

Towards A **Future-Ready** Education System, For Every Child

By Pooja Bhandari, Nov 2022



Pupils at Chongzheng Primary posing with an illustrated storybook that they put together under the school's Values in Action (VIA) programme.

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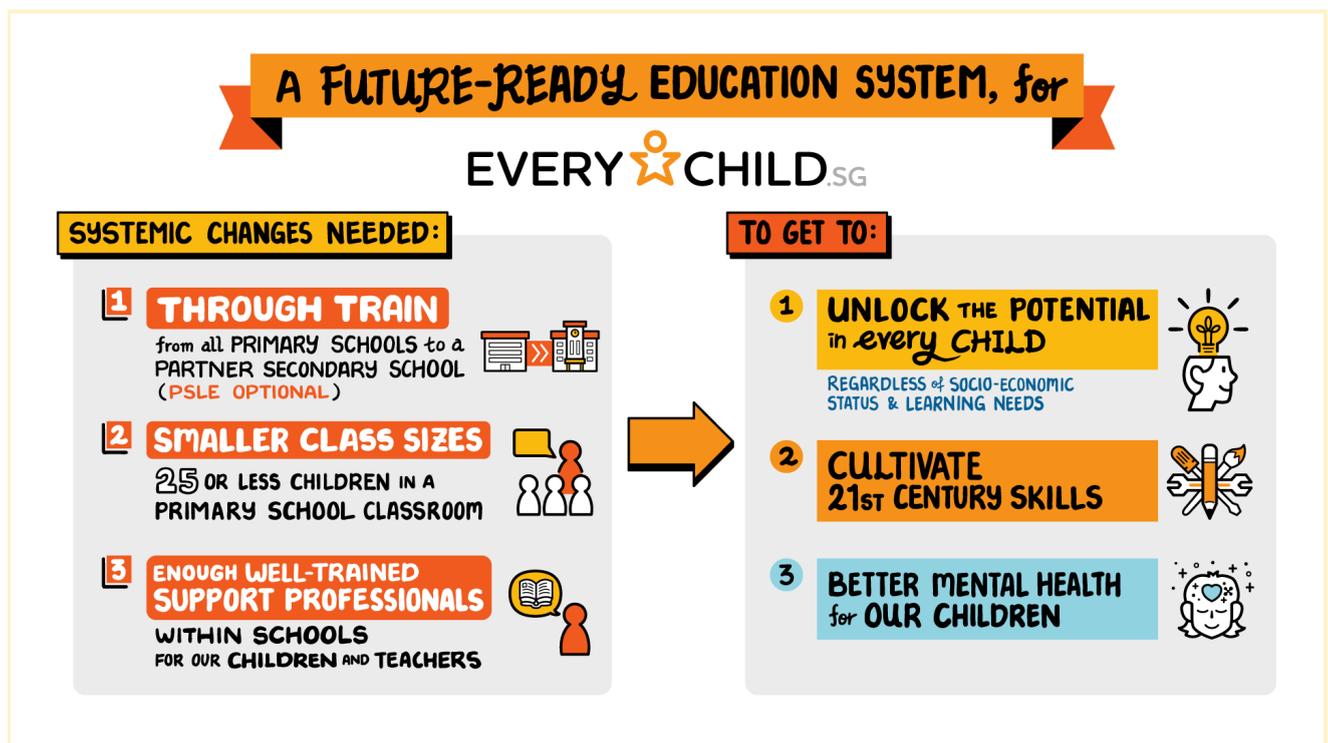
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Towards A Future-Ready Education System, For Every Child

Is our Singapore education system really nurturing every child to their fullest? Building their creativity, critical thinking, mental resilience and social-emotional skills, to meet the challenges of their and Singapore's future? We, as parents, think the answer is "sadly, not anymore".

Our education system is becoming increasingly outdated, putting Singapore's economic future in danger, along with our children's mental health, parent-child relationships, and much more.

In this document, we discuss in more detail what is going wrong, as well as the 3 key changes we suggest to bring our education system back on track. We invite you (as parents, educators, students and concerned citizens) to read on and make your voice heard.



So What's Wrong?

Some of you may think - look at Singapore's [PISA](#) rankings! Surely we're doing fine?

Yes, most of us thought so too. Having grown up under a very similar system, the issues are not always obvious to us parents, unless one has a child who is not neurotypical, or has learning or mental health needs. While the education system* still works fine for the top 10-20% or so of children by academic performance, it is certainly not working well for **all children**.

To be completely honest with ourselves, it probably never did work for every child, even when we were growing up. But back then we (parents and voters) held the Government and education system to different standards. In the 70s, 80s, 90s, just having an efficient and well-functioning education system was an achievement in itself, even if it meant 40-45 children crammed in a classroom with morning and afternoon sessions. And we seemed more in step with the times back then, e.g. creating 'Singapore Maths', which to this day remains a positive revelation to many education systems around the world.

*(*our references to 'education system', 'school', 'classroom', 'teacher', 'Principal' and 'MOE' in this article refer largely to our local primary education system, and sometimes to our local secondary education system, unless otherwise stated.)*

So what's wrong? Let's flip that question around and ask - **what's going demonstrably well right now?**

a. PISA Rankings vs the Tuition Industry

The PISA rankings are held out as the main indicator of how well our education system is doing. (The [Programme for International Student Assessment](#) (PISA) is a worldwide study by the [Organisation for Economic Co-operation and Development](#) (OECD) in member and non-member nations intended to evaluate educational systems by measuring 15-year-old school pupils' scholastic performance on mathematics, science, and reading.)

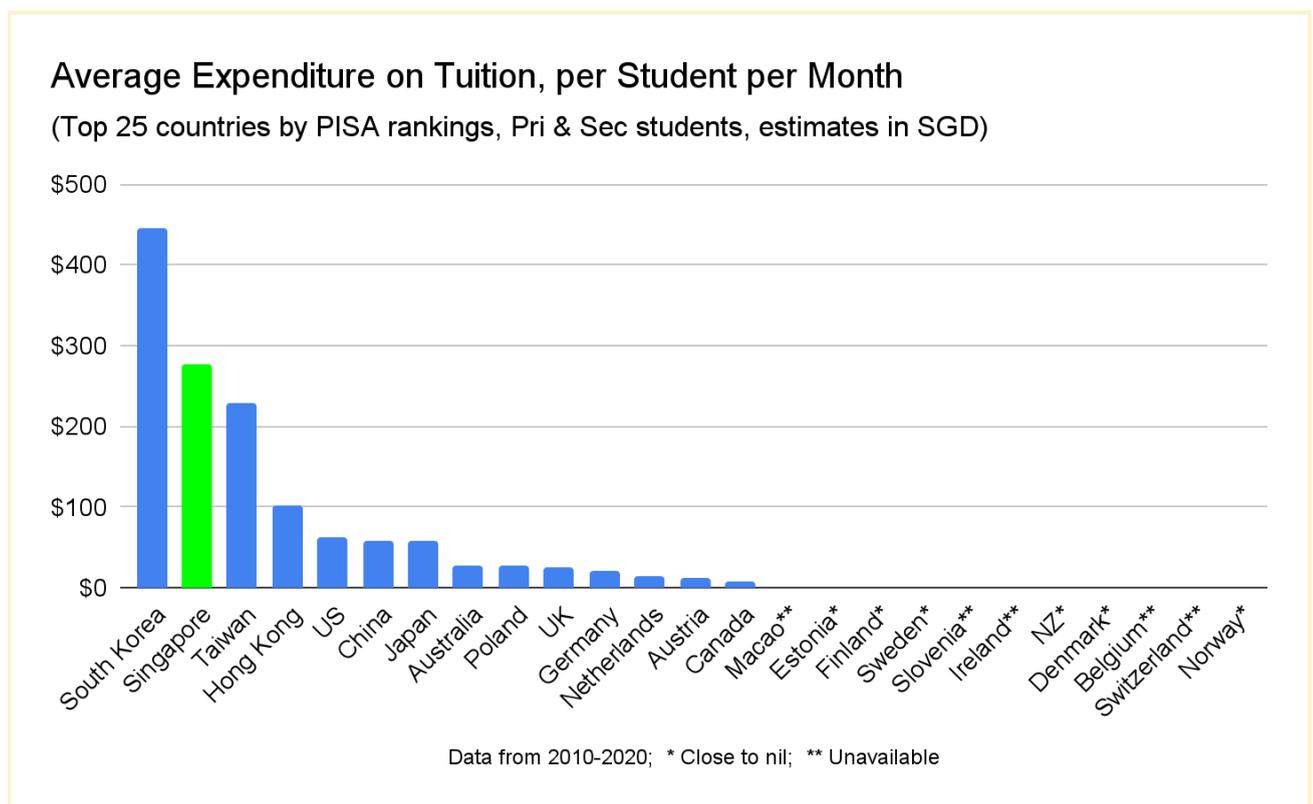
While PISA does not measure all the attributes needed to succeed in the future economy, in the absence of any other consistent measure across countries, let's say we accept the PISA rankings and reports as the best measure we currently have:

- **Our PISA results suggest there is [a fair amount of inequality](#)** in achievement in our education system, which goes against the promise of meritocracy that we have built our social contract on.
- **There is no way to separate how much of this 'achievement' is due to our education system, and how much is due to [our \\$1.4 billion \(in 2018\) plus tuition industry](#)** (about \$280 per child per month).

The difference in student performance in Singapore based on socio-economic status suggests that the tuition industry can take a significant portion of the credit. This is to be expected, since the tuition industry provides a much better ratio of teachers to students, and many tuition teachers are experienced ex-MOE teachers. This again goes against the compact of meritocracy, that every child is being given equitable opportunities at the start of their lives.

The graph below shows estimates of the **average expenditure on private tuition per student** (primary and secondary) per month in the countries that top the PISA rankings. Besides the East Asian countries like Taiwan and Korea, **expenditure is close to zero in the other toppers like Estonia, Canada, Finland, UK, Sweden.**

- **If we took away Singapore’s tuition industry, how much would our PISA ranking drop?**
- **Is there any proof that our education system is world-class once tuition is removed from the picture?**
- And as we discuss later, what 21st Century skills and attributes do our children **fail to develop** in the hours they spend daily and weekly in tuition compared to children in these other developed countries?

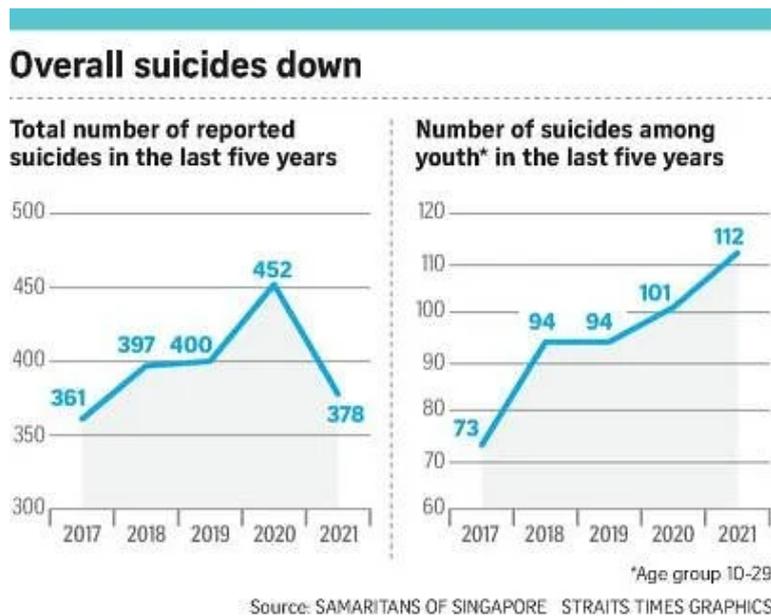


Ideally there would be other indicators that measure how our education system is doing in terms of preparing our children for the new economy, compared to other equally well-off developed countries. However, in the absence of such data, as a proxy we could look at **the well-being of our children, and the well-being of our economy.**

b. The Well-being of our Children

On the well-being of our children, things do not look good. **Suicide is the [leading cause of death amongst our youth aged 10 to 29](#)**; this age group accounts for 1 in 3 of all suicides in Singapore. **Academic stress was already a factor in [59% of suicides aged 10-14 in Singapore two decades ago](#)**. Anecdotally, most competitive primary and secondary schools lose about 1 student (each) to suicide every year.

And youth suicides continue to rise steadily even as overall suicide rates are stable post-Covid:

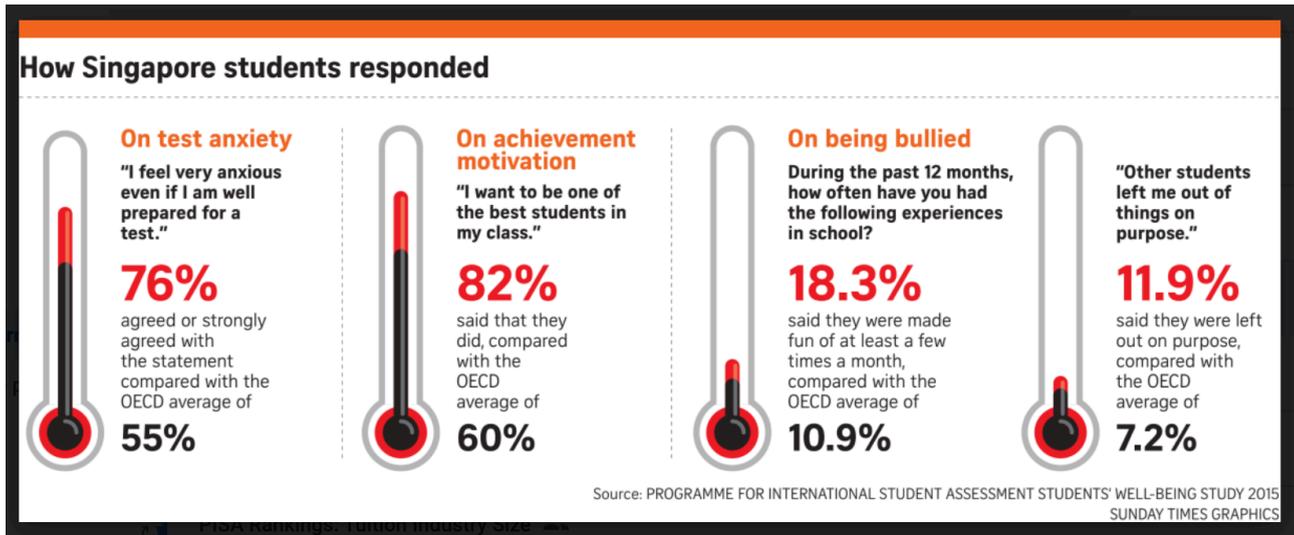


“With a high-stakes, exam-driven society, the number of children seeking psychiatric help has risen dramatically (Poon, C.H., 2012). There have been reports of children as young as 10, 11, and 12 years-old committing suicide after the results of the exams.”

*Walker, Z. & Musti-Rao, S. (2016). [Inclusion in High-Achieving Singapore: Challenges of Building an Inclusive Society in Policy and Practice](#). *Global Education Review* 3(3).*

These suicide rates are only the visible fatal tip of a much larger ‘**hidden iceberg**’ of **mental health issues in our youth, almost all of which start developing in their school years**. A recent national study by NUH showed **[1 in 3 Singapore youth](#) had reported internalising mental health symptoms, with severity worse among 14 to 16 year olds**.

[A study by the Organisation for Economic Cooperation and Development \(OECD\)](#), which conducts the triennial tests called the Programme for International Student Assessment (PISA), found **higher levels of anxiety and bullying among Singapore students** (15 year-olds) compared to other mid to high income countries:



For those of us who have had to transfer our children to international schools in Singapore (often because of learning needs) or overseas (because of job transfers), the difference between a “good” local system school and a good international/ overseas school can be a stark and disconcerting illustration of how far behind our local schools have fallen in terms of being able to offer a quality education to every child.

On the topic of nurturing student well-being specifically, **some of the key differences between local schools and good international schools in Singapore** are:

i. The large number of children per classroom in the local school system do not leave teachers with much bandwidth to deal with their social-emotional development or deeper issues, and [counsellors do not seem to be sufficient or sufficiently trained](#) to identify or help with the more serious cases.

The better international schools employ **qualified psychologists as counsellors, and have many more of them available** to help. There are also **much fewer children per class** for each teacher to pay attention to, **usually a maximum of 20-25**.

ii. This **larger ratio of trained and resourced adults to children** in the good international schools also **helps create and maintain a lower tolerance for bullying and meanness** amongst students at the primary school level. There is much more of an environment of acceptance and inclusion for those of different ethnicities, body types, strengths/ weaknesses/ learning needs, gender identities, interests etc.

iii. The stress induced by the competitive local system, especially in the run-up to PSLE, reinforced to varying degrees by teachers, peers and parents, has a very large negative impact on the mental health of young children. **Children between 7 and 12 should be developing a love for learning and themselves, not worrying about PSLE. Neither should their parents or teachers be.**

Students and teachers in international schools are free of this burden during the primary school years, and it shows in their interactions, teaching and classroom environment.

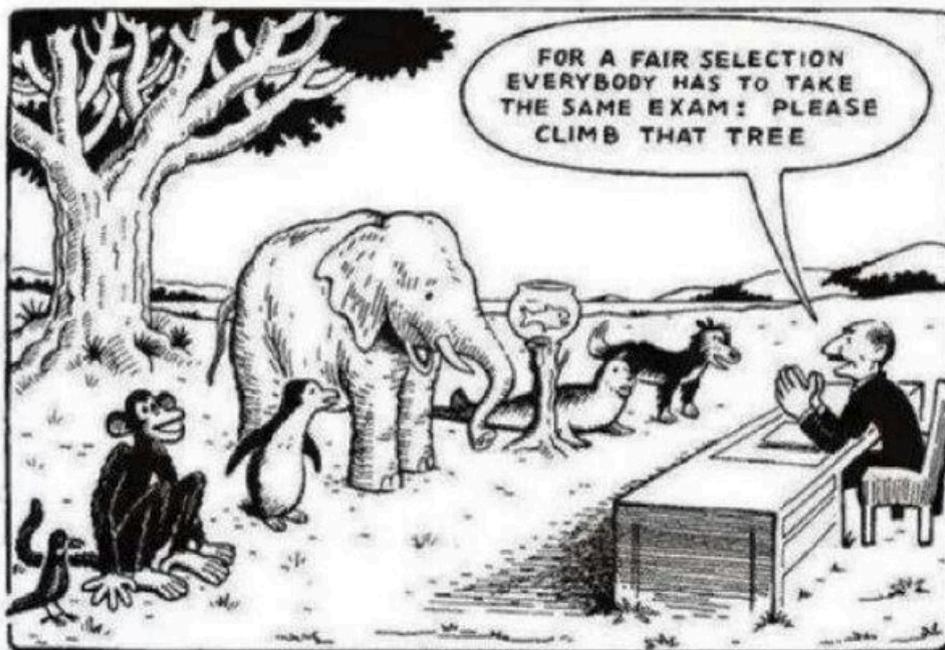
Most of us parents have been disappointed by a parent-teacher meeting where the teacher has gone on about how our child is not living up to the expected level of academic achievement, ignoring almost all other aspects of their personalities and development, or alternatively having nothing to say at all. **Children subconsciously absorb this stress and pressure** and turn it inwards, destroying their mental health, and/or outwards, bullying other children to feel better about themselves.

The following are two contradictory thought systems, and as adults (parents, teachers, policy-makers, etc.), we cannot reasonably expect our children to hold both in their heads. **We have to decide what primary school education should be about:**

“I have to do better than these other children to get into a good secondary school. We are all going to be judged by our academic (test-taking) abilities.”

vs.

“We are all unique in our own way and equally deserving of love and respect. We are all here to learn about ourselves and the world, and how we can contribute to it.”



Our Education System

“Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid.”

- Albert Einstein

c. The Well-being of our Economy

Our education system was built up at a time when its main task was to take us from Third World to First through the process of industrialization. We had to train up a workforce largely to work in factories and clerical jobs, while a select few were groomed for higher education. The focus thus was not so much on identifying the strengths of each child, but training the majority to be literate, numerate, and able to follow instructions well. Those with academic potential in the traditional sense were sifted out to be groomed as professionals, leaders, researchers and academics.

This was the case in most countries through most of the 20th century, and Singapore was no different. However, with the advent of the internet and the digital disruption that we are in the middle of, this type of education system is not what we need today or in the future.

So let's get to the question of how our economy is doing. If we focus this on the economic well-being of Singaporeans, we have to go beyond the usual KPI (key performance indicator, or measure of success) of 'GDP per capita'. **Given all the capital we have at our disposal, we seem to struggle with generating real innovation and [productivity growth in our economy](#), despite our supposedly world-class education system.**

[Inequality continues to increase](#), driven by rising property prices and other returns to capital that give a [considerable advantage to those who have already collected wealth](#), or inherited it from their parents. (This growing inequality is not reflected in [Singapore's Gini Coefficient](#) statistics, which only measure income from work. Income from wealth can be considerably more than income from work for the richest segments of society.)

We also have a growing problem with resentment against foreigners. Many Singaporeans perceive them to be 'stealing' our higher-paying jobs, but the questions to be asked are:

- Why do we Singaporeans not have the skillsets for these jobs in the first place? And even if we don't initially, why are we not able to acquire these skillsets eventually?
- **Could it be that we are being taught all through our developing years to acquire 'skillsets' that are not really that relevant anymore?**
- **And not being taught the skillsets that would make us successful in the modern economy?**

If we want to maximise our nation's potential (in all aspects), the skillsets that the future economy will reward are compared in the table below (on the right) to those that the traditional education systems of the industrial era encouraged (on the left). Some of these go beyond skills to outlook and values - these too are moulded in our growing years by what we see and experience around us most of the time. (This is not an exhaustive list, just what comes to our mind from our lived experience.)

Unfortunately, our education system is still largely stuck on the left side of this table. Think about PSLE and what most children are going through on a daily basis from P3 to P6 as you read through this table:

Skills & values prized in industrial era workforce (1900s/ 20th Century)	Skills & values rewarded in the Future Economy (2000s/ 21st Century)
Knowledge mastery through repetition	Innovation
Single correct answer	Creativity
Obedience & Group-think	Critical thinking
IQ	EQ
Sorting & labelling → shame, self-doubt	Confidence
Self-preservation	Empathy
Competition & politics (the negative sort)	Teamwork & collaboration
Operate through Control/ Power/ Hierarchy (over juniors, employees, resources, etc.)	Operate through Connection (with peers, community, local economy, planet) & creating psychological safety
Blind rat-race	Reflective practice → Seeing life as a journey of self-growth and discovery
Risk-aversion	Thoughtful risk-taking
Rigidity ('because that's how it's always been done')	Flexibility
Extrinsic motivation (e.g. grades, recognition, money)	Passion & Self-motivation
Selective (only those who succeed academically/ materially are worthy of respect)	Inclusive (everyone has intrinsic value and is worthy of love and respect)
Task-focused/ system-focused/ mass-produced service & design	Person-centric service & design

When our children spend the most impressionable years of their lives in an environment based on the left side of the table, this flows into their work ethic as adults. So no surprises, Singaporeans are hard-working and good at following directions - we can probably all agree on that. But we have observed in our daily work lives that **the drive for continuous work improvement** (also known as Lean Management, Kaizen, Agile, etc.) **is weak, as is the capability of most leaders to encourage it**, with the exception of organisations where this culture is explicitly fostered. It is much the same for other **21st century skills that create real economic value, like co-creation** (this goes much beyond cooperation and consultation, which are more basic level skills that Singaporeans can manage), **and innovation.**

Yes, we are suggesting a potential link between our education system and our stagnant productivity levels, that should be studied more closely. Those of us who have interacted with children from good international schools, or good public school systems overseas, will see the difference - those children are generally more confident, intrinsically-motivated and well-spoken than Singaporean children of a similar age, and this carries into adulthood.

How does this difference arise? Children from good international schools, and good public school systems overseas, **are actively encouraged to participate and interact in class, and empowered within school to shape their environment and experiences.** At primary school level, their inputs are regularly sought and taken on board for team, class and school activities; gradually by early secondary school age, they are actively co-creating aspects of their school lives, e.g. organising topics and student speakers for school-wide assembly periods.

They are allowed, encouraged even, to ask questions like ‘why are we doing this?’ or ‘why are we doing it like this?’, and the teacher/ school is usually obliged to give a good response, or commit to a review.

The cycle of ‘plan, do, review, refine’ (or ‘plan, do, check, act’) **is constantly integrated into their daily academic work.** This includes the art of working in teams, and learning how to give their peers effective feedback. Just as in real working life, there are much fewer of the competitive ‘one-off’ tests/ assessments that dominate primary school life for Singaporean children.

Those children thus **emerge from school understanding education more as a constant cycle of reflective collaboration, self-improvement and critical thinking**, rather than a blind race to master material to attain their target grade. It should be obvious, when we think about it, how **this mindset much better suits the realities of the modern workplace, than the one we foster in our Singapore school system.**

d. MOE’s Historical Achievement

Let’s pause for a moment though **to give credit where it is due - to MOE’s historical achievement.** After independence, MOE was able to quickly set up an efficient education system that mass produced workers for an industrialising economy. As mentioned earlier, relative to other developing countries we were wildly successful. We have the pioneering batches of teachers, principals and education officers to thank for bringing us to an almost 100% rate of basic education and literacy. **This certainly played a large role in our nation progressing quickly from Third World to First.**

Our education system *seemed* to continue to serve us well as we transitioned to a ‘Knowledge Economy’, producing higher-value goods and services. **But what about now? And the future?** Let’s come back to this question after looking a bit deeper into the current state of our education system, and how we got here.



A Singapore classroom in 1953

In the early decades after independence, MOE was able to establish a system of hierarchical control to efficiently run schools with 2 sessions a day and large numbers of students. Based on our conversations with numerous educators and education officials over the years, our hypothesis is that **a culture of 'need suppression' developed - instead of escalating issues with children (whether learning, behaviour or other needs), teachers were encouraged to manage by themselves, discouraged from tapping on resources outside themselves and their classrooms**, so as to leave those limited resources for those with much higher needs.

This approach made sense in the early decades after independence, when the resources to plough into education were indeed limited. In fact one could argue there was no other way to do it.

However, **this culture of 'need suppression' no longer makes sense** now that:

- (a) we are a rich country, with low population growth rate; and
- (b) we recognise, at least in theory, that the main resource we have to cultivate is our next generation of Singaporeans.

Now that our national education budget is no longer so constrained, to continue to ignore/ suppress our children's developmental needs (academic, social, mental health) is no longer a survival requirement, nor is it rational. But it continues because this **ideology of artificial scarcity** has become entrenched in MOE/ our education system.

Like a grandmother who won't let her grandchildren fill their bellies fully because that was the only way she could make ends meet when she was bringing up her own children in poverty, **our children are forced to survive in an education system that in some aspects is resourced more like a Third World one than First.**



A P1 classroom in Singapore, 1959

Nurturing ALL Children - What the Evidence says about Learning

a. Class Sizes

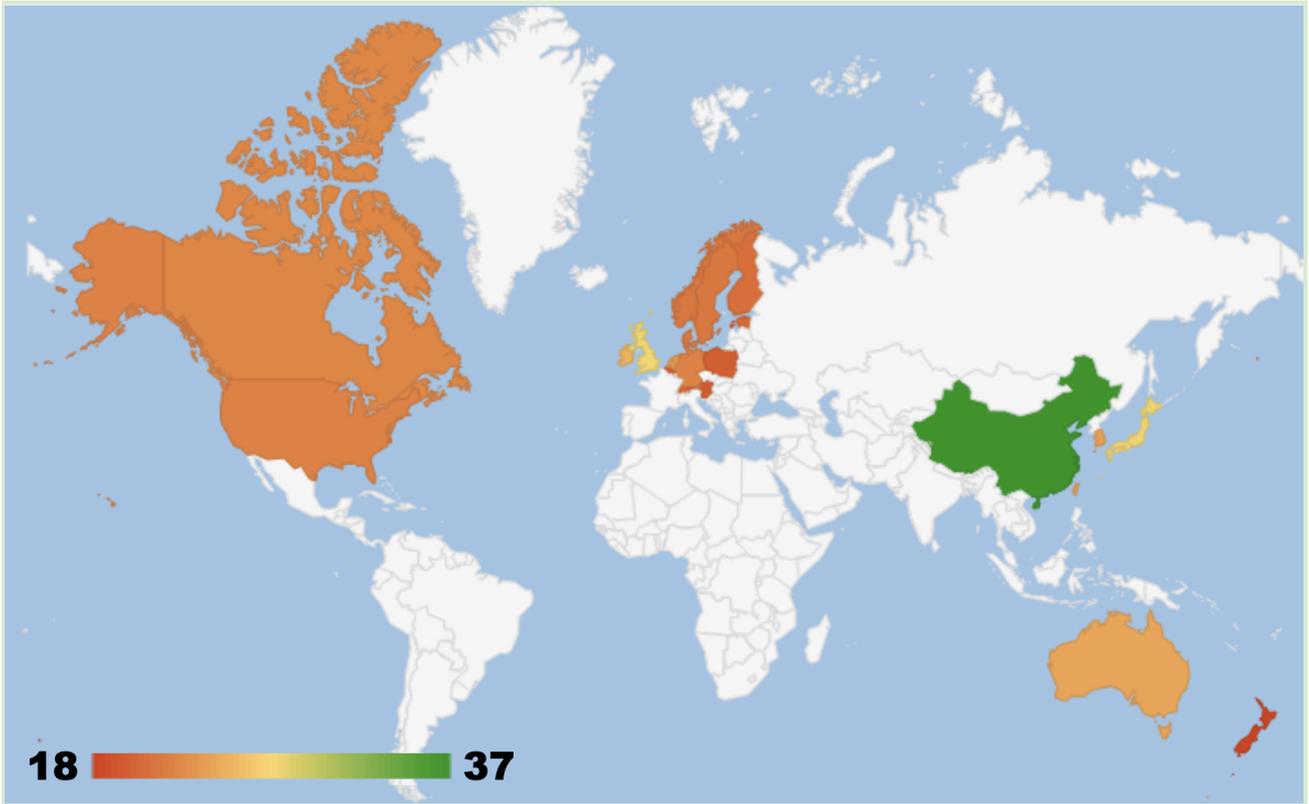
The most obvious place that this 'need suppression' and 'ideology of artificial scarcity' show up is in our abnormally large class sizes. If we want each child in our local system to maximise their potential and develop a love of learning, **a top-down delivery of material in a fixed style and pace by a teacher facing a class of 35-40 is not going to cut it anymore.**

There need to be smaller class sizes for more individualised attention, to nurture creativity, collaboration and real exploration, to allow different styles and pace of learning for children, without the stress of a high-stakes exam at P6 hanging over the heads of children as young as 7.

