# Reforming Singapore's Primary and Post 16 Assessments

This is one of three case studies illustrating how assessment policy has developed in three jurisdictions and the contextual factors that have shaped this.
The case study is mainly based on interviewees' accounts so reflects the views and opinions they shared.
Loic Menzies, 2023.

Introducing Singapore's Primary School Leaving Exam (PSLE) and University Admission Score (UAS)

In Singapore, all pupils complete the PSLE in their sixth year of primary school. They take multiple choice exams in English, Maths, Science, and their mother tongue (Tamil, Chinese or Malay). The exam is based on England's old 11-plus exam and serves a similar function - in terms of determining which secondary school pupils will attend. Pupils receive a fine-grained score that places them within a national distribution. This is now changing as a result of the reforms explored in this case study. Until recently, pupils also sat various mid-year and end of year exams throughout primary school. This assessment burden is now being reduced.

The University Admission Score is currently scored based on a maximum of 90 points. This is based on three main content-based subjects, an additional content-based subject, a general paper, project work, and mother tongue (if this improves their overall mark).
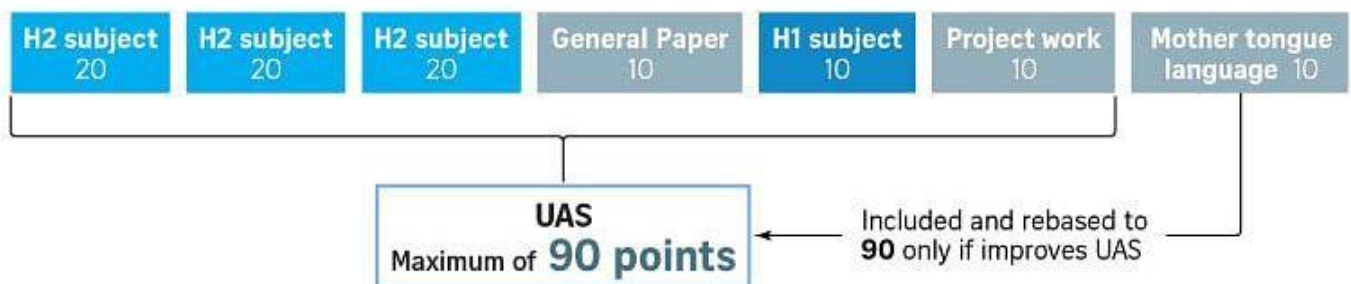

(Teng, 2023)

Reforming Assessment

Reforms are currently underway to shift from fine-grained scores in the PSLE, to broader attainment bands. This builds on the O-level and A level precedent. Mid-year - and some end-of-year exams have already been abolished and this is now happening at post-16 level.

Reforms are also taking place to reduce stakes on certain elements of post-16 assessment. This will result in the 'additional subject' only being counted if it improves a pupils' overall UAS score and removing the project work from the score (and turning it into a pass-fail assessment) as follows.
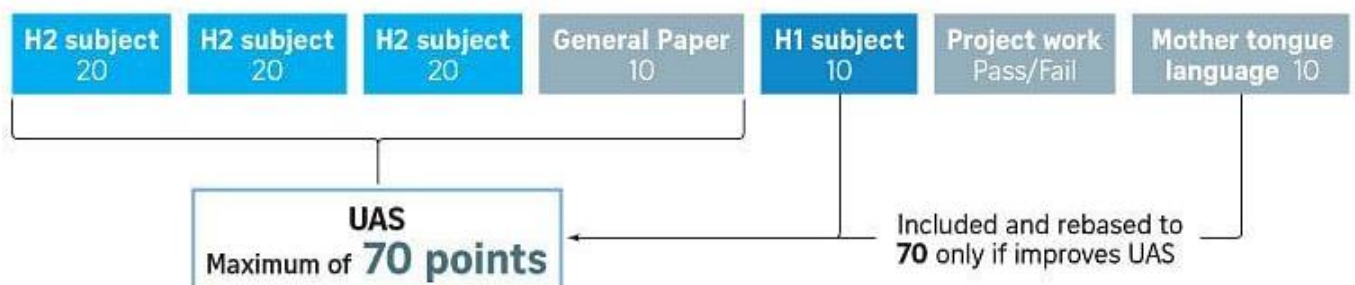
What problems are the reforms setting out to address?

