children's media usage as heavy media use is associated with many negative repercussions such as aggression, cyber-bullying and obesity.

The changing landscape that is taking over education and employment will be the impetus for Malay parents to stay abreast of structural changes that might take place in response to adapt. Some examples of how some organisations are preparing for this change are part of the initiatives undertaken by Yayasan MENDAKI whose focus is very much on uplifting the educational level of the Malay/Muslim community to be on the national par or beyond.

MENDAKI's flagship programme – MENDAKI Tuition Scheme (MTS) that aims to provide affordable supplementary learning to help the students will be implementing its Digital Learning at three MTS centres for Primary 4 to Primary 5 students in 2017, as part of integrating technology in the students' learning.

Another way to demonstrate foresight in responding creatively to the rapidly shifting landscape is through public education and creating awareness in the community and family members via extant platforms such as MENDAKI's Maju Minda Matematika (Tiga M)-targeted at parents with pre-school and lower primary school-going children in which parents are empowered to be efficient mediators for their children's journey into mastering Mathematics. But with digital parenting in mind, this parent-targeted programme could be tweaked and refined to suit the needs of digital parents in empowering their children to use digital technology effectively and efficiently as part of their learning journey to become future thinkers.

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Repositioning Self-Efficacy in the Community

By Fitri Zuraini Abdullah

Abstract

The paper seeks to highlight that more research has to be done on the assessment of self-efficacy in Singaporean students; as well as transition in academic continuum. Studies have shown that there is a talent mismatch between what schools are producing and what employers need. Primarily as Singaporean talents are seen as not confident and lack self-efficacy. Issue of self-efficacy is addressed by also looking at the students' performance in transitions and streaming; which calls for the expounding on self-efficacy during transitions in academic continuum especially within differing school structures and programmes (autonomous/ independent/ government schools). Subsequently, in suggesting caveats to the broadening of self-efficacy as a 21st Century values index assessing behavioural competency, it is observed that Teacher and Peer relationship plays proximal role in affecting the self-efficacy of a student in transition. And on the macro level, Our Malay-Muslim Community need to be more conscious of collective efficacy as a "soft approach" which could boost confidence in students especially late bloomers as this would reciprocate to an upward trajectory of self-efficacy beliefs.

Introduction

Harking to Former Education Minister Tharman Shanmugaratnam's message with reference to United States' education system in 2006;

> Yours (America's) is a talent meritocracy, ours (Singapore's) is an exam meritocracy. There are some parts of the intellect that we are not able to test well—like creativity, curiosity, a sense of adventure, ambition… These are the areas where Singapore must learn ("We all have a lot to learn", 2006).

These shaped the narrative of 2006 alongside "Aliveness Skills", "Enabling Skills", and "hyperjobs"; in which we are discovering the new higher-level workforce and delineating the values needed for the community to move towards it. Ten years later, threading the fine balance between "soft" skills and "hard" knowledge is still the locus of our education system; SkillsFuture is now the buzzword that permeates the continuum of education from primary level to workplace. Such is the vignette of employment and education trends throughout these years; behavioural competency remains an elusive endeavour that our system continuously tries to develop. Despite the repeated painting of 2016 as a time of VUCA – Volatility, Uncertainty, Complexity, and Ambiguity – the community is still addressing consternations of 2006. Charting this across Hegelian Dialectics, we would have yet developed an antithesis to move forward. Core values of Aliveness skills such as confident interpersonal skills, are brought forward in SkillsFuture as basic behavioural competency embedded in the proffered "skills of the future workforce"; similarly those values are also entrenched in the Ministry of Education (MOE) Blueprint of 21st Century Competencies as "self-awareness" and "confidence" (MOE, 2015). Perhaps the significant difference of the SkillsFuture initiative lies in the explicit emphasis on the onus of the individual to ensure he is equipped for the future, as highlighted by Minister Ong Ye Kung (2016) when he delineated SkillsFuture as a tripartite national movement of "Mastery, Meritocracy, and You". A decade ago, it was discovering skills for the hyperjobs; and today we have discovered some of these skills have just become a common currency in a meritocratic community. Indeed our students and graduates have topped several international charts this year: our Secondary 3 students have topped Programme for International Student Assessment (PISA) demonstrating strong application knowledge; and National University of Singapore (NUS) and National Technological University (NTU) are the only Top 20 Asian institutions in QS World University Rankings (Channel NewsAsia, 2016).

This signals that our education initiatives are effective in developing Learners and Thinkers; and subsequently should be effective in bolstering skilled workforce. However, Eisner (2006) cautions that, "we need to remember that not everything that is measurable matters, and not everything that matters is measurable" (p. 46).

21st Century skills are presently a commodity, just like how grades were (and still are). Beyond those, the element which will ensure that our community is indeed Future Ready is the ability to consciously be sure and to set ourselves apart, and at the forefront of others – which is elusive till today. Despite our performance on international academic assessments, employers in interviews conducted by Brown, Lauder and Sung (2015) "points to a significant mismatch between the national education system and the global labour market" (p. 218). The issue highlighted within that study was the lack of Networking Quotient (NQ) in Singaporean graduates. Descriptors like "lack confidence", "subdued leadership" were used on our graduates, when compared to foreign talents. Considering that the endeavour for behavioural competency and Future skills will remain the focus alongside "hard" knowledge; the question then remains as, how can the community and the system re-envision more intrinsic dimensions and outcomes of learning, such as helping students "build self-belief and confidence, and prepare them for a fulfilling life filled with hope and possibilities" (Duignan, 2012, p. 173); in tandem with what the global labour market deems as competent and confident individuals?

This paper does not discredit the development and in-depth entrenchment of self-efficacy beliefs in our education system; however looking at current literature reviews on self-efficacy in academic continuum and graduates' employability, this paper proposes a re-look into broadening the concept of self-efficacy as a 21st Century value facilitating a learning ecosystem where we are able to "teach less, learn more". Echoing Eisner (2005) that schools need to be concerned about more than what can be measured, for "no test score is an adequate indicator of quality education" (p. 18). What this means is that assessment in school should seek to provide a more complete picture of the developing student that not only is about measured academic achievement, but should give some indication of the how and why of students' socioemotional development. On this, indeed the Primary Education Review and Implementation (PERI) Committee has recommended a Holistic Assessment for Primary school students; beginning with having minimal examinations in Primary 1 and 2. However, the Holistic Assessment Implementation is targeted at "achieving greater balance and quality in the school assessment systems to ensure student success" (Lee, Oh, Ang, & Lee, n.d, p. 3). The conundrum remains as to how self-efficacy is being assessed. It is noted that most studies on cross-country comparisons across educationally diverse countries such as Australia, China, Canada, Cyprus, Korea, and Singapore found that general self-efficacy is a universal concept (Scherer, Jansen, Nilsen, et.al, 2016). However, there is no specific introspective assessment of self-efficacy based on differing school system, niche areas (the introduction of primary schools with special

> "indeed Future Ready is the ability to consciously be sure and to set ourselves apart, and at the forefront of others – which is elusive till today

programmes), and also transitions in between streaming exercises which takes into account our unique Singaporean community. Ergo, the broadening of self-efficacy as the new 21st Century value should consider issues of transitioning in between academic continuum.

Self-Efficacy as The Core Behavioural Competency

For the purpose of this paper, self-efficacy belief is defined as in Bandura's social cognitive theory: it serves as a self-regulatory function by providing individuals with the capability to influence their own cognitive processes and actions, and thus alter their own environments (Bandura, 2008). This denotes a triadic reciprocity in which it attributes affective properties on one's interpretation of own performance unto his or her environment and subsequent performance; and this cycle reciprocates. In effect, students' self-efficacy beliefs will influence their academic attainment and the academic path they will follow. At this juncture, it is significant that as noted academically, our education system has been strong and effective. This could be brought about by the pervasive culture of shadow education in our wider community. In a poll published by The Straits Times in 4 July 2015, 7 in 10 parents are spending hundreds of dollars every month to send their children to private tuition (Davie, 2015). Another survey further suggested that families are even sending their younger children for private tutoring as 4 in 10 families in Singapore are sending their pre-school children off to tuition classes "in [a] race to keep up with peers" (Teng, 2015). Tuition is often perceived as a "safety net" and something that is necessary and has become a norm, and this fixation with tuition has created an industry that is worth more than $1 billion. The latest Household Expenditure Survey found that families spent $1.1 billion a year on tuition - almost double the $650 million spent a decade ago and a third more than the $820 million spent just six years ago (Tan, 2015). Arguably this trend is reciprocated with our students being highly self-efficacious academically as shown in recent figures released by the Organisation for Economic Cooperation and Development (OECD); alongside other Asian countries such as Shanghai-China and South Korea, Singapore emerged amongst the top and charted high scores in students' performances in Mathematics, Science and Reading. On the flipside, a study on the latest PISA results uncovered that there is no significant difference between the results of a student who does not undergo tuition and one who does; in fact those with tuition "fared worse" (Straits Times, 2016). In light of this, it drives the idea that the current assessment of students' self-efficacy beliefs is lacking in determining the gap between expectations and reality. Furthermore, this also begs the concern of whether their behavioural competency is reciprocated; whether our students have what it needs to make themselves stand out and chart paths?

The hothousing trend has undeniably been commonly believed to have laid a strong foundation of cultural capital for many of us in the community – to answer exam questions. This seems to not correlate to self-efficacy in terms of behavioural

competency, which present reviews have uncovered. There is mounting evidence that success in life depends on many human qualities that are not measured by test scores (Cohen, 1999; Duckworth, Peterson, Matthews, & Kelly, 2007; Duckworth & Yeager, 2015; Goleman, 1995; Levin, 2012). However, this paper does not discounts the reciprocal role of such test scores (academic performance) on values of self-efficacy. Worth noting that behavioural competency is not bound by trends like "skillset of the century"; it describes how one approaches an activity or situation ("Performance Through People", n.d). Considering this and by virtue of the reciprocity of self-efficacy belief, it is just to posit that self-efficacy belief drives the approach and narrative one adopts – in classrooms and subsequently offices. Hence it is a concern when studies have found that students are lacking in leadership and self-confidence values. It is worth noting a caveat: current local literature on the research area is minimal, and there is a gap in terms of data on socioemotional competence of Singaporean students. Much of the research into socioemotional competence is on graduates and issues of employability (Wang, Wong, & Lu, 2001; Wang, Wong, & Lu, 2002; Tan, Ang, & Van Dyne, 2006; Edward Beck & Halim, 2008; Jackson, 2010). Studies conducted on self-efficacy beliefs at school level in Singapore have investigated on the self-efficacy of students on academic performance, and not on behavioural competency. This research gap at school level should be addressed as indicated by the triadic reciprocity of one's perception of ability; which will reciprocate into career choice – based on one's sense of own employability. It is only apt that Minister Ng Chee Meng's (2016) statement at the 8th Teachers' Conference in May bears the following message:

What will the next 50 years be like and what kind of future will we have to prepare our students for...When the rules of an entire industry change, individuals have the choice of either adjusting to those rules by taking on new mindsets, new knowledge and skills, or risk being totally side-lined by the disruptive changes.

The new mindsets, new knowledge and skills, and the propensity to be at the forefront begins arguably at home; but fortified in our institutions. By logical extension of the theory of self-efficacy beliefs, and as justified through research; the success of acquiring a new tangent into doing things will require harmony between self-efficacy and readily possessed skills and knowledge. Self-efficacy beliefs are critical determinants as to how well knowledge and skills are acquired at the outset (Bandura, 2008). Bearing in mind the elusiveness of the concept, it is therefore significant that MOE's "21st Century Competencies" which depicts the core values and skills the education system seeks to instill proves to be difficult in measurement and monitoring. The framework entails

students emerging from the system as confident, self-directed learners, and active contributors. This is what has been warned by Bandura (1986, 1997) in which such forms of general self-efficacy benchmarks (without a standard measurement) consist of an omnibus-type instrument – disregarding streams, types of school, and present efficacy of students. Such general measures create problems of predictive relevance and are obscure.

In delineating current literature review done on assessing self-efficacy beliefs and its constructs on Singaporean students, it has come to the forefront that measures for a Future Ready generation have been put in place; however there is an obvious dearth of study looking into whether the effects are shaded by the contours of transitions. As pointed earlier, the implication of nurtured self-efficacy values goes beyond the classroom and pervades even into how one approaches life challenges. One needs to be mindful of the mediational role of self-efficacy beliefs in the selection of career choice, as pointed by Gianakos (2001) in which it is a variable in career decision-making process; affecting either through confidence or maladaptive performance behaviour. Self-efficacy is task-specific; ergo the specific career chosen or avoided would be due to the efficacy in a specific area. The major courses of study taken in Singapore varies from those in Thailand, Indonesia, Europe (in which according to Eurostat 2013, amongst the top disciplines of study are Health and Welfare, and Mathematics and Computing). It varies even between ethnic groups in our community. The common disciplines of study amongst our Malay University Graduates are Humanities and Social Sciences (21%), and Education (10%) – these two fields are dominated by the ethnic group. Whereas, the community seems to not have a leaning towards Business and Administration (23% compared to the national percentage of 32%) and Engineering Sciences (13% compared to the national 21%) (Department of Statistics, 2010). The Education and Career Guidance (ECG) under the SkillsFuture initiative has pervaded the schools institutions, which is an implied recognition of the mediational role of self-efficacy into career choices. The aim of ECG is to facilitate necessary knowledge, skills and values to make informed decisions at each key education stage for successful transition from school to further education or work (MOE, n.d). This would address any risk-aversions towards certain pathways, and this is conducted through discovering and enhancing students' passions. ECG might promote self-efficacy through verbal persuasions and mastery experience but adolescents gain self-efficacy mostly through vicarious experience; in which it is more significant in the absence of mastery experience (Pajares, n.d). Vicarious experience is employed through ECG visits and talks by those who are already working, which excites and pushes students to discover the possibilities (MOE, 2016). However, it is noteworthy that again this requires the harmony between self-efficacy beliefs and present knowledge and skills; which ECG would need to bolster for the future instruments.