However, our class sizes are much larger than other developed countries, and larger even than private schools catering to upper-middle and high-income families in developing countries:

- **In most developed countries, primary school class sizes hardly ever exceed 25 children in a classroom.**
- **The OECD [average for public primary school class size](#) is 20.5. For public lower secondary classes, it is 23.** (*The [OECD](#), Organisation for Economic Co-operation and Development, is an economic organisation with 38 member countries, mostly high-income. Singapore is not a member.*)
- In India's urban public schools, anecdotally classroom sizes average 45-55, but these cater largely to low-income families. In private schools, where the upper-middle class and higher income families send their children, anecdotally it averages around 25-30 children in a classroom, both at the primary and secondary level - those are the children who will go on to get degrees and compete with ours.
- China, a much poorer country than Singapore per capita, has an average public primary school class size of [37](#).

Average primary class sizes (public schools) in the 25 top performing countries by PISA ranking. Only China has a larger average class size than Singapore:



An upper primary class in Finland with less than 20 students

Over the years, MOE has made varying arguments about why Singapore does not need to reduce its class sizes. In the past, its main claim was that studies on the impact of reducing class size [were inconclusive](#). What MOE failed to point out is that most of the published research on this subject has been done in developed countries, usually testing reductions from 22-25 to **even smaller**

classrooms of 10-20. Singapore, however, is **way above** the OECD average of 21 in a public primary school class.

More recently, MOE has made the argument that the [ratio of teachers to students](#) in our schools is comparable to other developed countries. And that in Singapore, rather than mandating smaller class sizes across the board, [schools are given flexibility](#) to deploy these teachers to help students with greater need for guidance.

However, what matters to us is not the overall ratio of teachers to students, but how large the class size is that a teacher has to deal with most of the time. The overall ratio of teachers to students in Singapore may look decent, but anecdotally we hear a lot about teachers having to spend large amounts of time doing work outside of classrooms (manually marking, organising CCAs and other events) that could be digitised or outsourced to admin support, at the expense of giving direct attention to students.

Also, the average class size given by MOE ([29 in primary schools](#)) is just that, an average. Yes, there may be some children in P3-P6 who spend a few hours or most of the school day in classes of less than 30, but most of our teachers and children are struggling with large class sizes of 35-40.

*“More than half of those (teachers) surveyed said they also struggled to manage students' behaviour, exacerbated by **insufficient support for special needs students and difficulties with parents. Many attributed this to "overwhelming" class sizes.**”*

(Straits Times, 22 Sep 2021: [More than 80% of S'pore teachers say Covid-19 pandemic has hurt their mental health: Survey](#))

It is not enough to provide small class sizes just to children in the GEP and those who are struggling. **In a developed country as rich as ours, ALL our children deserve smaller class sizes.** And these class sizes should be provided upstream, in P1 to P6, rather than just downstream in Secondary schools for children who end up in Specialised schools and 'Normal Stream'. Many ex-MOE teachers who are free to voice their views publicly have called for this, [here's an example](#).

*“**With good teachers, smaller class sizes help the students. It's quite clear.** Why then is MOE cautious on the issue of class size? Because how it is implemented makes all the difference.” [Minister Ong Ye Kung, 11 Jul 2018](#)*

The other argument that MOE makes is that teacher quality matters as much as class size, and that ramping up the number of teachers to reduce class sizes will reduce the quality of teachers. **This is a truly disingenuous argument - no one is forcing MOE to implement small class sizes immediately.**

Projecting ahead and gradually ramping up manpower for a sector, though it has its challenges, is not rocket science. Smaller, less well-funded Ministries like MSF been ramping up manpower (e.g. preschool teachers, therapists, psychologists) to serve the growing needs of their sector, while

maintaining quality. To be using this argument, year after year, instead of focusing on gradually ramping the quantity of teachers while maintaining quality, is yet another warning sign about MOE's strategic level policy-making capabilities (discussed in section on [‘What is MOE doing about all this?’](#))

If the benefits of reducing class sizes from 35-40 to 20+ were really questionable, or if the reduction was really that difficult to implement, the average primary class size in other developed countries would not be so much lower than ours. **This should worry those of us concerned about Singapore's economic competitiveness. Education is the main investment in our future workforce.** Is it ok for our children to get way less attention and connection from their teachers, day after day, than the rest of the well-off world? Is that the best way to prepare our children for the future economy?

“These teachers each have to, on a daily basis, manage classes of 40 or even 44. Teacher-student ratios are well and good. Life at the coalface for these teachers, however, is not a convenient ratio. For them, 40 pupils means 40 personalities, 40 sets of varying abilities, 40 sets of homework, and possibly several dysfunctional families to contend with as part of the work. We cannot allow this to continue if we value our teachers, especially those who are passionate about educating our children.”

(Today, 29 Mar 2019: [Class size in schools: For teachers, the real work is not just a ratio](#))

“Sadly, not all children can focus at such a class size. Teachers will not be able to help every student. Some soft-spoken ones will suffer in silence.”

(Straits Times, 17 Apr 2022: [ST netizens call for smaller classes amid some sadness over school mergers](#))



Class sizes in Singapore are much larger than other developed countries.

b. Early Academic Pressure Backfires

Broadly, the scientific evidence is clear that there is no benefit, and potentially much to lose, from subjecting young children to academic pressure or formal education, especially before the age of 7.

Children benefit from unstructured free play. They may seem to be just playing, but they are actually using this activity to hone their understanding of the world, themselves, and how to operate in it. These studies show that e.g. children in Scandinavian countries, where formal schooling/ literacy instruction starts later, eventually do as well as those who start getting drilled in their ABCs at a younger age.

Research shows that free play, alone or with friends, teaches kids to be less anxious and more resilient, and it improves social skills. It also makes kids feel like they are in control of their lives, which leads to greater autonomy and self-control as they grow up and a decreased chance of them winding up in your basement. Danes put such a high value on play that early elementary school curriculums are based around it. (Fatherly, 28 Jul 2015: [Why Danish Parents \(And Their Kids\) Are Happier Than Americans](#))



P2 students in Germany learning through play

“...a stunningly stress-free, and stunningly good, school system. Finland has a history of producing the highest global test scores in the Western world... In Finland, children don't receive formal academic training until the age of seven. Until then, many are in day care and learn through play, songs, games and conversation. Most children walk or bike to school, even the youngest. School hours are short and homework is generally light...”

Schoolchildren have a mandatory 15-minute outdoor free-play break every hour of every day. Fresh air, nature and regular physical activity breaks are considered engines of learning.

In class, children are allowed to have fun, giggle and daydream from time to time. Finns put into practice the cultural mantras I heard over and over: "Let children be children," "The work of a child is to play," and "Children learn best through play.”

(Sydney Morning Herald, 25 Mar 2016: [This is why Finland has the best schools](#))



Finnish school children enjoying class

While our education system does not officially demand an early start to reading and writing, we all know that the pressure from PSLE flows backwards all the way down to P1, and even to preschool.

When preschools start giving talks on preparing your children for P6, I think we can all agree that something is seriously wrong.

MOE tends to lay the blame on parents for creating stress and hot-housing their children. However, it goes against all scientific evidence, from basic human psychology to [game theory](#), to put families in a competitive system and then expect them not to play, especially when the huge inequalities in our society make the stakes seem so high (more on that later).

A very important question that we should all start to ask - how do the Scandinavians (Finns, Danes, etc.) educate their children as well as us, but without sacrificing their mental health, happiness and self-esteem? The [world happiness report](#) has the Northern European countries right at the top, Singapore is only #32 out of 146 countries ranked.

[Video on the Finnish Education System](#)



[Here's a book](#) distilling how the science of early childhood development applies to the education system.

What is the Purpose of PSLE?

Which brings us to the hot topic of PSLE. **One can only guess at what educational purpose PSLE in its current form continues to serve. Neither are the benefits apparent to the average parent, nor are they clearly articulated by MOE.** It is just a hurdle everyone knows they have to cross, regardless of whether their child is ready for it or not.

"The preoccupation in Singapore with examination results is unnatural and unhealthy and we should bring it to an end as early as possible.

After all, good performance in examinations only proves one thing – the ability to answer examination questions.

This ability is, presumably, related in some way to intelligence. It is also related to the possession of good examination techniques.

And it does not tell us a lot of other things about a person, for instance, his integrity, his character and so on, which are just as important as intelligence, and more important than the mastering of examination technique."

Dr Goh Keng Swee, former 2nd DPM and former Minister for Education, in a [speech at ACS, 1967](#)

PSLE may exist to check the level of learning of children at the end of primary school. But there are now **many better and more accurate ways to assess learning at this age**, including combinations of the following (non-exhaustive list):

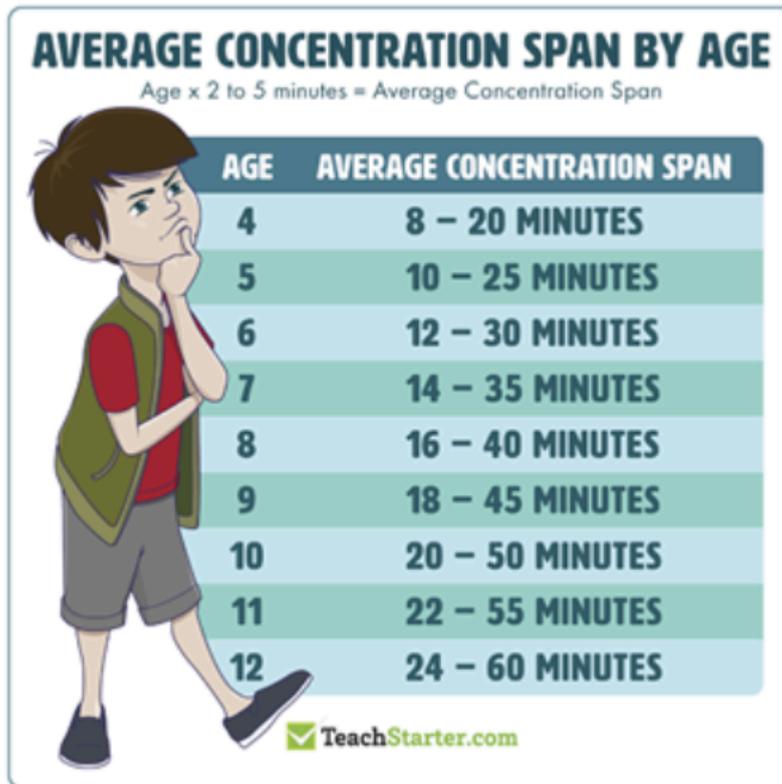
- [Computer Adaptive Testing](#), in which **questions are guided by the level of understanding demonstrated in previous questions**, so e.g. if a child is getting a lot of questions correct, subsequent questions will grow harder to hone in on their true level of understanding. Similarly, if they are getting a lot of questions wrong, subsequent questions will be easier.

This allows the test to **more accurately and quickly gauge what level the child is performing at**. It is also **less confidence-destroying** for the child, who for example does not see the 2 traditionally impossible-to-solve questions at the end of every PSLE Maths paper, unless they are one of the rare few likely to be able to solve them.

- Testing at **multiple timepoints** throughout P6, using **shorter tests**, in **multiple formats** including multiple-choice questions, short written answers, projects and presentations.

This **takes away the stress and anxiety** of facing a series of long, high-stakes exams in one shot, and allows one to gauge a **child's average performance**, not the result of one good or bad day. It also does not penalise children who have **trouble focusing or writing for long periods**, a still common issue among 11/12 year olds.

(We discuss these in more detail in the section on '[Better ways of assessing a child's learning](#)'.)

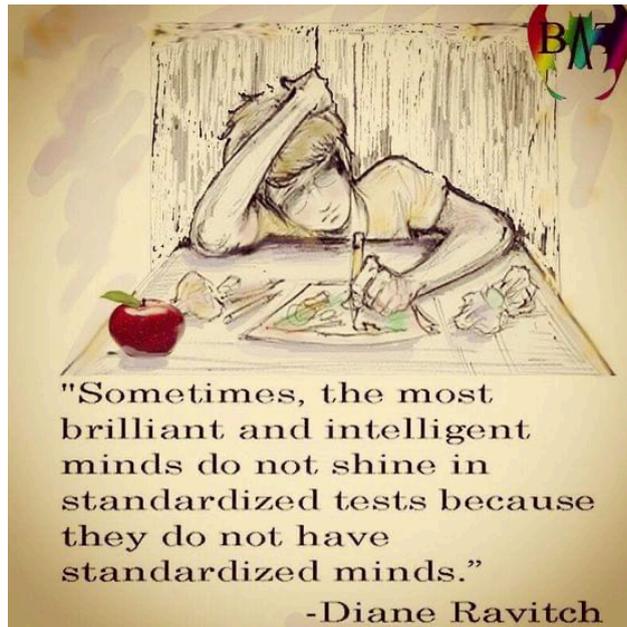


Another possible function served by PSLE could be to sort children into secondary schools based on ability. However, as a one-time, long duration, high-stakes and high-stress exam for 11-12 year olds, PSLE is unlikely to give an accurate reflection of a child’s current or future ability. It is a very blunt sorting tool that may have worked a few decades ago but is not relevant anymore. It discounts the very real fact that 11-12 year olds (and even us adults!) can be:

- Very good at one subject and not so good at another;
- Held back by their inability to focus for long periods, read through long passages, or write long answers;
- Held back by their inability to stay calm long enough to demonstrate their true level of understanding (no one’s brain works well when they are worried/ nervous/ anxious!);
- Dealing with familial, social, financial or health issues during that period that affect their focus, energy or motivation; or
- Just having a bad day!

“As streaming formally begins early (in Singapore) – at age 12 – late bloomers are at a disadvantage compared to their counterparts in some other advanced countries.”

Assoc Prof John Donaldson, SMU (Singapore Management University) School of Social Sciences



The use of PSLE as a sorting tool also does not account for the fact that most parents rely on additional tuition to train their children for PSLE, turning it into an outright game of who can stump up the most resources. This game, as we all know, can start as young as preschool/ P1.

But beyond all this, it is about time we ask why we need to sort children **into different schools** at the age of 11/12? We have already removed those with the highest learning needs into SPED schools, and those with the highest IQ (supposedly) into the GEP. Shouldn't everyone else be able to live, learn and play together in the same school? Or taking it a step further, if we really claim to want an inclusive society shouldn't everyone else be **required** to learn how to live, learn and play together in the same school?

Schools can always sort children into different groups for different subjects to make teaching more efficient without requiring them to actually be in separate classes, let alone separate schools. Many secondary schools are already introducing this through MOE's [Subject Based Banding](#) initiative, which will be mainstreamed fully by 2024.

A handful of secondary schools who want to remain selective could still have their own competitive entrance exams, or continue to use PSLE if they so wanted. But **there does not seem to be any good reason to feed the vast majority of Singaporean children into this blunt and rather damaging sorting machine.**

MP Denise Phua is one of many who have clearly and repeatedly advocated for this "sacred cow" of PSLE to be slaughtered:

"Removing the PSLE will free up substantive PSLE preparation time which is often hot-housing time to crunch a few selected academic subjects such as English, Mathematics, Science and Chinese, which do not reflect a holistic education."

"Abolishing the PSLE will provide real space to prepare students to become the curious, agile and more self-directed learner that the future economy needs."

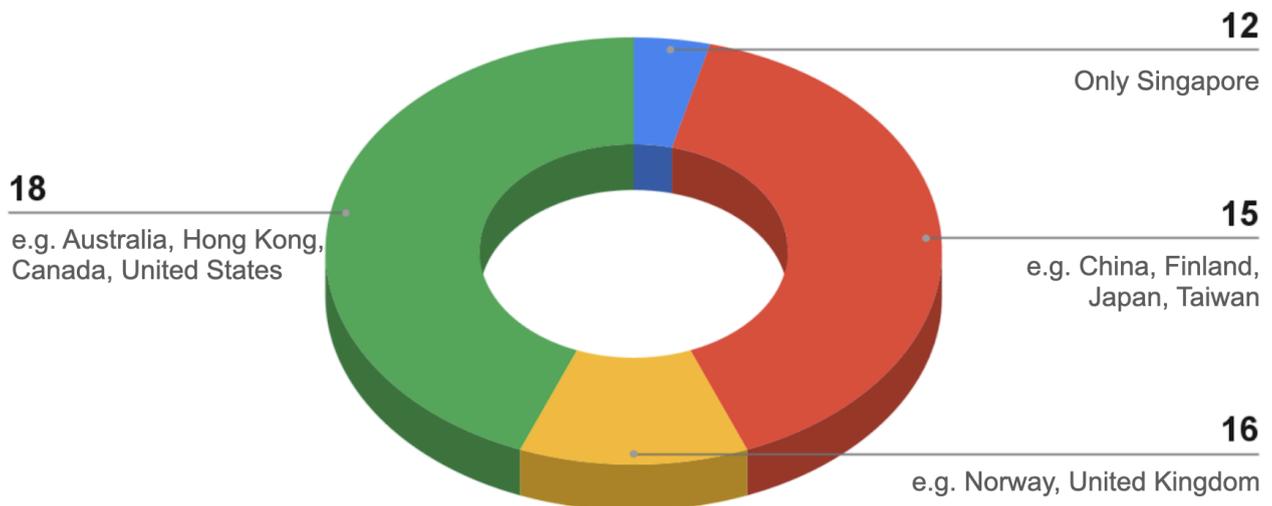
It will also reduce the "self-inflicted pressure and stress in students, families and teachers who have to choose between educating, learning or teaching to the test".

(MP Denise Phua's speech in Parliament, 4 Mar 2021)

No other country with a good education system has its first high-stakes exam at such a young age. This graph shows the ages at which the 25 top performing countries in the PISA rankings have their first high-stakes exam. Only Singapore has it younger than 15 years old:

Age at First One-Time, High-Stakes Exam

(Top 25 countries by PISA rankings)



Why is PSLE so Pressurising?

"...parents have limited room to manoeuvre; they are cognizant, and indeed correct in their assessment, of the high stakes involved – education attainment and wages are highly correlated in Singapore.

The average monthly income of households with a university graduate as main income earner (S\$18,255) is almost three times that of households with a secondary school graduate as main income earner (S\$6580; Department of Statistics, 2018).

Parents have limited room in which to decide not to 'play the game'.

Teo, Youyenn (2022). Education as care labour: Expanding our lens on the work-life balance problem. Current Sociology, SAGE Journals. pp.

The above quote from Teo You Yenn aptly summarises why the existence of PSLE creates this intense pressure. And why the desire among some (including MOE) to keep PSLE in its current form but just somehow remove the pressure and stress is impossible, because it goes against basic human psychology.

Singapore is a [fairly unequal society](#), especially once wealth inequality is included. If you are poor in Singapore, your life will be hard (including the spectre of food insecurity or overcrowding in a rental flat), for a number of reasons. The social safety net is very limited compared to most other developed countries. This is a city-state with a relatively high cost of living, with no cheaper hinterland or rural area to escape to. Local wages for blue-collar jobs (not necessarily requiring low skills, but perceived as such in our society) are depressed by the presence of a large lowly-paid foreign workforce. And because we live in close proximity to each other, this vast difference in lifestyles and quality of life is obvious to anyone who cares to look, and worrying to anyone who cares about such outcomes for their children, which is all of us.

And so ensuring your child enters the 'right' profession becomes an extremely high stakes game that all Singaporean parents have to play. Apart from parents who are rich enough to supplement their children's income for the rest of their lives, few feel they can relax and say, for example - Sure, my son loves working with his hands, let him become a carpenter or a sculptor!

Parents then see those doing well academically coming from a certain selection of JCs and secondary schools, and those getting into those schools coming from a certain selection of primary schools. While not all parents can ensure their children a place in one of these select primary schools (because they do not have alumni status or affiliations or the means to move closeby and spend hours volunteering), what they can do is pressure their children to do well at PSLE, so that the rest of their child's academic journey lines up with their perceived trajectory for adult success.

Parents also assume that if their children end up in 'not so good' secondary schools or ITEs, they will fall into 'not so good' company, and be led astray from this path to success. Or that their children will not be taught as well in these 'not so good' schools, and this will reduce their chances of future success.

Discussing whether these assumptions are true or not is beyond the intent of this discussion, but the **effects** of these parental assumptions are very real. They lead to an intense and pervasive pressure on children to do well, or to 'do their best' at PSLE, and to be safe, in the years leading up to it. **Blossoming academically only after PSLE is not a luxury most Singaporean parents feel they can afford to give their children.**

This pervasive high stakes game bearing down on all children below the age of 12 feeds into a number of other familial, societal and commercial mechanisms, so that the vast majority of parents, teachers, schools, preschools, tuition centres, enrichment centres, grandparents, peers, mentors, parental friends and relatives that a child encounters are also fixated on PSLE outcomes, whether out of a genuine concern for the child, or because it benefits their professional or commercial success to do so. Even if a lone parent or teacher chooses to not partake in this game and let it cloud their perceptions and interactions with a child, there will be plenty more surrounding the child to enforce the pressure.

As long as there's an edge that can be gotten, we can trust parents to fight tooth and nail to win that edge for their child. Despite Mr Heng's previous assurances of "every school a good school", deep down, parents know that there is a hierarchy...

Therein lies the dilemma. A meritocratic system requires sorting. And sorting inadvertently sits at odds with Mr Chan's (Minister Chan Chun Sing's) efforts to give children "more time for self-directed learning" - at least during school hours. Outside school time, a child's academic success is often subjected to the cruel world of supply and demand, rewards and punishment.

And however noble our efforts are to remove the mid-year examinations, parents know that at the end of the education system lies a national exam like the PSLE that will determine the fate of students. This exacerbates parents' anxieties, prompting them to further invest in private tuition during their child's free time to give their offspring an advantage.

(Ricemedia, 17 May 2022: School Exams Are Not the Issue — Insufficient Unstructured Time Is)



P4 pupils at Fairfield Methodist Primary School reading books from the classroom library.

c. Better Ways of Assessing a Child's Learning

At the 2022 budget debate in parliament (7 March), Minister for Education Chan Chun Sing tried to explain why tests and exams in our schools cause so much stress:

Because we use it to compare ourselves/ our children to others, rather than “an opportunity for us to know our children better - where they stand, where they're strong, and where they're weak.”

How do we present the results of tests, exams, even PSLE, in our local school system? Children are assigned a score, e.g. between 0-100, which is written on top of the test paper, or printed on a result sheet, and returned to them. The most natural next step would be to look around the room and compare results, don't you think?

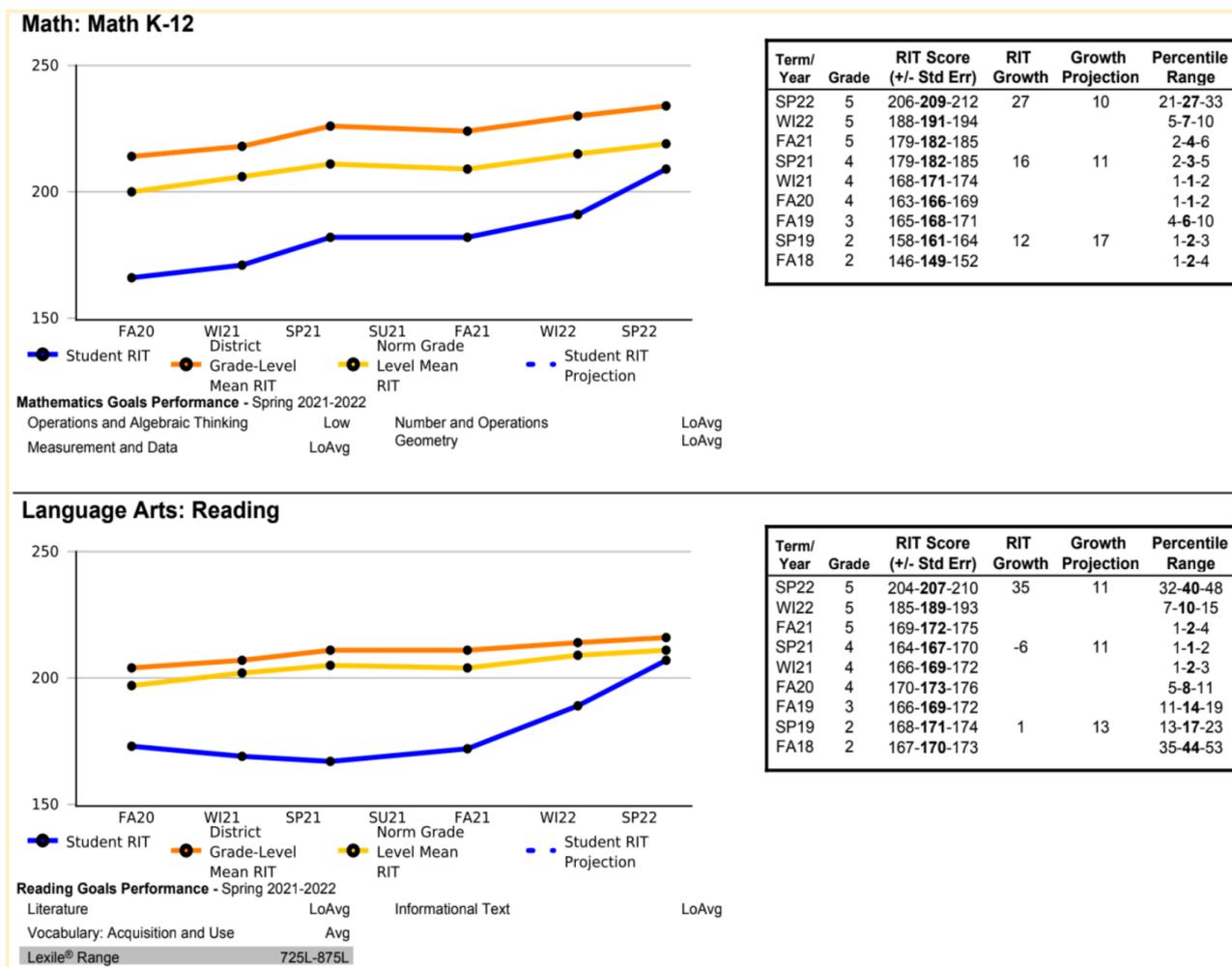
If we really want to achieve what Minister Chan is suggesting, here are some better ways to test and provide feedback on children's learning throughout their primary school years. A combination of these methods can also replace PSLE. (This list is not exhaustive, we are just sharing better ways of assessing learning that we have encountered in international schools):

- i. **More regular but shorter, bite-sized assessments, in multiple formats** e.g. multiple-choice quiz, short written answers, individual or group projects, presentations, class discussions, hands-on challenges, etc. These are more age-appropriate and accurate gauges of learning for primary school students. They allow children to demonstrate their different strengths as well, without penalizing those who have shorter attention spans, difficulty with writing long answers, etc. They are also a more accurate reflection of how children will be expected to use their knowledge and skills in the working world, in collaboration with others, rather than memorizing and regurgitating key words and phrases and sitting through long exams.
- ii. Use of computerised testing, so that **the sub-areas of strength and weakness can be flagged by the automated marking**, and listed right at the top along with the grade. This actually moves the focus very quickly to the self-improvement feedback that the child should be seeing. And teachers don't need to plough through papers manually if they want to highlight children's areas for improvement. These tests can be standardised nationally.
- iii. **Computer Adaptive Testing**, which can hone in more quickly and accurately on the child's level of understanding, without destroying confidence. It has been used for major standardised exams like the [GRE](#) for at least the past two decades, and more recently the [SAT](#). At the national level, it allows each child to be benchmarked against themselves as well as the national standard for their age.
- iv. Also easier with computerised testing - **provide a graph that shows the child's progress in the subject over the past few terms, i.e. their learning trajectory**. Children will naturally be drawn to start comparing the slopes (showing how much/ how fast they have improved), which can be displayed more prominently than the actual grades. This also nurtures a growth mindset and teaches **an important life lesson that the direction/ pace of growth is more important** than where one starts.

iii. Also easier with computerised testing - **Provide a comparison graph that tracks the national average performance**, so there is some element of comparison for child/ teacher/ parent on how far off the child is from expected levels of achievement at their age. But the focus of the comparison is this 'faceless average' rather than the other students around them.

iv. Yes, also easier with computerised testing - **Send these results home by email to parents**, rather than giving them out in class. Again, this keeps the focus on the individual child's progress. Teachers can discuss individually with children and parents on sub-areas that have improved (to encourage) or are still weak (to focus further effort), both of which would have been helpfully and automatically collated for them for every child.

Below is an example of [MAP testing](#) results sheet from an international school in Singapore. It keeps the focus on the individual child's progress and areas of strength/ weakness. The **blue** line shows the child's score at different timepoints through multiple grade levels. The **orange** line shows the average score in the school or school cluster/ district. The **yellow** line shows the expected average score for a child that age:



All the above would be made much easier if we adopted computerised testing ([here's a list of benefits](#)). Let's harness the digital and data age for the benefit of our primary school children, and in the process, make things easier for our overstretched and overworked teachers too.

Besides individual progress and performance, it will give teachers (and their supervisors/ coaches) plenty of data to see at a glance if there are specific sub-areas that many of their children are struggling with.

When conducted at the start and end of the academic year (pre-and-post testing), such testing also **allows teachers (and schools) to be rated based on the improvement they have made** in children's academic performance, rather than raw scores.

It enables our schools to accurately identify and reward the teachers who make the real difference in the trajectory of our children's development, the ones who can move children from much below the national average to just under, or even over.