- Government and society have been concerned that children are being pushed to chase every last mark in primary school assessments and that the PSLE is driving a tutoring 'treadmill'. This concern was frequently raised during a big national consultation (the 2012 national conversation) on the issues Singapore is facing.
- There are concerns that A-Level pupils lack the space to explore their interests, free from worries about their final result. Education Minister Chan Chun Sing has suggested that moving to a pass-fail approach to project work will encourage students to "exercise greater agency and creativity in areas of interests, rather than be driven by grades" (Teng, 2023). There does not seem to be significant concern yet that these changes will result in a cliff-edge or that given the high-stakes, pupils will be incentivised to narrow their focus to scored subjects.
- Reducing the assessment burden is seen as a way of increasing 'joy' in learning and freeing up time for a greater range of subjects and rigour (Chia, 2018b; Teng, 2018).
- There are serious concerns about pupils being over-pressured and hot-housed through excessive pressure and tutoring.
- Although there have been multiple calls for the PSLE to be abolished, these calls have so far been rejected since former education minister, Ong Ye Kung has argued that although there are problems with the system, it remains a "useful checkpoint" and is the fairest approach (Teng, 2018).

The process of reform
PSLE
The latest PSLE changes are not a single, 'big-bang' reform. Various iterative tweaks have been made over a long period of time to reduce the emphasis on exams. For example, in 2018, the government announced certain 'weighted mid-year' assessments and end of year exams (Chia, 2018).

Agenda setting and problem identification (Howlett & Giest, 2012) took place as part of one of Singapore's 'national consultations'. A similar big conversation is currently underway, led by the Deputy PM - this time focused on renewing the social compact.

The last 'national consultation' involved a series of dialogues with citizens and was run by a cross-governmental team. Views expressed as part of this sparked a two-year review of primary scoring and the latest reforms have therefore had a ten-year gestation period. When civil servants first looked at the dialogue findings, they looked at big "blue sky options," "casting our net widely". This led to consideration of radical changes like getting rid of the exams completely. They then whittled down the options towards the Overton Window (Mackinac Center for Public Policy, 2019) within which they could 'manoeuvre'. This took into account what was palatable to ministers.

When reviewing options, the first thing civil servants report doing is asking themselves "why did that policy come about historically", in other words, what was the rationale for it and:
1. What, if anything, has changed since?
2. Are there any of the aims from that time which are no longer valid?

The answer was that historically, detailed scores from the PSE had been needed because schools were not equally resourced and quality diverged considerably. Now that schools are more equitably resourced precise sorting may matter less – particularly now that the country has moved on from the 'efficiency' paradigm described below (Gopinathan, 2015).

Having narrowed down the options, civil servants moved on to a more technical phase, conducting extensive modelling of different approaches to scoring and simulating different placements to see how well different approaches might predict pupils' future outcomes (perhaps a sign that the 'efficiency'

paradigm to some extent persists). The process was lengthy since new options were constantly identified and each time a new option was identified, there was another round of modelling which needed to go to ministers. There were senior-level discussions about the various options at cabinet level and different concerns were raised each time - for example regarding how many scoring bands to have. It took five years to reach a decision on the preferred option.

Part of the challenge came from interdependencies, since only a small part of the system was being changed and the placement process itself has remained intact. The national policy also needed to align with school practices since schools run their own mock, mid-year exams which they set themselves. They therefore needed to be adjust these to the new system. Civil servants' view is that "the ground" needs a lot of time to adjust and teachers need to develop the skills to implement government-led changes such that mandating is not enough.

The Singapore Exam and Assessment board provided technical input on scoring and bands throughout the process.

UAS
Unusually these reforms were announced as part of a parliamentary debate on the budget rather than as part of a more formal and detailed document.

Verdicts on the process and outcome
- These latest changes to the PSLE should be seen as part of an ongoing process. As one interviewee noted "maybe the exam will go completely one day."
- Changes to A-level appear to represent a significant recognition of the problem of inequality and the need to widen opportunities – a shift in the narrative and priorities that we return to below.

What factors have influenced and shaped the process?
How has the environment shaped decisions and approaches?

National and state history
Singapore gained 'reluctant independence' from Malaysia in 1965 and Prime Minister Lee Kuan Yew declared "that the country had no other resource apart from its human beings. This has driven a long-running prioritisation of education, and a strong 'human capital orientation' (Bell & Stevenson, 2006).

The country is small and has no rural hinterland, making it highly governable. Having "secured the fundamentals" the country now has the luxury of asking "where we will be in 50 years". There is a sense of having achieved an equilibrium but a recognition that the world will always change and that this will require the country to continually seek new equilibria.

