

SEAB-link



ISSUE 01/2019



Dear Readers,

Over the past years, SEAB has been actively reaching out to educators through the various platforms to debunk some of the myths surrounding national examinations, as well as help schools and teachers prepare for the implementation of the new PSLE scoring system and the new modes of assessment such as e-Oral examinations for the various levels. 2019 is no exception and we are pleased to share these initiatives in this issue, such as our sharing at the MOE's annual Assessment Literacy Learning Series in March, and our conversations with senior teachers from NIE's Teacher Leaders Programme. If you are curious about key PSLE processes, you can also read all about it on page 18.

We are also pleased to share SEAB's progress in on-screen marking. The journey for on-screen marking commenced in 2015, and since then SEAB has been using on-screen marking in our national examinations. Did you know that about 65% of the 2018 GCE O/A-Level written scripts were on-screen marked in the UK? As we move towards the full implementation of on-screen

marking for our local and Cambridge subjects, we invited teachers to participate in the trials of SEAB's on-screen marking system. A study trip to UK was also conducted to learn from the best practices of Cambridge Assessment and RM Education. Read on to find out more.

Over the past decade, SEAB has chartered new directions and made waves in the area of assessment under the wise leadership of our former CEO Ms Tan Lay Choo. In this issue, we pay tribute to Ms Tan, who retired on 31 March 2019. Find out more about her thoughts and journey over the past ten years, and how the love of her signature brooches came about on page 21.

There's also other exciting content, such as updates on the development of SEAB's new building, the celebration of SEAB's 15th anniversary, the demystifying of more national examination myths, among others in this issue. We hope you will enjoy reading the articles.

Meng Lee,
On behalf of the SEAB-link Editorial Team

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Sharing at the 2019 Assessment Literacy Learning Series



Led by our Chief Executive, Mr Yue Lip Sin, then Deputy Chief Executive, SEAB's team of Assessment specialists presented at MOE's annual Assessment Literacy Learning Series in March 2019. The event was held on two sessions, reaching out first to pre-university school leaders and key personnel, and then to those in the secondary schools group. Spearheaded by the Curriculum Policy Office, the event engaged about 820 school personnel with the aim to deepen their understanding of our standards-referenced examination systems.

Each session began with a presentation by SEAB's Lead Assessment Specialist, Dr Leong See Cheng, who dispelled popular myths associated with national examinations by explicating the rigorous processes that SEAB uses to uphold the integrity of national examinations to ensure all students are treated fairly.

Before Mr Yue unveiled the details relating to students' performance data with his presentation entitled Inside Assessment, he highlighted the pressing need to strategically prepare our students for the future as new skill sets such as problem-solving and collaboration will be more desirable than knowledge acquired through formal education. This should be the key driver for schools to consciously align schools-based assessment with the shift in curriculum focus to equip students with the essential skills to be a thinking and reflective learner.

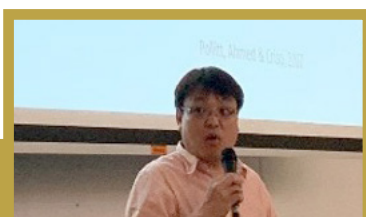
To aid schools in making an informed shift in their assessment practices, Mr Yue exemplified how schools could make use of the national examination data sets that SEAB will provide from 2019 onwards to fine-tune the pitching of their school-based examination standards in relation to that of the national examinations. He also encouraged school leaders and teachers to embark on the professional development journey to sharpen their skills in test development using the resources and data provided.

Following the keynote presentations, a panel comprising members from MOE and SEAB received questions from the audience. Many took the opportunity to thank SEAB for providing useful resources to aid schools in their journey to enhance assessment practices in school to achieve more positive learners' outcomes.



From left to right: Mr Sin Kim Ho, Director, Curriculum Planning and Development Division 1, MOE; Ms Tan Lay Choo, then Chief Executive, SEAB; Mr Heng Yew Seng, Director, Curriculum Policy Office, MOE; and Mr Yue Lip Sin, then Deputy Chief Executive, SEAB

Concurrent sessions were held for the Mathematics and Science teachers, where the concept of the C³R Framework was illustrated with specific test items by Dr Alwyn Pang, Lead Assessment Specialist, Mathematics; and Mr Ow Mun Hoe, Lead Assessment Specialist, Sciences.



Dr Pang illustrated how the C³R Framework could be applied to characterise Mathematics items with the use of past-year examination questions by examining the level of demand in the content assessed, the complexity of the task, the setting of the task and the expected response strategy required of students.

He concluded his segment with an excerpt from the Singapore Mathematics Syllabus – “Mathematical problem solving is central to Mathematics learning. It involves the acquisition and application of Mathematics concepts and skills in a wide range of situations, including non-routine, open-ended and real-world problems.”



With a similar approach, Mr Ow used Science items to illustrate the process of judging test demand for Biology, Physics and Chemistry. The audience enjoyed an enriching experience as he touched on all Science item types, ranging from multiple-choice questions to data-analysis questions. Due to the diverse nature of Science subjects, he went beyond the items to explore other aspects of test demand in the examination syllabuses.

He emphasised that accurate judgement hinged on level-appropriateness in setting and marking.

A similar session tailored for the Languages and Humanities teachers was held at the beginning of Term 3 this year.

Trials for SEAB's On-Screen Marking System

In March 2019, two groups of teachers were invited to participate in an On-Screen Marking (OSM) trial at SEAB. The participants comprised Mother Tongue Language and Social Studies Heads of Department, Subject Heads, Senior Teachers and teachers who have been involved in the marking of the national examinations. They were invited to trial SEAB's new OSM system and how it works for marking personnel across appointments, as well as to test out the system functionalities. At the end of the trial, SEAB discussed with the participants their experience using the system and gathered their feedback on the impact of OSM on marking quality and markers' welfare. During the discussions, participants surfaced their concerns and worries about using a computer to mark and the robustness of the system.