It would also allow MOE to have much more fine-grained data on schools and their relative strengths and challenges, and MOE could then provide them targeted help to really get us to 'every school is a good school'.

The use of **regular, bite-sized, pre-and-post testing** of children also solves the other mystery that MOE is apparently still grappling with, according to Minister Chan (budget debate, 7 March 2022):

"Pinpointing the best age to test students in a national examination that balances children's different pace of development is something the Education Ministry will continue to study. Testing too early might be detrimental for some late bloomers, while testing too late might mean being unable to apply the interventions necessary to help children progress at their pace."

In this day and age, there is no need for a one-off high-stakes national exam in the first 9-10 years of education, and so MOE should stop worrying about what the "best age" for this single high-stakes test is, and implement **regular computer-based bite-sized testing throughout the primary school years**.

The testing should be continuous, it should provide quick and accurate feedback to parents and teachers on children's areas of strength and weakness so these can be encouraged/ tackled. **Children should always be helped to progress at their individual pace**, whether they are early or late bloomers.

"Finland doesn't waste time or money on low-quality mass standardised testing.

Instead, children are assessed every day, through direct observation, check-ins and quizzes by the highest-quality "personalised learning device" ever created - flesh-and-blood teachers.

(Sydney Morning Herald, 25 Mar 2016: [This is why Finland has the best schools](#))

Trying to reduce or remove exams between P1 and P5, while PSLE is still in place, is a futile exercise. If the KPI/ ultimate measure of success for primary school remains PSLE, then it is human nature to want to know if we are on track to meet our KPI. And so teachers and parents will continue to test. They might just change the name, or do it in the tuition centres. An underground testing economy, if you will. Removing mid-year exams will make end-year exams more high stakes.

“As long as this obsession with grades remains, the removal of mid-year exams will not achieve the shift in focus that MOE is hoping for - since it is likely that weighted assessments will be administered in place of the mid-year exams or a higher weighting will be accorded to the end-of-year exams.”
Kieira Teo, 16. (Straits Times, 14 Mar 2022: [Voices of Youth: Mindsets need to change to achieve focus on learning](#))

In fact, reducing regular testing in schools, without removing PSLE itself, will only hurt the less well-off families. They will be deprived of the regular and realistic feedback on how their child might do in PSLE, and they will have insufficient information to direct their meagre resources at the out-of-school intervention that might benefit their child’s PSLE score the most. And so the income disparities in our secondary schools will worsen.

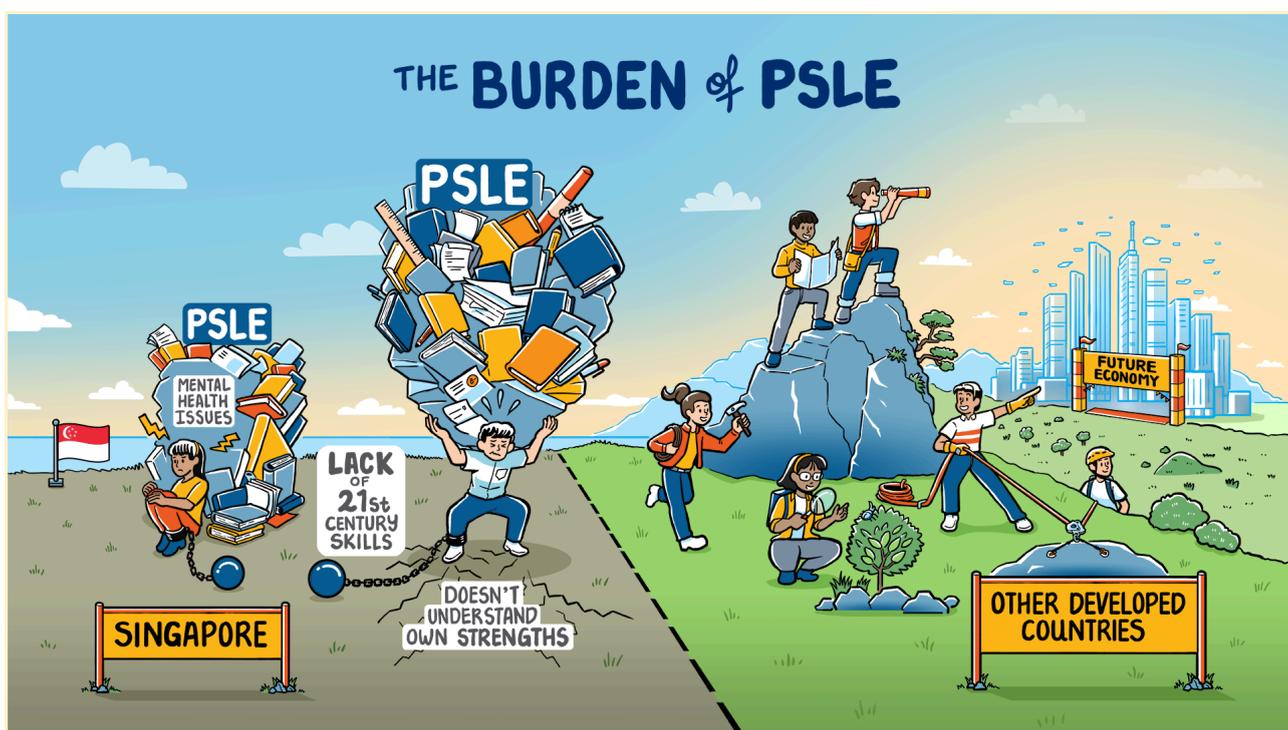
d. The Damage from PSLE’s Intense and Pervasive Pressure



Zhonghua Primary school student receiving PSLE results

This intense and pervasive pressure from PSLE creates a number of negative outcomes that quite easily eclipse whatever PSLE's mysterious purpose/ benefits may be. The pressure flowing backwards towards early childhood and the early primary school years **interferes with the child's holistic development**.

The early years are critical for children to grow on multiple fronts including (but not limited to) physical prowess, creativity and critical thinking, emotional intelligence (both in terms of working with others as well as understanding oneself), secure attachment, empathy, risk perception and risk taking. Many of these skills/ attributes are honed through free play, which remains important through the primary school years.



The Damage to Children's Holistic Development

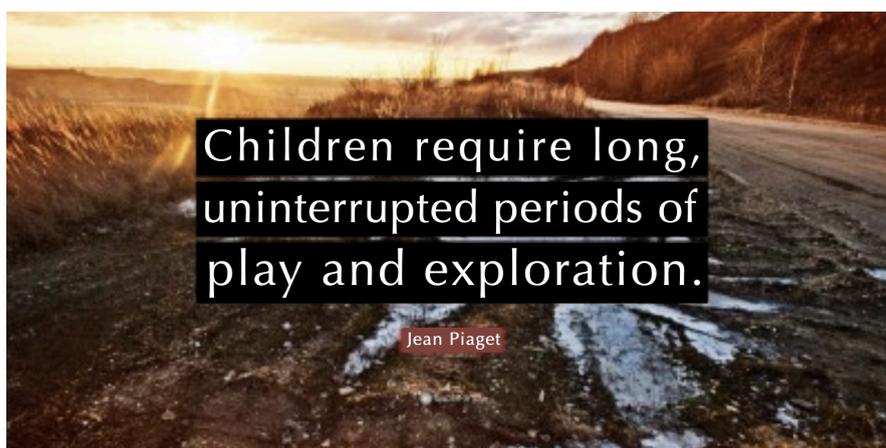
The extra focus on academics in Singapore, sometimes beginning in preschool, takes away time from this development.

Students in Singapore spend the [third highest time globally on homework](#). (2012 data: Among 15 year-olds - 9.4 hours/ week in Singapore, 5 being the global average, and less than 3 hours/ week in Finland.)

And then there's tuition. This are the results of a [Blackbox survey of Singaporeans from 2012](#), the situation would only be worse now:

- **23% think tuition should start in preschool**, before children begin formal education!

- **80% believe that tuition is beneficial, including for average and above average students.** Why would our 'world class' schools not be trusted to do the job?
- **51% of those with children enrolled in tuition spent more than \$500/ month per child on it. 1% spent \$2000-3000 a month per child.** This suggests a **strong relationship between parents' financial means and what they spend on tuition.**
- Among those in the higher income brackets, 61% thought tuition was **necessary to stay competitive with peers.**



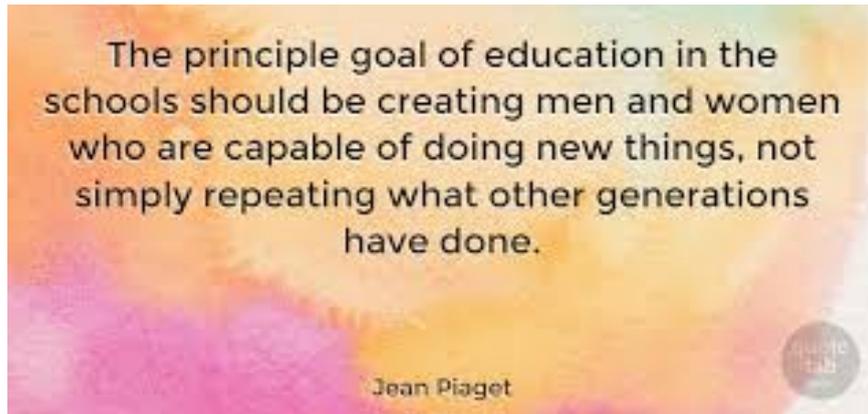
[Jean Piaget](#) - Swiss cognitive psychologist known for his work on child development

All this time is spent on the retention/ mastery of knowledge, but when was the last time you had to remember something you learnt in school? Google Search has been invented, and the highest paying jobs today are not about retention/ mastery of knowledge. They are about creativity, creative application of knowledge, joining the invisible dots, innovation, entrepreneurship, collaboration. This trend will only deepen with AI (artificial intelligence) and ML (machine learning) making inroads into more professions and doing the basic knowledge-based work for us.

In addition, all this additional time spent on academic pursuits outside school hours adds up, till the child eventually develops into a different adult. Roughly, 2 extra hours a day (devoted to academic pursuits compared to say a child in another country) from the age of 2 to 18 years eventually becomes 13,000 additional hours.

Compare this to the '10,000 hour rule' that was popularised in Malcolm Gladwell's book "Outliers" (i.e. that it takes 10,000 hours of intensive practice to achieve mastery of complex skills). We are not claiming the '10,000 hour rule' is accurate or applicable in this case. The comparison is just to raise the question:

How different are the resulting adults when such a large amount of their time as children is devoted to academics, at the expense of the free play, exploration, creative pursuits, time with family and friends, or other forms of human interaction that children in other successful countries receive? Do you still think our education system is successfully preparing our children for the 21st Century/ 'Future Economy'?



... children who spend more time playing outside in green spaces are less likely to develop psychiatric disorders as adults.

Norwegian play researchers Ellen Sandseter and Leif Kennair studied children's risky play from an evolutionary perspective and found that it helped them extend their coping abilities incrementally, allowing them to take on greater challenges. ...

Researchers fear 'increased neuroticism' and other mental health issues in future if children aren't allowed to take part in age-appropriate risky play. ... Children today only spend half as much time playing outside as their parents did, and in England fewer than a quarter of children regularly use their local 'patch of nature', compared with more than half of all adults when they were children."

(He can't read yet, but he can build a campfire: welcome to Viking parenting, 23 Nov 2021)

The extra and early focus on academics also means that **labelling by academic ability starts to get internalised at a younger and more impressionable age, leading to 'fixed' (vs 'growth') mindsets** (more on that later). So when we wonder why Singaporeans seem behind in innovation, creativity, entrepreneurial spirit, confidence, leadership, etc. perhaps we should start by looking here.

The **choices parents make about when and how they interact with their children** also have a large impact on a child's well-being and mental health. The pressure from PSLE warps the choices parents make even in their child's infancy and early childhood:

- In a high-cost city, having both parents work is how many families make ends meet. There is a financial cost for the family when a parent (usually the mother) takes time off work to devote to 'childcare' (as well as the career progression cost discussed later).
- And so the cultural norm among many Singaporean families is for a parent (usually the mother) to plan to **take time off during the child's PSLE year, rather than during the first 1-2 years of the child's life.**
- This is because many families can manage to find affordable alternative care in the child's first 2 years of life (e.g. subsidised infant care, help from grandparents/ relatives, hiring a

foreign helper), but feel they need to step in themselves to support their children's academic journey in P5-P6.

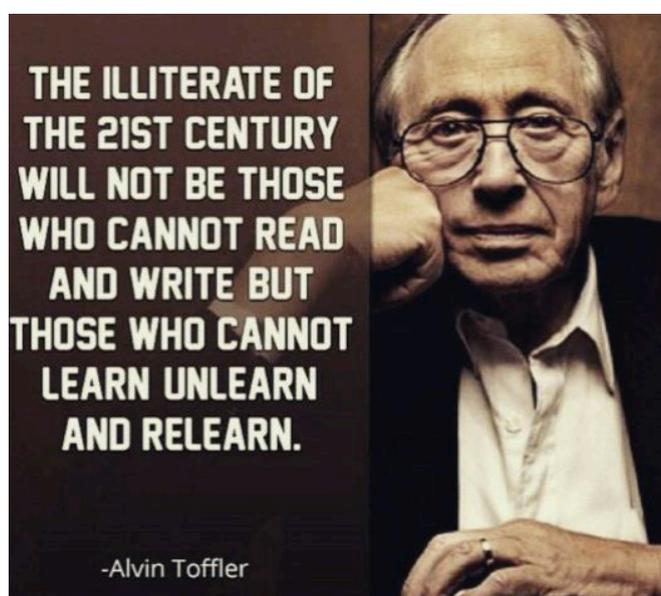
Some parents also start priming their children to specialise in other talents at a very young age (prematurely), in order to have a shot at Direct School Admission for secondary school (DSA).

The scientific case is solid for parents to prioritise their children having a [secure attachment](#) with **a responsive and interactive adult (preferably a parent) in the first 2-3 years of their lives**, when their brains develop the most, and they are learning to form emotional bonds.

But many Singaporean parents make trade offs the other way around - **prioritising giving their child undivided attention at the age of 11/12, which appears to the child to be tied to performance expectations, rather than the more unconditional and intimate love of infancy and early childhood**. We would be naive to think this does not have a negative impact on children's mental health, emotional development, self-esteem, and future relationships.

The Damage to Teaching

Beyond individual children, the existence of PSLE fundamentally changes how a typical primary school teacher teaches, and how classrooms and schools operate. Again, flowing backwards from the fixed syllabus that all children have to master by P6, there is a fair amount of rigidity in what children are expected to academically master every year in primary school, especially as we get to P4 and P5.



This **does not leave much room for [differentiated teaching](#)**, whereby teachers deliver the same material in different styles and at different levels of difficulty, **to cater to the different learning styles, levels and speeds within the same classroom**. While a good teacher may still succeed at delivering the syllabus in the different styles that children access learning, there is no way they can deliver it at the different **levels** of understanding or speed of learning that the children have.

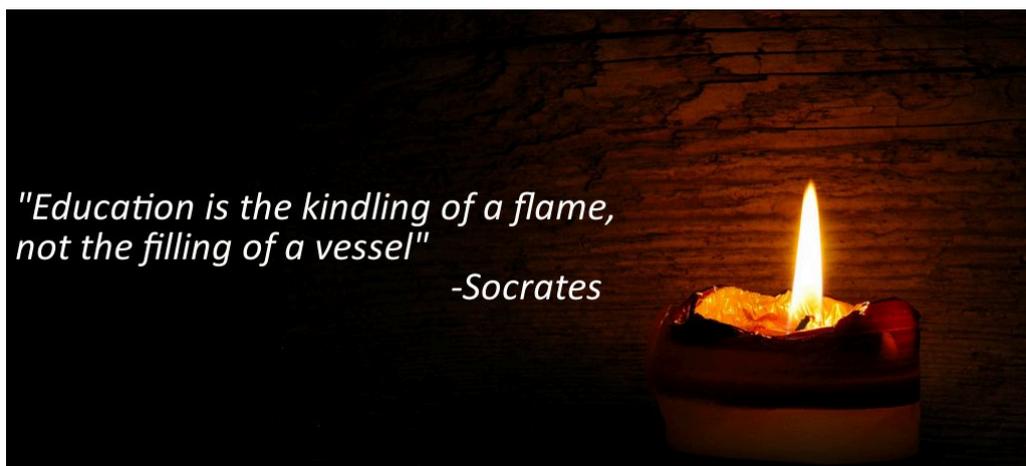
The fact is that **children learn and develop at different rates**. We seem to accept that in early childhood education, but suspend that belief by P1/P2. Beyond that, children who cannot keep up with the standard syllabus by and large **cannot be catered to within the mainstream classroom**. They either have to attend remedial classes beyond school time, or tuition of varying quality and intensity, depending on what their parents can afford.

Compare this to a good international school, where for example, children in a P6 class usually learn the same topic together, but are then given classwork or homework from different coloured folders (equivalent to P5, P6, or Sec1 level) depending on what level they are at with their understanding.

For example, Child A may usually get their work from the yellow (P6) folder, but the teacher has the option to vary this, depending on whether Child A is showing good mastery and might benefit from a challenge from the blue (Sec1) folder, or may need things slowed down a little with the green (P5) folder to ensure they have a solid command of the basics first.

Child B, who usually gets assigned work from the green (P5) folder, is not stigmatised for it, not made to attend extra remedial or tuition outside school hours, and does not end up in a different and 'not so good' secondary school from their friends the following year after a high-stakes sorting exam. Consequently **they are less likely to internalise that they are 'stupid' and stop trying, or start developing behavioural or mental health issues from constantly being made to feel like 'less'**.

Being a year behind the average at the age of 10/11 is no big deal in a good international school. It is accepted that everyone will be ahead in some subjects and behind in others, and school is for them to understand and tackle their own unique strengths and challenges. Some of the children who are consistently behind eventually catch up academically, or they discover other non-academic areas of strength, ways to participate in school or contribute to society that boost their self-esteem.



For those who say that It is a competitive world out there and it's better not to coddle our children quite so much when they are young, we would like to highlight that **eventually all children do encounter demanding syllabuses and competitive exams. In other countries and in Singapore's international schools, this happens around Year 9-12**, at the same time that our

local system schools too have O-levels, A-levels, IB, etc. But by then, children from these other school systems have a better sense of themselves, their interests, strengths and weaknesses. They also have some choice in the courses they will take and be tested on. And all this without having to go through PSLE-induced damage to their self-esteem and mental health in their primary school years.

Crucially, their teachers have spent their primary and early secondary school years helping them explore and find these strengths and interests, to develop self-motivation and a true love of learning. As opposed to children in our local system who are constantly reminded how they will end up with a bad outcome at PSLE if they don't study hard enough, or how they have ended up in a not so good secondary school so they better buck up.

Like differentiated teaching within the same classroom, this [strengths-based approach](#) is another evidence-informed best practice used in advanced education systems. Unfortunately, the existence of PSLE makes it very hard to implement in our local primary schools.

Here's a school district supervisor from Canada explaining the concept in more detail:

 [Everyone's In: An Educational Strengths-Based Approach](#) (Hover to play)



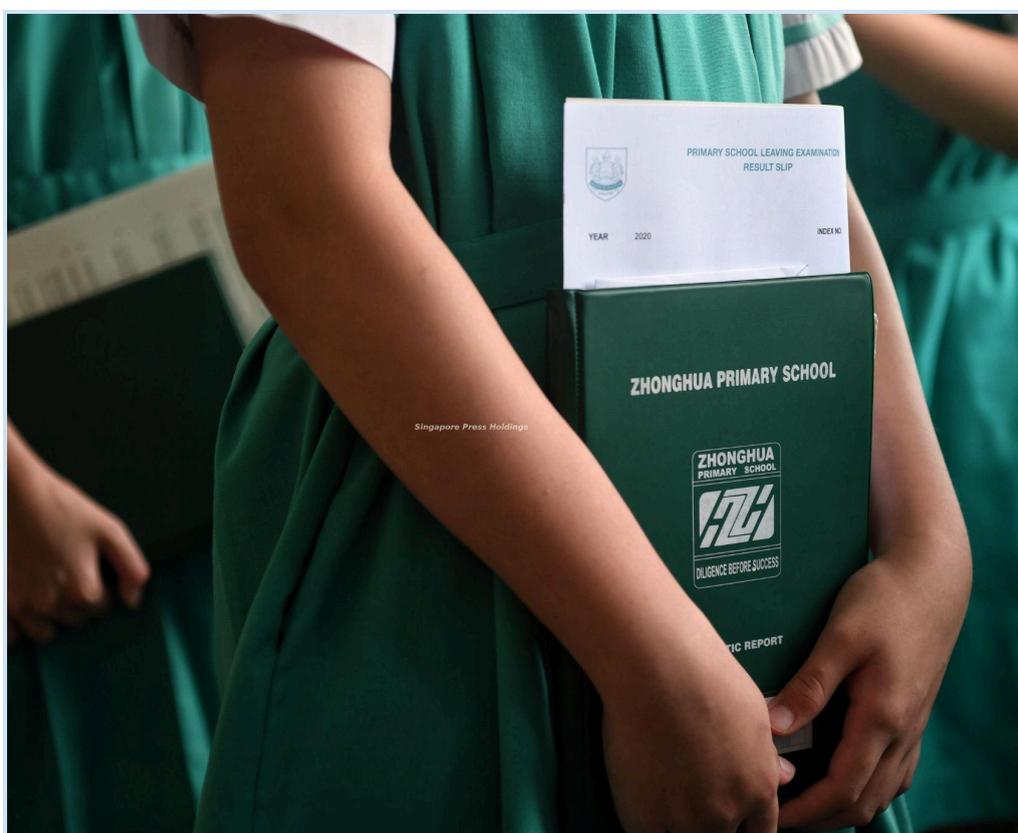
A strengths-based approach is increasingly driving hiring and culture in the world's most successful and dynamic companies as well. Here's [an example from Facebook](#). Children who have not developed self-motivation and a genuine love of learning when young will find it hard to engage or succeed in such work cultures when older.

PSLE being a high-stakes exam also means that the vast majority of teaching in our primary schools, especially in P5-P6, is **'teaching to the test'**. While there are higher order and critical thinking questions tested in PSLE, ostensibly to get beyond rote-learning, the intense pressure means that even these are being pulled apart into rules/ steps that children can memorise, something that the 'better' (i.e. more expensive) tuition centres specialise in. A question can't really test your critical thinking if your tuition teacher has spent the last 4 months teaching you how to tackle the 20 variations of it that have appeared over the last 10 years of PSLE.

And so, beyond a basic level of academic ability and memory, tackling these higher order questions has essentially become **a game of how much your parents can spend on such tuition.**

"Parents with more resources can hire tutors throughout the school years. Even if children are maintaining average or above grades, higher income parents are able to use tutors to help with the supervision of homework and test-teaching skills on a continual basis. For children from higher income households, tuition can be paid for throughout the year and children's school lives. In contrast, parents with more limited resources tend to pay for tuition for subjects their children are 'weaker' in and near exam times and in crucial examination years."

Teo, Youyenn (2022). [Education as care labour: Expanding our lens on the work-life balance problem](#). Current Sociology, SAGE Journals. pp.



Zhonghua Primary school student receiving PSLE results

(The first screening exam for the GEP, which children take at the age of 8/9, also falls into this category - full of complicated word problems, it is a test of preparation more than IQ. That preparation is now of course available in [enrichment centres](#). The first test thus disadvantages, at the outset, children who lack preparation because they come from humble backgrounds or primary schools, do not have a good command of English, or struggle with attention and focus. If they cannot do well in this test, they do not even get a chance to attempt the actual IQ test, even if they do actually have a high IQ. Consequently, most 'twice exceptional' children have both their gifts and their learning needs neglected by our system.)

The Damage to Social Inclusion

Following from above, if the KPI/ measure of success that a child is held to by their parents and society as a whole is PSLE performance, there is no way this will not percolate into the KPI for the primary school, and eventually for each individual teacher, especially at the upper primary levels.

From here, **to create a culture where every child is respected for who they are and nurtured at their level is virtually impossible**. There will of course always be micro-environments (individual lessons, classrooms or schools) where dedicated teachers, parents and principals manage to pull this off from time to time, but let's be clear-eyed - these would be exceptions, not what the default system incentivises.

MOE has recently admitted as much - Second Minister for Education Maliki Osman said on 9 March in parliament, **"We must be careful as social mixing, if brought to the extreme, may impose more challenges on teachers, so we want to strike a balance.** Beyond the classroom, we also facilitate social mixing through other platforms, such as co-curricular activities."

"Social mixing" is a problematic term for MOE to be using to begin with, as it plays into the narrative that young children should be sorted, or perceived as different, based on demonstrated academic achievement/ ability at a young age. (You can only 'mix' what is 'different'.)

And Minister Maliki's statement begs the question - **if Singaporean children cannot mix freely in primary school** (and mind you, the children with the most severe learning needs have already been separated and sent to SPED schools), **then when can they mix freely?!?** They have the rest of their lives to be sorted and streamed, academically, professionally, culturally, etc. Wasn't the entire point of having a compulsory national education system, strictly enforced till P6, to ensure all children go through the same experience and emerge 'Singaporean'?

But now we have confirmation that this mixing cannot be completely free, **because our teachers cannot cope with it**, given the current levels of resourcing in schools. Yes, as Minister Maliki points out, there are other platforms for social mixing, including CCAs, recess, neighbourhood playgrounds, etc., but none as inescapable and effective as the classroom that children spend 5 hours a day in.

The sorting into classrooms by ability sends a clear message to young children, that too from an official source that they are somehow 'less' or 'more' worthy. Let's not even try denying that these

messages are eventually internalised. Giving sorted classrooms neutral names doesn't help - just ask any child and they'll tell you which is the "naughty" or "slow" or "smart" class in their level.

Key Findings from a study by Singapore Children's Society:

- 1. At both the primary and secondary school levels, students from elite schools had higher levels of socio-economic status (SES) than those from non-elite schools.*
- 2. **Regardless of their school type, all students perceived individuals in elite schools to be of a higher social status and academic competence than those in non-elite schools. This was observed at both the primary and secondary school levels.***
- 3. **Students from elite secondary schools perceived themselves to have a higher social status than individuals from non-elite secondary schools.***
- 4. Regardless of their school type, most students aspired to attain at least a university degree. However, students from elite secondary schools were more likely to have high confidence in attaining at least a university degree, compared with those from non-elite secondary schools.*
- 5. Parents of children from elite secondary schools were more likely to have high confidence in their child's ability to attain at least a university degree.*
- 6. Follow-up interviews revealed that parents associated placement in elite secondary schools with better opportunities for attaining a university degree.*

Ong, X.L. & Cheung, H.S. (2016). Schools And The Class Divide: An Examination Of Children's Self-Concept And Aspirations In Singapore [Research Monograph No. 11]. Singapore Children's Society.

The Damage to Mental Health & Family Relationships

PSLE also has large and important negative effects on children, families and society outside of the classroom and academics. One of the key ones is the impact on children's mental health and family dynamics.

The vast majority of children are not cut out to be academics. But in our 'Singapore culture', excelling at academics is held up as the ultimate goal from a young age, and these expectations are reinforced by society at large around the child - school, teachers, parents, friends, random relatives and even perfect strangers.

For children who do not feel they are matching up to these expectations (which is a significant majority, since only a minority can technically 'do well' in our system), the damage to self-esteem begins young. Unlike in international schools or other developed countries, being good at sports, arts, music, etc. is not a moderating factor. In fact, showing talent in other areas also often turns hyper-competitive, as children are pressured to excel in those other talents at a young age, in order to be able to use DSA to bypass the PSLE.

We need to stop just pulling people out of the river. Some of us need to go upstream and find out why they are falling in.

(Desmond Tutu)



"I have long been concerned with the continuous rise, over roughly the past 50 years, in the rates of depression, anxiety, and suicides among children and teens...

during a period in which young people have been subjected to ever-increasing amounts of time being supervised, directed, and protected by adults—in school, in adult-run activities outside of school, and at home—and have experienced ever less opportunity to play freely and in other ways pursue their own interests and solve their own problems...

The pressure and continuous monitoring and judgments from adults, coupled with the loss of freedom to follow their own interests and solve their own problems, results in anxiety, depression, and general dissatisfaction with life...

My contention is that we have, over decades, been decreasing children's opportunities to experience autonomy, competence, and relatedness...

We have forced them to spend ever more time in school and on homework outside of school, and even within the realm of schoolwork, we have decreased the choices they have because of our misguided focus on high-stakes testing...

*There is reason to believe that even family relationships have suffered... As parents become homework monitors and cart their children from one activity to another, **the children, especially by the time they are teenagers, may begin to feel that their parents value them only for their achievements and not for who they really are** (e.g., Ebbert et al., 2019)."*

(Psychology Today, 30 Mar 2022, Dr Peter Gray: [Why kids are suffering today](#))

One of the protective factors for children experiencing such stress is a long-term attachment to a responsive and caring adult, which in most cases would be a parent. A healthy parent-child relationship will naturally grow and evolve as the child's needs change, e.g. from a primarily physical dependency in the early years, to more directive and guiding as the child gets older, to more of a friendship, and then eventually in our old age the tables turn and our children take on a more parenting type of role with us.

Somewhere around the age of 10-12, as children transition through their pre-teen to teenage years, the parent-child relationship has to start adapting to become more of a friendship; more about listening, understanding and mentoring than directing our children. (It is still important to provide structure, boundaries and discipline for children at this age, of course, but the relative weight of that aspect in the relationship starts to gradually reduce as children become both more mature and more demanding of independence.)

However, PSLE rears its high-stakes head just at that very point, and instead of transitioning into being our children's friends and mentors, we feel we need to nag, pressure and micro-manage our children on the academic front. Understandably, most Singaporean parents think they need to do this in the best interests of their children, but **it damages this natural transition in the parent-child relationship**.

"... parents regularly spend their evenings making sure kids have done their homework and, where possible, helping them with it.

This form of care is neither pleasant nor pretty. Interviewees readily admitted that much of what they do on a daily basis is to nag and scold. They felt impatient and frustrated about losing their tempers and having to 'shout' or 'scream'.