The constitution and political system
The same party has been in power since independence and the governing arrangement is referred to as a 'social compact.' Politicians keep an eye on election results with a benchmark whereby the ruling party aims to secure around 75% of the vote. If this dips to 73%, then it is considered a sign that something is amiss and action needed. There is now an increasingly consultative style to governing, and the national conversations are an example of this. This is a shift from the early days of the Singapore state when the government was run in a more top-down manner by highly educated individuals who stood out from a less educated population. As the population has become better educated, their ability to engage in the process has increased.

The contrast between Singapore and its far less successful neighbouring states (and the sense of being 'a nice house in a bad neighbourhood'), is said to contribute to the population's high approval of the governing party. Ultimately, the population trusts the highly educated and non-corrupt technocratic class

to govern. Having long time-horizon, few obstacles to governing and 'not having to play politics in the conventional sense' reduces complexity and makes a more planned approach possible. It also means politicians can 'get on with the job of governing and spending time in their constituency.' This constituency level engagement provides another form of consultative input.

Assessment reforms are an example of Singapore's highly iterative approach to policy making. Changes begin with an outline set of ideas rather than fully fleshed out policies. The government might announce a broad approach to reform but this will gradually change and be refined "because the world changes and that's not a problem."

Because policy making is insulated from short-term politics, and because the country is small (reducing the distance from policy-making to enactment), it follows a very structured, somewhat textbook policy process, as exemplified by the assessment reforms:
- **Policy formulation:** A stakeholder and gap analysis is conducted reviewing whether the context or priorities have changed.
- **Implementation**: Legislative requirements are identified, alongside any, funding, training or communication needs.
- **Review**: policies are scheduled for review after a set number of years, though some argue that review is a continuous process.

Education policy history and precedent
As a former colony, much of the education system is modelled on the UK.

Education follows ten-year masterplans and policies like assessment reforms are developed over a long period of time. This is possible because there is little risk that change of government will disrupt long-term reforms and the system is insulated from partisan politics (although some suggest that this is beginning to change). Rather than reform involving specific initiatives - there are "constant cycles of evolutionary and accretive reform." Thus, the assessment reforms described in this case study are not a self-contained initiative, they are features of an overall direction of travel.

Fine grained scoring has already been abolished at O Level and A level and being able to link PSLE reforms to this precedent is said to have helped overcome opposition

The current Deputy Prime Minister was previously the education secretary and in 2012 called for "Every School to be a Good School", which had not previously been the case. This drove reforms, like sending top teachers to the toughest schools. In turn - by reducing disparities between schools, this shift made it possible to reform the PSLE because precise rankings were less important.

Singapore is confident that its education system is world class but there is sense that maintaining this requires constant adaptation and learning.

The size of the state, the proximity of policy makers to delivery and the fact that there is only one National Institute of Education (which trains all teachers and conducts most education research) means it is easy to achieve alignment through: 'one ministry - one NIE - one national school system'. Intentions therefore get realised – though this may inadvertently inhibit innovation

Gopinathan and Lim (2021) distinguish between two phases in the Singaporean education:

1. Developing the system (1965–1997):
     - Unifying a segregated system and developing a standardised (but streamed) system,
     - Resolving issues with the medium of instruction and mother tongues,
     - Establishing the National Institute of Education and a skilled teaching workforce.

2. Shaping a post-industrial innovation economy (1997-2020)

- Moving away from standardisation,
- Introducing key reforms - Thinking Schools, Learning Nation (1997), Teach Less, Learn More (2004) and ICT Master Plans policies, which sought to promote deeper, more open, and questioning learning.
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These are broken down into more detail (Gopinathan, 2015) as:
- Survival (1965–1978) – by focusing on cohesion and developing a skilled workforce;
- Efficiency (1979–1997)– through selection and streaming;
- Ability-driven (1998–2011)- by moving up the value chain and into a post-industrial system;
- Student-centric, values-driven (2011–present) – by emphasising the more holistic priorities explored in this case study.

Narratives, ideologies, and policy orientations

The concept of meritocracy and the assumption that sorting by merit and aptitude is appropriate ran through the 'national consultation'. This narrative provides a shared and consensually accepted starting point. It also came up in every discussion and interview. However, there is an active debate underway about what meritocracy looks like in modern Singapore, partly driven by the fact that less space is now being created at the top now, compared to in the past when 'a rising tide lifted all ships.' Equity is now an increasing concern and focus. For example in 2018, schools minister, Mr Ong made a speech in parliament about the paradox of meritocracy and inequality (Chia, 2018a). Some speculate that in the long run, it will become possible to abandon sacred cows – like streaming and the exams that arbitrate it, by pointing to a fast-changing world. Debates about the PSLE are part of these narratives. Similarly, the ability to mandate policies that enhance equity is seen as a reason for a high degree of central direction.