Next, they were introduced to SEAB's latest developed OSM system. The participants were reassured that the rigour and standards of marking would remain the same with the transition to on-screen marking. When the participants had their first-hand experience on the system, they were relieved to note that the processes in the system are similar to those of the current paper-based marking.



Before the start of the trial, participants were asked to share with us their perceptions of OSM. Most of them felt that OSM would result in a reduction of administrative processes as there would be no transfer of marks to optical mark sheets and no counting of scripts. Hence, human errors in keying in marks and security risk related to movement of scripts could be reduced.

Participants spent at least two sessions testing the system functionalities for OSM, under the guidance of SEAB officers. As each participant had a chance to role-play as key marking personnel and markers during the trial, they learnt about system functionalities for the different marking appointments. Throughout the trial, the participants also provided their honest feedback for the benefit of fellow markers who would be end-users of the system. They also suggested improvements to the system that would help ensure that, with OSM, the quality of marking would not be compromised and markers' welfare would be taken care of. SEAB is extremely appreciative of their reflections and contributions.

On the whole, participants found the new OSM system easy to use. The system allows items to be grouped for specialised marking. The key marking personnel shared that this specialisation has eased their monitoring of marking. This is also facilitated by the system's ability to monitor the speed and progress of the marking team. Generally, as markers, they were delighted to note the reduction in administrative processes when using OSM system. The system has also increased the efficiency of the marking process. With this, some participants wondered if the marking duration would be shorter in future.

Feedback from participants

"Quality assurance scripts help to ensure the quality of marking throughout the marking exercise."

"For team leaders, the system helps to reduce administrative processes and they now can focus on sampling to ensure consistency and accuracy of marking."

"Annotation functions are easy to use for marking; it is easy to escalate issues; totaling of marks is automated."

"Concurrent marking of the same candidate's response and there is no need to wait for stacks of scripts to be rotated."

"It would take time to adjust and familiarize with the system as this is an unfamiliar terrain for most marking personnel."

Since the trial, SEAB has been working on refining the new OSM system. SEAB is committed to ensuring that the transition to on-screen marking is smooth for our stakeholders. As we transform the marking experience of our markers, SEAB will continue to uphold national examination standards.

Please refer to the next page for the infographic on the OSM.

Transforming Markers' Experience, Upholding Exam Standards



An Overview of

On-Screen Marking

WHAT IS ON-SCREEN MARKING (OSM)?

OSM is a computer application specifically designed to allow markers to mark examination responses displayed on a computer screen.

WHY IS SEAB IMPLEMENTING OSM?

By leveraging on technology, on-screen marking can enhance marking efficiency and reliability.

BENEFITS OF OSM

Improved quality assurance, i.e. reduction in human error



Increased efficiency in administrative and operational processes



Reduced security risk relating to transporting and handling of scripts



Improved professional development and assessment literacy of markers



Improved data capture to better inform teaching and learning



PAPER-BASED MARKING PROCESS



ON-SCREEN MARKING PROCESS

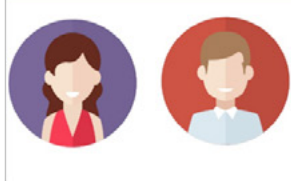


IMPLEMENTATION TIMELINE

2015	2016	2017	2018	2019	2020
OSM journey commenced	OSM implemented for 2016 GCE N(T)-Level Basic Chinese in Singapore	OSM implemented for GCE N(A)/N(T)-Level written scripts in the UK OSM implemented for 2017 and 2018 GCE N(T)-Level Basic MTL and GCE O-Level MTL Literature in Singapore	65% of GCE O/A-Level written scripts in the UK are on-screen marked	Almost all GCE N/O/A-Level written scripts are on-screen marked in the UK More locally developed/marked GCE-Level exams and PSLE onboard OSM (e.g. N(A)-Level Social Studies; PSLE Higher and Foundation MTL)	

ENHANCED MARKERS' EXPERIENCE

- No more counting of scripts
- No need to match marking sheets and scripts
- No more errors in transferring marks from scripts to marking sheets



- No need to total and write marks on marking sheets
- No more shading or writing on marking sheets
- Better able to monitor own marking speed and progress

OSM transforms the marking of local examination scripts while maintaining the rigour of marking.

Visit to the United Kingdom to Study On-Screen Marking

A team of SEAB officers went on a study trip to RM Education and Cambridge Assessment from 5 to 8 March 2019. Led by Mr Pang Chong Han, SEAB's Director of Exam Operations, the team was warmly welcomed by Mr Mike Job, Programme Manager of RM Results, in Oxford, and Mr Neil Musk, Cambridge Assessment's Director of Operations, in Cambridge.

Learning from Our Partners

The trip was engaging in its discussion and sharing of operational and assessment matters pertaining to On-Screen Marking (OSM), and in ensuring continued collaborative efforts with SEAB's examination partners in the UK on the management and conduct of national examinations in Singapore.

The visit to RM Education's head office in Abingdon and the operational visit demo on Cambridge Assessment's logistics and scanning capabilities at their facilities gave the Singapore team an opportunity to understand and appreciate the end-to-end processes of how scripts are processed for marking. Additionally, through the sharing and demonstrations, the team impressed upon themselves the importance of managing the overall quality and integrity of scanning operations by

- ensuring reliable, fuss-free and timely scanning of scripts,
- making continuous improvements to processes towards operations excellence, and
- adopting best practices through benchmarking.



Team with Mike Job and Ian Castledine from RM, Oxford



SEAB team with Welcoming Party Neil Musk and Nicola Sime, at the Triangle, Cambridge

There was also rich learning derived from the sharing on OSM by Cambridge Assessment due to the vastness of their experience. In 2017, Cambridge Assessment implemented OSM for the marking of Singapore's GCE N(A)- and N(T)-Level written scripts in the UK. Cambridge Assessment had also successfully done on-screen marking for about 65% of Singapore's GCE O- and A-Level written scripts in 2018 and aims to mark almost all of Singapore's GCE N(A), N(T), O and A-Level written scripts in the UK in 2019.