*Teo, Youyenn (2022). [Education as care labour: Expanding our lens on the work-life balance problem](#). *Current Sociology*, SAGE Journals. pp.*

In many cases, there is no recovery from this damage - children turn into teenagers who are secretive, withdrawn from their parents and family, or worse, oppositional. This makes them more vulnerable to social-emotional pressures from bad decisions and relationships, which in turn can worsen mental health outcomes.

Many Singaporean parents are caught off guard when their children start exhibiting mental health issues in their teens and early adulthood, but **often the build up has been occurring from a much younger age**, due to academic and social-emotional pressures combined with the unavailability of the parent as mentor-friend.

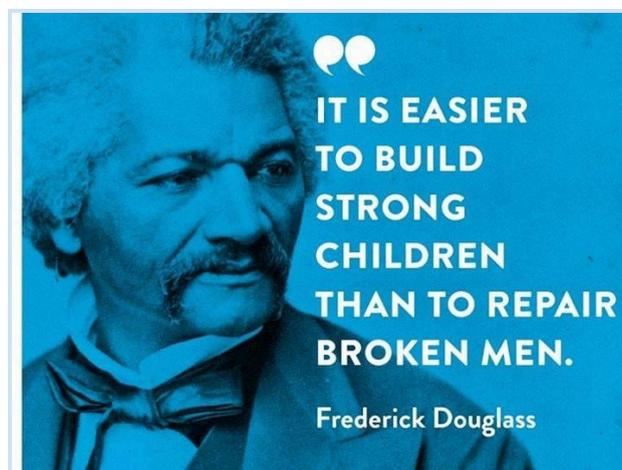


A secondary school classroom in Singapore

To the parents reading this - many people will brush off teenagers being rude or not talking to their parents as 'teenage behaviour'. **But if your teenager is not able to discuss important topics or heartfelt issues with you on a regular basis, that is a red flag for your relationship.** (Of course, a good relationship with your teenager is no guarantee that they will not struggle with mental health issues, which can be brought on by many other factors including genetic predisposition and traumatic events, but it is a protective factor that does reduce the chances.)

The academic pressure from society also **impacts family dynamics. Parents may have different parenting styles/ beliefs, and differences and disagreements are exacerbated** when one or both parents see education as a high-stakes game that they have to steer their child through.

A lack of financial resources for tuition is also a common stressor, as families make financial trade-offs in order to provide as much educational support as they can to their children in this game. **None of that can be healthy or conducive to happy family life.**



The Damage to Economic Potential

PSLE scores essentially stack rank all the children in the country. While this has recently been refined into stack 'banding', it does not fundamentally change what PSLE is. How does it serve a 12 year old to be told their position relative to every other child in the country? **Besides killing self-esteem, it does not give parents, teachers and children any idea of what the child's comparative advantage is.**

There are future artistic and tech geniuses and successful entrepreneurs who will place in the middle of these PSLE 'bands' - **how does telling them at 12 that they are just average and will be treated accordingly for the next 4-6 years help us develop their potential?**

It is understanding and developing a child's strength/ comparative advantage that is becoming crucial in setting them up for success in the new economy. Most high-income parents understand this; they help their children get exposure and develop 'portfolios' outside of academics - websites, exhibitions, even their own business - if their child is not academically inclined or good at being tested.

"Every strength has a corresponding challenge and every challenge has a corresponding strength. The inattentive child may be a deep thinker. The uncooperative child may be a good leader. The emotionally-charged child may be gifted with exceptional empathy. The rule-defying child may be an out-of-the-box innovator. When faced with challenging behaviours, look for the corresponding strength, and focus on nurturing that gift while providing gentle guidance and coping techniques for the challenging areas. That is the essence of working with, instead of against, our children." [L.R. Knost](#)

On the flip side of the socio-economic ladder, [a study by Assoc Prof John Donaldson](#) to uncover why Malays are over-represented in the Normal (Technical) stream was unable to throw up any answers related to race or family size, but found the following **common reasons among students from all races:**

- Hands-on learners
- Late bloomers
- Family dysfunction or trauma
- Undiagnosed or untreated learning disability
- Weak in English

All these factors would have been identified early and supported accordingly in a well-resourced, truly universal primary education system.

The study also found that the drivers of post-PSLE success among the Normal (Technical) students included:

- people who unconditionally believed in them
- finding their passion, often when they reached ITE

Again, these are also aspects that would have been provided in a universal primary school education system.

“... while most of us N(T) students were not stellar in our academic endeavours and struggled to pass exams regardless of how hard we tried, there were still things we excelled at — like street soccer or basketball.

Perhaps we could have excelled in other areas, but most of us lacked access to other opportunities.

And accessing opportunities is largely contingent on both academic performance (which places one in a school with more resources or even gives one a higher chance of being selected for programmes to represent the school) **and socioeconomic capital of one’s family** (which means access to a host of resources outside of school).

Most N(T) students are unfortunately not endowed with either.”

(*Mothership*, 17 Jul 2021: [Ex-teacher in S'pore who scored 110 for PSLE: 'Not everyone has access to equal opportunities'](#))

"A meritocratic system naturally relies upon education as a primary pathway for social mobility. **A fair educational system should, in theory, allow those with the strongest intellectual ability to climb to the top. Some have suggested, however, that there are barriers to this ideal in Singapore’s system.** First, some have argued that the system of streaming, determined by the Primary School Leaving Examination (PSLE), **may be an inexact way of identifying merit and deciding a student’s future.**

While the concept of streaming was designed primarily to stem the dropout rate in Singapore’s schools, and was quite successful in doing so, it has gone on to play an enormous role in determining the futures of Singaporean students. Many have pointed out that **some students may end up in academic streams where they do not necessarily belong, particularly as their placement is based on one test, which is taken when they are fairly young. For this reason, many have argued that the results of streaming are too dependent on a single examination."**

Smith, Catherine J.; Donaldson, John A.; Mudaliar, Sanushka; Md Kadir, Mumtaz; and Yeoh, Lam Keong. [A handbook on inequality, poverty and unmet social needs in Singapore](#). (2015). 1-86. Lien Centre for Social Innovation: Research.

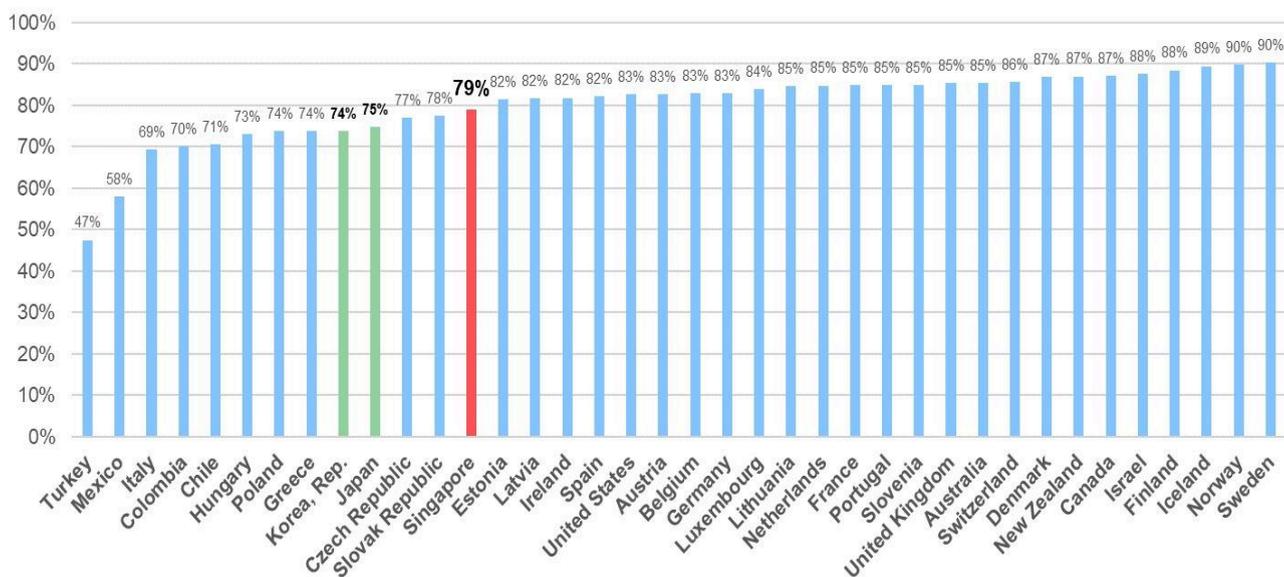
Wasted Female Potential & Damaged Careers

And then there is the damage to women’s ability to grow their income and careers as they largely shoulder this burden of keeping their children academically competitive. Teo You Yenn and Corinna Lim have described this uniquely Singaporean phenomena well (excerpts below), and we will only summarise it here.

Whereas in other developed countries, women tend to drop out of the workforce or reduce their participation only temporarily in the early years of their childrens' lives, **in Singapore women have to continue devoting significant time to tutoring their children academically, or accompanying them to tuition services, throughout the primary school years.**

Often this culminates in transitioning to part-time work or unpaid leave during the child's PSLE year. Consequently, **Singapore's female labour force participation rate is one of the lowest amongst the world's richest countries.** It appears at 26th in the graph below, near Korea and Japan which also struggle with an overly competitive academic system.

Singapore's female-to-male labour force participation rate compared with all OECD countries:



Lim, Corinna (2021). *IPS-Nathan Lectures: Gender Equality, The Time Has Come*. World Scientific. (Pg 46, Fig 4. Source: OECD data; Singapore Ministry of Manpower)

“Mothers’ careers are characterised by breaks, punctuated by the disruptions brought on first by childbearing and maternity leave, and then later by the demands of meeting educational needs of children. ... Although both fathers and mothers expressed concern about the PSLE, it was generally framed as mothers’ duty.

Jessie, in a clerical job she finds boring, has put off dreams of pursuing a different profession because she first wants to ‘be decent mother, go through PSLE’ – in six words, she encapsulates perfectly the centrality of the PSLE to Singaporean motherhood... Out of duty to children’s primary school needs, many women sacrifice their financial independence and alter their sense of self and accomplishment in both the short and long terms.

*Teo, Youyenn (2022). [Education as care labour: Expanding our lens on the work-life balance problem](#). *Current Sociology*, SAGE Journals. Pp.*

By this time, after 12 years of career sacrifices, the gap between where they are and where they could be in their careers can be pretty wide for most women. In more well-off families, women often give up work entirely while their children are in primary school, because the mental load of juggling work with their childcare responsibilities is no longer worth it. Mind you, this 'childcare' is mostly about playing the academic game, there are foreign domestic helpers aplenty available to these families to actually deal with physical childcare.

"The education system... used to be a good public system, but these days parents spend a lot of money on tuition to help their kids do well in PSLE..."

- a) **Primary school has now become a public-cum-private system that amplifies inequality. Rich kids get tuition in every subject; poor families scrounge around for free tuition in the subjects they need help in.***
- b) **The PSLE system has created a huge amount of unpleasant care labour for parents.** Parents spend a lot of time searching for the best tutors, ferrying kids here and there, coordinating timetables, nagging and scolding children, and getting upset with family members because it is all so stressful.*
- c) **It is now quite normal for one parent, usually the mother, to resign from her job or take one year off to support her kids to get through PSLE.** A mother whose child was struggling at Primary 5 told me she quit her job as she felt that she would not be able to live with herself if her child did poorly and she had not done everything she possibly could to support him. **It is heartbreaking to hear these stories. This is not what childhood and parenthood should be about.***

***The PSLE system is clearly not working.** This is one of the reasons why I think our women's labour force participation curve does not have an M shape. **Research from East Asia has also shown a negative correlation between TFR (Total Fertility Rate) and household spending on education.**"*

Lim, Corrina (2021). [IPS-Nathan Lectures: Gender Equality, The Time Has Come](#).

When it comes to the reliance on tuition in Singapore, it is important to distinguish between 'should' and 'is' - tuition **should not** be required for the vast majority of children, they should be able to learn what they need within the school day, but **the fact is most families do resort to tuition.** Policy cannot be made based on the 'should' of how people behave, it needs to look at **the reality of what is**, and why, and whether this is good for our society and economy or not, and if not, what can realistically be done about it.

Falling Birth Rate

Young couples are well aware of how stressful and expensive this academic competition can be, for themselves and their future children. For Singaporean couples planning whether to have children, or how many to have, we would be naive to think the reality of our education system does not play a role in their decisions.

"Parents spoke regularly about feeling rushed and stressed. In some instances, where this was possible given a family's financial circumstances, hectic schedules were the main impetus pushing women to reduce wage work. In other instances, it was experienced as hardship to be endured while children are young.

Time pressures seeped often into weekends, as various needs of the family that cannot be met during weekdays – errands, housework, tuition, and enrichment activities, socialising with extended family or friends – are crammed into the two weekend days."

Teo, Youyenn (2022). Education as care labour: Expanding our lens on the work-life balance problem. Current Sociology, SAGE Journals. pp.

Again, in other developed countries, the provision of affordable and accessible preschools and preschool care has been shown to have a positive effect on birthrates, by allowing women to not have to choose between having children and taking time off their careers. That is one of the reasons the Singapore government has also worked hard to ramp up the supply of affordable and accessible preschools, and is also working on boosting quality. ([MSF](#) and [ECDA](#) have oversight of the preschool sector.)



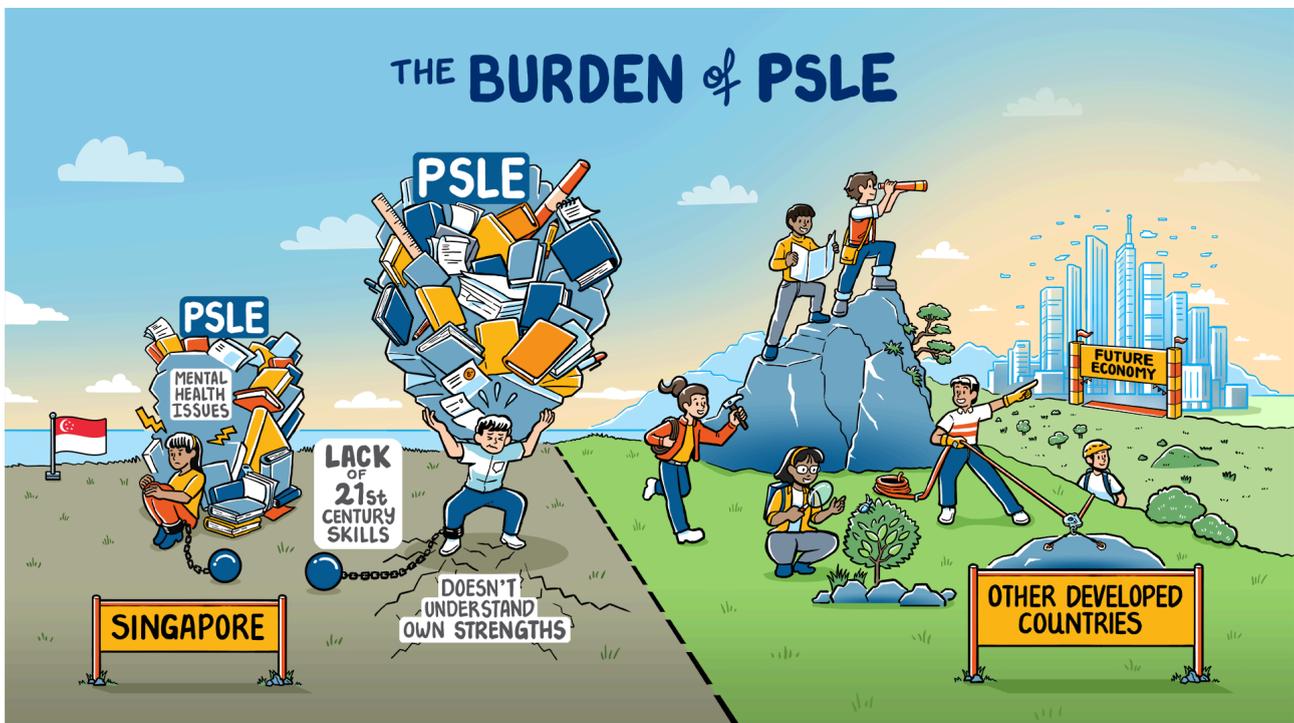
A preschool class in Singapore

But unlike in other developed countries, this may not be sufficient to boost birth rates in Singapore, because beyond preschool there still lies at least a 6-year stretch of high pressure and expense for mothers to bear.

“Yet, despite what appears to be significant improvement in care infrastructure, parents in Singapore still experience work-life balance as elusive. Something I was beginning to notice in the early 2000s now appears as full-blown impediment: children’s education.

In particular, parents spoke about primary school with trepidation and anxiety – reporting responsibilities, labour, and expenditure that render work-life reconciliation especially challenging.”

*Teo, Youyenn (2022). [Education as care labour: Expanding our lens on the work-life balance problem](#). *Current Sociology*, SAGE Journals. pp.*



An Alternative to a PSLE-Based System

PSLE would no longer be necessary if MOE were to establish **‘through trains’ from all primary schools to a partner secondary school**. At the end of P6, all children (except those at the extreme ends of the spectrum of learning abilities, who may benefit/ continue to benefit from a SPED or GEP-type education) could go from their neighbourhood primary school to their neighbourhood secondary school. This would require making all primary school admissions neighbourhood-based, without alumni/ volunteering-based admission.

Children **could continue to be regularly assessed**, through primary and secondary school, using computer-adaptive pre & post testing, as well as more 'real-life' assessment formats like projects and presentations, and regrouped for certain subjects the same way, and receive varying levels of learning support as needed. The primary school system's KPI/ measure of success becomes the child's learning trajectory, not absolute exam scores or PSLE bands.

Secondary schools that want to remain academically competitive, or those established to cater to a specific strength (e.g. arts/ sports schools), could choose to retain PSLE as a type of entrance examination, or replace it with their own merit-based admissions criteria/ testing, and would not be part of the through-train system.

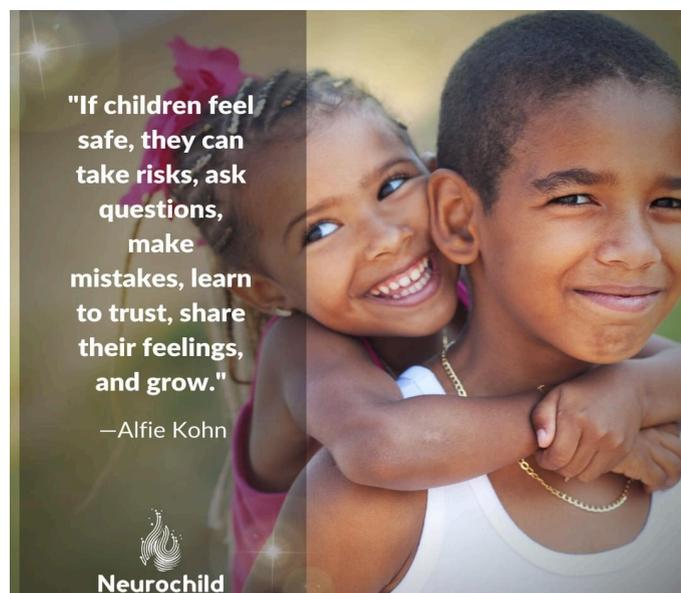
MOE's response to this suggestion of removing PSLE is that parents will then start moving to be close to the primary + secondary school combination they prefer. That ignores the facts on the ground:

- (a) There is [plenty of moving and renting already happening](#) to get close to desired primary schools; **the type of parent that would move to get their child into a chosen primary school is already doing so**; and
- (b) The **majority of Singaporean parents cannot afford to move/ volunteer** to get their child into a specific primary school, and are unlikely to start doing so if PSLE is made optional. That is a 'move' (excuse the pun) that only the well-off can afford to make in our game of competitive education.

Moreover, once PSLE is replaced with regular standardised pre and post computer-based testing, MOE will have much more fine-grained data on schools and their relative strengths and challenges, and can use this to truly get us to 'every school is a good school'.

e. From Control to Connection

Children need [psychological safety](#) in schools and classrooms to be able to learn effectively. This comes from the [quality of their interactions with their teachers and peers](#).



From birth, humans have a need to control and connect. But going forward, the balance of how our economy and communities work is **moving from control more towards connection**. We have to engage, collaborate and network more (i.e. connection), and depend less on getting work done through hierarchy and commands (i.e. control). Learning to work with and through connection to others starts at birth (through attachment to a primary adult caregiver), and continues through school. It requires us to develop more EQ (emotional intelligence) in our children, which in turn requires an environment of warmth and psychological safety for our children to develop - again, hard to do with 35-40 children in a class focused primarily on working towards PSLE.



P2 children in a class in Germany, 2008

Learning through connection with an adult/ teacher has been shown to be much more effective and intrinsically motivating for children. **Please take a moment to think of the teachers who left a lasting impression on you in your school years.** Why did you like them? What impact did they leave on you? You may not remember exactly what they said, what they did or even the material that they taught, but they probably left you with a deeper appreciation of both your strengths and the subject that they were teaching.

"The emotional climate of the typical classroom is warm, safe, respectful and highly supportive. There are no scripted lessons and no quasi-martial requirements to walk in straight lines or sit up straight. As one Chinese student-teacher studying in Finland marvelled to me, "In Chinese schools, you feel like you're in the military. Here, you feel like you're part of a really nice family." She is trying to figure out how she can stay in Finland permanently."
(The Sydney Morning Herald, 25 Mar 2016: [This is why Finland has the best schools](#))

From this connection can then arise **self-awareness and the practice of self-reflection** on their learning. Children can effectively learn how to work with peers, regulate their emotions, gain awareness of how they learn best, learn to be more aware of what's going on around them, start to understand how the world works - these are all important aspects of developing EQ and operating in the future economy. And they are better covered in other primary curriculums like the IB Primary Years Programme, than in our local primary schools geared towards covering the PSLE syllabus.

So we know teachers have to form deeper connections with children, and children with each other and the world. But how much of that can happen in a classroom with 35-40 children?

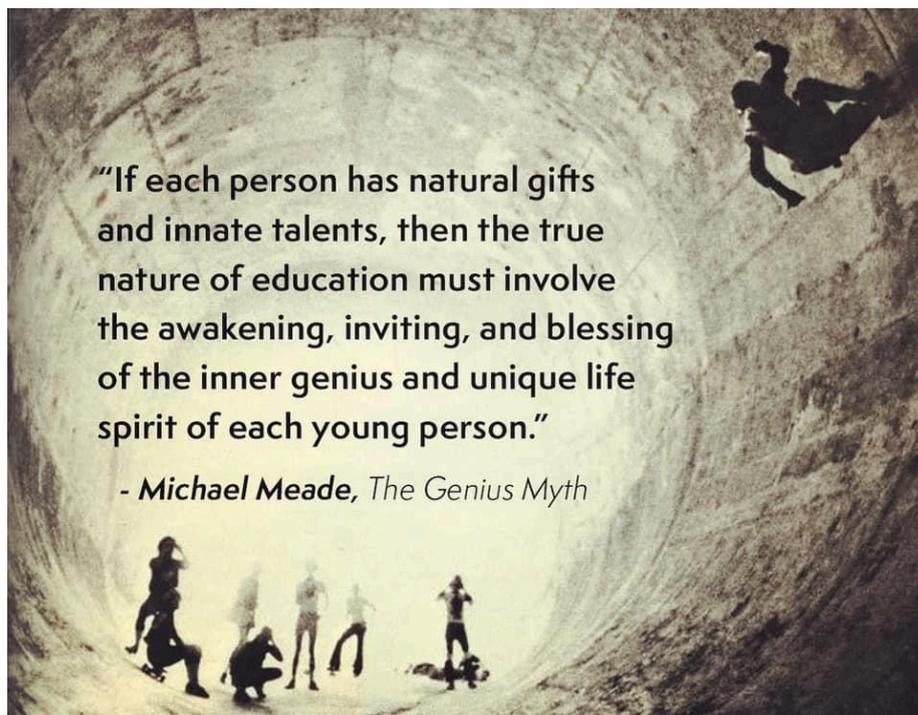


A secondary school class, Singapore

As another example, if you're used to parent-teacher meetings in the local system, the first time one gets to attend a parent-teacher meeting in a good international school is a revelation. The teachers are all interested and engaged, genuinely interested in each and every child and having the energy to connect and discuss with every set of parents the holistic development of their child, not just their academic performance. They try to start by sharing about the child's strengths, and drive the discussion towards a positive action plan that the teacher/ school and parents can work on to support the child better. (Which does not involve washing their hands off by suggesting the parent get the child external tuition or help them more with their homework/ learning.)

If you have a child with learning needs (which 10% of us do, whether we are aware of it or not), there may even be 2-5 such interested and engaged teachers and support professionals discussing your child with you. They always start the conversation with something kind and heartwarming to say about your child, they want to hear about your goals for your child, and they are confident and connected enough to you and your child to have an open brainstorm about the best way to help your child achieve those goals. This may happen in some of our government-funded early

intervention programmes, if they are following best practices, but it is virtually unheard of in mainstream primary schools.



Finland delivers on a national public scale:

- ***highly qualified, highly respected and highly professionalised teachers who conduct personalised one-on-one instruction;***
- ***manageable class sizes;***
- ***a rich, developmentally correct curriculum;***
- ***regular physical activity;***
- ***little or no low-quality standardised tests and the toxic stress and wasted time and energy that accompanies them;***
- ***daily assessments by teachers;***
- ***and a classroom atmosphere of safety, collaboration, warmth and respect for children as cherished individuals.***

(Sydney Morning Herald, 25 Mar 2016: [This is why Finland has the best schools](#))

▶ *This is the most active classroom in the world! (Hover to play)*



Large Class Sizes + Tuition + Parental labour ⇨ **Inequality of Attention**

This deeper connection between student and teacher is all the more important for children from low-income families, who may not get sufficient academic help at home, especially if parents are working long hours to make ends meet. Higher-income families can also afford more tuition, and tuition in smaller groups. Those of us who are tuition teachers know that well-heeled parents are able to provide all kinds of 'enrichment' classes for their children - academic subjects, sports, programming, music, etc. And on the other end of the spectrum, parents with lower income whose children are failing, but they can barely afford tuition in one subject.

"There is a tiered market to serve customers with different budgets – branded chains as well as bespoke services; smaller and cheaper centres located in so-called heartland neighbourhoods as well as fancier chain stores located in major shopping malls.

*Many university students work part-time as tutors, but **the industry is also heavily staffed by ex-school teachers**. These teachers – and especially those who have worked in well-known 'good schools' – command the highest prices, indicating they are valued for being able to teach the official curriculum. **Tuition centres unabashedly advertise their capacity to teach students test-taking skills that translate into improved grades at major exams.***

So intense is the need for tuition that this has also become a major role played by the social service sector – volunteer-run and/or charity-based tuition services are in high demand, particularly in low-income neighbourhoods."

*Teo, Youyenn (2022). Education as care labour: Expanding our lens on the work-life balance problem. *Current Sociology*, SAGE Journals. pp.*

The net result is that **the academic nurturing from adults that higher income children get can be very different from lower income children, helping to perpetuate inequality of opportunity from young**. For example, only [45% of children in the GEP](#) live in HDB apartments, as compared to over 80% of the resident population.

Here's a worked numerical example to show **the cumulative impact of this 'inequality of attention'**:

LC (child from low income family)	Primary school			Student care (after-school care)			-		Total 'academic adult attention hours' in a day
	Class size	Adult: child ratio	Time spent	Class size	Adult: child ratio	Time spent	-	-	
	30	1/30	5 hrs	40	1/40	3 hrs	-	-	
	Adult attention hours in school			Adult attention hours in student care			-		= 5/30 + 3/40
	5/30			3/40			-		= 0.22 hrs

- LC (low-income child) shares his school teacher's attention with his relatively small class of 30 for 5 hours in school, followed by 3 hours of after-school care run by 1 adult looking after 40 children. This adds up to 0.24 'academic adult attention hours' a day for LC.

HC (child from high income family)	Primary school			Tuition centre			Home		Total 'academic adult attention hours' in a day
	Class size	Adult: child ratio	Time spent	Class size	Adult: child ratio	Time spent	Adult: child ratio	Time spent	
	40	1/40	5 hrs	4	1/4	1 hr	1/1	1 hr	
	Adult attention hours in school			Adult attention hours in student care			Adult attention hours at home		= 5/40 + 1/4 + 1
	5/40			1/4			1		= 1.38 hrs

- HC (high-income child) gets 1/40 of his class teacher's attention in a larger class of 40 for 5 hours in school, but also 1 hour of tuition in a group of 4, and 1 hour of his mum's help with homework at home. This adds up to 1.38 'academic adult attention hours' a day for HC.

- So HC is getting about **6 times more academic adult attention in a day** than LC, even though LC is in a smaller class. This may be a simplified illustration, but **that kind of inequality of opportunity multiplied through days and years becomes an insurmountable divide:**

E.g. 6 times more attention in a school day x 300 days/year x 6 years of school = 10,800 times more attention...

Here's an alternative vision:

LC & HC (i.e. ALL children)	Primary school			(No other academic adult attention for the day)					Total 'academic adult attention hours' in a day	
	Class size	Adult: child ratio	Time spent	-	-	-	-	-		
	20	1/20	6 hrs	-	-	-	-	-		
	Adult attention hours in school			-			-			-
	6/20			-			-			= 0.30 hrs

- LC shares his school teacher's attention with his class of 25 for 6 hours in school. School runs from 8.30am to 3.30pm. He then has CCA in school and heads home at 5pm. He gets 0.30 'academic adult attention hours' a day.
- HC similarly gets 0.30 'adult attention hours' a day. He does not need his mum's help with his homework after school, because homework is set at a reasonable low amount, and his teacher goes over it the next day to ensure that all the children understand how to do it.
- HC does not need tuition after school because school hours are sufficient for him to learn what he needs to from his teachers, and there is no high-stakes exam coming up at the end of primary school that he has to compete with other children in. He and LC enjoy their school-based CCA together after school hours, exploring new interests and making new friends.
- (This is largely how the good international schools in Singapore operate, if we leave aside the fact that LC's family would not be able to afford the fees.)