As above illustrated, self-efficacy beliefs could be gained by the perception one has on his or her counterpart's experience. This would point to the vicarious experience that students may gain as they go through streaming in Secondary 1, and other points of transitions. According to Lay and Tan (2012) from her study on Singapore Adolescents, it was "indicated that the effects of streaming on students' sense of academic competence changed with time" (p. 87). Drawing the theoretical framework of Life Course Theory to further elucidate above findings; lives are dynamically unfolding in transaction with social contexts and structured by transition points (Elder, 1998). Further studies done on samples from Singapore schools implicitly points to the need of observing whether any performance trends is due to a change in social pathways (evolving roles and activities), and social convoys (continuity and change of interpersonal relations) in transitions (Benner, 2011). The first is a case study on a sample of Primary Three students after the pedagogical shift towards "Thinking Schools, Learning Nations", in which a review on the Integrated Project Work (IPW) curriculum was done. It is significant that the researcher, Saravanan (2005), noted the self-perception of the sample students at the beginning of the investigation, "Pupils in the class (primary 3B) came over to me and said straight in the face that '3B does not refer to the top class; we are nearly at the bottom" (p. 101). This however did not resonate in the students when they were tasked to role-play as leaders; Saravanan later noted "at least three from the minority race, some of them who were diligent pupils and who were quiet in class in previous lessons became effective leaders" (p. 103). Having said that, the findings on self-esteem reported was somewhat jarring. The students were motivated to work well not wanting to let the other group members down. However, the social convoy of their peers altered from a motivating role to impress peer pressure during examinations. Groups were observed to subconsciously share the same attitude of "what you have, I must have" (p. 104). What is implied from Saravanan's findings is that peer pressure (negative social convoy) has caused groups of 9-year olds to stick to uniformity, to be the same; an adverse attitude towards differing ideas. Any leadership attitude has receded into the backdrop; with them falling in line behind the other.

The Primary 3 pupils' behaviour parallels to the description of Singaporean graduates in aforementioned interview with 62 employers over nine months (Brown, Lauder, & Sung, 2015). In the interviews, one HR manager voiced, "I would try and take in more Singaporeans… but at the end of the day, I would only recruit on merit" (p. 223). As pointed earlier, despite our PISA and TIMSS rankings, there is clear evidence of mismatch in talent and even merit. Some of the missing talent signifiers that were highlighted are: "it boils down to the gift of the gab…the NQ…you make your presence felt" (p. 225) and "putting oneself forward…necessary condition for being recognised" (p. 226). This echoes the attitude of the Primary 3 pupils whom at the end

seems to succumb to risk-averse behaviour when examined together; the direct opposite of "putting oneself forward". This calls to mind the interrelatedness of every phase according to the life course theory – thus these two findings concomitantly notion that as the social roles of one changes from one phase to another; from a Primary school student to a graduate, the climate of continuing risk-averse behaviour persists. We are putting ourselves high on exam charts; we have to bear in mind not to fail to put ourselves at the forefront of other talents in the workplace. The Singaporean mettle should be exceptional on papers, as well as behaviour competencies. This calls for a need to look into transitions in academic continuum, to discern the developmental trajectories. A disruptive school transition for those already experiencing accumulating disadvantage might further deflect developmental trajectories (Banner, 2011, pg. 4).

> **A disruptive school transition for those already experiencing accumulating disadvantage might further deflect developmental trajectories**

Above mentioned studies were conducted with differing objectives, and samples. They signaled the need of a deeper look into self-efficacy beliefs in transitions of academic continuum in Singapore. Reverberating Minister Ng Chee Meng's (2016) opinion again, "we will have to be more than just a value-adding economy that follows up on the good, creative ideas of others"; this is the clarion call for us to put ourselves forward, and take the lead; with self-efficacy that is ingrained and celebrated in schools. As it has been highlighted, Singapore has neared the threshold of paper qualifications. But being comparable to other talents is about a lot more than Intelligence Quotient (IQ). As Gladwell (2008) puts it, it involves having a fertile mind. The future of our community's education landscape hinges on the "will and the determination to exploit those skills in front of (sometimes even terrific challenges) and involves hence the active use of a number of cognitive, affective and self-regulative skills" (Haddoune, 2009, p. 3). Self-efficacy points to the acceptance that the intellect and socio-cognitive skills is malleable. Which henceforth, drives the catalyst towards learning for mastery; shutting down the skills "vacuum" that students get sucked into during transitions in academic continuum. The top PSLE student shall remain and propel him or herself forward in the next stage of Secondary level, ensuring people know his or her presence. It drives "practical intelligence", which to Robert Sternberg is "knowing what

> **They signaled the need of a deeper look into self-efficacy beliefs in transitions of academic continuum in Singapore**

to say to whom, knowing when to say it, and knowing how to say it for a maximum effect" (as cited in Gladwell, 2008, p. 101). Being a silent genius may get you to the next academic level, but it might not get you the job.

Reimagining Self-Efficacy Index for Future Education Landcape

Self-efficacy beliefs predicts whether we would have more nurses, more mathematicians, or more entrepreneurs. Singapore's education system is coloured with transitions, and differing social convoys. As Professor Gopinathan (2016) commented, we hardly have a standard preschool pedagogy curriculum and this would entail a funneling of children with different early childhood education into a set of primary school system. Another significant transition as discussed would then be the streaming into Express, and Normal streams; and also between autonomous, independent and government schools. This would mean different social capital, different social convoys; and ultimately different vicarious experience and self-efficacy beliefs. Despite self-efficacy beliefs embedded in the pedagogical blueprint as set by MOE, transitions and different social convoys are not taken into account. It was found that Lower-ability stream students had a lower academic self-worth immediately after streaming compared to higher ability students (Lay, 2012). However, 3 years later, "the academic self-concept of both Express and Normal groups of students declined; interestingly, the decline in academic self-concept of the higher ability stream students was sharper than that of the lower-ability stream students" (Lay, 2012, p. 88). And it is significant to note the caveat here is that there has been no study done looking into whether the experience is the same for students in autonomous and independent schools, which are usually regarded as the elite schools. Ergo, with present gap in assessing self-efficacy beliefs in transitions and in different school structure, there is a need for an index with self-efficacy as the core values for the future learning landscape where fine balance between hard and soft skills dominate sustainably. A new index was similarly proposed by Tan (2015), in which he argued that a new approach is needed, towards education for a flourishing life through socioemotional measurements. In addition to his socioemotional measurements of the "mind, heart, body, soul, and hands" (p. 10), this paper would elucidate on possible imperatives for a future self-efficacy index:

Self-Efficacy, and Teacher and Peer Relationships

As a student moves from one phase to another; from the Secondary level to Institutes of Higher Learning and henceforth, it is observed that relationship between teacher and peers play a larger role as social convoys. Reflecting upon the Primary 3 students again, whom behaviour shows "peer acknowledgement and evaluation was an important aspect of their desire to learn well and do well" (Saravanan, 2005, p. 104). And it would do us well to ensure that peer mediation is addressed at the appropriate stages in the academic continuum. Peer perception is on the other hand directly related to the relationship of a student with the teachers – which will affect the self-efficacy of a student. As noted by Furrer, Skinner, and Pitzer (2014), "The quality

of students' relationships with teachers and peers is a fundamental substrate for the development of academic engagement and achievement" (p. 101). Peers take cues on the relationship that they should have with a student, from their perception of the relationship between the student and a teacher. They will also predict how intelligent or successful a student is based on that perception.

On the inverse side, this will also affect the perpetuation of negative developmental trajectories, if it has set in. Hence, it is imperative that schools take note of the importance of teacher's perception and peer mediation in ensuring an upward trajectory in self-efficacy beliefs as one moves up the continuum. Through the Ethics of Care (EoC) Pedagogy that MENDAKI has developed for our MENDAKI Tuition Scheme (MTS) tutors, it aims to enhance the role of MTS tutors to go beyond teaching subject matter knowledge and help develop their capacity and confidence to be providers of care for their students. Caring in the classroom also consists of helping the students learn to develop care for others, for ideas, for learning, for knowledge and for the environment around them. The relationship and camaraderie that unfolds is hoped to harness positive perceptions amongst students and tutors, and fortify self-efficacy beliefs.

Students' Efficacy: Big-Fish-Little-Pond Effect

A study conducted by Seaton, Marsh, and Craven (2009) shows that the big-fish-little-pond effect (BFLPE) has demonstrated that attending high-ability schools has a negative effect on academic self-concept. The theoretical model underlying the BFLPE posits that although individual ability is positively related to academic self-concept defined as one's knowledge and perceptions about one's academic ability, class- and school-average ability display a negative association, and it is this negative association that is characteristic of the effect. This is required to be assessed in-depth for the experience of students in transitions in autonomous and independent schools in Singapore. Mediation of test anxiety is found to have an effect on lowering the BFLPE in students in gifted programmes (Zeidner and Schleyer, 1999). In repositioning self-efficacy as an index – going beyond the academic indicators – the transition to schools and programmes should be taken into account.

What is Needed to Boost Self-Efficacy?

Taking stock of the two imperatives abovementioned which are significant when accounting for a broadening of the current self-efficacy measures to ensure the development of behavioural competency that is in tandem with future landscape: self-efficacy in teachers and its role in mediating the self-efficacy of students should be underscored. Bearing in mind that due to the

> " enhance the role of MTS tutors to go beyond teaching subject matter knowledge and help develop their capacity and confidence to be providers of care for their students

prevailing climate of high-stakes assessments and accountability in Singapore, teacher-led pedagogy remains dominant in the regular school classroom in Singapore (Hogan & Gopinathan, 2008). As such, primarily the assessment of self-efficacy beliefs between a teacher and a student should begin by establishing goals and expectations. Significantly teacher's own background would be an influencing factor as to how he sets his goals and expectations. Their personal family values, the values placed on education by their own families also would influence their classroom expectations and the standards they set and maintain for their students. This would affect the self-efficacy of students significantly as it may influence the teacher and student relationship, as well as peer relationship. Furthermore, the teacher's own visible passion and enthusiasm contributed to role modelling for students; which would serve as stable vicarious experience as a source of self-efficacy for the class. Ergo, it is important to bolster self-efficacy that expectations were made known. Although teacher and peers form the largest source of self-efficacy as students pass through the academic continuum; parents remain as a stable social convoy amidst these transitions. Therefore, this need for expectations to be made known should extend to parents. Research confirms parents, especially lower-income parents, tend to make fewer contacts with schools and teachers in the years after their children transition into high schools (Barbee, 2012; Carpenter, 2004; Rubie-Davies et al., 2012). And such inconsistencies in expectation between teachers and parents might reciprocate in a vicious cycle as it can also affect teacher and students efficacy beliefs as noted by Heng (2016).

Teacher self-efficacy in teaching low-achieving students should also be assessed in effort to boost general self-efficacy in schools. This is supported by study on Normal Academic students by Ang, Neubronner, Oh, and Leong (2006). The students were regularly identified by descriptors such as "weak"; poor behaviour. Progress should be attributed to descriptor of students' performance. There is no local literature review of this ability level being changed by schooling, teaching, development or maturation. Rather, this descriptor appeared as enduring as beliefs about ethnicity and gender. Linked to this was the belief that students can be known by the stream in which they are placed, for example, by whether they are "Express" or "Normal (Technical)" students. Current literature on teachers and students, relating to beliefs about learning and teaching theory drew heavily on beliefs about the nature of students (the fixed nature of their ability); the nature of knowledge (both social constructivist and transmission); teachers' role as parent with responsibility, power and care; and their holding authority in the classroom (Liang & Dixon, 2010). Low-performing students in particular, despite their academic difficulties, are on equal footing with their high-ability peers in terms of development in the non-academic aspects of the 21st century skills (Wang, Teng & Tan, 2014) These skills may not only provide an opportunity for Low-performing students to prove themselves and enhance their self-efficacy, but can also be used as an impetus to bring about higher academic achievements for Low-performing students (Wang, Teng, Tan, 2014). Less rigorous curriculum

often contribute to Low-performing students' low expectations of themselves and limit their educational opportunities. The right for Low-performing students to access high quality teaching and education resources should not be deprived simply because of their current performance. To offer Low-performing students an equal education opportunity, these students need to be encouraged and supported to engage with content knowledge and tasks that are above their current level of competencies or abilities. Extending upon this, the use of Information Technology (IT) could boost self-efficacy, and further provide insight as to the origin and development trajectory of the belief through a phase. As self-efficacy changes even within a single assignment or test, the use of IT-enabled learning could prove useful for identifying self-efficacy trajectories in transitions and comparisons could be made on self-efficacy between Low-decile and High-decile schools. This is proven in Lay and Tan's study (2012) in which the methodology employed in charting self-efficacy in Mathematics was through an Algebra IT-enabled learning software; students' self-efficacy was studied by looking at the number of hints used and the speed of solving as they move from one question to another. Introspectively this engraves upon individuals that self-efficacy is a conscious effort which could be measured; teaching our students that the onus is upon them to cultivate and sustain self-efficacy as they thread the future landscape.

Transitions throughout Stages Eased with Self-Efficacy

In discussing the need for broadening of the self-efficacy value for future landscape, it is noteworthy that introspectively there is a need for it to focus on transitions. But before that, it should be highlighted that in charting for the future, the present context is significant; "Educationally meaningful assessment requires data derived from the ongoing context in which students learn" (Eisner, 2000, p. 350). Traditional assessments in schools in Singapore are administered several times a year and have important bearings on a student's achievement progression to the next rung of the academic ladder in terms of programme of study, type of class and nature of learning experiences (Heng, 2016, p. 131). However, as studies have proven self-efficacy behaviour is affected by transitions in academic continuum. On this, students should not be seen as in situ. As our students go through streaming, and the choice of differing schools and programmes; students should not be thought of as the products of school (Sarason, 1990). With the broadening of self-efficacy value as an index for the future education landscape, in ensuring the growth of socioemotional and behavioural competency in our students; transitions throughout academic continuum and to employment should be addressed. This points to the transition from academic self-efficacy to social self-efficacy (an important factor helping individuals to evaluate themselves as successful in their social relationships), and to career self-efficacy. As discussed earlier, Tang et al (1999) further emphasised that career self-efficacy had a positive influence on career decision making, with students choosing to major in fields they felt most confident. In addressing the notion of mismatch in what the education system is producing and what the global labour market needs; students need to be encouraged to develop both their career self-efficacy and social self-efficacy in order to thrive in their future careers.