The following are good practices surfaced from Cambridge Assessment's sharing and key learning points:

- Importance of both the quality of assessment and the quality of marking. OSM should enhance and not compromise either of these qualities.
- Well-considered and carefully-planned (a) duration for every phase/stage of OSM (Pre-Standardisation, Standardisation, Marking, Post-Marking), (b) marking structure and (c) marking team size to ensure good overall management of marking, greater marking efficiency and accuracy, and good safeguard of the welfare of marking personnel.
- Rigorous processes for monitoring of marking quality during live marking.
- Comprehensive training of examiners as part of Cambridge Assessment's communications and engagement plan for OSM.
- Relevant and timely support and guidance to examiners through online support portal, specialist website and examiner helpdesk.
- Flexible approaches for OSM to achieve an overall positive examiner experience.

Sharing on the Singapore Experience

As part of the exchange, the Singapore team also shared with Cambridge Assessment on the future OSM plans for GCE N(A)-Level Social

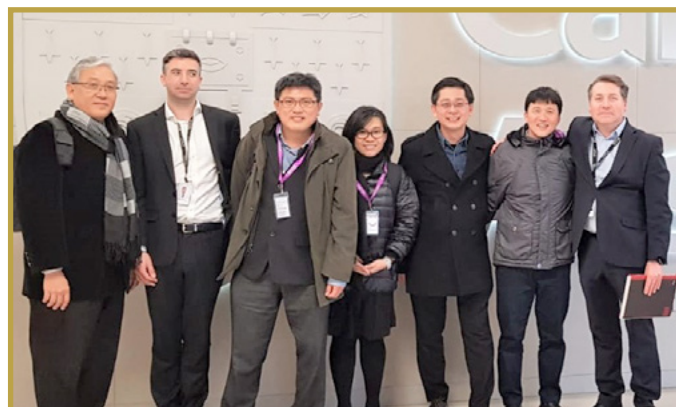
Studies, a Humanities subject which is marked in Singapore.

Cambridge Assessment commended SEAB for the OSM system design for Social Studies as it allows for more focused marking with greater flexibility in marking specialisation. It also provides ease in the allocation/re-allocation of scripts during the live marking stage, and is geared towards a more effective monitoring of marking with targeted feedback of better quality to marking teams. Cambridge Assessment expressed their interest to learn from the Singapore experience.

Rich Learning from Sharing of Experiences

This trip has deepened SEAB's understanding of how to operationalise the scanning of candidates' answer booklets and provided useful insights for SEAB to propose and adopt a feasible scanning model. The trip has also allowed SEAB to establish possible parameters and indicators for use to benchmark against the more established scanning processes at Cambridge Assessment. Additionally, the good practices of OSM gathered from Cambridge Assessment will allow for meaningful application of the learning by SEAB as it continues its OSM journey. Lastly, the trip has established a greater understanding between SEAB and Cambridge Assessment over matters pertaining to operational examination processes, e-Examinations and IT system integration.

Photos with working teams in Cambridge Assessment





This trip was wonderful for me. Thanks to everyone for making it so from beginning to end. I treasure all of you, the understanding you displayed and the learning I have had from every one of you. This is a trip to remember. (Sharifah Aljunied)



Thanks all for this wonderful trip. I am grateful to be part of this team. Most importantly, the care and concern that we had for one another is very touching and memorable. (Cherral Teo)



Thank you all for this wonderful and fruitful trip, especially to Mr Pang (DEO) and Mr Ng (DDEO) for leading the team. (Tan Peng Yiap)

SEAB would like to express our heartfelt appreciation to Cambridge Assessment and RM Education for their warm welcome and hospitality. To the many wonderful people in Cambridge Assessment and RM Education whom the Singapore team met and worked with on the trip, thank you for extending your care and attention, and much of your valuable time, to ensure that the team had a good professional experience during their study visit to the UK.

Officers on the study trip

1. Mr Pang Chong Han
Director, Exam Operations Division
2. Mr Jimmy Ng
Deputy Director, Exam Operations Division
3. Mr Oliver Junus
Senior Assistant Director, Exam Operations Division
4. Mr Wong Tien Han
Assistant Director, Exam Operations Division
5. Ms Cherral Teo
Senior Manager, Exam Operations Division
6. Mdm Sharifah M Aljunied
Lead Assessment Specialist, Assessment Planning and Development Division
7. Mr Tan Peng Yiap
Senior Business Analyst, MOE ITB

Sharing Experiences, Learning Best Practices

Corporate visits and exchanges are valuable platforms for learning and sharing of experiences.

SEAB hosted a number of international delegates and a group of senior teachers from NIE's Teacher Leaders Programme between January to June this year.

Nepal National Examinations Board



A group photo of the Nepalese visitors with SEAB personnel

Led by the Chairperson of Nepal National Examinations Board (NEB), Prof. Dr Chandra Mani Paudel, a group of seven delegates from the Nepal visited SEAB on 1 February 2019.

The Nepalese delegates were keen to learn about best practices on the conduct of national examinations and they were hosted by SEAB's senior management during their visit. The enlivening discussions were beneficial as both examination boards learnt greatly from each other.

Commenting on the visit, Prof Chandra Mani Pandel, Chairperson of NEB shared the following,

“ We got a chance to visit SEAB. It is very useful for us. We discussed the examination systems in Singapore and Nepal. The information provided is very useful to National Examination Board, Nepal. We look forward to future cooperations. Thanks to all and all best wishes to SEAB and her staff. ”

Shanghai Municipal Educational Examinations Authority



The delegation team from SMEEA posing for a group photo with SEAB representatives.

Established in June 1995, the Shanghai Municipal Educational Examinations Authority (SMEEA) oversees various entrance examinations in Shanghai, including the National College Entrance Examination or Gao Kao.