A P3 class in Germany with 24 students, 2020.

Inefficient Education ⇒ Trade-Offs

The example of the two children LC and HC above also raises the question of **how much time children should be spending on academic pursuits.**

Why is it that in Singapore the time spent on academics in school is generally not considered sufficient by most parents (and thus needing to be supplemented with tuition)?

For children and youth that spend long hours in tuition, what could they be doing/ learning/ participating/ creating, or whom could they be connecting with, that has to be taken away to make time for tuition?

Are the hours our young children spend in academics taking away from the other skills they require to ensure continued productivity growth and innovation in our economy, without becoming over-dependent on foreigners?

	Topping PISA rankings	Economy has been doing well	Very little stress in education system	Well-resourced, inclusive primary schools	Preparing children for the Future Economy
Finland (and most northern European countries)	✓	✓	✓	✓	✓
Singapore	✓	✓	✗	✗	✗

Finland is doing almost as well as us on the PISA rankings, and about as well as us economically, but their children are only spending half the time that our children spend on academics. Who has the more efficient or better quality education system by far?

Why don't we aim for better quality education **within classroom time**, giving teachers the time and space to differentiate their teaching styles and levels to 20-25 children in the classroom, ensuring that each progresses at their own pace, and none needs hours of tuition outside of class?



A P2 class in Finland with less than 20 students, 2005

And as we move onward from the pandemic and the collective grief from the River Valley incident, the future of our society and the children that live in it, stands on the cusp of a different time. And the foundations upon which we've built our education are now shaking.

It perhaps is a poignant sign for us to offer the gift that we can never buy, trade, or get more of, to our children—the gift of time.

(Ricemedia, 17 May 2022: [School Exams Are Not the Issue — Insufficient Unstructured Time Is](#))

The Damage to Self-Esteem from Constant Streaming & Sorting

In the absence of small class sizes, the local system has to resort to streaming and sorting children by 'ability' to try to ensure that they are grouped according to the pace at which

they can learn. However, written test results are not always a good indicator of ability, and strengths and abilities can vary a lot from subject to subject for even one child. We've all heard of the child who is great at Maths but has their grades pulled down by Mother Tongue every year, and so gets streamed into the 'slow' class. Or the child who is creative and articulate, but has internalised that they are 'dumb' because they don't do as well as the other children on written tests.

Over multiple years, with the constant testing, sorting, labelling and comparing, sometimes turning into putdowns and name-calling, **children internalise 'their place' in this hierarchy.** We would be naive to think this does not have an impact on their behaviour when they join the working world as adults.

*"It has become a commonplace idea that failure builds resilience. But **when children fail over and over and don't have the support to keep trying, all they learn is that they're failures.***

*Experiencing disappointment or failure is only half the picture. **Resilience comes not from failing, but from the experience of learning that even when everything goes wrong, you can pick yourself up, try again, and succeed. That requires at least some experience of success, and lots of emotional support.***

Dr Laura Markham, [12 Ways to Raise a Resilient, Competent Child](#)

We have come across plenty of competent workers, with good ideas, capable of taking on challenges or leaning in, but they second guess themselves and do not contribute or ask questions because they are 'not the scholars' or not 'ang moh' etc. They genuinely think that somehow makes them 'less', and/or they believe they will be perceived that way in comparison. Some of the 'scholar types' on the other hand, can be overconfident, unaware of their social shortcomings, underestimate staff or teammates without pedigree backgrounds, and underestimate the value-add of collaboration and diversity, leading to not too great decision-making.

In a more flexible system on the other hand, children from the same classroom are used to being grouped and regrouped for different subjects, with additional adults joining and leaving for different subjects. They are of course aware of which of their friends are academically faster or slower or have additional needs, but it is not a big deal to them, **because the adults make it clear, through conscious and subconscious behaviour, that it is not a big deal.**

*"When we set children against one another in contests- from spelling bees to awards assemblies to science "fairs" (that are really contests), from dodgeball to honor rolls to prizes for the best painting or the most books read- **we teach them to confuse excellence with winning, as if the only way to do something well is to outdo others.***

We encourage them to measure their own value in terms of how many people they've beaten, which is not exactly a path to mental health.

We invite them to see their peers not as potential friends or collaborators but as obstacles to their own success...

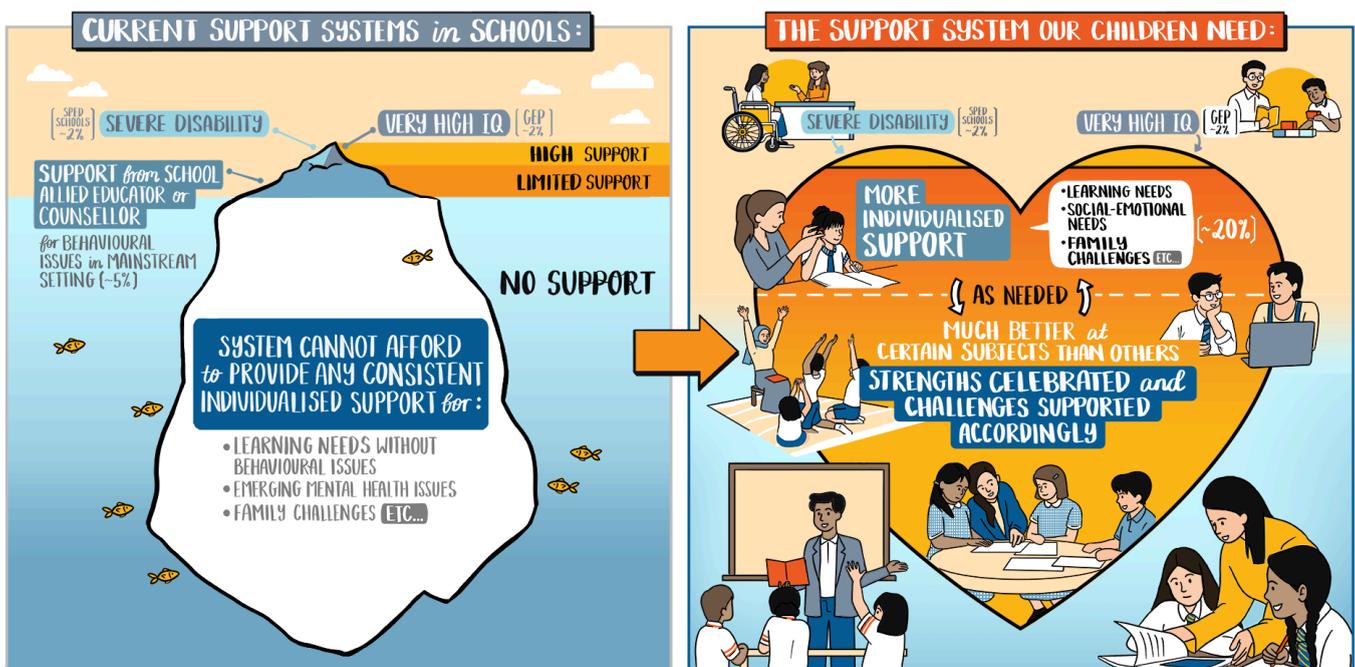
Finally, we lead children to regard whatever they're doing as a means to an end: The point isn't to paint or read or design a science experiment,

but to win. The act of painting, reading, or designing is thereby devalued in the child's mind.” – Alfie Kohn

f. Support for Learning Needs & Mental Well-being

Another place where MOE's ideology of 'need suppression' and 'artificial scarcity' clearly shows up is in our mainstream primary school system's inability to adequately support children with learning needs and social-emotional or mental health issues. **This lack of support can cost individual children their economic future**, especially if they come from low to middle income families that cannot afford to buy this support off the open market. But it also impacts every child in our school system in broad ways, which we will delve into after this section.

SUPPORTING EVERY CHILD.SG



Most schools are staffed with a meagre 1-2 Allied Educators for Learning & Behavioural Support, and 1-2 School Counsellors. They are neither trained sufficiently when they start working, requiring just a 8-12 month diploma course from the National Institute of Education (NIE), nor present in sufficient numbers. Most of them are really trying, and some do manage to develop expertise through their own efforts at continued learning, but many are set up for failure by this inadequate resourcing in the system.

Given that Allied Educators and Counsellors are the frontline, and not just assistants, in dealing with learning, behavioural and social-emotional issues in primary schools, this level of training is

grossly inadequate. It often leads to missed red flags, delayed diagnosis/ treatment until the child's behaviours are severe enough to cause serious concern, lost learning potential, and lost mental health (which is hard to regain).

*“Graduates of the DISE program have the skills necessary for identifying disabilities, diagnosing and assessing strengths and weaknesses of students, and planning interventions. However, **the DISE is only one year long and is the only qualification MOE requires to teach students with special needs.** In essence, **for students who need the most support, teachers are required to only complete one quarter to one third of the training received by their mainstream counterparts.**”*

*Walker, Z. & Musti-Rao, S. (2016). [Inclusion in High-Achieving Singapore: Challenges of Building an Inclusive Society in Policy and Practice](#). *Global Education Review* 3(3).*

Inadequate Resourcing for Mental Health Needs

Especially in the case of school counsellors, it is downright dangerous to let people with just [8 months of mental health training](#) give parents and teachers the impression that they know what they are doing. MOH wouldn't let anyone with only 8 months of medical, therapy or psychology training anywhere near a child with suspected mental or physical health issues or developmental needs as the primary interventionist; why do we have different standards for dealing with mental health and learning needs within our schools?

No less than our President Madam Halimah Yacob has pointed this out in [her Facebook post](#) after the [River Valley High School incident](#):

*“We do know however that parents, schools and our society are ill equipped to deal with this situation. ... For teachers, already overloaded with work, it's not possible to delve deeply into the issues affecting one child which will require close monitoring, observation and engagement. There's a school counsellor but the person may not be well trained on issues affecting mental health. ... **Schools need a lot more resources and support to help students with mental health issues. ... We could also study the experience of other countries with more developed systems of support for our reference.**”*

A CNA Insider (01 Aug 2021) report on school counsellors - [‘With school counsellors, it's really hit-or-miss’: Behind the challenge of safeguarding student mental health](#) - highlights issues such as training adequacy, confidentiality, approachability, the stigma of seeing the school counsellor, the school's conflicting interest in academic performance, insufficient supervision/ guidance for school counsellors, etc.:

“Compared to other developed countries, Singapore’s ratio of students to counsellors appears to occupy a lower rung. Research last year showed that schools in Ireland with more than 500 students must have one school counsellor per every 250 students, like in the United States.”

In Singapore by contrast, we seem to be making do with 1 counsellor to 500-1000 school children. MOE plans to add another 1000 “teacher-counsellors” over the next few years, but with 5 days of training to start them off, it sounds more like the basic mental health awareness training all educators should have, rather than something that qualifies them to start dealing with real mental health issues in schools.

At this [link](#) is an insightful opinion piece by Mark Lin on the need for systemic change that goes beyond what MOE proposed in the wake of the River Valley incident. He suggests that counselling support be outsourced outside schools, to tackle issues of adequate supervision, conflict between the child’s best interest and the school’s KPI, and confidentiality. That would be another way to solve the problem, provided that there is sufficient access to these external counsellors.

Inadequate Resourcing for Learning Needs

The most common learning needs in mainstream school classrooms are mild to moderate ASD (Autism Spectrum Disorder), dyslexia, mild to severe ADHD (Attention Deficit Hyperactivity Disorder), and other language and learning needs. They need early, government-funded diagnosis and support, including [differentiated teaching and learning support](#) within their mainstream classrooms to maximise their learning potential.

The ratios of Allied Educators in schools are grossly inadequate to support this. A back of envelope calculation using an estimate of 10-20% of children having mild to severe learning needs (based on data from other developed countries, e.g. [17% in the US](#)) and MOE’s own data on its [number of Allied Educators](#) (about 600 in 2020) suggests 65 to 135 children with needs per Allied Educator. Which would give each child with learning needs an equivalent of 15 to 30 minutes of attention from the Allied Educator each week, or 1.5 to 3 school days in a year.

MOE does employ some Educational Psychologists for mainstream education, but they are not based in schools. At about 1 for every 8,000 primary/ secondary students ([~50](#) fully qualified psychologists, that’s about 1 for every 1000 children with additional needs in mainstream schools), they are a scarce resource only available to schools to consult on the most severe cases.

We are not sure how all this translates into maximising the potential of this 10-20% of the population. (MOE’s own estimate of children with Special Educational Needs is much lower, [at 7%](#), likely an underestimate since the actual rate in Singapore would be about the same as other developed countries. In 2021, about [7,000 preschool children](#) were assessed for developmental needs in Singapore, which translates into about 17% of the future student cohort.)

There is some government-subsidised therapy and support provided for children with physical disability, speech disorders or low vision in mainstream schools through the [Community Integration](#)

[Service](#), but the much more common issues listed above (ASD, ADHD, dyslexia, dyscalculia, other language-related learning needs) are specifically excluded from receiving this support service.

MOE also provides small-group learning support in English and Maths at P1 and P2 level ([LSP and LSM](#) respectively) to children who may be lagging academically. But the teachers teaching these programmes do not seem to be trained in identifying and addressing learning needs. Recent initiatives like the [Transition Support for Integration programme](#) (TRANSIT) are more promising, but still extremely limited in scope - TRANSIT is only for P1.

And again, the huge class sizes that teachers have to deal with get in the way of supporting these children, as pointed out by academics who have studied the Singapore education system:

“Whereas mainstream teachers are being trained to work with students with special needs as part of the Teachers Trained in Special Needs (TSN) program, large class sizes (i.e., 1 teacher: 35-40 students) do not provide the academic and learning supports students with disabilities need to succeed in mainstream schools.”

*Walker, Z. & Musti-Rao, S. (2016). [Inclusion in High-Achieving Singapore: Challenges of Building an Inclusive Society in Policy and Practice](#). *Global Education Review* 3(3).*



A P2 class in Germany (15 children) interacting with their teacher

"Educators are unequivocal in their belief that children with disabilities who can cognitively access general curriculum should be given the opportunity to attend mainstream schools, but they are inundated with numerous initiatives and varied demands. They question their capacity to provide quality support to an increasing number of students with disabilities:

"I feel that the support is not quite there for students with special needs. I must admit. It is there because my teachers have the heart. But if you are talking about real professional help, I must admit, as a leader, it is not quite there because my teachers are really, really stretched. (Principal G)"

Wong, M. E., Ng, Z. J., & Poon, K. (2015). Supporting inclusive education: Negotiating home-school partnership in Singapore. *The International Journal of Special Education*, 30(2), pg 119-130.

Another major issue is the lack of sufficient, adequately trained support professionals in schools. Public schools in other developed countries and good international schools in Singapore have **their own well-resourced Learning Support teams**, with much better ratios of senior and specialist learning support teachers trained to Bachelors or Masters level, trained Educational Psychologists (for identifying and assessing learning needs), Clinical Psychologists (as counsellors for students and to support behavioural issues), Occupational Therapists and Speech and Language Therapists.

Countries as diverse as Hong Kong, New Zealand, the UK, US and Finland provide more extensive manpower, funding and/or resources for mainstream primary schools to provide learning support to their students. (See [Annex A](#) for further info on learning support systems and professionals in these countries.)

No less than the **Singapore Association of Occupational Therapists (SAOT)**, in their [Briefing on inclusive education in Singapore](#), make some similar points about the provision of support services in Singapore schools (See [Annex A](#) for full SAOT briefing document):

"1. Inclusive education benefits children and youth with, and without disabilities.

2. Inclusive education requires different strategies, tools, equipment and adaptations to the environment to enable the participation of children and youth with disabilities in school activities (both in-class and co-curricular activities), to maximise their academic and social development. Therefore, skills and expertise from a range of professionals is required to support all involved stakeholders.

3. Occupational therapists are a needed profession who are educated and skilled to work collaboratively with school staff and parents to enable the participation of children and youth with disabilities in schools.

4. SAOT recommends that Health, Social and Family Development, and Education Ministries look into improving students' access to Allied Health Professionals such as occupational therapists. Occupational therapists can work together with Allied Educators, Counsellors, and Educational & Career Guidance Counsellors to facilitate the holistic development of children and youth with varying disabilities in schools."

Here's the additional tiered support a mainstream international school in Singapore is able to provide:

Student Support Department

is an Inclusive School and we follow a Multi-Tiered Systems of Support Model

3 Intensive Individualized Instruction and Intervention

2 Targeted Supplemental Instruction and Intervention

1 Core Instruction and Supports

Services @

- Special education specialized instruction
- Academic Intervention
- Occupational Therapy
- Speech & Language Therapy,
- Social Emotional Counseling
- Behavior intervention
- In-class support

Please contact homeroom teacher if you feel your student would benefit services.

**More info can be found on [redacted]

(Pyramid reads: 1- Core Instruction & Supports; 2 - Targeted Supplemental Instruction and Intervention; 3 - Intensive Individualized Instruction and Intervention)

The comparative lack of support in our local system is felt acutely by our educators as they struggle to support children with learning needs in their classrooms:

"... schools do not have the expertise to adequately support the socio-emotional and behavioural development of children with disabilities. This is of particular importance during the adolescent period of storm and stress where they go through puberty and face increased academic demands and pressures:

"On our side we could not provide the regular therapy that they [students with disabilities] need. Our teachers are not trained to be therapists... So we have to tell the parents that we are sorry but their child needs help in areas that we are unable to provide. (Principal K)"

"...Parents thus actively seek private tuition and professional therapy to supplement the inadequacies of school and home support and give their children with disabilities the best chance for mainstream school success..."

The supplementary support of private tutors and psychologists, however, comes at an exorbitant price:

*“We thank God that at this point in time we can afford to support Calvin financially, but up to what level? There is a limit to what we can really support him. **How about other parents who are financially not able to support? It is even worse.** (Calvin’s Father)”*

*“...**Educators** emphasise that inclusive education should not be the sole responsibility of individual schools. They **perceive a need for more resources and support from the Ministry of Education to fully address the educational needs of children with disabilities:***

“Each of them [educational psychologists from the Ministry] serves like sixteen schools. And primary schools only. They support secondary schools on a consultancy basis, so they won’t even go down to our school. I think that is the extent of support we have for now. (Teacher H)”

*“**We would love to have a psychologist be attached to every school. In Australia, therapy work is part of the mainstream school. Therapy does not belong in our world, that’s the issue.** (Principal K)”*

*Wong, M. E., Ng, Z. J., & Poon, K. (2015). Supporting inclusive education: Negotiating home-school partnership in Singapore. *The International Journal of Special Education*, 30(2), pg 119-130.*

If you think it is fine to leave such students to their fate in our ‘meritocratic’ system, note that this group also includes children with high potential - the whole range of potential, including IQ, EQ, creativity, etc - that are essential for our future economy. This includes bright children with social-emotional or mental health needs, or children who are ‘twice exceptional’ (i.e. are gifted and have learning needs).



Children with severe special needs are educated in separate [SPED \(Special Education\) schools](#), which are resourced with a much better ratio of teachers, as well as well-trained support professionals like therapists and psychologists. So a child with an IQ of 70 or lower can benefit from more individualised attention and much better resourcing at one of our SPED schools. However, **a child with a slightly higher IQ of 71-80 would have support needs that are not much less, but would largely be left to flounder in the mainstream education system with minimal support.**

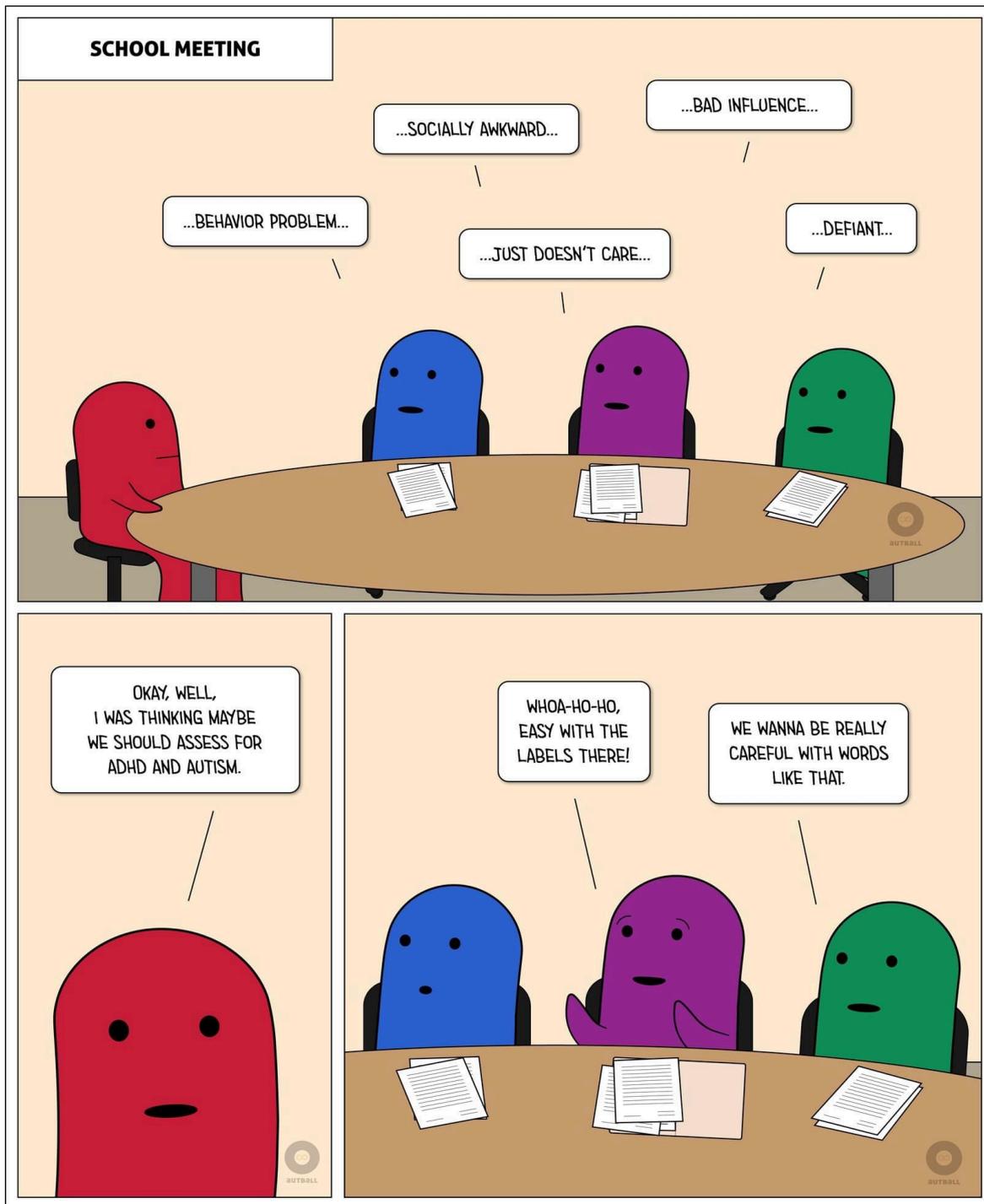
"The availability of professionals to identify and diagnose individuals with special needs in the public or private sector can be limited and a challenge, especially for families who cannot afford to pay for a private sector psychologist.

Efforts for earlier screening of students in the early elementary years and timely diagnosis is needed."

*Walker, Z. & Musti-Rao, S. (2016). [Inclusion in High-Achieving Singapore: Challenges of Building an Inclusive Society in Policy and Practice](#). *Global Education Review* 3(3).*

This 10-20% with learning needs can also include those who face multiple challenges in life, including broken or low-income families, and these children usually lose hope fairly quickly of succeeding in our education system. This can lead to 'under-streaming', dropping out early, and falling into bad company, sometimes ending in anti-social/ juvenile/ criminal behaviour, or falling into addiction to compensate for their feelings of disconnection and failure. Besides social costs, this adds long-term economic costs.

What percentage of the children in our juvenile homes have diagnosed or undiagnosed learning needs? What percentage of the adults in our prisons? How much could we save by investing in their confidence and success when they are 7-12 year olds in school, rather than trying to reform defiant 15-20 year olds or hardened criminals/ drug abusers?

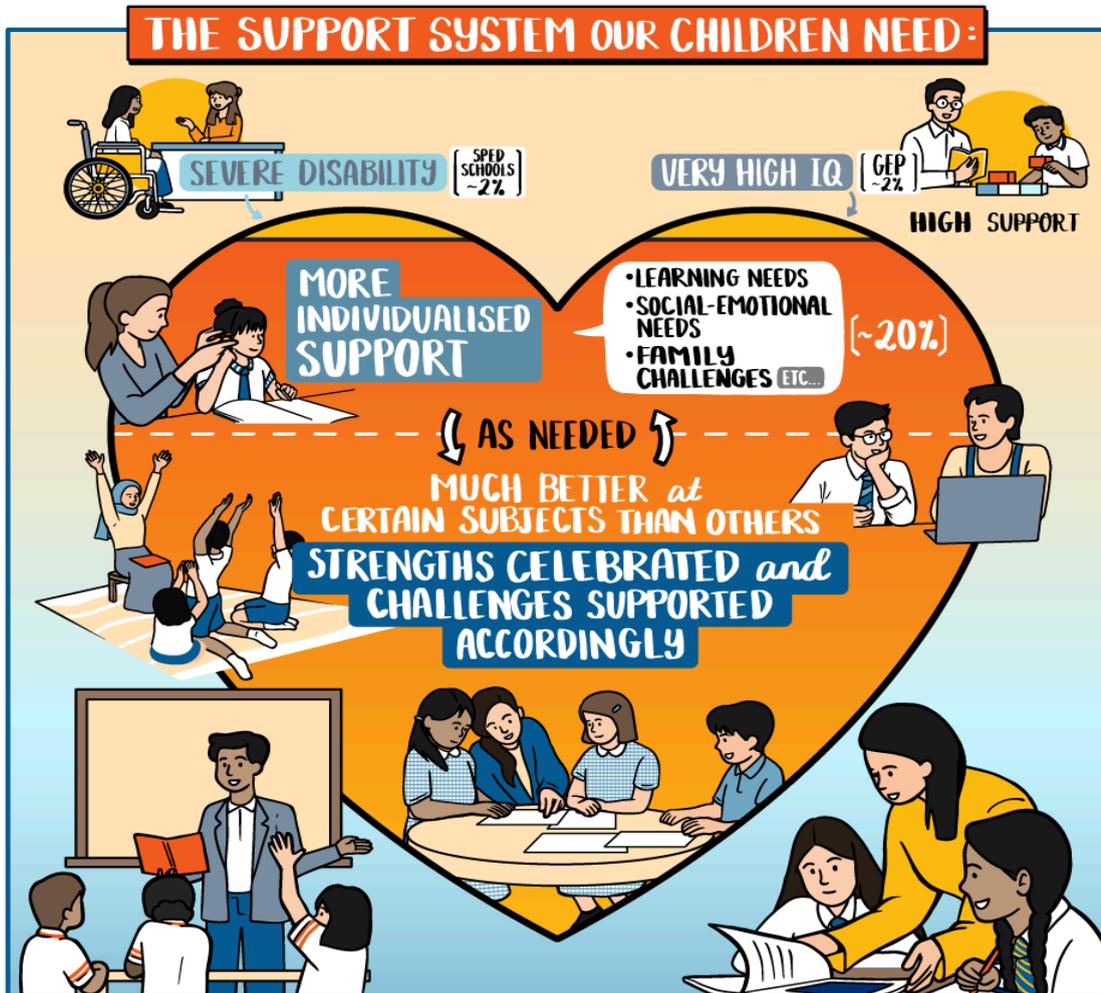


If [this boy's](#) ADHD had been diagnosed earlier, instead of when he reached ITE, and his creativity, initiative and 'love for doing hands-on stuff' had been harnessed and channelled appropriately, would he have been caught detonating bombs off East Coast?

MOE and MSF are trying to tackle this through [UPLIFT](#) (Uplifting Pupils in Life and Inspiring Families Taskforce), but again, it seems dependent on stretching some existing resources (e.g. finding volunteers to befriend families, a few additional teachers in some schools) in line with MOE's ideology of artificial scarcity and minutely incremental change. There is no mention of resourcing for proper mental health or learning needs support.

How to Provide Better Support in Schools

SUPPORTING EVERY CHILD



In public schools in other developed countries and good international schools in Singapore, children with additional needs have '**individual support plans**' developed for them, which are regularly reviewed together with parents every 3-6 months, and the child's progress and continuing needs are used to calibrate the level and type of support accordingly. This is a more effective and resource-efficient way of supporting children - intervention for each child is right-sized for their individual needs (i.e. not too much, not too little), and right-sited, i.e. provided at the right time and place during the school day, rather than in a private therapist's office.

Classrooms remain mixed ability, but different styles and levels of learning are catered to through a combination of techniques like:

- **Differentiated teaching**, which involves delivering the same material in different styles and at different levels of difficulty, to cater to different learning styles and speeds within the same classroom.
- **Grouping certain subjects by current level of understanding**, especially second language where children may have varying years of exposure to the subject. So e.g. P3

Mandarin class may come in say 3 different levels roughly equivalent to P2 to P4, and children would split up by their level and go to different classrooms during that subject period.

- **Pull-out support** for children who may need additional support. So e.g. a child with additional learning needs may be exempted from learning a second language, and would use that period to join support classes for literacy or Maths run in very small groups of 1-5 students. Or a child may receive a session of Occupational Therapy (OT) support once a week, during which the OT may choose to work with the child within the class, to support their participation in the classroom, or in a separate room to try a specific intervention.
- **Push-in support** for children who may need additional support. A support professional, special needs teacher or teacher aide may join the child or a few children in class during subjects that are more challenging for them, to provide additional support.
- All the above can be, and usually is, **provided within the school day**, so children do not have to be stigmatised by being asked to stay back for 'remedial' lessons.

In developed countries, this support is provided in public schools at no additional cost to parents.

"Leave no child behind" was a slogan adopted in Finnish schools long before it became popular in the US. Pupils with learning difficulties are patiently brought up to the average level of their classmates by teachers and assistants who give them the extra attention and support they need to catch up.