In effort to understand the effects of transitions on students' self-efficacy beliefs; we have to be cognizant of how self-efficacy itself changes. Min Cheng (2015) has delineated 4 points of transitions in which self-efficacy belief changes within a continuum; the pre-transition stage, the shock stage, the adjustment stage, and the progression stage. At the first stage (pre-transition stage), a firm sense of self-efficacy with regard to the particular events and situations that make up a new school experience can enable students to gain confidence in their ability to survive. If students can adapt at this stage, then this can prepare them for the next stages. This is assisted through adaptation systems in Primary 1 with buddy systems and Orientation Day. In the second "shock stage", they need to adapt to a new physical environment, as well as establish new connections and meet new academic demands (Denovan and Macaskill 2013). By extending upon the Life Course theory employed in illustrating transitions; this would point to the changing of social pathways and social convoys which are pertinent in the trajectory of self-efficacy beliefs of one. If students are able to use self-efficacy beliefs as coping mechanism (such as attributing challenges as opportunities), their belief would be strengthened at this stage. Chemers et al (2001) assessed the influence of self-efficacy on challenge-threat evaluations, and showed that self-efficacy had a strong impact on academic performance and personal adaptation among first-year university students. Moreover, Yusoff (2012) conducted a study on 185 international undergraduate students in Malaysia and showed that students with a strong sense of general self-efficacy also reported higher levels of psychological adjustment. Although both studies were done on undergraduates, this stage of transition is applicable at every first point in a continuum. The third phase in the transition process is the adjustment stage. During this stage, it is how they deal with new routines and begin to adapt to their new environment. According to Zimmerman and Cleary (2006), a key determinant of whether learners employ self-regulatory strategies of monitoring progress as well as controlling and regulating their own cognitive activities and actual behaviour (which is a tenet in MOE's 21st Century Competencies framework) rests on the beliefs learners hold about their capabilities to do so. Hence, knowing self-regulatory strategies in itself is insufficient to ensure their effective use; students must also possess the belief that they can use them effectively (Usher and Pajares 2007). The final phase entails an upward trajectory in which one's self-efficacy will be reciprocated to more confidence in engaging in innovative ideas, or even a career choice. This reciprocity will be sustained only if the self-efficacy belief is sustained at going towards the progression stage.

Reimagining Self-Efficacy Belief in Malay/Muslim Community

In endeavouring to discover a new narrative for the community and self-efficacy in minority communities, a retrospective look into the prevailing weltanschauung is needed. It has been highlighted that the prevailing narrative in the MMC is that we will be lagging behind in the race towards future readiness; and that we have puzzle pieces missing in contrast to the other ethnic groups (Yayasan MENDAKI, 2016). On the flipside, Farhan Ali's study on the Gaps in educational outcomes: analysing national

examination performance of Singaporean Malay and non-Malay students in the past 20 years (2014) outlines his primary significant observation as,

The different ethnic groups have trended together over the last 20 years…between 1996 and 2001, all three groups showed a decline in the percentage graded A* to C in PSLE Mathematics after similar ethnic improvements in the previous five years (p. 6).

Therefore, debunking the oft-repeated perception that it is an ethnic issue. This goes beyond cultural structures, and affects all the three communities similarly. Farhan Ali went further to suggest "the trends…may also be driven by large-scale changes to the curricula and pedagogical philosophy" (p. 11). The trend that he discovered is similar to other multi-ethnic societies in Australia. Such correlations, in the case of a general decrease, can be as Farhan Ali purported, the hypothesis of a "reset" of the trend. Which could also be a transitional issue, as delineated within the life course theory. As above discussed, this would also imply that our community draws self-efficacy beliefs through vicarious experience mostly. We are most affected by the perception and performance of others; which is reciprocated into much lower self-efficacious behaviour; in keeping with a collectivist Malay culture, to significant others.

It is utmost noteworthy that self-efficacy is neither cultural nor is it bound by Social-Economic Status (SES). This is underscored by Tok's (2016) study on the Characteristics of Parent-Child Relationship Among Low-Income Families that Promote Children's Academic Success, which found that family's humble background became the impetus to inculcate self-efficacy in the children; transparency and leveraging on humble SES to educate the children that it is not a boundary for their success. Moreover, the children grew up inculcating in themselves that they have to be responsible for their learning, and the parents play minimal role in educating them at home. Family serves as the primary and most stable social convoy in every phase of one's life. In spite of SES, with a stable support from this social convoy, one will be able to navigate self-efficacy beliefs in the midst of any other changes (Benner, 2011; Phan & Ngu, 2014). Considering this, and the belief that the family is the primary unit, but with schools as fortifying institutions; MENDAKI is strengthening its bridging role through the Home-Yayasan MENDAKI-School (HYMS) partnership framework. This would bridge the self-efficacy agents together ensuring students' beliefs are maintained throughout transition; teachers, peer, and parents. It is also significant to point that the effects of peer mediation is the greatest amongst siblings, as signaled that younger siblings tend to learn at a much faster rate (this translates to higher self-efficacy in adopting new knowledge) than older siblings due to their early vicarious exposure (Tok, 2016).

On a macro level, self-efficacy beliefs should be positioned at the forefront of all Malay-Muslim Organisations (MMOs) as collective efficacy. As highlighted by Shamir at this year's Post National Day Rally Policy Forum conducted by MENDAKI, there

is a need for the community to acknowledge and accept failures as a stepping stone to discovering successes (Yayasan MENDAKI, 2016). Perceived collective efficacy is defined as a group's shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainments. Looking back at Farhan Ali's findings that the Malay community is showing trends that are in tandem with the other ethnic groups, except that we are susceptible to a multiplier effect. In addressing this, our community need to be more conscious of collective efficacy as a "soft approach" which could boost confidence in students especially late bloomers as this would reciprocate to an upward trajectory of self-efficacy beliefs. The ways in which we exercise personal agency are strongly influenced by collective efficacy beliefs as purported by Goddard, Hoy, and Hoy, (2004). Working together rather than separately can generalise the main goals for all. A team effort could change the teaching and learning culture of a school and possibly an entire community. The students and community will be able to recognise this culture when it is more evidently displayed by all. This approach is supported by Stipek (2012), who suggests that efficacy is best understood by an understanding of the relationships between all the stakeholders responsible for teacher efficacy and student achievement.

Within education, several studies have documented a strong link between perceived collective efficacy and differences in student achievement among schools (Bandura, 1993; Goddard, 2001; Goddard et al., 2000). On this, with Education being the niche area of focus for MENDAKI, the Education and Developmental programmes enhances bridges of relationships in a coherent intervention structure with family, school,

> collective efficacy as a "soft approach" which could boost confidence in students especially late bloomers as this would reciprocate to an upward trajectory of self-efficacy beliefs

peers, and members of the community as pillars. The Family Excellence Circle (FEC) bridges low-income families to build social capital with each other, fortifying their support network and their collective efficacy. It would be a step further to ensure that this social capital is translated into bearing positive cultural capital for the children. Our Empowerment Programme for Girls (EPG) has the explicit objective of enhacing self-efficacy of Secondary Two girls (as they go through transitions); this is pillared through bolstering collective efficacy between the girls, mentors (who are Women Professionals), trainers and the girls' mothers. MMOs and the community would need to assess our collective efficacy, and strengthen cohesive collaborations to realise a new narrative in which we underscore a strong Malay/Muslim mettle.

Conclusion

This paper amongst others served to highlight the dearth of study into self-efficacy in academic transition in Singapore, and positioning teacher and peer relationship on the foreground of academic transitions and resulting performance as factors of self-efficacy. Self-efficacy is isomorphic to teachers' perception and peer relationship as one transcends the primary to secondary level, and subsequently to employment. More research has to be done on this, and this also calls for an assessment of self-efficacy of students in present education system. Aside to the 21st Century skills that MOE has delineated, we should approach a new index; one that goes beyond our academic indicators to assess socioemotional and behaviour competency. It has to be underscored that this is the time of not fitting in, it is the time of difference and taking the bold move.

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Singapore must take a more proactive approach, with a purposeful stance to connect with the wider international community
}

Seeding the Culture of Learning for Life – The Swedish and Finnish Experience

By Tuminah Sapawi

Introduction

The Lifelong Learning Council (LLC) was appointed by the Minister for Manpower in October 2014, and includes members from the private, public sectors as well as non-profit organization. Led by Chairman Tan Kay Yong, the members are tasked to lead and take ownership in galvanising community and industry efforts to build a culture of lifelong learning from the ground up.

Since its formation, the Council has adopted the Design Thinking Process, and has developed its Vision, Mission and 4 strategic thrusts supported by a pipeline of initiatives. In March 2016, the Council collectively decided that its work should delve deeper into three other specific areas:

• Sharpening the definition and outcomes of lifelong learning
• Articulating more deeply the needs of the various archetypes, including the under-served and unserved
• Exploring ways to celebrate and recognise lifelong learning

The visit to Sweden and Finland was an effort to support all the above efforts as well as learn from the experiences of organisations in both countries about:

• National policies and communal practices that build, nurture and celebrate lifelong learning, including efforts to reach out to various segments of the community
• Measures and initiatives put in place to promote lifelong learning, their outcomes and impact indicators, as well as challenges faced and envisaged in the future.
• Ways to plug into and actively participate in the international network of countries and organisations with a long history of championing lifelong learning.

The Council visited a total of 16 organisations - nine in Stockholm, Sweden and 7 in Helsinki, Finland. The following are key observation and learning points that could be adapted to Singapore's learning culture.

Mapping Out Singapore's Learning Landscape

Unlike Singapore, both Swedish and Finnish learning opportunities and systems – formal and informal – are well-communicated to their people. Built over many years, their learning systems first evolved as a result of social democratic ideals. Informal learning is firmly etched into the social fabric of both countries.

In Sweden, it is known as "Folkbildning" (People Learning), and is a manifestation of societal or active groundup movement to acquire knowledge and skills for personal growth, career and connections to improve the quality of life. It has a long historical gestation necessitated by circumstances in the past – a differentiation from Singapore's that should be taken heed of when fashioning a learning model for us.

Over the years, through active citizen participation as well as government support, citizens of both countries – young and old, including challenged groups – are presented with a clear set of learning avenues and opportunities available through formal and informal routes.

Whilst the Swedish system has clear demarcations between formal (academic and Vocational Education and Training, VET) and informal (folk high schools and study circles) education, the Finnish system has made attempts to amalgamate both in their main Adult Learning Centres, which now carries both informal and formal learning programmes and activities.

Singapore's learning and education system, on the other hand, is a product of economic necessity, arising from the need to educate and upskill manpower for the nation's survival. The government played, and continues to play, a leading role in motivating citizens to learn, as well as putting in place the learning and education system. Unlike the Swedish and Finnish cases, our learning and education system, hitherto, is mainly orchestrated by the state, with minimal active role, if any, played by society groups and citizens.

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"Folkbildning" (People Learning), and is a manifestation of societal or active groundup movement to acquire knowledge and skills for personal growth, career and connections to improve the quality of life.

In Singapore, citizens largely view learning and education exclusively in terms of the formal learning opportunities provided by the state, as well as learning institutions and programmes that are under state support. However, beyond those structures, a certain amount of informal learning and education does exist, albeit loosely in various forms and places, but are currently not mapped out and communicable as a coherent Singapore "learning map".

What Singapore could consider is mapping the learning landscape to serve two purposes. First, to provide a holistic learning map of Singapore that includes both formal and informal learning opportunities that are available to all citizens. With this, we can then communicate clearly to Singaporeans at different life stages what lifelong learning can mean, and where they can find these opportunities. A coherent and common Singapore Learning Narrative is a powerful tool to raise awareness and inspire lifelong learning. The Singapore story of lifelong learning must relate to all segments and strata of our society – to show not just learning for life, but also through life. The picture we get can serve as a baseline for future reference.

Second, with a clear mental map of the learning landscape in Singapore, we can then put effort into designing gateways to better support Singaporeans in discovering and plotting their own learning pathways. It is imperative that the gateways we develop support and are intrinsically linked to the SkillsFuture movement.

Learning from Best Practices and Developing Partnership

Sweden and Finland are plugged into the international network of organisations that (a) champion research, (b) share best practices, (c) compare and measure efforts in lifelong learning, and (d) organise activities that celebrate lifelong learning. These associations opened up possibilities and, in some instances, sowed mutually beneficial partnerships. They also widened the lenses of both countries in the improvement of their existing learning systems and initiatives to sustain the lifelong learning culture.

Both countries proactively plan and participate in international networks in relevant dialogue and collaborative forums. Finland, in addition to its efforts to have its footprint in the European Union (EU) Lifelong Learning agenda, has one of its cities – Espoo City, recognised as one of the UNESCO Lifelong Learning Cities.

Singapore must take a more proactive approach, with a purposeful stance to connect with the wider international community championing lifelong learning and to learn from international best practices. We should first seek to understand existing reputable international networks and platforms so that we can carve out our involvement to benefit and share our country's lessons and journey.

Plugging our country into such networks and platforms will widen the national lenses to be able to see and learn from the other countries. Such links will offer useful information that can help steer and guide our efforts to building and sustaining a lifelong learning culture that is not only apt for Singapore but also in sync with global efforts and practices. Our active resolve to connect with, share and learn from the best in the lifelong learning international community will also raise the people's interest, pride and passion in lifelong learning over time.

In this respect, we can begin by "twinning" with the City of Espoo, so that we can learn from their journey, to build a lifelong learning culture in a society for all ages, by potentially linking up relevant agencies and associations with their counterparts in Singapore. We can also learn what they developed to become a UNESCO Learning City.

We can also team up with the Helsinki Playful Learning Centre, in early childhood education and adult learning research; engage the teachers there with the Early Childhood Development Agency (ECDA) and Ministry of Education (MOE), in our Lifelong Learning Festivals (LLF), and with selected EduTech companies.

Crystalizing Meaningful Messages of Lifelong Learning

In both Sweden and Finland, lifelong learning is embedded into the societies' way of life. Whether young or old, able-bodied or challenged, learning has a place in every individual's life stage and, in many cases, even takes place near their living spaces, such as in the neighbourhood areas for informal learning activities. Be it for personal growth, network capital expansion, or simply the joy of learning together, the need for, and purpose of learning are clear to various segments and groups, resonating with individuals at different stages and circumstances of their lives.

It is also interesting to note that there are no explicit public messages or national campaigns in Sweden or Finland to drive the message of lifelong learning. However there is a strong desire of the people to be part of learning groups and associations, probably through word of mouth and mutual encouragement. Efforts to encourage learning are concentrated towards creating awareness of learning opportunities and facilitating access to them through subsidies and involving a wide network of NGOs as well as individuals to expand outreach, particularly for the informal learning sector.

The general environment is also supportive towards learning, nurturing learners through creating a safe and respectful environment for learning. This is evident through Sweden's study circles which seek to strengthen self-esteem and to seed the first positive learning experience. Each circle decides what to learn. Participants meet at peer-peer level, with a leader instead of teacher and participants instead of students; and everyone is empowered to think and speak freely.