SEAB was pleased to host the team of six delegates led by Ms Zhang Bo, the Deputy President of SMEEA on 27 March 2019. The delegates wanted to better understand SEAB's processes on test development and test administration.

As an authority conducting high stakes examination such as the Gao Kao, the SMEEA faces similar challenges as Singapore. It was a fruitful and enriching exchange between the two examination boards during the half day visit.

Pleased with the rich learning, the SMEEA penned the following in Chinese:

“ 祝新加坡考评局:越办越好!密切合作交流! ”

The delegates wished SEAB success and looked forward to further exchanges and collaboration in the future.

Conversations with SEAB



Group photo of TLP1A participants with SEAB's management team

As part of SEAB's initiative to reach out to teachers, SEAB hosts groups of educators from NIE's Management and Leadership in Schools (MLS) and Teacher Leaders Programme (TLP) regularly.

We welcomed 28 senior teachers from the January 2019 run of the TLP on 5 March 2019. SEAB's senior management engaged in lively discussions with the teachers and debunked various myths about the national examination processes such as the grading processes, the new PSLE scoring system as well as Special Consideration processes. The teachers also provided various suggestions to improve the national examination system.

The participants found the session to be insightful and engaging.

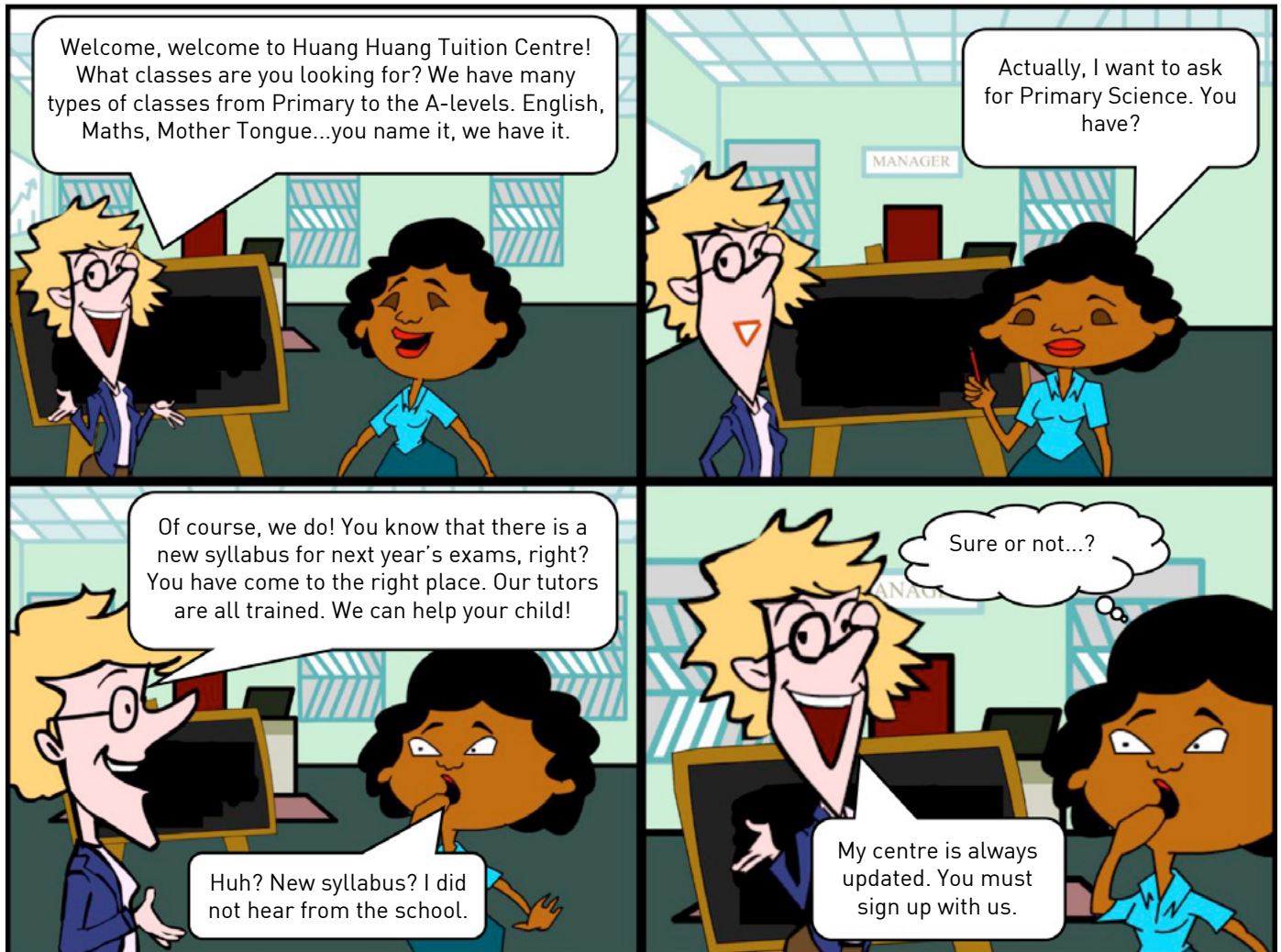
“ Thank you very much for your kind hospitality. It has been an enriching learning experience and we have gained much insight into the rationale and processes of our examination system. Thanks once again. ”

From TLP1A (2019)

Demystifying National Examinations

Credit : Comics were created using Comics Head app

#10 "New Syllabus"