(World Economic Forum, 13 May 2015: [3 reasons why Finland is first for education](#))

▶ **HOW WE DO SCHOOL FINLAND Ep 2: Teaching Twogether** (Hover to play)

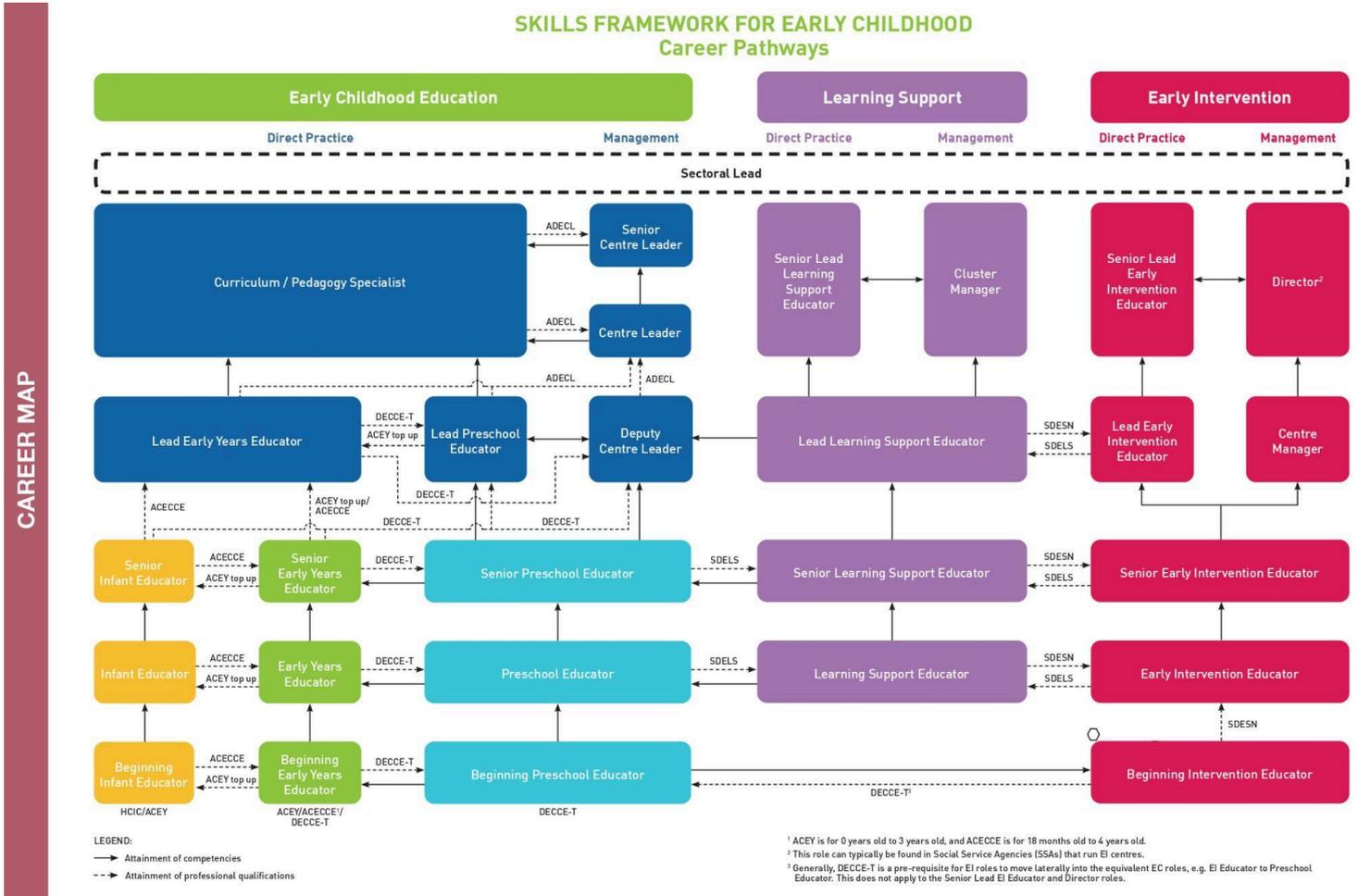


Anecdotally, the outcomes for children with learning needs are remarkably better in good international schools. Children are much less likely to get disillusioned, demotivated, or lose confidence, because there are encouraging and engaging teachers to meet them at their level of development. Support can be flexibly ratcheted up or down as needed to ensure the most efficient use of finite support resources. It is provided subtly and positively by teachers and support professionals, so children do not sense or pick up on negative associations.

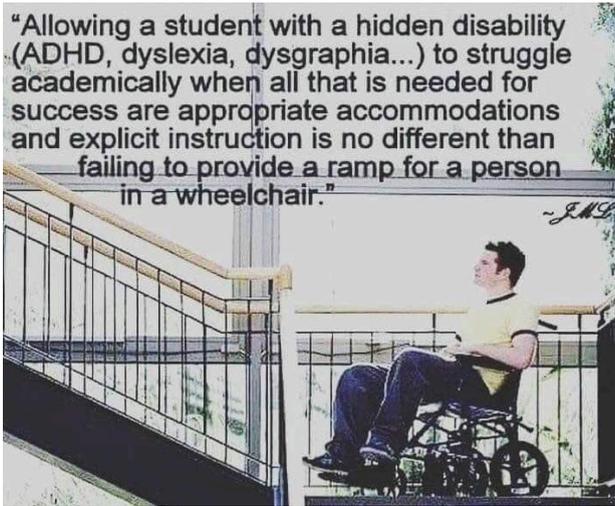
Singapore has also implemented a similar system of support for children with mild developmental needs in its [early intervention system](#) for 0-6 year olds, including the use of trained support professionals like therapists, psychologists and [Learning Support Educators in preschools](#):



Unlike Allied Educators who are not required to be qualified teachers, Learning Support Educators are qualified preschool teachers with at least 2 years preschool teaching experience, who then receive further training before they become Learning Support Educators. This gives them the standing as well as the qualifications and experience to guide other preschool teachers in creating more inclusive preschool classrooms:



There really is no reason our primary school system cannot aspire to the same approach. As a country, we have the money to implement it.



As an example of how limited learning support is in our local schools, here are the educational support plans made for the same child, from the “good” local primary school that he left, and the good international school that he joined. Both are the ‘first proposal’ from the school, before any advocacy by or discussion with parents. They look like a comparison between first world and third world education systems:

Local school support plan (P1):

- *Child can sit in front of class*
- *Child can take regular movement breaks*
- *Child can choose 3 words from weekly 10 word spelling list (the words in the spelling list are mostly all 3-4 syllables long)*

vs.

International school support plan (P2):

Student Support Department Elementary: Student Support Plan					
Date	Student Name		Case Manager	Grade/Class Code	
T2 Service Entry Criterion: <input type="checkbox"/> Admissions Review Process <input type="checkbox"/> Quarterly Data Review <input type="checkbox"/> Students of Concern (SoC) Meeting <input checked="" type="checkbox"/> Entered services on August 2018		T2 Quarterly Progress Reviews: <input type="checkbox"/> October review complete—continued services <input type="checkbox"/> February review complete—continued services <input checked="" type="checkbox"/> June review complete—continued services <input type="checkbox"/> Exited services on _____ (plan removed in iSAMS)		Psychological Evaluation: (<input type="checkbox"/> N/A) <input checked="" type="checkbox"/> Student has Psy Eval on file <input checked="" type="checkbox"/> Entitled to Language Exemption (as per eval) <input checked="" type="checkbox"/> Entitled to Separate Testing (as per eval)	
Tier 2	Academic Support		Occupational Therapy	Speech-Language Therapy	Social/Emotional Support
	Literacy (<input type="checkbox"/> N/A)	Math (<input type="checkbox"/> N/A)	(<input type="checkbox"/> N/A)	(<input type="checkbox"/> N/A)	(<input type="checkbox"/> N/A)
Intervention Focus	<input checked="" type="checkbox"/> Phonics/Fundamentals <input checked="" type="checkbox"/> Leveled Literacy Intervention <input checked="" type="checkbox"/> Fluency-based intervention <input checked="" type="checkbox"/> Comprehension strategies <input checked="" type="checkbox"/> Writing support <input checked="" type="checkbox"/> In-class support	<input checked="" type="checkbox"/> Place Value <input checked="" type="checkbox"/> Fact Fluency <input checked="" type="checkbox"/> Computation strategies <input checked="" type="checkbox"/> Additional practice <input checked="" type="checkbox"/> In-class support	<input checked="" type="checkbox"/> Perceptual-Motor Group <input checked="" type="checkbox"/> Zones/Self-Regulation <input type="checkbox"/> Handwriting <input type="checkbox"/> Motor Development <input type="checkbox"/> In-class support	<input type="checkbox"/> Speech/Articulation <input type="checkbox"/> Receptive Language <input type="checkbox"/> Expressive Language <input type="checkbox"/> Social Communication <input type="checkbox"/> In-class support	<input type="checkbox"/> Check-in/Check-out Program <input type="checkbox"/> Small Group Services (short-term) <input type="checkbox"/> Individual Services (short-term)
Goals	<input checked="" type="checkbox"/> Student performs at or above benchmark in reading/writing as measured by multiple assessments.	<input checked="" type="checkbox"/> Student performs at or above benchmark in math as measured by multiple assessments.	<input checked="" type="checkbox"/> Student demonstrates similar level of motor development and/or self-regulation as compared to same-age peers.	<input type="checkbox"/> Student demonstrates similar level of speech and language development as compared to same-age peers.	<input type="checkbox"/> Student follows directions, remains on task, and works/plays well with peers as compared to same-age peers.

(cont'd)

Classroom Accommodations

Literacy

- Modelling – provide a model so that he knows what is expected in the task
- Provide sentence starters/stems
- Provide a tactile/kinesthetic aid for spelling. (For spelling, use the “finger tapping” strategy, writing in the air, tracing)
- Break assignments into smaller parts
- Ask comprehension questions as [redacted] reads independently
- Check for understanding on academic texts frequently by asking [redacted] to repeat directions back to you
- Provide buddies for reading activities in the classroom
- Provide increased opportunities for guided and independent reading practice
- Prompt him to read written directions/key points aloud before beginning
- Provide clear and corrective feedback

Math

- Provide student with example problems and explicitly model how to solve particular problems (one-on-one/small group).
- Model vocabulary terms. Represent the word in multiple ways (definition, picture/diagram, real-life situation). D
- Provide manipulatives (counters, base 10 materials etc.) and use illustrations and diagrams to increase comprehension.
- Model and practice a **variety of ways** to represent mathematical ideas and procedures (visually and verbally).

OT

- Provide [redacted] with a quiet, distraction free area (such as a quiet corner in your room) for reading and independent working time. Discreetly send him to this distraction-free area if you feel he is losing focus and becoming distracted by his surroundings.
- If possible attempt to seat [redacted] near the source of instruction, facing the whiteboard or stand near him when you are providing verbal instruction.
- Provide clear instructions in short, sequential steps. (visual schedules help [redacted] stay focused and engaged with what is happening)
- Provide close guidance with planning of longer tasks/activities to avoid procrastination (and increase motivation and engagement in [redacted] case) and allow him to remain focused.
- Provide him with reminders of how long he has to spend on each task (e.g. Using a timer that will beep at the end of the activity)
- Write a schedule on the board that outlines the class activities for the day. [redacted] may also be involved in writing/designing/drawing the schedule on the board to feel a sense of inclusion. You may need to ask him to refer back to the schedule during the day to refocus.
- Give discrete cues for [redacted] to stay on task such as a tap on his desk or a gentle squeeze on his shoulder
- Recognise positive achievements/efforts to increase motivation and give a greater sense of purpose.
- Provide opportunities for [redacted] to take on a responsibility or a heavy work task during the day, especially to break up seated tasks, such as: Erasing the board, Stacking chairs, Opening doors, Help give out children books, Give a ‘note’ to a teacher in a nearby classroom

Testing Accommodations

Separate testing accommodation as per psychological evaluation.

More Inclusive Classrooms Benefit ALL Children

We are all unique learners, some absorbing info better by reading, some preferring visual aids or auditory means, some learn better through hands-on means, etc. A teacher in the smaller and more inclusive classrooms in good international schools is resourced and prepared to provide this level of nurturing to each child. Where necessary, there are support professionals, teachers or teacher aides added ('push-in support') for children who may need extra attention or support.

Moreover, all children at some point in their lives need a little extra help or attention, even if they are 'typically developing'. A listening ear or even some intervention for social-emotional issues, some help catching up academically after a long illness or disruption in the family, etc. In a resource scarce education system like ours, fewer of these needs will be noticed and/or attended too, compared to a good international school, unless they degenerate into behavioural issues.

The outcomes for 'typically developing' children (i.e. those without learning needs) can also be quite different in international schools. The fact is that **in a more inclusive classroom that can cater to a variety of different learning styles and needs, ALL children benefit from the differentiated teaching and more individualised attention.**



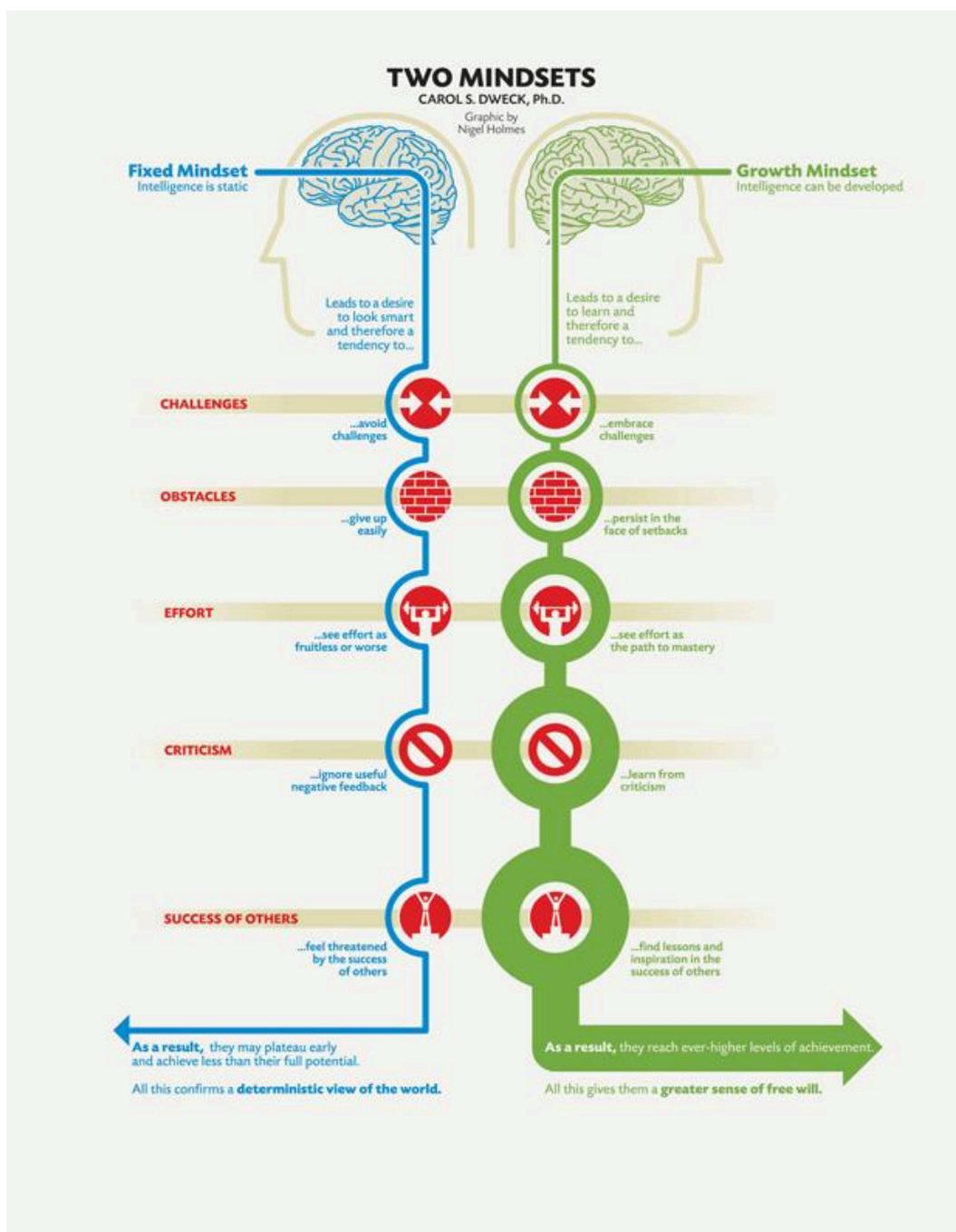
A teacher coaches some children in a German P4 classroom, 2008



So Are We Really Preparing Our Children for the Future Economy?

At a time when the problems we need to solve both in business and governance are becoming more complex, it is likely we are producing workers and civil servants, even from the elite schools, who fall into the same hierarchical and risk-averse patterns that they got comfortable with (and rewarded for) in our school system.

After a childhood filled with competing, sorting and labelling, they are likely to emerge from our education system with 'fixed mindsets' (see graphic below), when what is needed to succeed in the future economy is a [growth mindset](#) - believing that intelligence, abilities and talents can be learnt and improved through effort, and embracing failure, challenge, criticism and the success of others as opportunities to keep learning, rather than threats to one's standing.



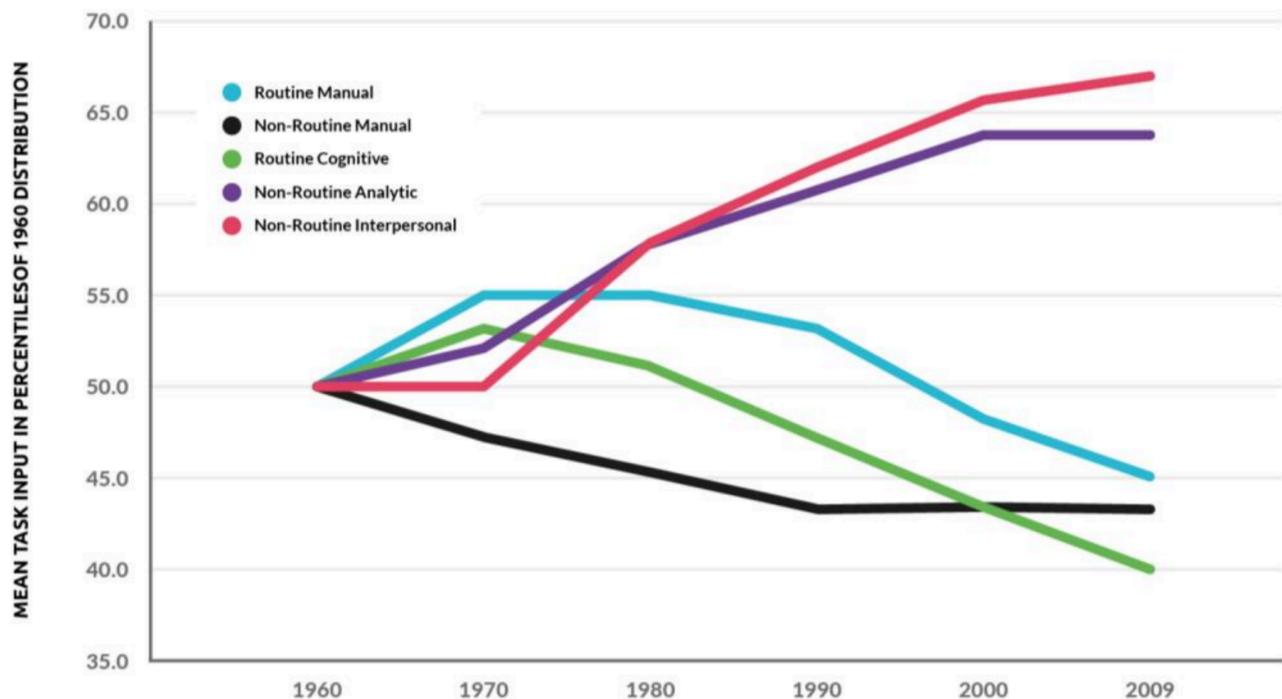
Anecdotal accounts **from Singaporeans** responsible for hiring for progressive MNCs, tech companies and law firms in Singapore, whom we posed this question to, felt that most of **these graduates with impeccable academic credentials from our elite schools struggled** to compete with foreigners on skills like critical thinking, collaboration and innovation. Most are hesitant to be quoted publicly on this, but it is a common gripe in hiring circles. Perhaps this explains why so many successful companies in Singapore have CEOs who grew up elsewhere?

This again suggests that a lot of those who ‘succeed’ in the rat-race that is our education system, after all the trade-offs and sacrifices they and their parents have made, are not set up to be competitive in the future economy. It really is time for some bold educational reforms.

From 'Hierarchy, Control & Competition' ⇨ 'Connection, Co-creation & Creativity'

The future economy is going to be different, and in many ways it is already here. It requires all workers to be engaged, innovative and collaborative. There are much fewer clerical and simple factory roles, as AI (artificial intelligence), ML (machine learning) and robots replace the rote and repetitive parts of human work. These trends can be seen clearly in the graph below which shows how the type of tasks performed by US workers changed between 1960 and 2009:

Figure 1. Changing prevalence of types of tasks required for work over time



Source: Autor and Price (2013) in Bialik and Fadel (2018[14]), p.7

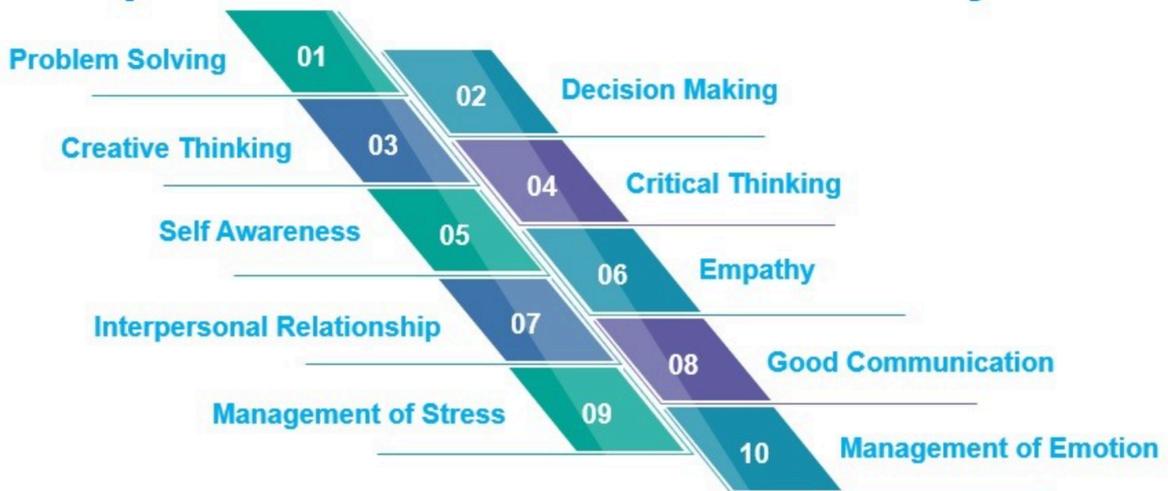
Instead of hierarchy and control, the key drivers of work in the future economy will be passion, shared purpose, collaboration, co-creation and creativity. These will drive continuous learning, adaptation and innovation. [It is no longer sufficient to be a good manager to succeed, the world is looking for leaders and entrepreneurs.](#)

To make their way through this very fast changing world, each and every one of our children has to **emerge from the education system with their growth mindset, self-confidence, risk appetite, creativity, love of learning, and above all, self-love, intact.** Not just the children from high-income families who can afford enrichment classes based on '21st century skills', private psychological therapy as needed, and then be sent overseas to complete their education. **Everyone.**



Teachers playing games with their P1 pupils in Fern Green Primary School

BLOG Top 10 Life Skills Recommended by WHO



“Let’s just start with one of the most important things that we look for actually, no matter who you are, is your ability to learn, learning agility. Because we know that while we may hire you for a certain set of skills, the rate of change and the need for skills is quite rapid.

*So there’s lots of research on this, that **skills that were around in the Fortune 500, for example, in 2017, that approximately 40% are no longer relevant. ... We ask a very simple question to all of our applicants ...***

“What have you learned in the last six months that was not part of school?”

... And what we’re looking for are individuals who naturally learn things. Now, the answer could be, “I learned to cook.” ... “I learned how to change a tire.” The point is, can the applicant respond to that question? It’s a really simple, but very effective way of understanding whether you’re hiring someone who likes to learn.”

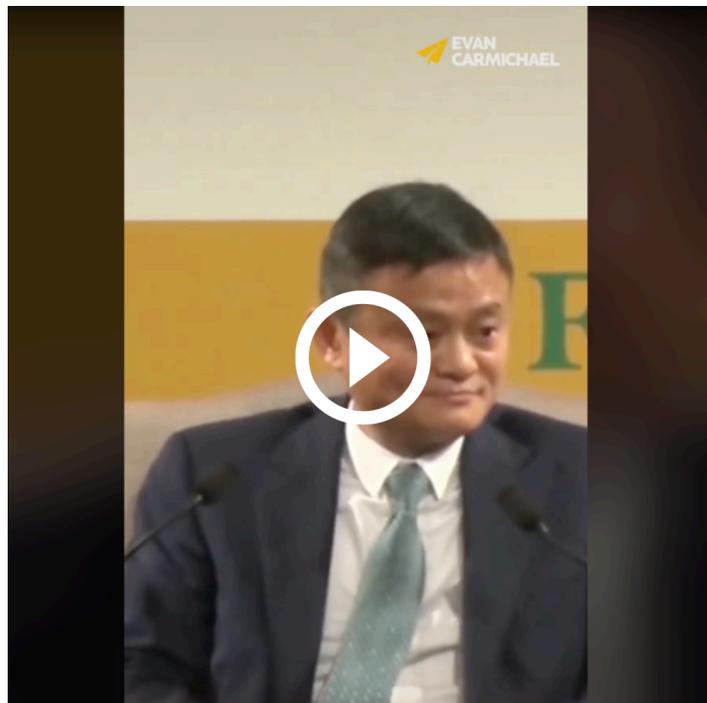
- [Accenture CEO Julie Sweet](#)

The OECD has a [Future of Education and Skills 2030](#) project which aims to help education systems determine the knowledge, skills, attitudes and values students need to thrive in and shape their future.

The attributes required for the future economy, like emotional intelligence (empathy towards others as well as self-awareness), creativity, innovation, teamwork, courage, calibrated risk-taking, and a continuous love of learning, are **more effectively honed in inclusive educational environments**, where every child believes they belong, have a strength to build on, and something to contribute.

This includes children who are neurodiverse (e.g. on the ASD or ADHD spectrums). The **link between neurodiversity and innovation** is increasingly being recognised, but educational inclusion has to precede to fully harness its potential, otherwise these neurodiverse children have their self-esteem and love of learning damaged much before they enter the workforce.

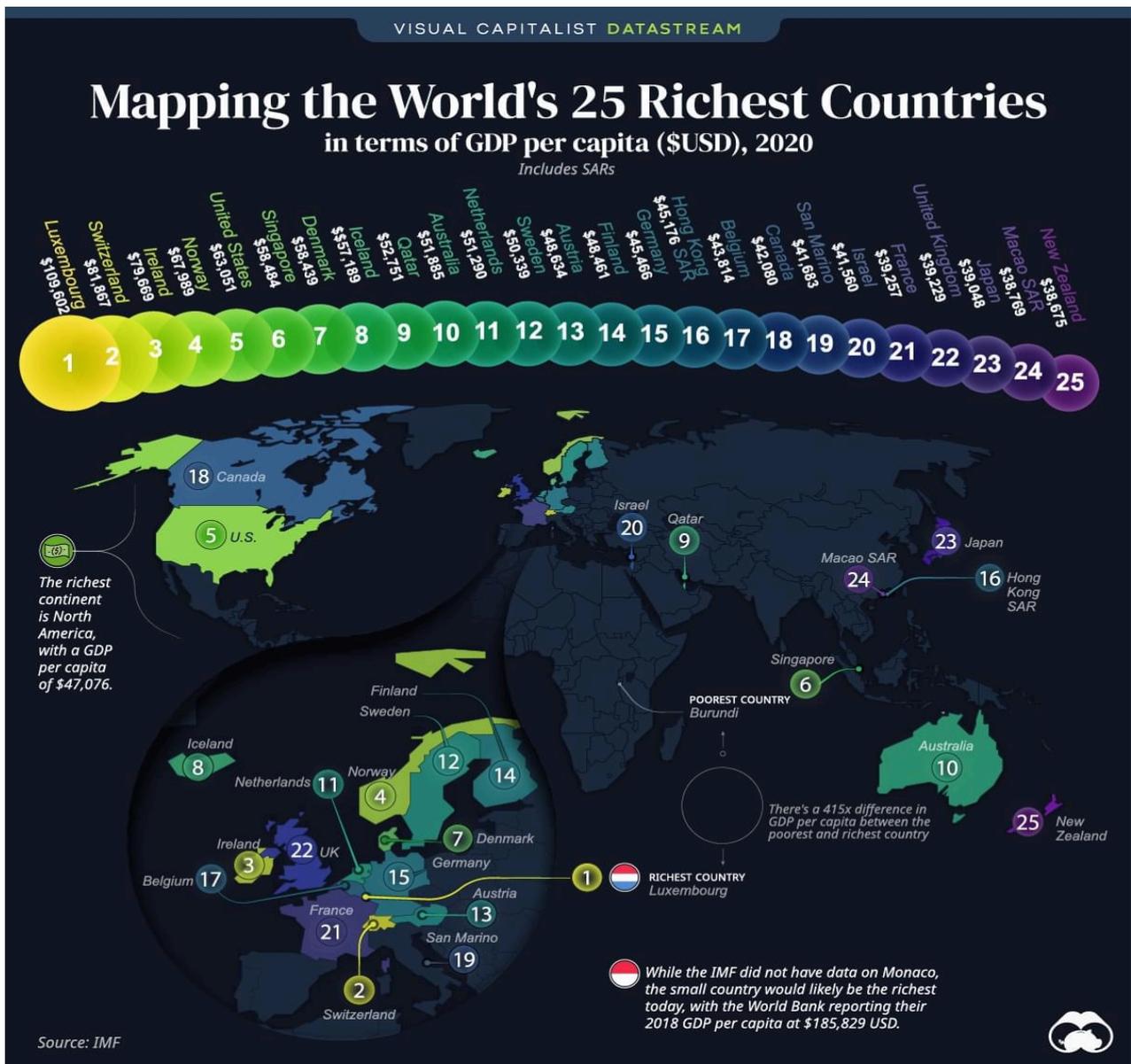
[Jack Ma: “My company is a farm, not a zoo”](#)



On the other hand, overly competitive and hierarchical environments with resource scarcity produce experts at politicking (to gain power/ control at the expense of others), risk-aversion, and stress of the negative sort, with its mental health implications over the longer-term. The fear and shame

instilled in many of our children during their school-going years hinders entrepreneurship, innovation, creativity, and the ability to connect well with fellow human beings.