There is an overall effort to broaden education and make assessment more holistic. Universities now take into account resilience and the whole person - for example by exploring in interviews whether people have overcome adversity. Activities like youth social action are also now being recognised and publicly celebrated to emphasise that these things matter. Reforms to UAS are part of this direction of travel and some believe that this will eventually lead to a move away from subject disciplines.

Fertility is falling and the government therefore takes the obligation to maintain the stock of human capital seriously – even avoiding sucking up too much expertise within the civil services.

The country has three main ethnic groups and maintaining the balance between them, and promoting social cohesion is considered important for national stability. There are emerging questions about the future of bilingualism in school.

The country is keenly aware of its proximity to China which drives a degree of competition as well as being an important source of wealthy migration of people and capital

Previously, the focus for the system was efficiency but diversification is now important. This involves increasing the number and range of paths available.

Who have the key actors been?

Government
- The political will for recent assessment reforms came from the current Deputy Prime Minister who was previously a minister for education and was very active in the national dialogues.
- Extensive discussion and debate about the reforms took place at cabinet level. This may have driven the frequent back-and-forth on different grading models. Most cabinet members have been at the table for a long time and many have been education ministers. They therefore have highly-developed views on many of the issues. This can result in a degree of attachment to previous

policies when they are being reviewed and revised. For example, with the A level reforms, some of the ministers in the cabinet had been involved in broadening the curriculum by increasing the number of subjects taken. They were therefore concerned that reforms to exclude these from scoring would represent a rowing back and unpicking of their work.

- What is said in Parliament can affect public sentiment contributing to what gains salience. However, would not normally act as a blocker.
- The governing party tends to source its talent (in terms of politicians) from within the bureaucracy. This means that one education minister involved in the assessment reforms was a former permanent secretary for education. Politicians therefore often have considerable pre-existing, domain-specific policy expertise.
- There are "coordinating ministers" with responsibility across broader remits such as 'social issues', national security or economic affairs. They bring departments together and are normally senior ministers (for example a former Deputy Prime Minister)

The Bureaucracy

- The civil service includes both policy generalist (~20%), and specialist (~80%) teams drawn from the profession. Civil servants are seen as internal consultants rather than work being routinely outsourced. The professional/specialist teams provide insight into the operational reality. They are also less frequently rotated and therefore provide institutional memory as well as domain expertise. Both teams made an important contribution to assessment reforms and there is sometimes a degree of horse-trading between the two to reconcile their slightly different perspectives.
- Civil servants are said to be more insulated from politics than in other countries. There is a healthy degree of trust between politicians and civil service. For example, one civil servant explained that they felt empowered to say 'no' to ministers and confident that when they say 'no', politicians will listen. Nonetheless, in these situations, civil servants must still work hard to back up their argument and they will be diplomatic and aware of their political capital. However, some believe that civil service neutrality has been eroded in recent years.
- When making an argument to ministers, civil servants may appeal to professional authority saying "teachers have called for this" rather than simply the logical reason for doing it.

The Treasury

- Competition between ministers for departmental budgets is minimised by agreeing five year block-budgets for ministries, which can then be deployed at their discretion.
- It is down to permanent secretaries rather than ministers to negotiate the department's budget.
- If, within those five years, there are new ideas then the permanent secretary can go to the finance ministry to justify the case and secure the funding.
- The aim is to depoliticise the process of departmental budget allocations and to ensure decisions are based on cost benefit calculations rather than politics
- This approach is made easier by the fact that there have been national budget surpluses in recent years, reducing the degree to which negotiations are a zero-sum game

Social stakeholders (Parents, teachers, employers, 'the public')

- Culturally, education is seen as something schools and the experts know best, limiting parents' involvement in education policy.
- However, given the high-degree of prioritisation of education in Singapore, and the high-profile nature of exams, there is a nervousness about interfering with assessment.
- As noted above, Singapore has pursued an increasingly consultative approach, including with parents, employers and the public in general.
- Consultations with the public are valued as a means of surfacing concerns but less so for generating solutions where more technical expertise is needed. They do not tend to yield unexpected issues because it is a small country so it is not hard to know what is going on, but they do help with understanding what the biggest issues are.
- Given education policy's human capital orientation, employers are a key stakeholder group.