Myth

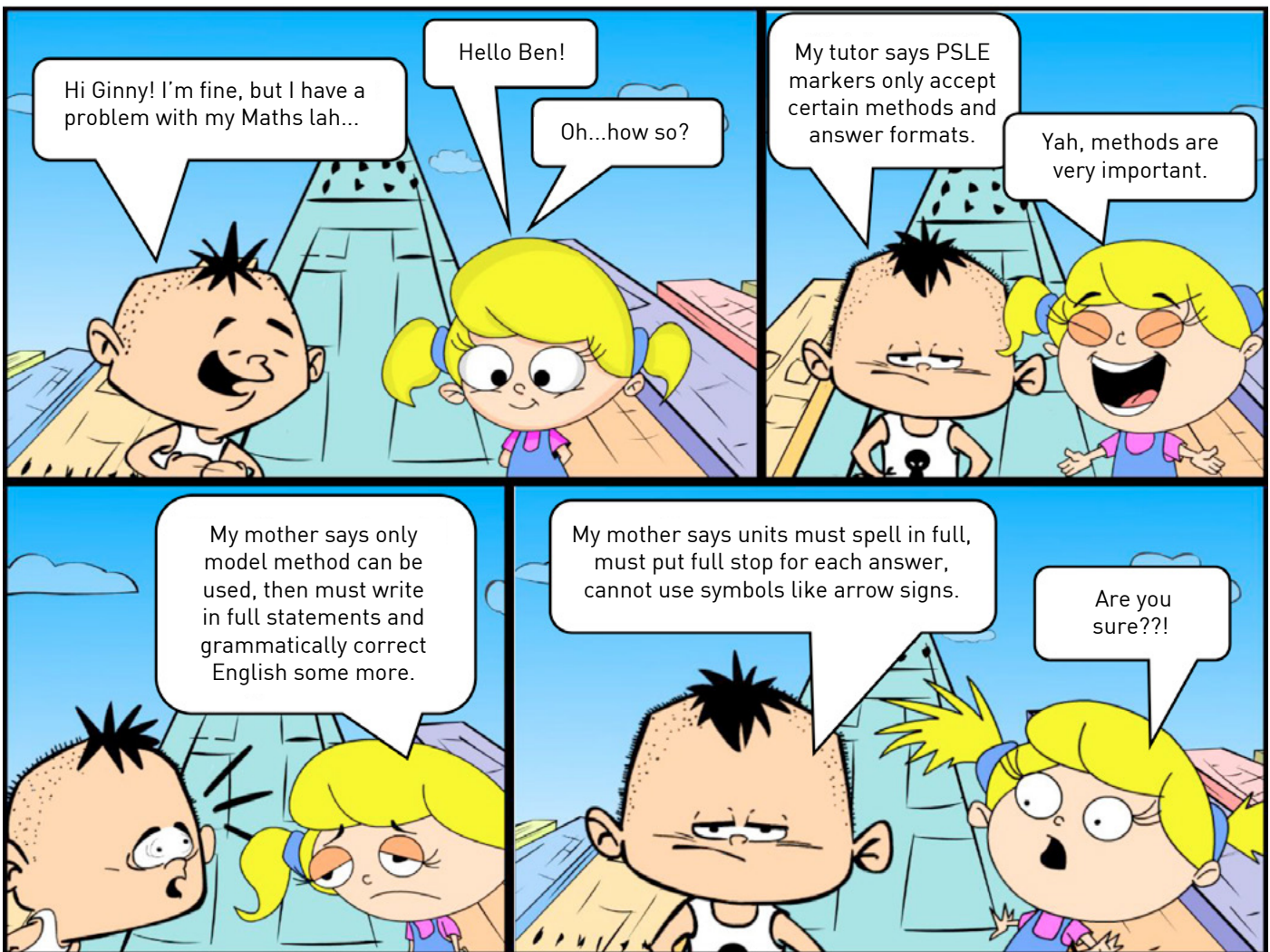
Changes to examination syllabuses or formats are not communicated to schools or not done in advance.

Fact

Curriculum review, as well as the review of assessment objectives and examination formats, is conducted regularly to ensure they remain relevant and updated. Schools will be briefed on the revised examination syllabuses or formats two years in advance. Information on the examination syllabuses are also published on the SEAB website ahead of the examination year. Teachers will align teaching materials with the revised syllabuses so that students are well prepared for their examinations.

Parents are encouraged to approach their children's respective schools to verify the legitimacy of information related to curriculum and examinations that they receive, especially from unofficial sources.

#11 "Model Answers"