In this sense, it is useful to go beyond the overarching message of "Every Day, A Learning Day", to developing clear meaningful messages that will resonate with the various target archetypes. It is also useful to examine the channels through which these messages can be best delivered, and the supportive environment under which these are communicated.

This review exercise is fundamental as it would shape the national attitude towards learning. In addition, the manner in which these messages are permeated and conveyed is also key to their effectiveness. Both Swedish and Finnish models show that efforts are driven towards improving accessibility to learning activities, as well as providing timely information and assisting individuals to participate in learning through government funding and facilities etc. We can include this as a prong for next year's workplan, and potentially create a subgroup to address this, including the involvement of social media influencers and PR experts.

Spawning Study Circles

A key pillar of Sweden's learning culture is study circles. Formed and led by individuals, these study circles create communal learning spaces and opportunities that are collegial and safe. A study circle brings people of similar interests to learn together – whether it is a craft, skill, knowledge or the joy of learning something new. Depending on the programme, study circles can be funded through the Study Associations to which they belong. There are about 10 Study Associations in Sweden and each has its own focus and agenda – political, economic or even mission-based, such as sustainable development, or an ethnic-religious and immigrant focus.

Study circles tap into the collective knowledge of the community to further learning. There is a group leader instead of a teacher taking charge of the sessions and facilitating group learning. Despite the expansion of formal learning opportunities in Sweden, study circles remain a key feature of learning initiatives at the community level, albeit with a mostly mature and elderly profile of learners and group leaders. It was noted that funding for study circles has also been capped and is not as attractive as before. There is also a discernible drop in youth participation. The form of study circles does not seem to have kept pace with technology nor the needs of the millennials. This is surprising given that Sweden is truly a nation of digital natives and very digitally connected.

To encourage the younger generation to come together to learn, Study Associations and NGOs are experimenting with hybrid study circles that allow meetings to take place both online and offline.

Study circles are usually led by an individual who has both domain knowledge and passion in the field/topic. The experience and mastery of such people should be appreciated and shared, not just amongst interested individuals, but also across generations. Some study circles are also able to provide some form of mentorship and guidance, which can help promote the love for learning in a given field.

The idea of the community-led Learning Circles is a powerful one. Yayasan MENDAKI, at the last Family Excellence Circles (FEC) Family Day launched its Parents Study Circles which will look into group learning leveraging on SkillsFuture.

At the national level, we can begin by spawning "safe Learning Circles", using the LearnSG Seed Fund, such as through the formation of circles immediately following a course, by encouraging course mates to continue their learning journey together.

This may involve the promotion of the fund, the idea of the learning circle and deliberate forming up during the course, to cement the "specific learning DNA" of course attendees, for a smooth follow-through. With the pilot of the social learning mobile application, we can also encourage these "safe Learning Circles" to enrich their interaction using the app, and for other learning circles to form online, particularly for the physically challenged and the more house-bound. The mobile app was launched during Lifelong Learning Festival 2016 for a pilot with selected users from parents with young children, employers/employees promoting learning at work in conjunction with IAL's Learning@Work and Chief Learning Officers' Roundtable, individuals and groups who have been given the LearnSG Seed Fund, as well as SSG/WSG's Learning Clubs. In addition, we can also consider the "uberising" of space that is needed to support Learning.

Fostering Partnerships with NGOs

In both Sweden and Finland, the government works hand-in-hand with NGOs to offer learning activities to different segments of the population, as doing so allows the government to reach under-served and unserved segments, such as migrants, as well as the mentally and physically challenged. The NGOs are able to bring in volunteers and competent individuals to plan, organise and conduct learning activities. The form of learning organised and conducted by the NGOs includes study circles, programme-based lessons, and on-the-job training at the premises of the NGO itself.

In Singapore's case, the past few years have seen a proliferation of social enterprises that champion various causes for various groups. There is a strong case to emulate the good practice of both Swedish and Finnish governments to leverage on these social enterprises as well as established NGOs to organise and carry out learning activities.

While the LifeLong Learning Council have started by focusing on the four archetypes, they should identify and link-up with selected social enterprises to better meet the needs of the under-served and the un-served.

Igniting the Passion for Learning in our Young Ones

In Finland, strong emphasis is placed on discovery, play and experience from a young age – be it indoors or outdoors. From preschool to primary levels, children are free to explore, with the curriculum being geared towards multi-modal or multi-disciplinary learning. There is also a conscious emphasis on the application of learning to real life. Learning to pass examinations is not something that is adopted until the age of 16, at upper secondary level.

Rather than assessments, learning should be geared towards developing learning skills and nurturing the passion to learn from a young age.

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In Sweden's Folk High School, where those who dropped out have a second chance to learn again, the focus is on the students' passion, allowing them to chart their learning journey once again, through a flexible learning programme that is more friendly to their pace and style of learning. The learner-centric approach in the delivery of learning opportunities aims to re-ignite the passion of learning in both youth and adults. Students can learn any subject including language, media literacy, arts, culture, computer literacy, and others.

Both the formal and informal learning systems of Finland and Sweden seek to nurture and reignite passion for learning, and display strong appreciation for the different learning pace and style of students through its flexible learning programmes.

Efforts to nurture a love for learning at a young age are already being emphasised in Singapore. However, the learning and education system we have in place is very much a formal one – rigged with prevailing practices that have strong emphasis on assessments, grading and streaming based on scores.

There is a need for a stronger voice to de-emphasise the high value placed on assessment and ranking at such a young age, and to avoid utilising it as a tool to categorise or limit individual potential and abilities. Rather than assessments, learning should be geared towards developing learning skills and nurturing the passion to learn from a young age.

We should seek to consciously embed in our learning and education system, both in and out of schools, programmes that put higher premium on building learning skills and nurturing the love for learning. Like in Finland, the programmes must involve parents (and grandparents as in the case of Hong Kong), who are instrumental as co-educators at home. As important as it is to children, it is equally important, if not more so, to educate parents and caregivers on the importance of inculcating passion for learning and imparting learning skills in our young ones.

The Lifelong Learning Council can begin this by engaging the Finnish Playful Learning Centre in speaking engagements for ECDA, MOE and also parents; in research relating to early childhood education and relating to rekindling love for learning in our adults who may have lost the passion to learn due to our education system; and in their participation in our festivals. In addition, we have also developed a LearnThrough-Play Toolkit using the LearnSG Seed Fund, for parents with young children, developed by ex-MOE teachers. This was launched during Lifelong Learning Festival 2016.

Broadening the Purpose of Learning

In both Sweden and Finland, there is much recognition of and emphasis on learning for purposes beyond employment and career. Learning out of sheer interest in culture, art and craft, sustainable development, music, language and media literacy is what drives many to partake in learning programmes in the informal sector, either through the Folk High School or study/learning circles. In Sweden, the Ibn Rushd study circle was set up to meet the religious learning needs of the Muslim community.

In Sweden, for example, learning through study/learning circles is also an important social activity that occupies the lives of special needs people. To the physically and mentally challenged, learning provides a safe environment for them to pick up the necessary skills to improve their quality of life and to lead a meaningful life. The concept of learning together is recognised as part of a "step-down" intervention care for those who need to relearn to read, speak, and do something again, after having lost those capabilities due to poor health or accident.

In Espoo City (Finland), its library has broadened its key mission beyond just learning through books, to learning through experience. It has invested in facilities and infrastructure that allow individuals to learn and practice 3-D printing, music jamming, and sewing, among others at the Makers Space. The library now encourages learning by doing, which in turn promotes the reading of resources in the library. The concept of the learning space itself, such as the library, can thus influence how learning is perceived and appropriated.

Sweden and Finland's cases show that there is a significant scope for us in Singapore to start recognising and supporting learning in various forms and for various purposes, especially to value learning, regardless of subject matter, as a meaningful activity in itself. Whilst deep and formal learning programmes warrant clear outcomes and tangible benefits such as better progression, promotion, job placement, support towards informal learning should take into account other intangible but equally important benefits to each individual learner such as self-improvement, a meaningful occupation of time to uplift quality of life and to achieve one's aspirations and potential.

This could be incorporated into the communications plan for next year's Learning Festival. In addition, the library at the City of Espoo has dedicated space to provide for the equivalent of Tinkerama and Makers' activities, in addition to space catered for people to come to learn together. Some of these are undertaken by volunteers.

Going forward, we can examine if we can proliferate the Tinkerama space to more libraries and if it is feasible to encourage Learning Circles at our libraries. We should also look into how to encourage and grow a reservoir of volunteers in furthering the lifelong learning promotion, as a key part of a community-led movement.

In MENDAKI, our Cahaya M activity room could be expanded to infuse fun in learning for our children. There could be weekly activities for pre-schoolers to learn through play at this room.

MENDAKI's Raikan Ilmu (Celebrate Knowledge) campaign launched in June 2016 could be expanded to include activities that go beyond reading. Only then can we broaden the purpose of learning beyond utilitarian value for employment and career, to include fulfilling personal aspirations and interests. Only then, will we learn for life.

The author was a member of the Lifelong Learning Council, from 2014 to 2016. This paper was written based on her experiences on a study trip to Sweden and Finland between 28 August 2016 and 4 September 2016.

Notes

Report on mission to explore the culture of lifelong learning. October 2016

In Sweden, the Council visited:
- Swedish National Council of Adult Education (Folkbildningsrådet)

- Swedish Adult Education Association (Studieförbunden)

- Swedish National Agency for Higher Vocational Education

- Sigtuna Folk High School (Folkhögskola)

- ABF Norra Stockholms (Län)

- University of Third Age (Senioruniversitetet)

- Medborgarskolan

- Study circle from Studieforbunden Vuxenskolanon (SV): Nyaverkstan

- Study circle from SV (Afasiföreningen)

In Finland, the Council visited:
- Helsinki University, Playful Learning Center

- Finnish Lifelong Learning Foundation

- Ministry of Education and Culture

- Espoo Learning City

- Entresse Library

- Omnia Adult Education Centre

- Vindängen

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**Research by Nel Noddings
(Jan 1929) shows that investing
in care is a move towards
increasing levels of efforts as
well as levels of achievements**

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A Learner's Voice: Envisioned, Enacted and Experienced in 2020

By Sharifah Fairuz Alsagoff

A Happy Child Skipping Her Way to MTS

I skip to Mendaki Tuition Scheme (MTS) class on Saturdays in a sprightly manner as if there are springs on my feet. My primary school years are crucial in giving me a strong start in my journey of lifelong learning. The signature pedagogy has established outcomes that aim to ensure that pupils develop confidence and a sense of pride in themselves, and contribute to be a community of excellence.

Our MTS School – "A School is not a Factory. Its raison d'etre is to provide opportunity for experience."
– J.L. Carr, Novelist

My learning is a process rather than a product where it involves transformation in knowledge, beliefs, behaviours and attitudes. Learning is something I do for myself rather than to please anyone. My MTS tutors are the facilitators of learning as they play an integral role in extending students' thinking and learning.

Ethics of Care @ Work

In MTS today, the psyche of the students is a matter of interest and commitment of the tutors. The Ethics of Care has been adopted and is a fundamental tool to achieve the positive influence on me and my peers. Research by Nel Noddings (Jan 1929) shows that investing in care is a move towards increasing levels of efforts as well as levels of achievements. My tutors take effort to know the profile of every one of us in the class before even teaching them. They touch our hearts first before 'charging our mind'. Essentially, if you have not touched the hearts, you have not attempted to win students over. Our tutors diligently show care and concern for us and develop strong bond with us.

> *"Nobody cares how much you know, until they know how much you care"*
> – Theodore Roosevelt

Yayasan Mendaki's (YM) Teaching and Learning Framework stems from its Care Pedagogy which is embedded with the Ethics of Care principles. The CARE Pedagogy is made up of Caring Tutors, Authentic Environment, Reflective Learners and Engaging Curriculum and is intimately referred to as the HEART Framework where my learning experience and well-being are close to the heart of the tutors and the learning domains have helped me develop the knowledge, skills and dispositions necessary to participate in a fast-paced and changing society. The framework has been intended for the tutors to plan and implement the content and pedagogy according to the needs, interests and abilities of the students.

The Interactional Environment refers to the emotional and social aspects of the environment. A positive interactional environment helps me to be engaged intellectually and socially, build positive relationship with others, develop friendships and regulate our behaviours. In such an environment we are willing to take risks, explore confidently and make decisions.

The development of our early years is crucial as this is a period when children inquire, explore and discover the world around us. Our wonderful classroom allows us to learn social skills such as learning to work together and build our confidence.

> *"Too often we underestimate the power of a touch, a smile, a kind word, a listening year, an honest compliment or the smallest act of caring, all of which have the potential to turn a life around."*
> – Leo F. Burcaglia

Personal Peak Performance Learning at MTS

As part of Ethics of Care in MTS, students are given opportunity to acquire personal peak performance learning to better prepare ourselves in developing the social emotional competencies in coping with our studies. The mind takes the form of what

is focused on. In building our personal power, I have been able to distinguish which is my best friend and which is my worst enemy. The mind is like a sponge – its nature is to soak up experience and to store them in memory. It forgets nothing and does not know the art of giving up. Master the monkey mind and it will be a happy, peaceful mastermind.

Dynamic Math Lessons by Tutors who Care

I look forward fervently to my Math lessons. My tutors cultivate a positive learning attitude in me and enhance my self-esteem and I have progressively improved my Math proficiency. Having good ownership of my learning makes me more proactive where I seek intensive help early; there is time to 'catch up' and grasp fundamental concepts and skills necessary for Math. Hence my peers and I handle basic computation fairly well and a good number of us are confident enough to perform and persevere in non-routine problem-solving tasks.

With the care pedagogy principles at work, our lessons are not only pedagogical but also pastoral in nature where our tutors are like our mentors, playing their role effectively and maximizing the potential of the small class size.

The BIG IDEA is to that our tutors understand us the Math Learners. To improve Math education, much research in the past has been done to understand how tutors teach Math – how they teach differently. However, in recent years, researchers have homed in on the part of the equation: the learners and how they learn – Shift in thinking among researchers – A new paradigm has taken place – the Learners as the Focus.

A Holistic View of Math Education

My tutors have taken a holistic look at teaching and learning where the interaction is between 3 factors – the knowledge of Math, the tutor and the student as they form an important interaction triangle. Teachers position us, the learners, very significantly in the interaction pattern. They attempt to see the learners in a different light; an important one.

There are 3 factors that come to pay in the learning of Math and these are students' mathematical self-concept, motivation and achievement. With tutors' efforts to establish good rapport with students, we are keen to learn in class even though we may not be making remarkable progress and some may also have difficulty grasping Math concepts. Despite our obvious learning challenges, our tutors make us feel 'we can do Math'.