- Slightly different policy messages are emphasised to parents and teachers.
- Schools perceive their boss to be the government rather than parents.

Unions and the media
- There is a Singapore Teaching union as well as separate Chinese, Tamil and Malay unions. Where there is an issue they want to raise, they are expected to do so behind closed-doors in discussion with the ministry, rather than through public outcry.
- The media is funded by the state and its role is to 'get ideas out there.' It is informative rather than investigative.
- Social media has to some extent 'disintermediated' the traditional pres.

Other policy actors
- The Singapore Exam and Assessment Board sets national exams and works with Cambridge Assessment on the A-level assessments. The board is very involved in policy making and provides technical expertise on things like scoring and bands.
- There are a few small research institutes and consultancies that occasionally respond to calls for research or advice from government (which are sometimes issued as 'problem statements'), rather than pursuing their own work agenda. Some, like the Head Foundation, conduct more regionally focused work.

What role does evidence play?

Expertise:
- Most expertise is internal to the ministry, either through the specialist/professional branch or the policy branch.
- Education expertise also sits within the National Institute for Education which works closely with the ministry.

Consultation and piloting:
- Public and stakeholder consultation plays an important role in informing policy, as noted above through the national conversations. This is particularly the case at the agenda setting/problem identification stage.
- Policies are generally piloted and evaluated.

Quantitative data:
- There is a strong preference for quantitative data and the Singaporean state has rich data sets that allow sophisticated and extensive analysis – for example in recent analyses of intergenerational social mobility.
- Research institutes and think tanks occasionally make requests for government data but this is not routine.

Research studies and international evidence:
- Research studies tend to come from the National Institute of Education
- International studies and examples are widely used, sometimes drawing on expert organisations from overseas. England remains a frequent source of international input (such from Cambridge Assessment and the UCL IOE) partly because of historic colonial links.
- As an established educational super-power, Singapore has a degree of confidence in asking for advice to provide external learning, but acting as a critical consumer, rejecting it when it does not resonate or hit the spot..
- Hong Kong is often used as a comparison point given its similarity as a small, high performing, Asian jurisdiction.

How do assessment arrangements relate to other features of the education system?

- Given the degree of central direction and the "one ministry - one NIE - one national school system" approach, there is a high degree of alignment between different elements of the education system.
- Primary school assessment is designed to cohere with the established streaming system.
- Singapore is enthusiastically pursuing a new approach to lifelong learning, whereby the state supports people to regularly upgrade their educational credentials. This involves creating additional places in higher education institutions and setting targets for the proportion of people pursuing education at this level over the course of their lifetime, rather than simply when they leave school. Minister Chan has argued that this will lead to more "purposeful and timely acquisition of relevant knowledge and skills." Post-16 qualifications are therefore now less significant as a gatekeeper to higher education.

References

Bell, L., & Stevenson, H. (2006). Education policy: Process, themes and impact. In *Education Policy: Process, Themes and Impact*. https://doi.org/10.4324/9780203088579

Chia, L. (2018a, July 11). *Minister Ong Ye Kung outlines key principles on education system*. Channel NewsAsia. https://web.archive.org/web/20181017224836/https://www.channelnewsasia.com/news/singapore/ong-ye-kung-principles-singapore-education-system-10520356

Chia, L. (2018b, September 28). *Fewer exams, assessments in schools to reduce emphasis on academic results: MOE - Channel NewsAsia*. Channel News Asia. https://web.archive.org/web/20180930115920/https://www.channelnewsasia.com/news/singapore/exams-assessments-scrap-mid-year-primary-secondary-schools-10767370

Gopinathan, S. (2015). *Singapore chronicles: education*. Institute of Policy Studies.

Gopinathan, S., & Lim, E. (2021). Reform Implementation Lessons. *Implementing Educational Reform: Cases and Challenges*, 149.

Howlett, M., & Giest, S. (2012). The policy-making process. In *Routledge Handbook of Public Policy*. Routledge. https://doi.org/10.4324/9780203097571.ch2

Mackinac Center for Public Policy. (2019). *The Overton Window*. https://www.mackinac.org/OvertonWindow

Teng, A. (2018). *Parliament: Call for MOE to remove "sacred cow" of PSLE*. The Straits Times. https://www.straitstimes.com/politics/call-for-moe-to-remove-sacred-cow-of-psle

Teng, A. (2023, March 2). Fourth content-based A-level subject to be dropped from university admission score. *The Straits Times*. https://www.straitstimes.com/singapore/politics/fourth-content-based-a-level-subject-to-be-dropped-from-university-admission-score