Myth

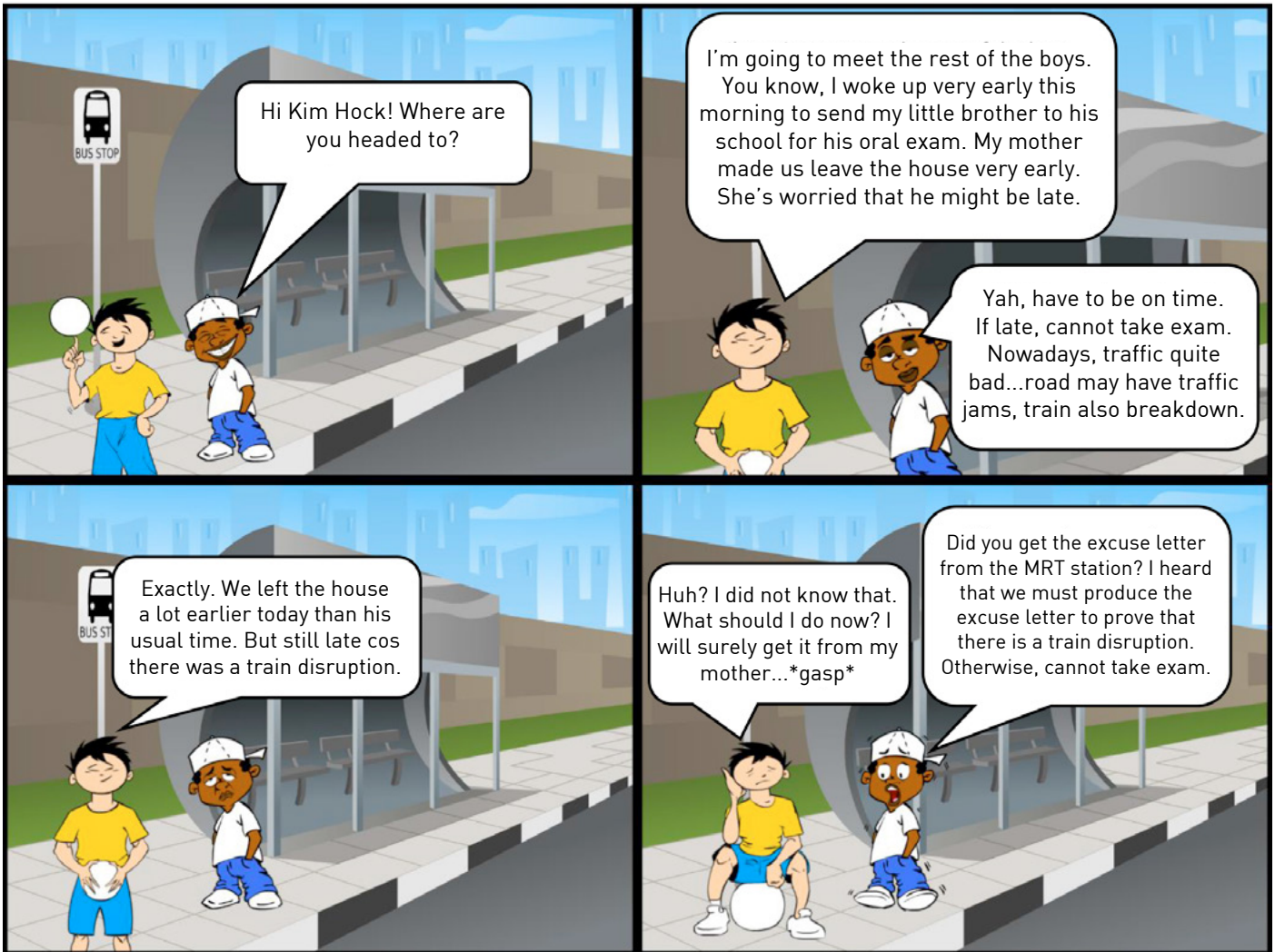
1. Answer statements are required for PSLE Mathematics papers. Marks will be deducted if there are no such answer statements provided.
2. Markers for PSLE Mathematics accept only certain problem-solving methods.
3. Marks will not be awarded for the correct method used in answering a question, if the answer to the question ends up being wrong.
4. Marks will be awarded so long as the answer is correct even if the method used is wrong.

Fact

The Singapore Examinations and Assessment Board (SEAB) is fully aware that different candidates may use different methods to attempt a given problem. We would like to assure you that in PSLE marking, we adopt the general principle that any solution that show a candidate's correct understanding and application of mathematical concepts and skills will be awarded with the full credit. SEAB is aware that there are a variety of ways that students can present their work, and this includes how they choose to indicate what the final answer is. Thus, any presentation of work that demonstrates a correct understanding by the student will be accepted. However, no marks will be awarded for answers derived from incorrect work.

When presenting their answers, candidates are not required to include a final answer statement in their solution. However, writing statements is a good practice in mathematical problem-solving as it helps to clarify the candidates' working.

#12 "Train Disruption"



Myth

1. Candidates are not allowed to sit for the examinations if they are late even when there is a valid reason, e.g. train disruption.
2. Candidates who are late will not be given the full duration for the paper.
3. Candidates must produce documentary evidence if they are late for the examinations.

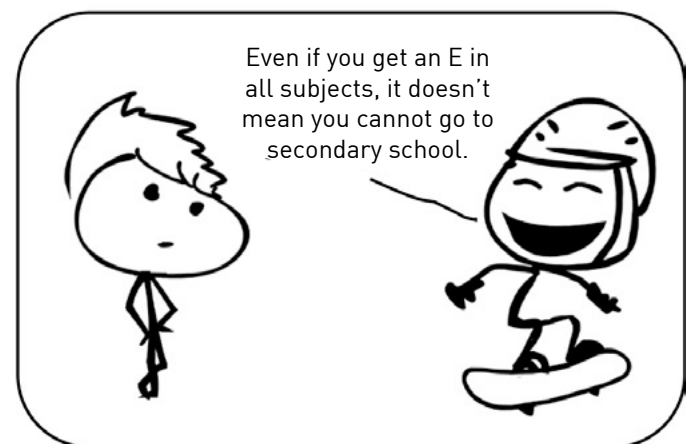
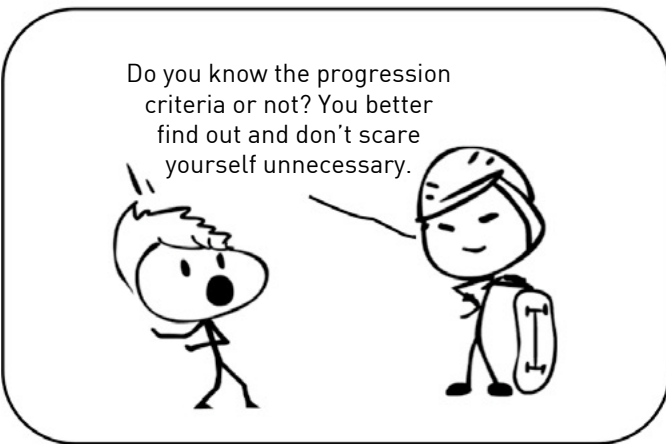
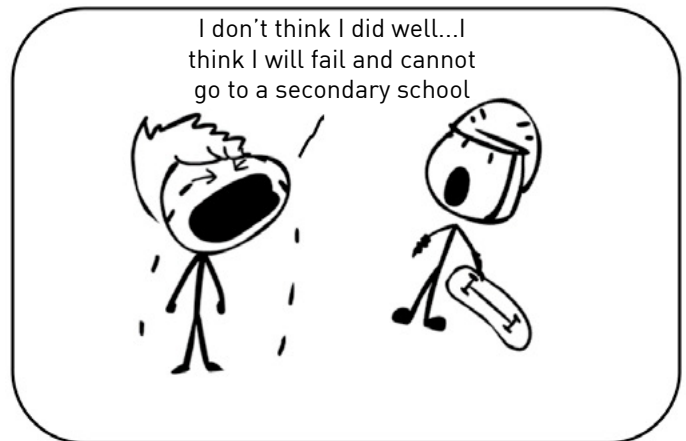
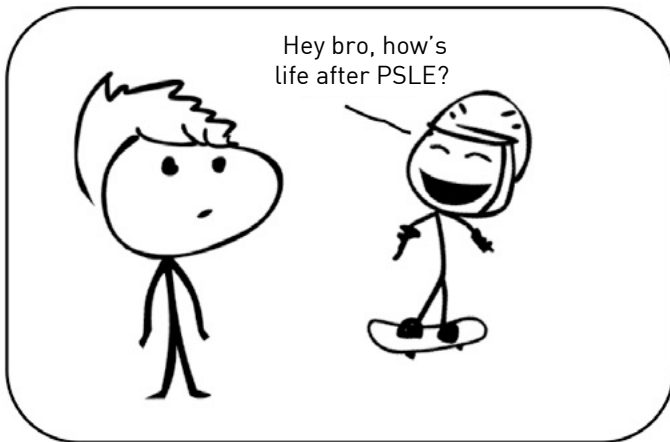
Fact