For every student from an 'elite' institute who might emerge with their self-esteem intact, there could be 10-15 equally capable youth who do not fully believe in themselves purely because of their grades - what a waste of talent! Imagine this process of internalising one's grades perpetuating year after year, cohort after cohort, and arguably getting worse with time. How has/ will it impact our global competitiveness?



Beyond Economics, What Kind of a Society Do We Want to Build?

At the level of values, we claim to be seeking a **more inclusive society**, and creating that culture begins in preschools and schools.



We have started making the effort in preschools, credit going to MSF/ ECDA for trying to continuously strengthen the early intervention support and inclusion resources available to preschools over the past decade or so.

But in our schools, to a large extent, the culture that our competitive, stressful, and under-resourced education system inadvertently promotes is the opposite of inclusion.

Bullying and meanness are alive and thriving in our schools, ask any student with a disability, learning need, the 'wrong' skin colour or body shape, etc. Indian children are asked why they are so dirty. Malay children are called lazy. Adopted children are told they are unwanted. Children with learning needs are called stupid.

There are many forms of vulnerability among students - income, family situation, disability (including invisible disabilities like ASD and ADHD), learning needs, body shape, race, skin colour, gender identity, mental health/ attachment issues - all are fair game for children to name-call and be mean to each other. Most perpetrators grow out of it, but there is often some mental health damage left for the victims, or at the very least, a lingering sense that they are somehow less than others.

"Teachers in Singapore are strictly instructed to avoid discussing race, religion, class and sexuality in the classroom. Any potentially divisive topic is taboo. In many schools, this is enforced — a number of us have received a firm dressing-down for allowing such conversations to take place.

Yet, you want us to teach empathy? Justice? Integrity? Inter-everything love and understanding? In every ministry-sanctioned Powerpoint Presentation we

preach respect and harmony and deplore discrimination, but each time we sing of meritocracy and ignore privilege, we only reinforce a divide.

Children connect these imperfect dots and conclude that their fate is written in their DNA. That these academic streams are their identity. That if they succeed, it is their doing alone. That if they fail, it is all their fault.

And this is the underbelly of our glittering meritocracy. In the shadow of every Starbucks cup and violin lesson is a kid who bought and read all my literature texts even though the subject wouldn't be offered to her stream in the next year. A kid who writes the most moving poetry in horribly broken grammar. A kid who calls me at 2am, standing on the precipice, ready to jump because he is useless and stupid."

Ex-educator Chew Wei Shan, [Facebook post](#), 3 Oct 2018

This is not something that can be counteracted by adults or teachers simply lecturing about the right way to behave during CCE/ FTGP periods and school assembly. The problem perpetuates itself due to factors like:

- Stress and pressure, and/or less than ideal parent-child relationships at home, that tempt perpetrators to take out their frustrations on other children
- The less than ideal ratio of adults to children, so teachers and counsellors rarely get to the bottom of what is going on, and are unable to consistently step in to stop negative behaviour between peers.
- Children pick up on the subliminal signals they are receiving from the adults and system around them, that their 'worthiness' and that of others is somehow based on their academic performance. E.g. how else would a happy child who enjoyed their time in preschool come home from P1 looking miserable and saying that they are "stupid" - it is quite unlikely a teacher is calling them that, but their peers are able to pick up from the reactions and subconscious body language of the adults around them that their classmate has been deemed 'stupid', and they can get away with calling them that.



If you think this does not apply to your children, or their class, or their school, **take a moment to ask them whether there is a child in their class that some children are not nice to. You may be surprised at what comes out.** Your child may not be participating in the bullying and meanness, but they very often are bystanders.

The environment in good international schools is much kinder and more accepting and inclusive. Not because the children start off any different from the children in our local school system, but **because there are sufficient, and sufficiently-resourced, adults around them to enforce and perpetuate an overt culture of kindness and inclusion.**

The adults make it clear to these children, through **both words and actions**, that inclusion is valued, and teasing or being mean to these children will be firmly dealt with. Negative interactions that might go unnoticed in local schools, e.g. one child telling another to ‘go die’, in an international school can result in both children being spoken with and an email update to both sets of parents. Do teachers with classes of 35-40 children really have the time to deal with the vast majority of such ‘low level’ negative behaviour between their students? Most likely they can only focus on behaviours that disrupt the class’s learning, or the more extreme cases.

“A 14-year-old student and her parents are disappointed with the response from the Ministry of Education (MOE) to what they say was sustained bullying of the girl both online and at school. The incidents caused her to attempt suicide and left her in the hospital for 12 days.

The girl, who is dyslexic, described her anguish at being bullied in a four-page handwritten letter to Prime Minister Lee Hsien Loong, dated Dec 10, which also urged him to improve the way schools and MOE address bullying.

Detailing repeated incidents of physical and online bullying, the girl wrote: “As the bullying continued, I felt harassed and intimidated, and started to feel

unsafe not knowing who wished me dead and who might attack me next. I sank really low and cut myself.”

She said that she had been relieved to have home-based schooling during the circuit breaker imposed earlier this year to halt activities due to Covid-19. Then, when she learnt that classes were resuming, she was “terrified”.

“Four days later, I took an overdose. I just could not bear the thought of having to face my bullies...” she wrote.”

(Today, 18 Dec 2020: [Teen says bullying led her to try suicide: MOE admits school lapse but ‘effective disciplinary action’ then taken](#))

a. Exclusion & Trauma

Can we afford to have a good chunk of our children spending years recovering from the trauma inflicted by this competitive education system, and its societal byproducts, on their sense of self?

Some may think ‘trauma’ is a strong word to use here. But trauma does not just occur from one intense negative experience, it can be the cumulative product of years of negative experiences, each of which may be considered minor in itself. For those of us who are different from the ‘ideal norm’ in our society, due to learning ability, race/ religion, body shape, gender identity, disabilities physical or invisible, this is a reality we face daily in our education system.

*“The human brain is wired for connection, but trauma rewires it for protection.”
-[Kim Barthelemy](#)*

The primary outcome of school has to be a child’s mental well-being. It has been proven that if children are not feeling safe, happy and included, not much learning will happen.

The stress, exclusion and bullying in our primary schools can regularly trigger a child’s threat perception. We may tout our schools and country as physically safe, but from the point of view of the child’s brain and its need for psychological safety to learn effectively, the outcomes could be as bad as having guns in schools (though of course, the physical safety outcomes are different).

In wondering why some races seem to underperform relative to others, it might be worth asking if we are providing them with psychologically safe and inclusive enough environments in school to focus fully on learning? (See: [Moving Upstream: Confronting Racism to Open Up Children’s Potential](#), Centre on the Developing Child, Harvard University)

[Creating psychological safety](#), so they can fully harness the creativity and potential contributions of their staff, is what helps organisations innovate in the 21st century. An equivalent revolution is required [in our school classrooms](#).

b. Exacerbating the Inequity in Our Society

“If you tell a bunch of high-achieving privileged kids all their lives that their system is fair and founded on meritocracy, logic leads them to elitism and bigotry.

If you tell a bunch of failing underprivileged kids all their lives that their system is fair and founded on meritocracy, logic leads them to self-loathing and an internalised inferiority.”

Ex-educator Chew Wei Shan, [Facebook post](#), 3 Oct 2018

The inequity in our society is also reflected, exacerbated and thus perpetuated by the competitiveness of our education system. Some elements of this inequity are captured in the [PISA 2018 Results \(Vol II\): Where All Students Can Succeed](#), which shows that while Singapore has one of the highest mean PISA scores in the world, **the difference in reading performance for high vs. low socio-economic status students in Singapore is the largest among the top 5 countries** (see [Annex B](#) for more details).

No other than SM Tharman, Coordinating Minister for Social Policies, recently commented on [the need to close this gap](#) between students with different starting points in life, and strengthen unity across different socio-economic and ethnic groups:

*“... we have to work harder to address these problems in Singapore. **Work harder to make sure that the early disadvantages in life do not replicate themselves and become stubborn disadvantages throughout life.**”*

This came in the wake of a study by SUSS and Mendaki that found [a strong link between pupils' socio-economic status and their academic performance](#).

Obvious causes include the **large dependence on tuition** to compete in our system, which as mentioned earlier leaves low-income children receiving much less academic attention than their better off peers. The other main contributor is **early streaming and excessive physical sorting**.

To clarify, **we are not against grouping children by abilities/ potential if there are extreme differences**. One can't realistically claim to be maximising potential in an academic class that has children with both Intellectual Disability and very high IQ. We realise that while differentiated teaching within a mixed-ability classroom is the way to go, it has its practical limits. For those at the extreme ends of the spectrum of intellectual abilities (i.e. those who fit the profile for SPED or GEP), there are also mental health benefits to being grouped with children of the same mental wavelength at least part of the day.

But leaving aside those on the extreme ends of this spectrum, say approximately the top and bottom 2% by IQ/ learning potential, **the other 96% of children should have regular (daily and substantial) opportunities to mix with each other**. Instead, the early testing and sorting advantages early bloomers and those whose parents can afford early academic exposure and tuition support, so that by Sec 1, higher income and lower income children tend to be segregated into very different schools and/or streams.

The danger here is what we will call **'wasted talent'** - children who end up in **'not so good' secondary schools** and then ITE, by which time they are under-confident and have lost motivation, having internalised the labels they've been given, officially and unofficially, since P1.

There are many reasons children can fail to do well academically in their primary school years besides academic potential - traumatic events, death and loss, family tension, ill health, having to help parents with work, caregiving duties, etc.

When these children experience all that together with an education system that is extremely competitive and dependent on external tuition, they fall further behind, academically as well as in confidence and motivation.



Sure, there are lots of inspirational stories of children who've gone from hardship to success, but that is definitely not the norm. Higher income parents who know their children are not academically inclined would rather pay large amounts to have them study overseas than go to an ITE, not because there is anything wrong with the ITE curriculum or the dedicated teachers there, but because it is perceived as a 'dumping ground' for all the children experiencing multiple vulnerabilities, especially those with learning needs, financial and/or family challenges.

We would also like to highlight at this point **the options and services that well-off parents are able to afford to support their children** through our competitive and under-resourced education system. **These are largely out of reach for the majority of Singaporeans**, again exacerbating inequity in the system:

- Pay for the **private diagnosis of learning needs and mental health issues** in their children (about [S\\$1000-3000](#) and S\$500-1000 respectively).

While there is government-subsidised diagnosis available, resources are limited and wait times can be long. A learning needs diagnosis through MOE is usually only available in P2 or P3, by which time the child's unaddressed needs and frustrations in a typical classroom setting would have led to the emergence of behavioural issues, which requires more effort to roll back and would have been avoidable if support was provided earlier.

- Pay for **private educational/ occupational/ speech/ psychological therapy after school**, to support learning needs or mental health needs (S\$100-300 per hour).

While there are government-subsidised therapy support services available, resources are limited so therapy is usually not regular or long-term. The difference can be as stark as twice a week vs. once in 6 months.

- **Hire a support teacher to shadow their child in class** to support their learning. This costs around S\$60-80 per hour. (That's about S\$5,000 a month for 4 hours of support a day.) Or a parent may choose to be in the classroom to provide such support themselves, foregoing paid work.
- Get exemption on the basis of a learning needs diagnosis and **transfer their children to international schools with better learning support systems in-house**. A good international school would cost about \$1500-3000 a month at the primary school level.
- And at some stage, either **move overseas or send their child to study overseas** in another developed country where the education system is more geared towards supporting the natural variation in learning needs among students.

Parents unable to afford the above are largely left to struggle with their child's learning or mental health needs, which can quickly translate into behavioural issues on the part of the child, and over or under-parenting on the part of the parent, besides exacerbating existing stresses within the family unit.

These parents are usually not the vocal ones - they continue to struggle, thinking this must be their lot in a 'meritocratic' system, unaware that they are well within their rights to demand better for their child in a First World education system.

Reading the above, you may not identify with either of these scenarios - the struggling parent, or the one buying their child out of the system. It is worth pointing out, especially if you come from an upper-middle or high-income background, that just because your child seems to be getting a 'good' education in the Singapore system (as probably you did before), **it does not mean that every**

other child is getting the education they deserve, or that even most Singaporean children are.

Education is not an individual game, it is a social/ collective good. **There is a cost we will ALL pay, economically and socially**, when a significant portion of our youngsters are shortchanged by the primary education system.

A truly universal education system is something we need to rediscover, as a country. Our education system should **serve ALL children, nurture ALL children, help each and every one maximise their potential.**

It is important to assess student progress and discern potential in the primary school years, **but this should not be based on long one-off high-stakes written tests** like the GEP entrance exam or PSLE. It also is not helpful when it comes with labels or over-segregation, and it should not be assumed to extend to every subject - e.g. all children can do art and PE together.

When will higher income parents in Singapore be happy to let their child with a hands-on learning style go to an ITE, instead of to an international school or overseas, because there they will meet other motivated, confident children pursuing similar passions, and teachers who will kindle that flame further?

Some other education systems to study in this regard would be [Germany](#) and the Nordic countries. While their schools start streaming children early (around age 10, with 2 years of an orientation/ testing phase), this is mostly done through teacher recommendations based on daily work, rather than high-stakes exams, and parents often have the final choice.

The system is flexible, and eventually ends with multiple forms of vocational training and an apprenticeship system backed by partnerships with companies, in addition to the usual university-style tertiary options. **The entire system is low pressure, and builds confidence, self-esteem and a low fear of failure among children, besides often ending in secure employment.**

"My first time bringing a handful of neighbourhood school kids to a play, at the Esplanade Theatre Studio. They were 15 and for all of them, it was their first play ever. For some it was their first time at the Esplanade at all. After the play we walked out onto the roof garden for a post-show discussion. Everyone gasped and whipped out their cameras.

"What?! This is Singapore?!!"

"I thought the postcards were all like some next level photoshop skill level 999 shit."

"Omg look look look, that thing really looks like a boat with 3 legs."

Shocked, I asked if they had really never seen our skyline ever before, in the flesh.

"For what we go hang out outside Bukit Panjang, cher? So far."

Ex-educator Chew Wei Shan, [Facebook post](#), 3 Oct 2018

c. Political Repercussions

The reasons to take action to reform our education system go much beyond the more intangible benefits of an inclusive society. If a significant chunk of our children have lost their confidence and motivation before they even enter the workforce, and if this is what happened to their parents too, **we are setting ourselves up for a hereditary and entrenched underclass, with a hereditary and entrenched elite to match, forever dependent on foreigners to keep the economy dynamic and alive.**

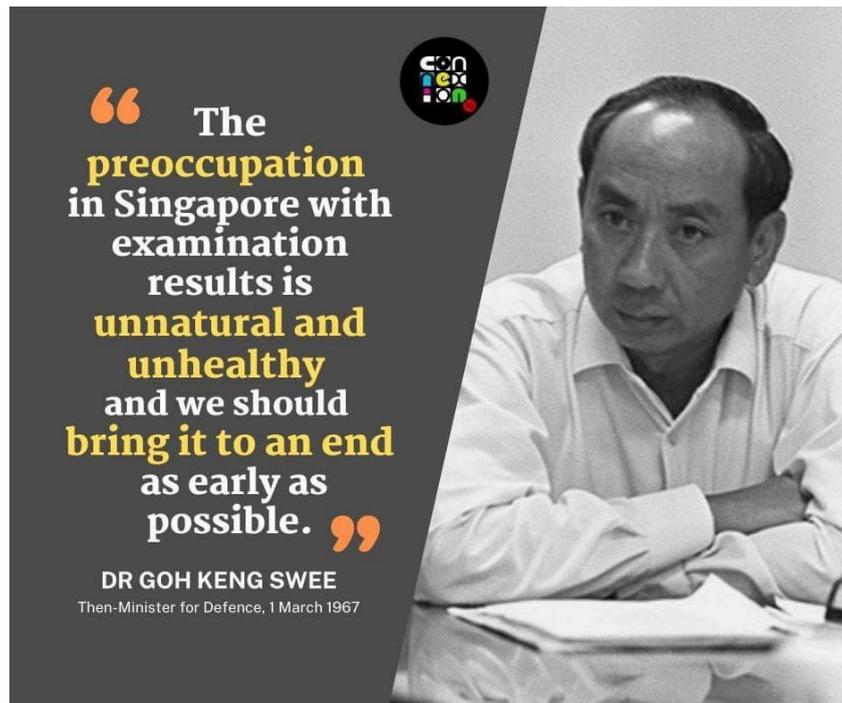
We have seen politics in some Western countries get more divisive in recent years, **when there is an underclass that feels threatened by globalisation and the future**, because they do not have the skills/ education to succeed in that future. They also feel that the globalised elites don't understand them and look down on them as 'dumb'. There may be some truth in that sentiment, as elites start to live in their own bubbles, never having learnt how to connect with those different from them.

And so those who feel left behind vote for the populist politicians, with their divisory rhetoric and promises to return the country to a 'better past' by getting rid of the foreigners, shutting the world out, turning their country inward, e.g. Brexit in the UK. **For an open economy like Singapore, that would be fatal. Yet we fear that our education system is creating this entrenched underclass even as you read this.**

The ability to sow division through misinformation will be exacerbated by the lack of critical thinking skills being taught in our schools. As mentioned earlier, MOE does try to put 'higher order' and 'thinking' questions into its exams, but given the strong pressure to achieve good grades, these have been dissected into memorisable formulas and model answers by tuition providers. And there are anecdotes aplenty of teachers telling children to stick to formulaic answers even in subjects that are supposed to be all about critical thinking, like Literature.

And so our future citizens are not being educated to distinguish between sources of information, or ask probing questions about the content being shared by non-traditional media. **They have spent their formative years being passive downloaders of information.** This means that once whatever government is in power in Singapore is no longer able or willing to moderate the narrative, it will be a fast and slippery slope to Singapore's own Trump or Brexit, there will be little resiliency in the system.

There are few things scarier than your intelligent 12 year old telling you, after 2 months in a non-selective international school, that **their 'elite' local primary school had not taught them how to think, and they were only now, in an international school, beginning to understand what critical thinking really meant.**



One of Singapore's founding fathers, then-Minister for Defence Dr Goh Keng Swee, gave a remarkably prescient [speech 55 years ago](#) (formatted [version](#)):

"The preoccupation in Singapore with examination results is unnatural and unhealthy and we should bring it to an end as early as possible. After all, good performance in examinations only proves one thing -- the ability to answer examination questions. This ability is, presumably, related in some way with intelligence. It is also related with the possession of good examination techniques. And it does not tell us a lot of other things about a person, for instance, his integrity, his character and so on which are just as important as intelligence and more important than mastering of examination technique. ...

I think there are three matters or aspects of education which have been neglected in Singapore, possibly as a result of over-emphasis on examinations. These three aspects are:

1. **"Creative imagination...** the ability to think independently and find solutions to problems without reference to the textbooks and without instructions from others. Imaginative thinking is, for instance, cultivated in playing an intellectual game like chess. It is encouraged in certain types of physical activities like Outward Bound training courses. It is inhibited by parrot-like teaching of text-books and I hope that abominations of this kind will cease in all of our schools."

2. **"Character...** An intelligent person can have no character; that is he may be weak and irresolute. Conversely, persons of lesser intelligence can show a

high degree of courage and tenacity when placed in trying or adverse conditions."

3. **"Moral values...** *Imagination and character are necessary but not sufficient in themselves to produce a desirable type of citizen. For instance, the most successful leaders of pirates, brigands and gangsters have imagination and character in ample proportions but they, of course, are sadly lacking in moral stature."*

*"Without a widely accepted code of moral values, Singapore will remain what it is now -- a community which is basically self-centred and selfish. Such a community may be alright if it is governed by others but **it will not survive for long as an independent democratic national state if the more successful citizens continue to place their self-interest before the interest of the community.**"*

Our Teachers & Principals are Trying Their Best, but They Are Struggling

Despite and in spite of everything described above, **we truly believe that most teachers and principals are trying their level best** to nurture each and every child and create a positive and respectful culture of genuine learning in their schools. However, because of the 3 large systemic gaps that we have highlighted (class sizes, PSLE as the main KPI, and lack of trained support professionals), teachers and principals are doing their work and fighting this good fight with one hand tied behind their back.

This does not need to be so in a rich developed country like Singapore. There are many positive examples of inclusion, creativity, collaboration and critical thinking in our schools, everyday, but the frequency could be enhanced by a system that truly supports such behaviour, so that it is commonplace **in every school and every classroom, everyday.**

Impact on Teachers

It is only fair that we also honestly discuss the effect of our current system on the people who keep it running - our teachers. We can assume that most of them join the profession out of a passion to teach and help children, but:

- What do they experience after in terms of remuneration, work-life balance, job satisfaction, working conditions, performance appraisals, etc.?
- And how are these experiences linked to the nature of our education system?

In Finland teachers are the most trusted and admired professionals next to doctors, in part because they are required to have a master's degree in education with specialisation in research and classroom practice.

(Sydney Morning Herald, 25 Mar 2016: [This is why Finland has the best schools](#))



Teachers' room in a Finnish school

There is a very illuminating exercise in some basic Economics classes where students are asked to divide the starting salary of someone in investment banking by the number of hours that they are expected to work, and suddenly these students start seeing their future career options in a very different light.

Our teachers too seem to be comparatively well-remunerated until one divides their salaries by the number of hours most of them work. And then it no longer holds up against **the allure of being a tuition teacher, or teaching in an international school - earning more per hour, being able to spend time teaching students one-on-one or in smaller groups, where one can really feel the impact of one's teaching, or working balanced/ controlled hours, leaving time for one's own family and children.**

The issues we have discussed earlier impact teachers greatly too - the focus on PSLE and grades as the main KPI, the 35-40 children in a class that leave teachers struggling to cope, especially if on average 2-5 of those children also have learning needs. Add on the pressure from parents, the

need to accumulate non-teaching roles to do well in their appraisals, and the struggle to teach through home-based learning during Covid.

"Friends tell me that many graduates go into teaching only to leave as soon as their bond is over to become private tutors.

*Is money the only factor in this? Or do teachers derive a greater sense of reward and satisfaction when they see their students improve from whatever point they start, and this is more likely and evident **in the tuition sector where the (much) lower teacher-student ratio allows them the space and freedom to customise teaching —not control, manage or discipline — according to the needs of the student?"***

(Today, 29 Mar 2019: [Class size in schools: For teachers, the real work is not just a ratio](#))

Then there is MOE's ideology of 'need suppression' / 'artificial resource scarcity' which we discussed earlier, which **makes it hard for teachers to ask for help, for themselves or for their students, lest they be seen as failures for being unable to cope.** It also leaves teachers **expected to do almost everything required to run the schools, instead of bringing in specialist support, whether it be admin support for event-organisation type work, or sufficient and well-trained support professionals** to help teachers better cope with the learning, behavioural and social-emotional needs of their students.

"With 40 years of experience under her belt, Gina (not her real name) has seen the workload of teachers increase beyond just teaching, adding to their stress.

"Teaching used to be focused on building values in our students. Now, our focus has spread to being able to perform in other areas and helm leadership roles while juggling administrative work and classes," said the primary school teacher."

(Today, 17 August 2022: [Pay raise doesn't solve high stress levels, workload issues, say teachers and allied educators](#))

All this has all taken **a very real mental health toll on our teachers.** This inside look by CNA is worth a read: ['My mental health is at an all-time low': Teachers talk of burnout, MOE aware that 'gaps' need plugging](#)

"More than 80 per cent of teachers said their mental health has been negatively impacted by their work amid the Covid-19 pandemic in a nationwide survey. They cited long hours as one reason, with 80.6 percent

indicating they worked more than 45 hours a week. This is above the average for the working population in Singapore...

***More than 62 per cent said their physical health had also declined,** reporting ailments such as irritability, insomnia and recurring headaches. Almost half, or about 43 per cent, said their personal relationships suffered and around 33 per cent fell sick easily. ...*

*About **56 per cent said they were overwhelmed,** followed by around 39 per cent who said they were frustrated and 21 percent indicating they were worried. The **lack of work-life balance and excessive workloads** topped the common stress factors identified by those surveyed. ...*

A primary school teacher, 25, noted that courses or workshops on mental health training are not good enough, adding that administrative tasks also take up too much time. "We should streamline and simplify the menial admin processes (like chasing students for documentation for approved absence) because they take up so much energy and take away energy for actual good teaching."

*More than half of those surveyed said they also struggled to manage students' behaviour, exacerbated by **insufficient support for special needs students** and difficulties with parents. **Many attributed this to "overwhelming" class sizes.**"*

(Straits Times, 22 Sep 2021: [More than 80% of S'pore teachers say Covid-19 pandemic has hurt their mental health: Survey](#))

We discussed earlier the important role of safety and connection in enabling learning. **How do we expect teachers struggling to keep their own mental health intact to effectively model self-regulation or create safe spaces for their large classes, let alone figure out how to support children who need additional support?**

Yes, there is some variation between schools, as to some extent Principals have an influence over the culture of their schools. But between us we have experienced primary schools at the extremes of the competitive vs inclusive range (in the Singapore primary school context), and in all cases, most teachers are struggling. Whether they are still able to maintain a warm and caring disposition for their students, or appear curt and unapproachable, **they are all under pressure, and a significant portion are burning out. That in itself means our education system is in trouble.**

"After the River Valley High School (RVHS) incident took place, Susan, who is from another school, was on the alert for students on "suicide watch". But also running through her mind was whether she could finally raise the issue of teachers' mental health. So when she was giving her principal a routine update on her at-risk students, she decided to "boldly ask" about that.*

"I was rather saddened to hear her say, 'the mental health of teachers? It depends on all of you. You guys are adults. You need to take care of each other and watch out for one another,'" she recounted. While it sounded "noble", it felt "quite invalidating", Susan said. "It's a failure to recognise that you need to take care of the caregiver."

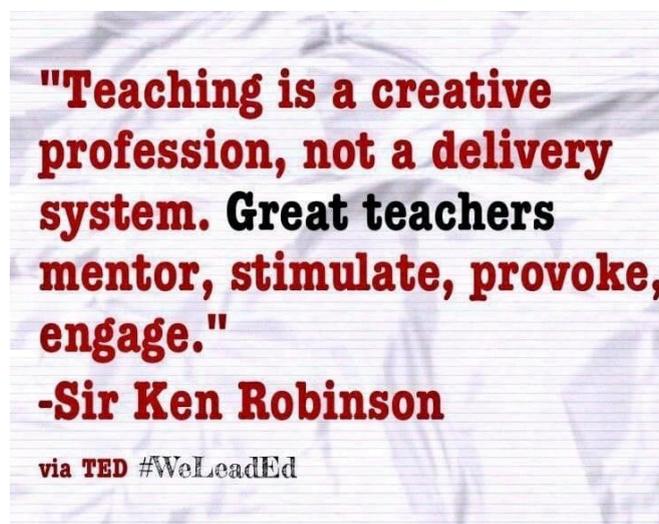
(CNA Insider, 5 Sep 2021: ['My mental health is at an all-time low': Teachers talk of burnout, MOE aware that 'gaps' need plugging](#))

"Primary school teacher Lisa said this is often made worse by large class sizes, which reduce teachers' ability to look out for every child. "You have to reduce the number of kids so that we can really take care of ... their mental (health)," she said.

A smaller class size has made it easier for secondary school teacher Claire to "build student rapport" and, in turn, take care of the students' needs. Her Secondary 1 class has fewer than 20 students owing to falling enrolments, compared to "the normal 40 students per class" in the past. "With a smaller class ... you become less of a dictator where it's like, everyone just keeps quiet and listens to me," she said. She can get to know her students now and can better understand why students "misbehave" as well."*

(CNA Insider, 5 Sep 2021: ['My mental health is at an all-time low': Teachers talk of burnout, MOE aware that 'gaps' need plugging](#))

Hardly any teacher feels like they are able to fully cater to every child in their class. If your response to that is 'of course, teachers can't fully cater to every child in their class', then **we also cannot claim that we have a system of universal education that is one of the best in the world**, or that **every child gets a good start in life**, or that we have a **meritocratic society**. And if we cannot claim those, then **what is the point of being one of the richest countries in the world?**



Comparisons to Other Countries, and Ourselves

Throughout this article, we have used examples from other countries or from international schools in Singapore. That is to show that these issues can be realistically tackled, that numerous solutions have been tested worldwide, that we can adapt or learn from at reasonable cost.

Also, in case it needs to be explicitly stated, we do not believe that there is any perfect education system out there. Some do have more strengths than others; some are clearly more willing to learn and experiment based on the latest child development science; some are extremely uneven (e.g. schools in the US can range from cutting-edge to grossly underfunded).

But that is not an excuse to be so cautious and only 'tinker at the edges' of our education system. Singapore has never waited to see perfection in other countries' systems before trying out cutting-edge ideas and policies itself, in areas as varied as e.g. pension systems (CPF) and government housing (HDB) in the past, and urban planning, infrastructure, and green spaces (e.g. Gardens by the Bay, the Park Connector system) more recently.

In the human services sector, some of this experimentation has come from the private sector or charity/ non-profit sector, often with government interest/ encouragement, before being adopted/ mainstreamed by the government, in areas as diverse as inclusive preschools and eldercare. **Unfortunately this cannot really happen in the primary school sector given MOE's strong, centralised control over schools, including clamping down on experimentation that threatens its ideology/ orthodoxy.**

There are very few things left in Singapore where a time traveller from the 1980s might feel familiarity - an HDB coffeeshop, the odd mama shop, and strangely enough, a typical lesson in a primary school. Where the future should be playing out, we are stuck in the past. Something that was doing well 30 years ago and still hasn't changed much can't still be cutting edge.