"Children are born ready to learn. They are wired from the beginning to experience and master the world around them."

– Jan Shomkoff, 2005

With policy-makers' efforts in promoting STEM (Science Technology Engineering and Mathematics), our mindset has changed. Tutors are effectively helping students to be capable of excelling in Math, enjoying Math, and making Math learning happen for students.

My Supportive Peer Culture

Many of my peers are intrinsically motivated to learn Math. 'Motivation' is a factor to develop positive learning attitudes. What is critical is the spurt of motivation that comes in the form of having a problem-solving disposition to tackle challenging questions as we are proactive when we cannot solve the problem. What is commendable is that we would engage with the problem without necessarily having to solve it completely. It does not matter if our answers are wrong.

> **People with a Growth Mindset believe that smartness increases with hard work, whereas people with a fixed mindset believe that you can learn things but you cannot change your basic level of intelligence.**

Although some of us are low progressing pupils at some point of time, our thoughts and feelings towards Math tell us that we can 'simply do Math' and our belief system tells that success in Math is 'on its way'. Along the way some of us may have not done well in Math, yet we are able to pick ourselves up in a virtuous circle where our growth mindset guides us to continue to learn math deeper through the mistakes we make and we will eventually progress to the next level.

"My Peers, O Talk not to me of a name great in story. The days of our youth are the days of glory."
– Byron

With their Mathematical Mindset, our adult enablers – both parents and teachers alike, have never allowed us to give up Math because they believe that 'everyone can excel in it'. No one chants 'I am not a Math person!'

Mathematical Mindset Principles by Jo Boaler

The book entitled "Mathematical Mindsets" by Jo Boaler is a unique and wonderful book that shows how the author has distilled her years of experience and her powerful wisdom to show tutors how to present Math work, structure Math problems, guide students through them and give feedback towards 'Growth Mindset'.

Indeed we as students are joyfully immersed in really challenging Math problems. We are keen to have our mistakes discussed in front of the class. We say 'I am a Math person' and this is not a Utopian Vision; it is happening in many MTS classrooms who believe in Jo Boaler's recommended principles.

The Power of Mindset – Growth vs Fixed – implies that mindsets are critically important in determining the MTS students' achievement in Math. People with a Growth Mindset believe that smartness increases with hard work, whereas people with a fixed mindset believe that you can learn things but you cannot change your basic level of intelligence. When people change their mindset and start to believe they can learn to high levels, they change their learning pathways. Our MTS Math tutors believe that they have the potential to deeply impact students learning in a sustained way over time.

A nurtured Growth Mindset and good study habits, like completing homework and taking down notes during class, help reinforce and consolidate what we learn. Having procedural fluency means we students are familiar with basic mathematical procedures. Practice bolsters procedural fluency, which lets students tackle complex problems more easily.

The Disciplinarity of Math have been continuously instilled in us where we should not just have good study habits but also a sense of what Math is about - Math has been sensible for us students as we are able to explain and understand a particular formula. And not just memorise it.

Make Math Thinking Visible

When working out our Math problem, the MTS tutors would encourage the students to pen our thoughts and reasons for solving a problem in a particular way in a column next to the questions. Metacognition for Students and Teachers – Thinking about Thinking – has been critical in our learning at MTS and appreciating Math. Applying Metacognitive skills in the Math classroom is important in understanding what we are doing, instead of solving mechanically.

Our Math tutors seek feedback from us on their teaching and they also benefit from 'this visible thinking' when they prepare, conduct and reflect back on their lessons. We normally consider why we use a certain approach to solve a Math problem and always ask, "Do I use it because it is the best or because I am used to it? Am I aware of alternative strategies as well?"

This is Metacognition – Thinking about Thinking – being aware of the ability to control one's thinking process. Our MTS tutors are also gaining confidence in their ability to develop 'metacognition' in their students. In developing metacognition, they have encouraged verbal communication. Verbalizing is powerful in our class as when we discuss or speak out, we reflect on what we are doing and think about what we say out loud.

We are given ample opportunities to solve non-routine and open-ended problems and this is really the first part of helping us develop metacognitive awareness. For example,

when students learn the topic 'Percentage', our tutors ensure that we do not answer questions mechanically.

For example if I say I will give you 20% of what I have in exchange for 10% of what you had, do you want to take the offer? – We have to think deeper about what percentage is and hence understand it. This makes us visualize our working backwards instead of doing it the usual forward manner without thinking!

In addition, vocalizing our thought enhances our metacognition process. By listening to how we support our answer, our tutors are certain to know if the students have understood the topic and can truly make mathematical sense. This is a way of measuring if we have indeed developed metacognition.

An undisputed point in educational literature is that the tutor is the single most influential factor in student learning, Tokuhama-Espinosa, (2014). Good tutor push students, maintain order and are willing to help, explain until everyone understands, vary classroom activities and also try to understand students.

When tutors look back at their lessons, they observe through 2 lenses – the tutors' lens (look at how they ask the questions and carry out the tasks) and the students' lens (they look at the students behaviour and how their reaction towards specific tasks). With their encouragement in Math communication, we have greater clarity in learning Math concepts. Thus we no longer have tutors teach reducing of fraction by simply explaining that it is a process where you divide both parts by a common term and they just say 'cancel' the numerator and 'strike' the denominator. Hence their students don't understand – whenever they see the same number, they will strike out even though it cannot be done. Fortunately, our dynamic MTS tutors have eliminated this kind of 'wrong language' and have encouraged the right kind of Math classroom norms.

I am Not a Poor Learner who Learn Concepts Blindly

We adopt simple slogans like 'Learn, Use and Do Math' close to the heart as promoted by Dr Hang Kim Hoo, Principal of NUS High School. Each time we are engaged in thinking about anything related to Math, we are able to mindfully keep a comprehensive and holistic view of the world of Math.

Indeed at MTS, at the heart of learning Math, it is always about learning joyfully, properly, comprehensively, competently and mindfully so that one will acquire the competencies and capacity to engage in lifelong and self-directed learning in Math. This will then enable one to go on to do Math - to explore, build and develop new mathematical knowledge and tools – to understand real and authentic problems and hence appreciate the value, nature and beauty of Math.

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> *We have continuously discovered how the various mathematical processes like reasoning, communication and connection-making can be weaved more coherently to produce productive mathematical habits of the mind.*

Our teachers' craft and capacity have leveraged the mathematical modelling process framework as a platform to provide opportunities for us students to use Math to develop proficiency in mathematical conceptual understanding, skills and knowledge. We have continuously discovered how the various mathematical processes like reasoning, communication and connection-making can be weaved more coherently to produce productive mathematical habits of the mind. There have been many improvement cycles in providing a total learning experience in Math for us the students.

"A starfish landed on the shore, Quite helpless, Dejected and limp, parched by the sky I picked up the shriveled star, Hurled it back to the luscious sea. The waves continued their relentless swish I prayed a prayer and made a wish The starfish would live."

– Dr Shirley Lim

We attempt to comprehend the study on the relationship between brain-based learning and Math. In the early 2000, scientists chose to study London Black Cab Drivers to look for brain changes as the drivers took years of complex spatial training and they noticed that vast difference in the development of the brain between the Black Cab drivers in London and the bus drivers.

The Black Cab drivers had to memorise an incredible 2500 streets, 20 000 landmarks within a 25 mile radius of Charing Cross in London. Learning their way around in the city of London was challenging as London was not built on a grid structure and comprises thousands of interweaving interconnected streets. At the end of the training period, the Black Cab Drivers would take a test that was simply and elegantly called "The Knowledge".

If you ride in a London Black cab and ask your driver about "The Knowledge", he would usually be happy to regale you with stories of the difficulty of the test and his training period. "The Knowledge" was known to be one of the world's most demanding courses and applicants took an average of 12 times before passing.

Researchers found that at the end of their training period, the hippocampus in the taxi drivers have grown significantly. The hippocampus is the brain area specialized in acquiring and using spatial information.

Scientists have compared the brain growth of black cab drivers to that of London bus drivers. Since the bus drivers learn only simple and singular routes, the studies show that they do not experience the same brain growth. This confirmed the scientists' conclusion that the more mistakes we make through experiencing mistakes, the better our brain develops.

The studies of London Black Cab Drivers show the degree of brain flexibility or plasticity that stunned scientists. Therefore, our MTS tutors have been advocating to students to keep on working on the Math problems again and again.

Generally, tutors have always preferred more traditional modes of teaching and direct instruction as they feel they have control over the pupils. However it is heartening to note that MTS tutors have provided students with experiences to learn through play and with manipulatives (available Math learning resources). Our comprehensive lesson package includes Practice Papers, Activity Pack with Manipulative, and Positive Math Norms Reference Guide for Tutors, Positive Math Norms bookmarks for Students.

In addition, parents are also grateful for the intensive support for their children in MTS. The continuous development of our MTS tutors which focus on both content mastery and instructional strategies have taken a big step forward. The role of MTS tutors has indeed evolved, shifting from one who presents content to one who enables the student to learn how to learn, through the holistic development of mathematical knowledge, skills, competencies and productive habits of minds. In particular, content mastery among Math tutors will be critical as improving disciplinarity improves ones access to a wider repertoire of pedagogies.

In the studies by Carol Dweck and her colleagues, about 40% of the children held damaging fixed mindset, believing that intelligence is a gift and that you either have it or you don't. Another 40% had a growth mindset and the remaining 20% held beliefs that wavered between the 2 mindsets – students with a fixed mindset are more likely to give up easily; whereas those with a growth mindset keep going even when work is hard and are persistent, displaying what Angela Duckworth termed as 'GRIT'.

> *"The mind is not a vessel to be filled, but a fire to be kindled."*
> – Plutarch

Thankfully, with MTS Care Pedagogy and the embedded EoC principles, our tutors often affirm that we are capable of making continuous improvement if we have more positive brain activity when we make mistakes with more brain regions lighting up and more attention to and correcting of errors.

The **Power of Mistakes and Struggles** has been the very key process encouraged in class; it has called for changes in the approach to teaching and learning of Math by tutors and parents. The positive norms have guided tutors and students on the right learning habits and tutors have been promoting this attitude and behaviour towards learning in class.

The Mindset Makeover in Math

Math is a very broad and multi-dimensional subject that requires reasoning, creativity, connection-making and interpretation of methods. At the heart of this adoption of mathematical mindset in teaching and parenting is about the child's growth, innovation, creativity and the fulfillment of his Math potential.

Education is not just about numeracy and literacy skills, or even subject knowledge; it is also about the development of the critical faculty of children; it is about their ability to be situated individuals who can interact as responsible community members and citizens in any given society. Every society also feels that the knowledge and understanding that previous generations have developed should be passed on to their children through education: our traditions, values, culture and languages do that.

What always impressed people about me was my confidence in myself, my ability to hold my own against all, and my confident and balanced interaction with the world on the basis of how secure and situated I feel in any situation. And I have amazing knowledge, understanding and wisdom. My interpersonal skills are quite astounding. My knowledge of my culture is fairly good. My tutors at MTS have made time to rethink and reimagine what they teach and how they teach it. Apart from literacy/numeracy and other skills and subject knowledge, they have worked on giving the students the ability to think for themselves. I am able to contextualize and possibly localize my knowledge. I just need to situate them better in our languages, cultures and traditions.

> **Education is not just about numeracy and literacy skills, or even subject knowledge; it is also about the development of the critical faculty of children; it is about their ability to be situated individuals who can interact as responsible community members and citizens in any given society**

"It is the supreme art of the teacher to awaken joy in creative expression and knowledge."
– Albert Einstein

Mendaki has designed a Learning Approach for my time. I am leaning to build on the basics to develop the higher order skills the new economy demands. The REIMAGINING EDUCATION movement has attempted to make my learning more relevant to real life, real work and the real opportunities for learning.

My tutors create "Moments of Truth" which are a special time when a pupil has a very good experience with the teacher in the classroom and "falls in love with the school' or with her studies. My tutor's role is no longer one-size-fits-all . Mendaki has redefined the Tutor's Role.

"A teacher affects eternity. He can never tell where his influence stops."
– Henry Adams

My Hopes and Aspirations

My tutors have been reflecting and improving our MTS education, particularly content pedagogy and assessment for learning. My MTS centre is actively working towards student-centred education, authentic learning, and providing locally relevant and effective MTS school . Teaching is a work of the heart, hand and the mind. Through his actions and words, my tutor guides his students in the pursuit of knowledge, helps me discover my strengths and builds my character. I owe it to my tutor.

My hope and aspiration is for MTS classrooms to continue to become places of intellectual stimulation where learning is viewed not in test scores but in the development of individuals who can think, plan, create, question and engage independently as learners. As good learning centres, tutors have created the cultures of thinking where thinking is made visible through the use of effective questioning and listening. An impactful Learning experience or simply helping me learn better. Indeed my classroom has evolved as it has recaptured the essence of what drives me to learn and engage with my environment. I have ownership of my learning and developed my own terms of learning by updating my tutors on my areas of concern.

As a Malay Muslim student, I have not been traumatized by Math; hence Math trauma and Math anxiety are never in the path of my learning experience. Life is 10 percent what happens to you and 90 percent how you respond to it. MTS approach in Math Teaching and Learning is a pathway that has changed my relationship with Math forever and brought about my quality school experience in MTS. My MTS learning space with its EOC principles has nurtured happy thinking children who looks forward to each lesson at its centre. This caring and dynamic learning space I have is very special to me.