Prior to the start of the National Examinations, the Singapore Examinations and Assessment Board (SEAB) works with schools to advise and remind candidates to plan for sufficient travel time, and the actions they should take when affected by train service disruptions. Schools have been informed to assure candidates that the full duration of the paper will be given if they are affected.

LTA alerts SEAB to any major train service disruption during the national examination period. SEAB would like to assure examination candidates that they will not be penalised for being late if they have difficulty getting to their examination centres due to train service disruptions.

Candidates will be given the full duration of the paper. They are also not required to produce any excuse sheet as proof that they were affected by the train disruption.

#13 "Promotion to Secondary School"



Myth

1. A child will not be able to progress to Secondary One if s/he fails one subject.
2. A child will not be eligible for the Express stream if s/he is taking one or more Foundation subject(s), even if s/he obtains good grades in these subjects.
3. A child has As for three subjects and a borderline grade for the fourth subject. S/he is not eligible for the Express stream.

Fact

A candidate will be eligible for a particular secondary school's course if his/her PSLE aggregate score meets that respective course's requirements:

- Express
- Express or Normal (Academic) [option band]
- Normal (Academic)
- Normal (Academic) or Normal (Technical) [option band]

If the candidate's PSLE aggregate score does not meet the requirements for the Normal (Academic) or Normal (Technical) option band, he/she will be eligible for the Normal (Technical) course if he/she obtains at least:

- Grade E in English Language (or grade 4 in Foundation English Language); and
- Grade E in Mathematics (or grade 4 in Foundation Mathematics).

PSLE Key Exam Processes

PRIMARY SCHOOL LEAVING EXAMINATION (PSLE) 2021: STANDARDS-REFERENCED ASSESSMENT

TEST DEVELOPMENT STAGE

01



The PSLE test paper is developed based on the teaching syllabus and the Table of Specifications (TOS) for the syllabus. The TOS acts as a blueprint to ensure there is sufficient coverage of topics, skills or concepts in the test paper.

02



A professional panel of specialists with assessment and subject expertise, as well as a knowledge of the profile of the students, develop the test paper according to this blueprint.

03



The panel also ensures that the test paper has a balanced proportion of easy, average and challenging questions to cater to a range of students' abilities.

04



A provisional mark scheme is concurrently developed.

05

There are many rounds of discussion by the panel and checks by experienced senior examiners to ensure that the questions are clearly phrased. Senior examiners also check for comparability in the standard of the test paper with previous years'.

DURING THE PSLE



Students take the PSLE under standardised conditions.

MARKING STAGE

STANDARDISATION PROCESS

01



The panel samples scripts from a wide range of students' performance for a comprehensive range of responses.

02



Variations in answers and alternative responses from these sample scripts are taken into account and studied carefully against the provisional mark scheme.

03



The provisional mark scheme is refined and updated based on the representative sample of answer scripts.

04



Key Marking Personnel (KMP) made up of Principals, Vice-Principals and Heads of Department engage in rigorous discussion on the mark scheme to establish a common understanding of it.

05

KMPs apply the mark scheme on the sample scripts and practise marking them.

06

The mark scheme is further refined.

MARKING PROCESS

07



At the marking centre, the Chief Marker briefs all markers on the mark scheme and how to apply it in their marking.

08

All candidates' responses are reviewed carefully by the markers. Responses which demonstrate correct understanding and application of concepts and skills relevant to the context of the question are duly awarded.

09



Marking is monitored throughout the duration of the marking.

10



KMPs at various levels of the marking structure carry out sample checks of the scripts during the marking to ensure that the answer scripts are marked accurately and consistently.

There are robust processes to maintain comparability of standards in the PSLE.



Cheating case discovered during the 2016 GCE O-Level English Language exam

Every year, SEAB conducts the national examinations with the support from teachers who are appointed as Examination Personnel (such as the Chief Presiding Examiners (CPEs), Presiding Examiners (PEs), Invigilators, etc). Prior to the examinations, all Examination Personnel would be briefed on their roles and responsibilities, and the four guiding principles which all examination personnel are required to uphold when carrying out their examination duties.

The four key guiding principles are:



Fairness

Conduct the examination with fairness so that candidates can sit the examination under standard exam conditions.



Accuracy

Conduct the examination by following the exam procedures and guidelines given by SEAB accurately so that there is no compromise of exam integrity.