[▶ Jack Ma on the future of education \(teamwork includes the teacher over to play\)](#)



What is MOE Doing About All This?

In theory, MOE claims to support much the same things that we argue for here about reducing the emphasis on grades, life-long learning and learning beyond the classroom, holistic development, etc. This can be seen in successive Education Ministers' speeches like [this one](#) by Minister Chan, and in polished public engagement sessions, like the one just announced for the [Forward SG Equip pillar](#), and below from Oct 2020:

WHAT'S YOUR TAKE: LEARN FOR LIFE, LEARN FROM LIFE
PART OF THE EMERGING STRONGER CONVERSATIONS
OCTOBER 31ST 2020

WHAT'S YOUR TAKE? Ministry of Education SINGAPORE SG TOGETHER

- 1 REDEFINE SUCCESS**
 - ✳ Shift away from grades to life skills and resilience.
 - ✳ Fail forward and learn quickly.
 - ✳ Happiness and success aren't the same thing. There are multiple pathways in life to success.
- 2 LIFELONG LEARNING**
 - ✳ Encourage reflection and confidence to explore and pursue interests.
 - ✳ Self-directed education journey.
 - ✳ Have an open mind and growth mindset.
 - ✳ Space for children to go beyond curriculum.
 - ✳ Uncover our children's purpose (what drives them).
- 3 HOLISTIC DEVELOPMENT**
 - ✳ **New 5 C's:** Confidence, Shape the community, culture, compassion, and credibility.
 - ✳ Learn how to process, manage and communicate emotions in a healthy way.
 - ✳ Emphasis on character and values.
- 4 POSITIVE LEARNING CULTURE**
 - ✳ Encourage our children to ask questions.
 - ✳ Move away from judging our children at a young age.
 - ✳ Create an open learning environment that emphasises inclusion, equality and diversity.
- 5 SUPPORT TEACHERS**
 - ✳ Collaborate and share resources.
 - ✳ Support new ideas that teachers may have.
 - ✳ Better School-Home Partnerships.
- 6 COLLECTIVE ACTION**
 - ✳ Strengthen partnerships between schools, industries and the community to provide real-world learning opportunities, e.g. mentorships and internships.
 - ✳ Re-define success as a society through our collective actions, e.g. as parents and employers.

All of us, as individuals, the community, or the Ministry, can take action in these areas.

Second Minister, Mohamed Muhiy Bin Osman

In reality, MOE has been slow to accept the need for real system-level policy changes in recent decades, like moving away from PSLE as the main KPI of primary school education, or improving the limited resourcing in primary schools. The Industry Transformation Map [\(ITM\) for Education](#) has transformation plans sections for Early Childhood and Training/ Adult Education, but is silent on any need for improvement in the school sector, perhaps reflecting this lack of vision.

MOE has thus **not been able to move the dominant mindset/ culture** in our schools and parenting. Instead, it focuses on encouraging parents, teachers and schools to change their behaviour, using tools like guides (e.g. for [parent support groups to support student mental health](#)), trainings, anecdotal success stories (e.g. <https://www.moe.gov.sg/our-schools-our-stories>). It deflects pressure through consultation and engagement sessions, which, like the infographic above, usually conclude again by calling for changes in mindset and behaviour.

However, **none of these efforts fundamentally fixes the incentive system and resourcing realities driving the issues** within our education system. For example, applying very basic game theory, how do we expect parents not to compete after setting up a competitive game with their children's futures?

The Government is able to use reasonably well-designed incentives to guide citizens and stakeholders towards desired behaviours in most other aspects of policy-making in Singapore. However, when it comes to our primary education system, we somehow expect humans to control/overcome their natural tendencies by themselves.

This leads to a disconnect between parents' ideals and actions - many will admit they should not be putting so much pressure on their children, or signing them up for so much tuition, but they feel if they do not do so, they risk their child's future.

*"A small handful of parents acknowledged or claimed themselves to be kiasu... Most respondents, however, expressed ambivalence. **The emotions at the forefront of our conversations around education were angst, frustration, and helplessness.***

Some explicitly repudiated this kind of parenting – insisting that they are not or do not want to be 'helicopter' or 'tiger' parents. They questioned if it is right to pay so much attention to exam results.

***Many express tension between what they practiced and what they believed;** although they spent time and energy on their kids' education, they talked about pitying children these days for not having time to play; about their worries of stress and even youth suicide, which they attributed to a stressful education system; and of how 'book smarts' are not enough to survive in this world. ...*

On one hand, they spoke of their desire for children to enjoy learning, to have happy childhoods that include play, and to acquire good values and become good people.

Their definition of 'good' persons often revealed a social dimension – to be able to take care of others, to not hurt people, to get along in society.

On the other hand, parents are conscious of the importance of educational credentials and therefore drawn to the everyday focus on homework, examinations, competing, and not losing out to others.

*These emotions of unease, and the emotional labour of managing contradictory parental desires, were present across class and gender lines. They signal, then, **a broader paradoxical social phenomenon: a worldclass education system in which people are not exactly satisfied.**"*

*Teo, Youyenn (2022). [Education as care labour: Expanding our lens on the work-life balance problem.](#) *Current Sociology*, SAGE Journals. pp.*

One could easily imagine a similar tug-of-war going on in many teachers' psyches - to give a child the support and space they need to develop a true love of learning, or focus on their own 'KPI' of maximising the cumulative end-year/ PSLE grades of their class of 35-40 children.

Why Hasn't This Been Fixed Yet?

You may ask, if the deficits in our education system are so obvious, why hasn't the Government fixed them yet? Most of the physical infrastructure in Singapore is world-class, including social amenities like parks, libraries, school buildings, etc. The public health system is pretty good (even if some struggle with affordability), public transport has improved a lot in the past decade, etc. So why would our education system be lagging?

You can't fix a system
that is functioning
exactly as it was
designed to operate.

The main reason seems to be **the lack of an independent and empowered policy and future-planning division in MOE driving improvement at the systems-level**. This is mostly due to **the large number of practising professionals** (senior teachers, Principals, Educational Psychologists etc.) **being rotated in and out of senior policy positions at MOE**.

In general, **policy-making is not what they are trained for, good at or have substantial experience with**. They become senior teachers and Principals because they are good at teaching, and later running school departments or entire schools. We do not have large numbers of senior doctors running health policy in MOH (Ministry of Health), or large numbers of senior pilots running aviation policy.

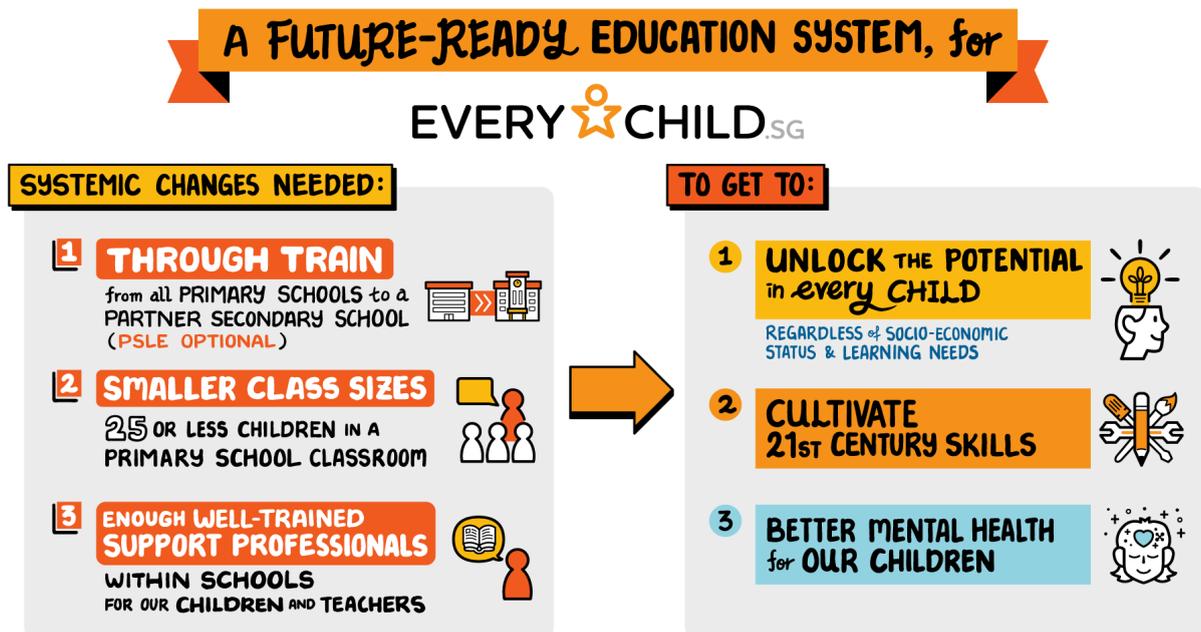
Our education system is thus stuck with **outdated KPIs and an outdated ideology of artificial scarcity that does not seem to be questioned within MOE**. MOE's internal narrative remains that our education system is still world-class and does not need radical change. This is unlike most other Ministries in Singapore, who prioritise forward-looking policy-making and embrace innovation and change. They generally adopt a more humble and open attitude, looking to learn from the best ideas, locally and globally.

Without independent, empowered policy-makers to drive systemic change, **MOE resorts to blaming the behaviour of parents for creating/ perpetuating stress and competition**. MOE trains teachers in differentiated teaching and special needs support, but this barely translates into improvements for students on the ground.

Elsewhere in our Government, **rarely do we blame large-scale policy failure on the behaviour of recipients/ residents. Rather we strive to design policy that works with (not against) human psychology to succeed**.

All this means that **in its current form, MOE is unlikely to be able to fix the shortcomings** in our education system by itself. It will require **political will from the Government to reform MOE first**, before MOE can reform the education system. And this will only come about **when parents unite and speak up and ask for this change**.

So What's Needed?



MOE's approach of encouraging messages like 'grades don't matter', 'you don't need a degree to succeed', or 'it's up to parents to put less pressure on their kids' **will not work**, if education remains a competitive game.

Tinkering with the rules (e.g. removing mid-year exams, or grading PSLE in bands), **while keeping the game intact, also will not help**. If the underlying system doesn't change, only the elites can afford to buy the extensive tuition required to continue winning the game, whatever the new rules may be. At the end of the day, only they can afford to send their children overseas to get the diploma/ degree in the subject their child is truly passionate about.

- We recommend ending this competitive game that is our education system, and
- replacing it with a well-resourced and truly universal education system,
- that gives every child the holistic, child-centric, mental-health-friendly and future-oriented education they should be getting,
- in a country as rich as ours.

To do that, our education system needs to be **redesigned boldly from first principles, using system-level fixes** (and good policy-making practices) like:

- instituting appropriate KPIs,
- aligning incentives to human psychology,
- ensuring sufficient resourcing, and
- harnessing the power of data analytics.

INEQUALITY

Current system



Support for children largely dependent on their parents' support

EQUALITY

Smaller Class Sizes



Children given more equal support

EQUITY

Sufficient and Well-trained Support Professionals



Children given different levels of support based on their needs

SYSTEMIC JUSTICE

PSLE Optional



Removal of systemic barriers can allow more equal outcomes with fewer supports

A Systems-Level Approach

At the most basic level, a system is shaped by:

- (a) **its overarching aim/ goal, as reflected in the key KPI measured;**
- (b) **resources made available to achieve (a).**

Our primary school system is currently shortchanged on both:

(a) Key KPI Measured

PSLE has become the goal, instead of holistic child development. As parents, we know this is true despite whatever MOE may claim. If holistic child development were really the goal, then there would be a common measure of that development, that all of us parents knew about and understood.

Does your child receive a **thorough evaluation** of their development at the end of every year? In **every domain**, comparing where **they** were at the **start** of the year to where they are at the **end**? Or are you just receiving some grades that score your child's ability to perform in written, timed academic tests on a scale of 0 to 100, with the natural comparison being to their other classmates, with a few lines of comment underneath? Let's admit it, the only universal and universally understood and targeted measure we have of success in primary school education is final-year exams and PSLE results.

So that becomes not just **the goal** that we hold our children too (despite our misgivings), but **the goal** to which teachers hold themselves, and schools hold teachers, and so on. Everyone does so with misgivings, because of course most parents and educators know deep inside that this should not be the main point of a primary school education. But in Singapore, it is.

- PSLE as we know it should be made optional.
- **Testing and assessing children should be done on a regular basis, in low-stakes bite-sized pieces, in multiple formats**, including project and group work, presentations, etc. that mimic the real world our children will have to work in.
- Their **trajectories should be tracked, individual strengths highlighted and built on, weaknesses adequately supported and/or accommodated.**

Once PSLE is made optional, the KPI for teachers and schools can be adjusted from raw grades to children's learning trajectories, as measured by regular bite-sized tests and assignments in multiple formats. And teachers' and schools' incentives, behaviour and actions can become more aligned with encouraging our children's steady and holistic development throughout the entire first 10 years of education, rather than applying undue pressure towards a one-time high-stakes exam.

(b) Resources Provided

The resources required to provide a universal, world-class, future-ready, holistic education **are currently not provided**, and there is little internal pressure from within the system for these resources. That is probably because **a universal, world-class, future-ready, holistic education does not seem to be the goal currently; the goal seems to be getting children through PSLE.**

35-40 children in a class (of whom 8 on average would have some form of additional needs), no therapists, psychologists or adequately-trained counsellors in schools, not enough senior specialist teachers deployed specifically to help other teachers support children with additional needs, etc. The resources currently provided can only be considered enough if schools see their goal as herding their students through PSLE, rather than the holistic development of each child.

We need to have smaller class sizes, **no more than 25 children in a primary school classroom**, to enable **more interactive and differentiated teaching and personalised learning** that benefits every child.

We need to give our children and teachers the support system they need and deserve, and that we can well afford. This includes **adequate and well-trained support professionals operating within schools** (therapists, psychologists, additional & senior learning support teachers, teachers for the gifted/ talented, etc.)

MOE has made efforts like [TRANSIT](#) (Transition Support for Integration programme) and [UPLIFT and its Enhanced School Resourcing programme](#). While on the right track, these efforts are still much too little.

A universal and equitable primary education system should be key goals for MOE. The massive reliance on external tuition and private therapy by those who can afford it should become

an exception rather than the norm. **This does not mean doing away with 'meritocracy'**. Eventually students will have to compete to show their abilities in the post-secondary/ tertiary education fields of their choice, but it goes against all evidence about learning and assessment to hold this competition at 11/12 years of age.

There is no point discussing anything else to do with primary school, e.g. curriculum, streaming, how to do testing, role of parents, role of teachers, what time school should start, should the GEP exist, etc., **if we don't fix (a) and (b) first**.

Reforming our education system for the 21st century is something we all need to care about, in the coming years and decades it will have a massive impact on all of us in Singapore:

- The competitiveness and adaptability of our current and future economy;
- Our ability to forge an inclusive and unified vision for our country, and stem the rise of populist and divisive politics;
- Our children's futures and livelihoods, family relationships, and just about everyone's mental health and happiness.

Let's aim for a new set of '5C's for the 21st century, one within the reach of every Singaporean child, if we as parents can be brave enough to demand the policy reforms needed in our education system:

Curious, Creative, Confident & Compassionate Citizens

One day last November, when the first snow came to my part of Finland, I heard a commotion outside my university faculty office window, which is close to the teacher training school's outdoor play area. I walked over to investigate.

The field was filled with children savouring the first taste of winter amid the pine trees. "Do you hear that?" asked the recess monitor, a special education teacher wearing a yellow safety smock. "That," she said proudly, "is the voice of happiness."

(Sydney Morning Herald, 25 Mar 2016: [This is why Finland has the best schools](#))



School children in Finland climbing a tree.

A FUTURE-READY EDUCATION SYSTEM, for EVERY CHILD.SG

SYSTEMIC CHANGES NEEDED:

<p>1 THROUGH TRAIN from all PRIMARY SCHOOLS to a PARTNER SECONDARY SCHOOL</p> 					
<p>PSLE ONLY for ENTERING COMPETITIVE SECONDARY SCHOOLS</p> <p>OPTIONAL</p>	<p>INSTEAD...</p> <ul style="list-style-type: none"> BITE-SIZED, REGULAR ASSESSMENTS COMPUTER ADAPTIVE PRE TESTING POST TESTING 				
<p>2 SMALLER CLASS SIZES 25 OR LESS CHILDREN IN A PRIMARY SCHOOL CLASSROOM</p> <p>TO ENABLE:</p> <ul style="list-style-type: none"> DIFFERENTIATED TEACHING PERSONALISED LEARNING 	<p>3 ENOUGH WELL-TRAINED SUPPORT PROFESSIONALS WITHIN SCHOOLS FOR OUR CHILDREN AND TEACHERS</p> <table border="1"> <tr> <td> <p>THERAPISTS</p>  </td> <td> <p>PSYCHOLOGISTS</p>  </td> </tr> <tr> <td> <p>TEACHERS for the GIFTED/TALENTED</p>  </td> <td> <p>ADDITIONAL & SENIOR LEARNING SUPPORT TEACHERS</p>  </td> </tr> </table>	<p>THERAPISTS</p> 	<p>PSYCHOLOGISTS</p> 	<p>TEACHERS for the GIFTED/TALENTED</p> 	<p>ADDITIONAL & SENIOR LEARNING SUPPORT TEACHERS</p> 
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TO GET TO:

<p>1 UNLOCK THE POTENTIAL in every CHILD REGARDLESS of SOCIO-ECONOMIC STATUS & LEARNING NEEDS</p>	
<p>2 CULTIVATE 21st CENTURY SKILLS</p>	
<p>3 BETTER MENTAL HEALTH for OUR CHILDREN</p>	

Further Info

Annex A - Learning Support Systems

[Briefing on inclusive education in Singapore](#), Singapore Association of Occupational Therapists (SAOT**) *(Reproduced in full, emphasis added is ours)***

Summary of main points from the Singapore Association of Occupational Therapists (SAOT):

- 1. Inclusive education benefits children and youth with, and without disabilities.**
- Inclusive education requires different strategies, tools, equipment and adaptations to the environment to enable the participation of children and youth with disabilities in school activities (both in-class and co-curricular activities), to maximise their academic and social development. Therefore, **skills and expertise from a range of professionals is required to support all involved stakeholders.**
- Occupational therapists are a needed profession who are educated and skilled to work collaboratively with school staff and parents to enable the participation of children and youth with disabilities in schools.**
- SAOT recommends that Health, Social and Family Development, and Education Ministries look into improving students' access to Allied Health Professionals such as occupational therapists.** Occupational therapists can work together with Allied Educators, Counsellors, and Educational & Career Guidance Counsellors to facilitate the holistic development of children and youth with varying disabilities in schools.

SAOT would be happy to provide further information or assistance as required. Please do not hesitate to contact the President of SAOT, Ms. Ngooi Bi Xia.

Inclusive education and occupational therapy

The Universal Declaration of Human Rights (United Nations, 1948), the UN Convention of the Rights of the Child (United Nations, 1989) and the UN Convention on the Rights of Persons with Disabilities (United Nations, 2006) advocates for an inclusive education system for all children and youth. To achieve this aim, children and youth require effective support measures in schools which maximise academic and social development (World Federation of Occupational Therapists, 2016).

The benefits of inclusive education are reported for both children with and without disabilities. Some studies have shown greater progress in reading, maths and general academic achievement for all children in inclusive education (e.g. Cole, Waldron & Majd, 2004; Kalambouka, Farrell and Dyson, 2007; Sermier Dessemontet and Bless, 2013). Moreover, children have the opportunity to develop meaningful friendships, understand, appreciate and respect individual differences, and prepare for living in a diverse society.

School is made up of numerous occupations which focus on learning activities (e.g. writing stories/ essays, drawing/ art, maths, drama, sport, history), activities to look after oneself (e.g. eating lunch, using the toilet, changing clothes for sport, getting to class), and school-leisure activities (e.g. playing/ socialising with friends, free play, participating in organised groups). Children and youth with disabilities have the same engagement requirements in these school occupations. However, they may require different strategies, tools, equipment or adaptations to the environment to make this possible (Missiuna et al., 2012).

General education teachers are skilled professionals. However, the different strategies, tools, equipment and adaptations to the environment, requires skills and expertise from a range of professionals. Occupational therapists are an example of a needed profession who are educated and skilled to work collaboratively with education professionals (teachers and allied educators) as well as parents. Occupational therapists enable, support and promote full participation and wellbeing of children and youth with disabilities by supporting their strengths and finding solutions which reduce or remove limitations and restrictions to learning and participation (World Federation of Occupational Therapists, 2016).

International practice

School-based occupational therapy is a common practice in countries such as Canada and America from as early as the 1980s (American Occupational Therapy Association, 1987, Coleman, 1988; Dunn, 1990). The type of children that occupational therapists work with include those with handwriting difficulties, social and emotional issues, coordination difficulties, and physical disabilities. In terms of diagnostic groups, it is common for occupational therapists to work with children who are included in mainstream education such as those with autism spectrum disorder, attention deficit hyperactivity disorder (ADHD), and fine/ gross motor deficits, developmental coordination disorder and cerebral palsy. There are many research articles documenting about school-based occupational therapy in primary school (e.g., Bayona et al., 2006; Case-Smith, 2002).

There are different models of practices for occupational therapy to work within the mainstream school. One of the more recent and contemporary work is published in Canada, on a consultative service delivery model called Partner for Change (Missiuna et al., 2012). This model emphasizes the partnership of the occupational therapist with educators and parents to change the life and daily environment of a child, highlighting the importance of working within the context of where the child spends time in. The model also uses a tiered approach that includes whole class instruction, dynamic performance analysis and monitoring of response to intervention.

Current situation locally

Currently, children and youth in mainstream schools with disabilities have access to time limited and adhoc services, which mean that true and effective collaboration with education professionals is difficult to establish to promote an inclusive culture and quality delivery within schools.

In addition, **existing funding structures between health and education mean that professionals such as occupational therapists have limited scope to support children and youth with disabilities within the education setting.**

Having professionals such as occupational therapists employed within the education system could create innovative collaborations that can benefit all children and youth in schools, with and without disabilities.

School-based therapy has many benefits, including providing assessment and intervention that are contextually based, and partnering school teachers, allied educators and other children for inclusive practices. With the Compulsory Education Act starting in Singapore from 2019, it is foreseeable that there will be more children with disabilities included in schools. Occupational therapists can play a big role as part of the Allied Health Professional services, in supporting these children through the use of assistive technology, environmental modification, Universal Design for Learning principles, and life/social skills development.

Having professional support for school teachers, allied educators, counsellors, and educational and career guidance counsellors will be an important step towards an inclusive education for our children. **Inclusive education is about supporting ALL children and youth in schools, and this requires collaborative effort from the Ministries of Health, Education, and Social and Family Development, to provide schools with access to needed professionals.**

Examples of Learning Support Systems in Other Developed Countries

1. Hong Kong:

(Source: Special Education Division, Education Bureau)

- **Speech & Language Therapist (SLT) - Generally 1 school-based SLT services 2-3 mainstream schools.** ~400 SLTs will serve ~500,000 primary and secondary mainstream school students once this is fully ramped up (about 1 SLT for every 1,250 students) . The School-based Speech Therapy Service (SBSTS) covers the domain of prevention, intervention and enhancement, and facilitates schools, teachers and parents in supporting students with speech and language impairment (SLI) and those with other special educational needs.
- **Educational Psychologist (EP) - Generally 1 EP serves 6-7 mainstream schools.** About 180 EPs serve HK's ~500,000 primary and secondary school students (about 1 for every 8,800 students). The School-based Educational Psychology Service (SBEPS) is a comprehensive and integrated educational psychology service that aims at enhancing schools' capacity to cater for students' diverse educational needs.
- **Special Educational Needs Coordinator (SENCO) - 1 per school** to assist the school principal and vice-principal to coordinate, plan and review the work related to the support given to students with special education needs. SENCOs are trained in special education and have at least three years' experience in teaching and promoting inclusive education respectively.
- **Special Educational Needs Support Teachers (SENSTs) - 1 to 3 per school,** depending on needs. The SENCO and SENSTs may work in collaboration to enhance the quality of

teaching by introducing inclusive practices in the classroom. SENSTs are trained in inclusive education.

2. New Zealand:

- New Zealand has a more extensive system than Singapore of [support for learning needs](#) in mainstream schools. [This site](#) guides parents on the support and services available.
- The **Ministry of Education employs support professionals like Speech & Language Therapists (SLTs), for whom it is one of the largest employers, Occupational Therapists, Physiotherapists, and Resource Teachers with additional specialised training** (in learning and behavioural support, literacy, gifted education, deaf education, etc.). It also provides funding for schools to hire teacher aides and additional resources as required.

3. UK:

- The UK's publicly-funded **National Health Service (NHS) provides therapy services to mainstream schools**. Some examples from their local sites can be seen [here](#) and [here](#).
- [Here](#) is the **Royal College of Speech and Language Therapists (RCSLT) sharing about the role of SLTs in the full range of educational settings, including mainstream schools**, to enable children to reach their full communicative and educational potential and remove/ reduce barriers that speech, language and communication needs present to their learning. [This is their guide for schools](#) buying SLT services, covering all 3 tiers from whole-school support, to one-on-one assessment and therapy services

4. US:

- The US has a law - the Individuals with Disabilities Education Act ([IDEA](#)) - to ensure **free and supported public education to children with disabilities, including special education services and support in mainstream schools**. Easy to understand information on IDEA can be found [here](#).
- Children with disabilities and learning needs and their classroom teachers **have access to support professionals as needed, funded by the school district, including school psychologists, special education teachers, therapists and mental health professionals, according to their Individualised Education Program (IEP)**.
- These professionals are also involved in [providing assessment](#) for special education services when requested by the school or parents.
- **Parents have the [right to request an evaluation](#) at any time.**

5. Europe:

- The [European Agency for Special Needs and Inclusive Education](#) provides member countries and stakeholders with evidence-based information and guidance on implementing inclusive education systems. Their detailed information on each country's system of inclusive education can be found [here](#).

6. [Finland](#):

- “Unlike many countries, Finland does not distinguish between students who need general learning support and special needs students. **All Finnish schools are assigned full-time specialists to address an array of learning needs.** Teachers refer students to the specialists, who work with students individually and in small groups, as needed. **Almost half of Finnish students receive some sort of academic support at some point during their schooling.**
- Finnish law outlines three levels of support for struggling students. Teachers provide “basic support” to most students who need assistance, including remedial instruction, part-time special needs instruction, and individual guidance. **About 22 percent of students qualify for basic support.**
- **Students who need “intensified support,” as determined by a pedagogical assessment, receive an individualised learning plan, which includes part-time special education classes and individual guidance.** Students’ learning and attendance are monitored regularly and learning plans adjusted as needed. In 2018, **about 11 percent of students received this intensified support.**
- The third level of support is “**special support.**” **Students who need more than part-time support in the classroom are referred for full-time services. About 8 percent of students** receive this level of support.
- Most receive these services in mainstream schools, but a small number of students with severe handicaps, autism, dysphasia, and visual or hearing impairment (**less than 1 percent of the school population in 2018**) are served in **special schools** funded by the national Ministry.
- Each school has a group of staff that meets twice a month in order to discuss which students need new or continued learning support and how they are faring in particular classrooms. This group - comprised of the principal, the school nurse, the special education (or learning support) teacher, the school psychologist, a social worker and the classroom teachers - determines whether classroom supports are adequate and what other interventions may be needed. If students need help beyond what the school can provide, the school helps the family find professional intervention.”
- More than [7,000 special teachers](#) - most of whom hold master's degrees in special education - in Finland support 43,000 students with special needs, 39,000 of whom are in mainstream schools. (Compare to 600 Allied Educators in Singapore with not even Bachelors level training in special needs, for a similar number of students.)
- In 2007, Finland had about [300 school psychologists](#) for 600,000 students, which is about 1 for every 2000 students. (Compare to 1 to 8,000 in Singapore in 2022.)

Annex B - Inequity in Performance

Summary points on equity in the Singapore system, from:

OECD (2019), **PISA 2018 Results (Volume II): [Where All Students Can Succeed](#)**, PISA, OECD Publishing, Paris.

From Chapter 2:

- Singapore has one of the highest mean PISA scores in the world.
- Between 2009 to 2018, the performance of both advantaged and disadvantaged students in Singapore improved significantly.
- However, **the difference in reading performance for high vs. low socio-economic status (SES) students in Singapore is the largest among the top 5 countries.** The difference in mean score for students from the **ninth vs. second decile** of SES is **110 points in Singapore**, compared to a range of **33-77 point difference among the other top performing countries.**
- The difference in mean score for students from the **top vs. bottom decile** of SES is **602 points in Singapore**, compared to a range of 48-557 point difference among the other top performing countries. (However, the number of students in the bottom decile in Singapore is very low at 3%.)
- In all countries, the proportion of top performers amongst advantaged students largely exceeded that amongst disadvantaged students. While around 10% of disadvantaged students in Singapore were top performers in reading (the largest proportions observed amongst all countries), four times as many advantaged students attained that level of performance. This suggests that even in high-performing school systems, social inequities may be perpetuated.
- **While Singapore is performing above-average in reading performance, it is considered performing below-average in equity in education.**

From Chapter 3:

- **The percentage of disadvantaged students who are academically resilient in Singapore is 9.7%, which is below the OECD average of 11.3%.** Academically resilient students are those who are able to beat the odds against them and sustain high academic performance. While all students face difficulties of one sort or another, disadvantaged students are more likely to be low performers at school.

From Chapter 5:

- **On average across OECD countries, 40% of teachers in disadvantaged schools** (schools in the bottom quarter of the distribution of average SES), and **48% of teachers in advantaged schools** (in the top quarter of that distribution) **had at least a master's degree. In Singapore, around 18% of teachers in disadvantaged schools** have at least a masters' degree, compared to around **37% in advantaged schools.** This difference is larger.