"Education is for improving the lives of others and for leaving your community the world better than you found it."
– Marian Wright Edelman

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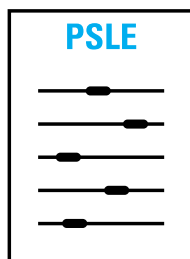
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Section

II

**Scan of Key National
Policies in Singapore and
their Implications on the
Malay/Muslim Community**

General Scan of Education Policies

Education

A. Primary and Secondary Education

PSLE

I. Changes to PSLE scoring
- Part of a larger shift to nurture well-rounded individuals while reducing emphasis on academic results
- Changes will take effect in 2021, and will affect the current cohort of Primary 1 students

Achievement Levels (AL)
- Each PSLE subject will be scored using 8 Achievement Levels (ALs), with AL1 being the best
- A student's AL for each subject will reflect his own level of achievement, rather than how he has performed relative to his peers. The PSLE Score is the sum of ALs across the four subjects, ranging from 4 (best) to 32
  [Example: Math (AL1); Science (AL1), English (AL2), Mother Tongue (AL1). PSLE score = 5]
- The 8 ALs are designed to broadly reflect different levels of achievement, and are set based on the learning objectives of the curriculum
- Foundation-level subjects will also be scored using ALs
- Students will continue to be placed in streams based on their PSLE scores. Streams will remain the same – Express, Normal (Academic) and Normal (Technical)

AL	Reference Raw Mark Range	Placement Outcome	PSLE Score
1	≥ 90	Express	4-20
2	85-89	Express/N(A) option	21-22
3	80-84		
4	75-79	N(A)	23-24
5	65-74	N(A) / N(T) option	25
6	45-64	N(T)	
7	20-44		26-30, with AL7 or better in both English and Mathematics
8	< 20		

Implications on the Malay/Muslim Community (MMC)

- Through abolishment of the T-score, fine differentiation of students will be reduced
- Students' level of achievement will be reflected, regardless of how his peers have done
- Parents will be encouraged to choose schools based on their child's learning needs, talents and interests
- A majority of the 12.58% of the Malay population aged between 0-9 years old as of 2016 (Population in Brief, 2016) will be affected by the new PSLE scoring system
- A short survey by MENDAKI (2016) showed that a majority of parents of MTS students and ETF Preschool subsidies recipients view these changes as insubstantial in terms of reducing stress and allowing children to develop interests beyond academics. In order to precipitate a change in attitudes towards the changes in PSLE scoring, more initiatives by Malay/Muslim Organisations (MMOs) are needed to inform parents about the available pathways for their children post-primary school

II. Changes to Secondary 1 (S1) posting

- Posting will continue to be based on academic merit first, i.e. students' PSLE Score
- The following tie-breakers will be used in cases where students have the same PSLE Score:

1   Citizenship   2   Choice Order [New]
acknowledges various considerations that students and parents have in choosing schools, such as CCA and academic programmes   3   Computerised Balloting
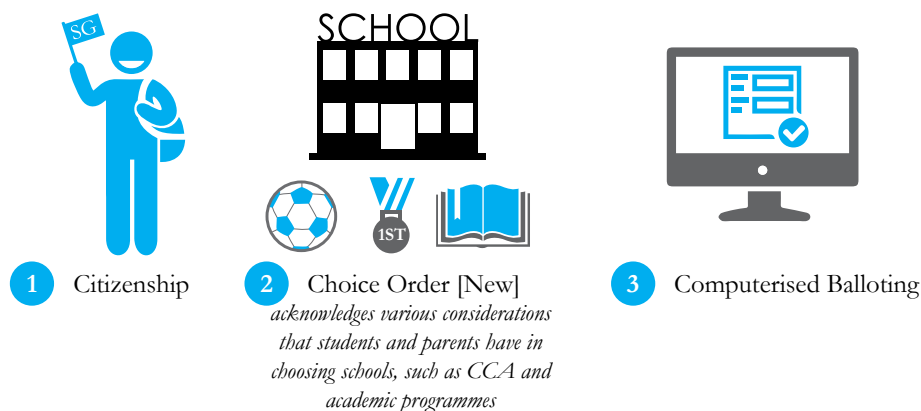
Implications on MMC

- With wider scoring bands, more students will have the same PSLE Score and schools will be less differentiated by cut-off points
- The merger of 22 secondary schools by 2018 will encourage schools to develop their niche areas and focus on holistic student development
- Malay parents must be cognizant of schools with niche areas that can nurture their child's potential

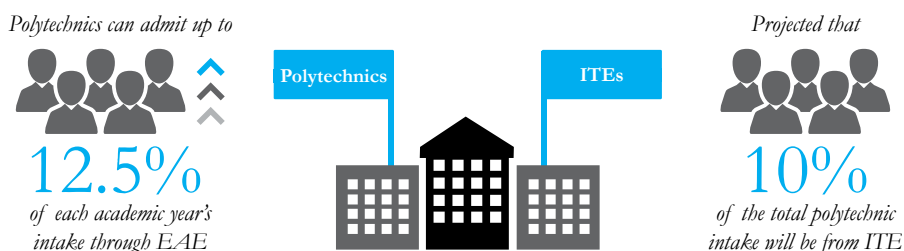## III. New Subjects Offered at N and O levels

- Seven new applied learning subjects will become part of the N-level and O-level curriculum
- Curriculum developed with input from industry partners and Institutes of Higher Learning (IHLs)
- Allows students to discover new interests and explore fields that they might want to pursue after secondary school

2017		2018
N-Levels - Smart Electrical Technology - Mobile Robotics - Retail Operations	**O-Levels** - Electronics - Computing	**O-Levels** - Exercise and Sport Science - Drama

- Malay/Muslim students can leverage on these opportunities to assess the suitability of various fields of study before entry into IHLs
- Early exposure to these disciplines will give Malay/Muslim students a head start in gaining mastery of new skills

B. Tertiary Education

I. Early Admissions Exercise (EAE) for Enrolment into Polytechnics

Polytechnics can admit up to
12.5%
of each academic year's intake through EAE

Polytechnics   ITEs

Projected that
10%
of the total polytechnic intake will be from ITE

- Courses have 30%-50% course level cap on students entering the polytechnic under the EAE – ensures that students admitted through their GCE 'O' Level Examination grades will have access to all polytechnic courses
- Assessments based on aptitude, talents and interests in the course applied for. Modes of assessment include interviews, submission of portfolios and/or aptitude tests, and may vary across courses
- Students with exceptional leadership skills, community service participation, and/or talent in sports and arts may also apply
- **Early Admissions Exercise (ITE Graduates):** Allows students to be considered for admission on the basis of strong skills exhibited in areas relevant to the diploma course they wish to pursue

Implications on MMC

- The first conditional enrolment in 2016 has seen 3,680 secondary school students offered provisional polytechnic places
- 72% were offered their first choice, and more than 92% have accepted their offers
- The EAE opens up alternative pathways for students to gain entry into polytechnics prior to sitting for their GCE 'O' Level examinations, thereby allowing them to focus on learning instead of rote memorisation for examinations

II. Edusave Awards to be Extended to Polytechnics (2017)
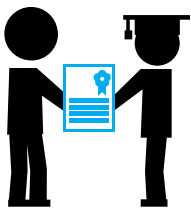
Enhanced number and reach of Edusave awards to better recognise both academic and non-academic excellence in polytechnics and ITE
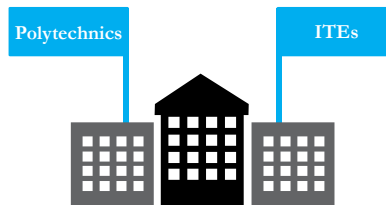
- Edusave Merit Bursary (EMB) and Edusave Good Progress Award (GPA)
- Will be extended to polytechnic students; previously limited to ITE students
- Criteria and amount will be pegged to the corresponding Edusave awards in ITE
- These awards will encourage Malay/Muslim students in polytechnics and ITEs to develop skills and excel in areas outside of academics

New edusave awards for ITE & Polytchnic students in 2017			
Awards	ITE	POLY	Criteria
Edusave Skills Award **(NEW)**	$500	$500	For up to 10% of graduting students who have demonstrated excellent application of course-specific skills and soft skills in the course of their studies
			Students' performance during their internships and Final Year Projects, or achievements at other platforms such as conferences and competitions, will be evaluated for the award
Edusave Good Progress Award	$400	$400	For the top 10% of students from each level and course from each school in terms of academic performance improvement*
			*Excluding students awarded the Edusave Merit Bursary
Edusave Merit Bursary	$500	$500	For the top 25% of students in each level and course from each school in terms of academic performance, whose household income does not exceed $6,000 (or per capita income does not exceed $1,500)

III. Increased Discretionary Admissions Scheme (DAS) Intake
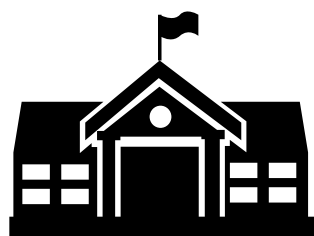
Nanyang Technological University (NTU), National University of Singapore (NUS), and Singapore Management University (SMU) can now admit up to

15%

of the annual intake annual intake under the DAS, an increase from the previous 10%

• Provides opportunities for Malay/Muslim students to be admitted into degree programmes on the basis of their strengths and talents beyond academic performance

C. SkillsFuture
I. Lifelong Learning Units In Public Universities

All five public universities will set up dedicated units to prepare new courses for mid-career employees so as to help them learn new skills throughout their lives

- Courses will have shorter durations and more online training
- Admission to courses will be based on prior learning and work experience
- Some courses can be combined towards attaining certificates

NUS: School of Continuing and Lifelong Education (SCALE)
- Short undergraduate-level certificate courses which allow workers to keep pace with changes in technology
- Credits from these courses can be counted towards the Bachelor of Technology degree

NTU: College of Professional and Continuing Education (PaCE)
- Offers specialist modular certificate programmes in Power and Clean Energy, Electrical Power Systems and Manufacturing Engineering

SMU: Academy of Continuing Education (ACE)	SUTD: Academic of Technology and Design (SATD)	SIT: SITLearn

Implications on MMC

- Employees will be able to upgrade and gain certification to increase their employability and remain relevant
- Malay SMEs will be able to tap on more innovative ideas from their employees as a result of skills and knowledge upgrading
- The Malay/Muslim community should cultivate a culture of continuous learning by taking advantage of these courses

II. Earn and Learn Programme (ELP)

- A work-study programme designed to give fresh graduates[1] from polytechnics and the Institute of Technical Education (ITE) a head start in careers related to their discipline of study
- Successful applicants are matched with a job related to their discipline of study and undergo a 12- to 18-month structured training programme, depending on the sector and job requirements
- Fresh polytechnic and ITE graduates who are Singaporeans or PRs may participate in the programme. However, only Singaporeans will receive the $5,000 sign-on incentive which will be disbursed in two tranches

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[1] Fresh graduates are defined as individuals who are hired by participating companies within 12 months after their graduation from the polytechnics or ITE (based on the graduation date as stated on the Diploma/NITEC/Higher NITEC certificates). For male participants who need to serve National Service (NS), the 12-month period will start from their Operationally Ready Date (ORD).

Polytechnic ELP

- 2 ELPs are available for polytechnic graduates to pursue degree programmes:

> Singapore Polytechnic's ELP leading to an Advanced Diploma in Applied Food Science → SIT's Bachelor of Food Technology with Honours, with the exemption of the 28-week work portion of the Integrated Work Study Programme.

> Republic Polytechnic's ELP leading to a Specialist Diploma in Supply Chain Management → UniSIM's Bachelor of Science in Logistics and Supply Chain Management with credit exemption.

ITE ELP

- Trainees will work towards attaining part-time polytechnic diplomas while undergoing training to take on higher-level job roles within the company
- Two new ELPs will lead to a part-time diploma in the Air Transport Sector. Under these ELPs, ITE graduates have the flexibility to take modules relevant to their immediate jobs first and complete the rest later

Implications for MMC

- This programme provides an alternative pathway for polytechnic and ITE graduates who are unsure of whether they want to seek employment immediately or pursue further education, by allowing them to pursue both concurrently
- Given that there were over 27,500 Malay/Muslim polytechnic graduates in 2010 (Census, 2010) and it is likely that this number has increased over the years, a large number of Malay/Muslim graduates stand to benefit from this programme

D. Madrasahs
Asatizah Recognition Scheme (ARS)

All Islamic religious teachers[2] must be recognised under this scheme in order to ensure credibility of religious teachers

- Training will be helmed by MUIS and PERGAS
- Effective from **1 Jan 2017**
- Currently, about **80% of local Islamic religious teachers are accredited under the scheme**
- Code of Ethics provides guidelines on acceptable behaviours and stances, reflective of their positions as teachers and representatives of the community

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[2] ARS-registered asatizahs are not required for religious ceremonies which are not religious classes.

General Scan of Employment Policies

Employment
A. Adapt and Grow Initiative

Up to
70%
wage support

&

90%
course fee subsidy to employers
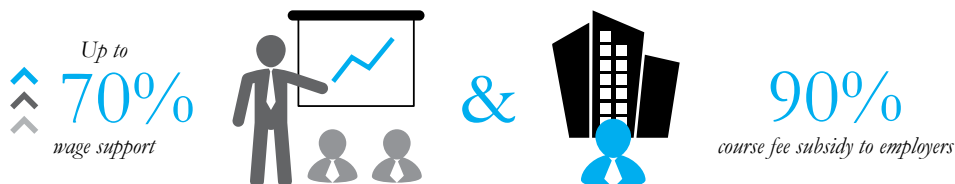
I. Place & Train (P&T) Programmes
- Supports Rank-and-File (RnF) workers by allowing them to be employed in a company before starting their training
- Increased number of programmes in sectors such as education, and information and communications technology (ICT)

Applicable to more than
20
sectors
including healthcare, social services and ICT

Training allowance increased from

$4.50
per hour

➡ **$7.50**
per hour, with better retention incentives for trainees

II. Professional Conversion Programmes (PCP)
- Facilitates reskilling of Professionals, Managers, Engineers and Technicians (PMETs) to prepare them to take on new job scopes within the same sector, or for re-entry into different industries
- Provides up to 90%[1] wage support to employers during the duration of training

III. Enhanced Work Trial
- Offers on-the-job training to individuals who are unable to be placed directly into employment, thereby allowing both employers and employees to assess job fit

[1] Applicable to mature PMEs aged 40 years old and above, and long-term unemployed (more than 6 months) Singaporean PME, depending on the industry

IV. Career Support Programme (CSP)

10% - 40%
wage support to employers for up to 1 year

- Encourages employers to hire mature (i.e. 40 years and above) long-term unemployed Singaporean PMETs into mid-level PMET jobs through the provision of wage supports
- From 1st May 2016, CSP has been expanded to cover PMETs who have been made redundant, either due to retrenchment or premature release from employment contracts
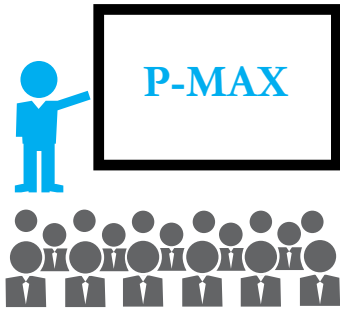
V. P-MAX

- Facilitates recruitment, training, managing and retention of PMETs within Small and Medium-sized Enterprises (SMEs)
- SMEs to receive a one-time $5,000 grant upon successful implementation of recommended HR processes, and retention of PMETs hired under the programme for at least six months
- Number of placements to be made available per year targeted to increase to 1,400

VI. Techskills Accelerator

- Strengthens training and job-matching in the ICT sector
- New skills development and job placement hub for the ICT sector
- Identifies skills in demand and work with specialized training providers
- Develops industry-recognized skills standards and certification
- Works with anchor employers to hire and pay based on certified skills proficiency rather than academic qualifications

Implications on MMC

- There is a high proportion of Malay/Muslims working in the Transportation & Storage and Manufacturing sectors (Statistics Singapore, 2010), industries which are vulnerable to technological disruption
- MMOs can engage the Committee on the Future Economy to find out more about future growth sectors, and accordingly encourage our workers to leverage skills upgrading initiatives so that they can remain relevant in the new economy
- According to a Manpower Ministry report, 71% of the 9,090 residents who lost their jobs in 2015 were PMETs, up from 66% the year before (The Straits Times, 21 April 2016) This shows that PMETs are as vulnerable as RnF workers when it comes to layoffs.
- Our community must remain alert to new sunrise and sunset industries, and take advantage of schemes like the PCP in order to remain relevant in the face of changing economic landscapes
- Outreach can be done by MMOs to channel Malay/Muslim PMETs, who have recently been made redundant or unemployed, to the CSP, thereby enabling them to secure new jobs
- To ensure wider career options for Malay/Muslim PMETs, outreach can be done under the P-Max scheme to facilitate job placements for our PMETs with SMEs
- As demand for ICT professionals grows, more efforts can be made to cultivate our community's interest in the technology sector
- Malay/Muslim students should be exposed to coding and programming at secondary school level or earlier, in line with the government's focus on building a Smart Nation and the attendant changes to the future career landscape
- Outreach to Malay/Muslim workers already in the technology sector should be carried out to acquaint them with new IT skills development and job placement opportunities
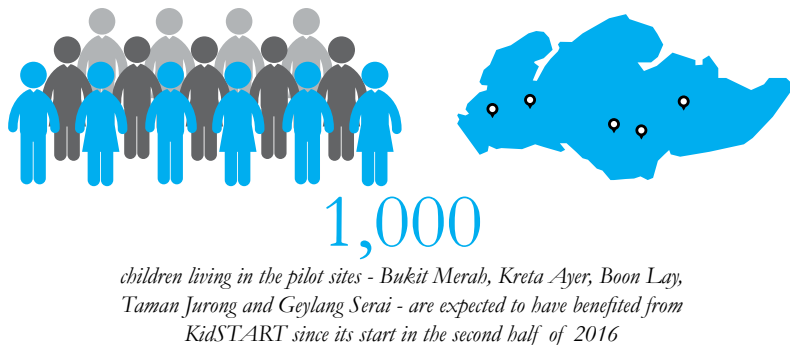
B. *Strengthening the Singapore Workforce*

Policy Announcements	Implications on MMC

I. Employment, Wage & Training Support for Low-wage Workers & Persons with Disabilities

Workfare Income Supplement (WIS)
- Higher income ceiling of $2,000 & payouts of up to $3,600 a year
- WIS payouts to be given monthly

Workfare Training Support (WTS)
- Training subsidies & awards extended to more workers, including persons with disabilities (PWDs)

Contract Workers
- Entitled to statutory leave benefits after working in the same firm for 3 months or more
- Contracts renewed within a month are to be treated as continuous, and leave is to be granted based on the cumulative term of contracts

With the income ceiling being raised from $1,900 to $2,000 a month, more Malay/Muslim workers will qualify for the WIS scheme

More disabled workers in the community will also stand to receive support for skills training

MMOs working with low-income beneficiaries and contract workers can raise awareness on enhancements to the WIS scheme and leave benefits at job fairs or similar platforms

MMOs working with disabled, low-income beneficiaries may encourage their clients to sign up for skills training, with the extension of the WTS scheme to PWDs

II. Developing Human Capital

National Jobs Bank
- Improved, more user-friendly interface

Career Guidance and e-Services by e2i and Workforce Singapore
- 'Video-resume' recording, online job matching and online forum communities with access to job-related information

National HR Professional Certification Framework
- Provides HR professionals with a comprehensive roadmap for developing skills and capabilities needed to advance their careers

Employment Claims Tribunal
- Attends to salary-related employment disputes

Tripartite Alliance for Dispute Management
- Mediation centre for all employees, both unionised and non unionised

Besides physical job fairs, Malay/Muslim job seekers can now take advantage of e-services such as 'video-resume' recording and online job matching by e2i and Workforce Singapore to land job opportunities

MENDAKI SENSE and other MMOs can collaborate with e2i and Workforce Singapore to publicise the enhanced Jobs Bank, organise job fairs and offer information on career guidance

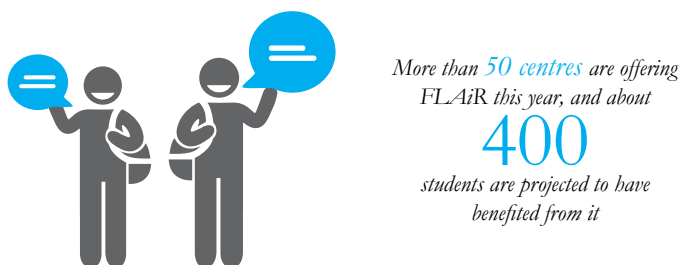# General Scan of Family and Household Policies

Family and Households
A. Ensuring Quality Childcare & Education

I. KidSTART Programme

1,000

children living in the pilot sites - Bukit Merah, Kreta Ayer, Boon Lay, Taman Jurong and Geylang Serai - are expected to have benefited from KidSTART since its start in the second half of 2016

- Early Childhood Development Agency (ECDA) has piloted a new system of support for low income and vulnerable children to enable them to have a good start in life
- Aims to **coordinate and strengthen support across agencies, extend new forms of support**, and **monitor the progress** of these children from birth to 6 years old

II. Focused Language Assistance in Reading (FLAiR) programme

More than 50 centres are offering FLAiR this year, and about

400

students are projected to have benefited from it

- To help students who **do not have English** as a **common language** used **at home**
- Number of not-for-profit centres offering the programme to double

III. More After-school Care
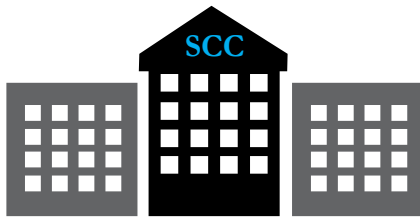
Increase in the number of school-based Student Care Centres (SCCs) to

140

by the end of 2016.

By 2020, all primary schools will have SCCs.

- Student Care Centres (SCCs) provide **after-school care**, **supervision** and **development** for school-going children **aged 7 to 14 years old** who might not have a conducive environment for learning at home
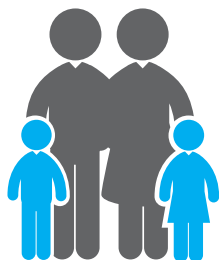
IV. More Childcare Places

By 2017, about

10,000

more childcare places will be added in Singapore

- **A third** of these places will be in **Punggol** and **Sengkang**, on top of the **30,000** childcare places **added from 2013 to 2015**

B. More Support for Child-raising
I. Child Development Account (CDA) First Step Grant

Initial amount of
$3,000

First Step grant given without parents having to save in the CDA first

- Parents who continue to save beyond this initial balance will enjoy **dollar-for-dollar matching** by the Government, **up to the remaining amount of the contribution caps**
- Parents can save any time before 31 December of the year their child turns 12 years old
- Available to eligible Singaporean children **born on or after 24 March 2016**
- Unwed mothers will soon benefit from government-paid maternity leave and the $3,000 First Step grant. This will apply to children born from early 2017

CDA First Step Grant and Total Government Contribution

Birth Order	Contribution by Employer	New (For children born on after March 24, 2016)		
	Co-savings caps (A)	CDA First Step grant - NEW (Deposited by the Government) (B)	Adjusted co-savings caps (Government matches savings deposited by parents dollar-for-dollar up to the caps below) (C)	Maximum amount provided by Government (B+C=A)
1st and 2nd	$6,000	$3,000	$3,000	$6,000
3rd and 4th	$12,000	$3,000	$9,000	$12,000
5th and higher	$18,000	$3,000	$15,000	$18,000

Source: Ministry of Finance (STRAITS TIMES GRAPHICS)

II. Medisave Maternity Package

Withdrawal limit for pre-delivery medical expenses increased from

$450 - $900

with effect from 24 March 2016

- **Defrays the health expenses of expectant mothers** by allowing them to use Medisave to pay for their pre-delivery (e.g. pre-natal consultations, ultrasound scans, tests and medication) and delivery medical expenses
- To use **Medisave** for the **delivery** and **pre-delivery** care for the **5th** and **subsequent** children, couples will need to have a combined Medisave balance of at least $15,000 at the time of delivery

Delivery Procedure	No. of days of Hospitalisation	Medisave Withdrawal Limit under the Medisave Maternity Package (covers delivery and pre-delivery medical expenses)
Example 1: Vaginal delivery (normal)	3	($450 x 3 days) + ($750 for procedure, i.e. vaginal delivery) + $900 Total claimable: Up to $3,000
Example 2: Caesarean delivery (normal)	4	($450 x 3 days) + ($750 for procedure, i.e. vaginal delivery) + $900 Total claimable: Up to $3,000

C. *Promoting Better Work-Life Balance*

I. Paternity Leave

Mandatory for employers to provide a
second week of paternity leave
to fathers of citizen children born from
1 January 2017 onwards

- Encourages fathers to spend more time caring for their children

II. Shared Parental Leave (SPL)

Working fathers will be able to share up to

4 weeks

of leave from their wives' 16 weeks of
maternity leave, as long as the latter agree

- Increased SPL to further encourage and support shared parental responsibility
- Applies to working parents of Singapore citizen children **born on or after 1 July 2017**
- Eligibility criteria for SPL
    o Working father (or self-employed)
    o Child is a Singapore Citizen
    o Child's mother qualifies for Government-paid maternity leave
    o Lawfully married to the child's mother

D. Helping Households
I. 2016 GST Voucher – Cash Special Payment

Eligible GST Voucher – Cash recipients will receive a one-off GST Voucher – Cash Special Payment of up to

$200

Eligible recipients will receive up to

$500

in 2016

- Provides **additional assistance with living expenses**, on top of the regular GST Voucher – Cash payment
- **Eligibility criteria** for the 2016 GST Voucher – Cash Special Payment is the **same** as that of the regular 2016 GST Voucher – Cash payment
- Singaporeans who **own more than one property** as at 31 December 2015 will not be eligible for the 2016 GST Voucher – Cash Special Payment

Income Earned in 2014: $26,000 and below (Assessable Income for YA2015)	Annual Value of Home as at 31 Dec 2015	
	Up to $13,000	$13,001 to $21,000
Regular GST Voucher – Cash (To be paid in **August 2016**)	$300	$150
One-off GST Voucher – Cash Special Payment (To be paid in **November 2016**)	$200	$100
Total	**$500**	**$250**

II. Personal Income Tax Relief Cap

- **Cap of $80,000 on personal income tax reliefs** per Year of Assessment (YA)
- Enhances the progressivity of Singapore's Personal Income Tax regime
- Change will take effect **from YA 2018**

III. Service and Conservancy Charges (S&CC) Rebates

840,000

Singaporean HDB households received $86 million
worth of S&CC rebates in 2016
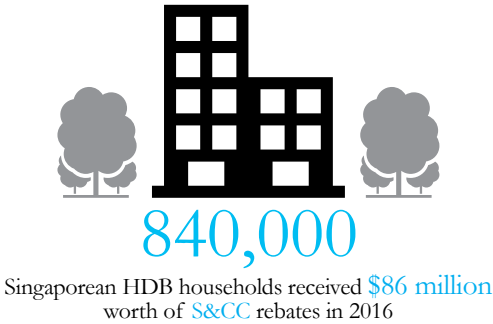
- Provides additional support to households
- Each eligible Singaporean household received **one** to **three months** of S&CC rebates, depending on their HDB flat type
- The rebates were disbursed over the months of May, July, and October, as follows:

HDB Flat Type	2016 S&CC Rebate (no. of months)			
	May 2016	July 2016	October 2016	Total for 2016
1- and 2-room	1	1	1	3
3- and 4-room	1	0.5	0.5	2
5-room	0.5	0.5	0.5	1.5
Executive/ Multi-Generation	0.5	0.5	-	1

Source: Ministry of Finance (MOF)

IV. Increase in ComCare Long Term Assistance

From 1st July 2016, cash assistance rates to households under this scheme have been raised

3,800
households have benefited from the increased rates – of which majority are elderly households

- Provides support for persons who are unable to work and support themselves, and have limited family support
- **Monthly cash assistance, free medical treatment** in polyclinics and government/restructured hospitals, and **access to government-funded social services** such as senior activity centres and home help
- Recipients may receive additional assistance for recurring healthcare or hygiene needs, or one-off purchases of essential items

Household Type	Current Rates	New Cash Rates (from 1 July 2016)
1 person	$450	$500
2 person	$790	$870
3 person	$990	$1,130
4 person	$1,180	$1,450

V. Infocomm Media Development Authority's (IMDA) NEU PC Plus Programme

From 1st September 2016, the monthly household income cap has been raised from $3,000 to $3,400

Another 5,000
families expected to benefit over the next five years

- Aims to make computers and broadband connectivity more affordable for needy students or those with disabilities
- **Special Education (SPED) students** on the **Ministry of Education's SPED Financial Assistance Scheme** will **automatically qualify** for the subsidies
- Applicants who cannot afford to pay even after the subsidy can earn their computers by doing community service

Source: Ministry of Social and Family Development (MSF)

IMDA NEU PC Plus Programme

Changes to Eligibility Criteria		
Applicants must meet one of the following criteria		
	Now	**New (from Sept 1)**
Monthly Household Income	Up to $3,000	Up to $3,400
Per Capita Income (PCI)	Up to $800 (or $875 if there is a person with disability)	Up to $900 (or $1,125 if there is a person with disability)
Financial Assistance Scheme (FAS)	Recipient of Ministry of Education (MOE) FAS	Recipient of MOE FAS or Special Education (Sped) FAS

Subsidy Amount					
	Now			**New (from Sept 1)**	
	MOE FAS	**PCI ≤ $600**	**PCI > $600**	**MOE FAS or Sped FAS**	**PCI ≤ $700**	**PCI > $700**
Singapore Citizen	Up to 75%	Up to 75%	Up to 50%	Up to 75%	Up to 75%	Up to 50%
Permanent Resident	-	Up to 50%	Up to 50%	-	Up to 50%	Up to 50%

Implications on MMC

Malay/Muslim parents, like other parents, aspire towards better career opportunities for their children through education. In the past year, there have been numerous announcements regarding new schemes such as KidSTART, and improvements to existing policies such as the CDA First Step Grant and the FLAiR programme. Given that almost all of these schemes list monthly household income or per capita income as part of the qualification criteria, low income Malay/Muslim families are better positioned to take advantage of these national support schemes. The Malay/Muslim community should be made aware of these national initiatives and how they present an opportunity to aid their children in their bid to climb the education ladder.

Although several of these policies are relatively new, it is hoped that these coordinated efforts between different agencies will yield positive results within the community. MENDAKI is collaborating with ECDA to better support vulnerable Malay/Muslim families on KidSTART, and will also continue to equip low income parents with the skills to impart the joy of reading to their children, as well as parenting toolkits to help their children be school-ready.

General Scan of Elderly and Healthcare Policies

Support for Older Singaporeans and Healthcare
I. Special Employment Credit (SEC)

Special Employment Credit (SEC), which encourages employers to continue employing workers aged 55 and above
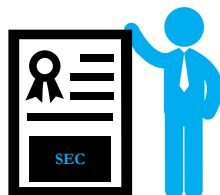
by providing wage offsets, has been extended until 2019

- Re-employment age raised to 67
- Removal of provision for wage cut at 60

II. Silver Support Scheme

Eligible seniors will receive between

$300 to $750 every quarter,

depending on their flat type

- To supplement the incomes of elderly who had lower incomes over their lifetimes and thus have less retirement support
- For bottom 20% of elderly aged 65 and above; smaller degree of support covering up to bottom 30%
- Application not required – automatic enrolment if you qualify; paid out quarterly
- First payment in July 2016 consisted of 2 quarters' worth of payouts

Implications on MMC

- Up to 40,900 Malay/Muslim seniors (Population in Brief, 2016) may be eligible for the Silver Support Scheme, provided they have $70,000 or less in CPF contributions, and a per capita household income of $1,100 or less.
- Malay/Muslim Organisations (MMOs) should work with FSCs or engage beneficiary families directly to advocate utilisation of such schemes.

Silver Support Scheme Eligibility Criteria

Lifetime Wages	Housing Type	Household Support
Total CPF contributions of not more than $70,000 at age 55. (Self-employed persons should also have an average annual net trade income of not more than $22,800 when they were between the ages of 45 and 54)	1 to 5-Room HDB flats[1]	Household income per person is not more than $1,100 per month

- Eligible seniors will receive between $300 to $750 every quarter, depending on their flat type

Resident Type	Payout Per Quarter	Payout Per Year
1-2 Room HDB	$750	$3,000
3 Room HDB	$600	$2,400
4 Room HDB	$450	$1,800
5 Room HDB[2]	$300	$1,200

- Seniors on the ComCare Long Term Assistance (LTA) Scheme will automatically receive a Silver Support Payout of $300 per quarter, as long as they meet the age criteria

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[1] Seniors will not qualify if they, or their spouses, or both own an HDB flat which is 5-Room or larger, a private property, or multiple properties
[2] Live in, but do not own a 5-Room HDB flat

III. Ageing Well at Home and in the Community

1 **Integrated Eldercare Services**

Under a pilot Integrated Operator Scheme, the Ministry of Health will appoint a single operator for

"three-in-one" eldercare services

comprising nursing homes, eldercare centres and home care within the same area for better care integration

2 **Updates on Healthcare 2020 Masterplan**
- **New polyclinics** will be opened in **Jurong West**, **Punggol** and **Bukit Panjang**, and a new primary care facility will open in Sembawang by 2020

3 **Community Networks for Seniors (Pilot)**
- Facilitates **coordination amongst community partners** to reach out to seniors and enable them to age successfully
- Networks will comprise local stakeholders with small full time teams to coordinate support for seniors
- Connects those who are healthy and mobile to activities

4 **National Silver Academy (NSA)**
- Enables seniors to pursue learning in diverse areas according to their interests
- From **May 2016**, Singaporeans **aged 50 and above** may sign up for a variety of courses under the NSA
- Subsidised courses by post-secondary education institutions and VWOs
- Selected degree/diploma modules at a token fee; no exams

5 **National Seniors' Health Programme**
- Deliver educational campaigns on **nutrition**, **fall prevention** and **dementia** to seniors in the community in order to encourage them to keep healthy

Implications on MMC

- In 2015, **8% of all Malays are 65 years and above** (Population in Brief, 2016)
- In 2010, the **old age dependency ratio stood at 8.6 per 100 Malays** (Census, 2010)
- As majority of Malays aged 65 years and above live in households with their working children with or without their spouse (70%), they could maximise their time by involving themselves in this pilot which presents opportunities for seniors to actively contribute and remain connected to the community
- In order to encourage Malay/Muslim seniors to stay healthy and active, MMOs with elderly beneficiaries may partner with the Community Networks for programme collaboration
- MMOs may engage active seniors as volunteers and mentors for community programmes

6 **Health Screening and Education at the Workplace for Seniors**

Targeting to bring the
workplace health programme to

120,000

mature workers in seven sectors by 2025

- To help seniors remain in workforce longer, Government will **bring health screening and education to the workplace**. These programmes will be customised for seniors in different work environments
- Programme has been carried out in the **transport**, **retail**, **cleaning** and **security** sectors, and will be extended to other sectors such as **healthcare**, **logistics** and **education**

Implications on MMC

- In the National Survey of Senior Citizens (2011), **Malays had the lowest percentage of respondents who had regular health screening (47.7%)**.

- The workplace health programme would benefit a good number of our elderly Malay workers, given that a high proportion of working Malays are in the Public Administration & Education (17%), Transportation & Storage (16%) and Wholesale & Retail Trade (11%) industries (General Household Survey, 2015).

IV. New Initiatives under the New Home and Community Care Masterplan to Better Support Seniors to Age at Home

New Integrated Home and Day Care Packages
- Provide seniors flexibility and convenience of receiving a mix of home- and centre-based care services from the same provider (e.g. the SPICE package, which will be expanded to pilot at least three new care packages that offer combinations of care services to meet the needs of seniors).

New "Eldercarer" pilot

Provides **comprehensive training to domestic helpers** before they are deployed to families, so that they can provide good care for elders

Expansion of Transportation Service

The scheme that helps send seniors from home to care centres is to serve **200 more seniors** this year (over 130 seniors have benefited from the services)

**SingHealth to pilot new system of deploying nurses**

To provide home nursing care to its patients living nearby, **starting with Bukit Merah**

V. War on Diabetes and Promoting a Healthy Lifestyle

1   **New Diabetes Prevention and Care Taskforce**
to be set up to develop and implement multi-year action plan, reach out and mobilise nation to fight diabetes, and monitor and evaluate outcomes of the efforts
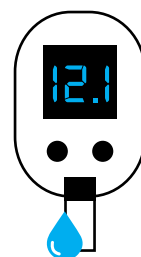
- Aims to help Singaporeans live life free from diabetes and help those with the disease control their condition
- To promote healthy lifestyle, ongoing programmes such as **National Steps Challenge** will be brought to schools, workplaces and the community

2   **Health Community Ecosystem Programme**

To be extended to nine more neighbourhoods this year, including Jalan Besar, Pasir Ris-Punggol and West Coast

- Ecosystem can benefit the Malay/Muslim community given its health situation – high percentage of individuals suffering from diabetes, hypertension, high cholesterol and obesity

3 Number of **exercise sessions** available in the community and workplaces will be doubled from **current 100 to 200 by end-2016**

4 To increase food manufacturers' adoption of **Health Promotion Board's Healthier Choice Symbol** on product packaging **from 17% to 25% by 2020**

The Fight Against Diabetes: A Nationwide Effort
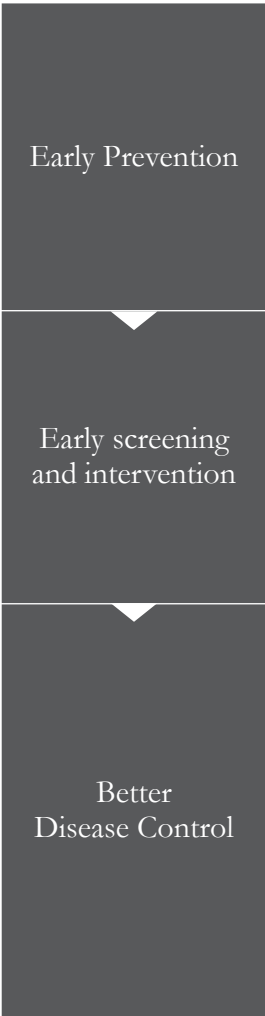
Early Prevention	**NurtureSG** A plan by MOH and MOE to inculcate healthy habits in our children and youth. **Eat Right, Exercise More** Health promotion efforts will focus on encouraging Singaporeans to eat healthily and exercise more to prevent obesity.
Early screening and intervention	**Go for health screening and follow-ups** Singaporeans can go for recommended screening tests and follow-ups at GP clinics close to home, at affordable rates through HPB's Screen for Life programme. **Identify At-Risk Groups** Early identification of high-risk groups and more public education efforts to help them adopt preventive measures.
Better Disease Control	**One Singaporean, One Family Doctor** With a regular family doctor, your doctor will be familiar with your health needs, support you with health advice and manage your health conditions as you go through different life stages. **Primary Care Facilities** • Eunos polyclinic by 2020 • Family Medicine Clinics (FMCs) in Tampines and Keat Hong by 2017 FMCs provide medical care with support services under one roof for chronic disease management.

Source: Ministry of Health (MOH)

VI. Boosting Healthcare Manpower

1 **Enhanced Return-To-Nursing scheme**
to better attract non-practising local nurses back to work in the growing aged care sector
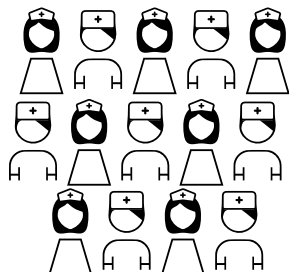
New one-time Community Care Placement Bonus at

S$3,000	S$5,000
for Enrolled Nurses	*for Registered Nurses*

joining the sector

New Senior Management Associate Scheme launched to attract mid-career talents interested in a career switch to the aged care sector

2 **Healthcare SkillsFuture Study Awards**
- To support skills upgrading of the healthcare workforce
- Opened for application from June 2016
- MOH will work with healthcare institutions and the Healthcare Services Employees' Union to **improve working environments**

VII. Other Healthcare Announcements

1 **Agency for Care Effectiveness (ACE)**
- Set up to expand capacity in evaluating clinical and cost effectiveness of health technologies

2 **Mental Health and Women's Health**
- Introduction of **3,000 dementia day care places, 1,970 dementia nursing home beds** and **160 eldersitters** by **2020**

- **Launch of national initiative to build Dementia-Friendly Communities**
  Consists of networks of Dementia Friends who are trained to recognise and provide assistance where necessary to persons with dementia

- **Revamped Women's Health Committee**
  Focus on increasing cancer screening uptake among women and promoting bone health and fighting diabetes

3 **Medisave Enhancements**
- Medisave use of $2500 for home palliative care will be extended to day hospice services later this year
- For those with terminal cancer or end stage organ failure, there is no limit and they may use their full Medisave balance

General Scan of Housing and CPF Policies

Housing and CPF
## I. Developing Residences, Transforming the Urban Landscape

Plans to launch about

18,000

HDB flats in new towns such as Bidadari, Punggol and Tampines North

- 2nd CBD at Jurong Lake District with High Speed Rail terminus to Kuala Lumpur; new Creative Cluster at Punggol; new Northern Growth corridor at Woodlands and Sembawang
- New HDB town called Tengah will be opened next to the Jurong Innovation District
- HDB will work with MTI and SPRING to help young entrepreneurs and SMEs set up shops in the heartlands
- This will increase business potential for our Malay/Muslim employers and employability opportunities for our workers
- Support for ground-up greening efforts, such as the Community In Bloom programme

II. Fresh Start Housing Scheme
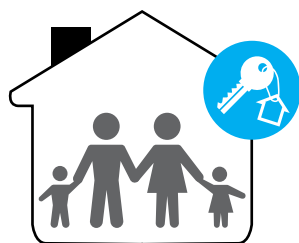
Fresh Start Housing Grant of up to

$35,000

to help them own a new 2-room Flexi flat with shorter lease – grant amount will be pro-rated according to the lease of the flat they buy

- For second-timer families with young children, who sold their first flat and are now living in public rental housing
- Eligible for another HDB concessionary loan, regardless of the number of HDB loans they have taken before
- Parents to show commitment to remaining in stable employment and ensuring that their children attend school regularly
- Tenants' Priority Scheme will be extended to all second-timer rental families
- MMOs can raise awareness among low-income Malay/Muslim families to take advantage of the Scheme and own a flat. MMOs to work with social agencies to identify and support these families in their needs, e.g. children's education, parental employment

III. Housing (rental)
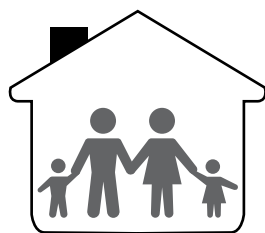
10%

of 2- and 3-room BTO/Sale of Balance flats in HDB sales exercises are set aside for rental families

- Waiting time for a rental flat has decreased from 21 months in 2008 to 4 months currently
- Such measures will help meet the needs of rental families, given that there is an **increase in the proportion of non-ownership** of homes for Malay households (from **10.4% in 2010** to **13.1% in 2015**) (General Household Survey, 2015)

IV. Housing (first-time buyers)

- New BTO prices will be kept stable and affordable. First timer couples can consider applying for flats in non-mature estates for a higher chance of success and more affordable prices
- With the new Proximity Housing Grant, first-timer resale buyers can get up to $90,000 in housing grants

V. Change in CPF Contribution and Allocation Rates

- With effect from **1st January 2016**, revisions have been made to the CPF contribution rate for **employees aged 50 to 65 years** who are **earning more than $750 a month**
- Ensures sufficiency of funds in CPF accounts for retirement needs.

Employee's Age (Years)	Increase in CPF Contribution Rates (% of Wages*)		
	Contribution by Employer	Contribution by Employee	Total
Above 50 to 55	+1	+1	+2
Above 55 to 60	+1	-	+1
Above 60 to 65	+0.5	-	+0.5

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