Security

Ensure security and confidentiality of exam documents/materials so that there is no compromise of exam integrity.



Timeliness

Ensure that exam procedures are carried out according to stipulated timings and that candidates' queries are attended to promptly.

Examination Personnel are also reminded to be vigilant during their duties and look out for suspicious behaviour displayed by candidates during the examination. Any suspected malpractice must be reported to SEAB immediately for advice.

It was during the 2016 GCE O-Level English Language written examinations that a cheating case was discovered by the observant examination personnel at Tampines Secondary School.

An invigilator was invigilating a group of candidates in a classroom during the English Language Paper 1 examination when she heard noises that sounded like transmission sounds and voices coming from one area of the classroom. She also observed that one of the male candidates was behaving suspiciously. He was coughing intermittently and he seemed to be clicking on something underneath his shirt which had a vest over it. The invigilator immediately notified the PE who went into the classroom to verify the invigilator's observations. However, the PE did not hear any noise during the time that he was there. The PE then advised the invigilator to continue to monitor the candidates closely. In the meantime, the PE informed the CPE who reported the case to SEAB. The CPE was advised by SEAB officers to detain the candidate after the English Language Paper 1 examination to conduct further investigations.

The candidate was escorted to a holding room after the examination. When he was asked by the CPE to remove his vest, it was discovered that he had his mobile phone hidden in his vest pocket with a Bluetooth device taped near his collarbone. The candidate was also found to be wearing a very small earpiece. Upon checking the call logs on the candidate's phone, the CPE found several text messages and multiple calls received during the examination. The CPE proceeded to confiscate all the electronic devices and allowed the candidate to continue with Paper 2 of the examination based on the instructions given by SEAB.

During the Paper 2 examination, the PE noticed that the candidate's mobile phone continued to receive text messages with some of the content resembling answers to the exam questions. The CPE immediately reported the latest findings to SEAB. Based on SEAB's advice, the CPE and PE questioned the candidate further and obtained a written statement from him.

After the examination, the CPE and PE submitted all the statements and confiscated electronic devices from the candidate and examination personnel to SEAB in a timely manner.

SEAB subsequently reported the incident to the police for their follow-up.

This malpractice case has demonstrated the high level of professionalism and good understanding of the examination procedures displayed by our examination personnel in carrying out their examination duties and protecting the integrity of the examination. SEAB is grateful to all examination personnel who have been vigilant in upholding the fairness and security of the national examinations.

Interview with Ms Tan Lay Choo



Ms Tan Lay Choo had spent a decade of her career as the CEO of SEAB. To many, she was more than a leader – she was a highly valued teacher and a mentor. In her time with SEAB, she has inspired many staff with her words of wisdom and caring nature. Beloved by many, it was an emotional moment for many staff when she retired on 31 March 2019. In this article, Ms Tan was asked to share her thoughts about her time here in SEAB.

Appointment as SEAB CEO

Ms Tan had spent over 35 years in the Public Service, starting off as a Mathematics teacher in the Chinese High School and Raffles Institution. This was followed by several postings over the years which included curriculum planning for the Gifted Education Programme (GEP), manpower planning in HR, Principal at Bukit Panjang Government High School, Cluster Superintendent, and psychological assessment and research. In 2008, Ms Tan was appointed CEO of SEAB, where she spent the last 10 years of her career.

When asked if she remembered what her thoughts were when she received news about her appointment as CEO of SEAB, Ms Tan candidly shared that one of the first things that went through her mind was whether they had selected the right person for the role. “To be honest, I was not a fan of exams and I now have to lead an exams board!” She reframed the challenge into an opportunity. Instead of making herself like exams, Ms Tan decided that her personal mission would be to make exams a better experience for students, which continued to motivate her every day at work.

Debunking the myths about SEAB and National Examinations

One area that Ms Tan put much focus on was to progressively unravel the ‘mystery’ of examinations which are perceived as a “black box” by the public. “The idea is to stop being a “Secret Society” Ms Tan joked, “and allow the public and schools to better understand the work that we do.”

She added that when the new SEAB building is ready, SEAB would also be having its very own heritage gallery which would showcase some of SEAB's work and the evolution of exams. Having the gallery was a significant step to demonstrate SEAB's move to becoming more open.

She also added that as a country matured with the times, there was a need for people to understand and explain the 'whys', hence the need for more engagement. "If we take the time to explain the work to staff, when something happens and there isn't time to discuss, staff will know how to calibrate and adjust the process accordingly as they understand the objective of the work."

In line with the desire to improve the experience for SEAB's customers and stakeholders, Ms Tan spoke about the importance of the new EASE system, and enhancing stakeholder engagement, citing the example of multiple engagement sessions conducted when the new PSLE scoring system was announced.

Speaking of PSLE, Ms Tan also shared that she would always have a bowl of chendol during the PSLE period. Apart from her love of coconut milk, Ms Tan explained that PSLE had possibly been the most stressful time for her, and chendol became something she enjoyed eating during this time. She added that she had come to associate it with the time when she collected her own PSLE results and she still remembered going on to celebrate the occasion with ice kacang and chendol.

Thoughts about Leadership

To many SEAB staff, Ms Tan is a well-respected leader who is always calm and patient, taking the time to communicate and listen to her staff. When asked about the leaders that she looked up to, and the lessons she drew from them, Ms Tan shared, "Actually this is a very difficult question to answer. I have this personal philosophy that every leader, every peer, every subordinate that we have worked with, we are there to learn from one another. There is definitely something that we can learn in the course of the work, about the person, or something deeper. It is difficult to single

out a particular person as there may be a need for different bosses or people, at different milestones of your life.

Ms Tan shared that she had drawn valuable lessons from all the Director-Generals of Education (DGE) whom she had worked with. She remembered the first time she had to manage an exams-related crisis as the CEO of SEAB. One of the former DGEs had appeared in SEAB to render support to her and the team. Ms Tan was pleasantly surprised, as the former DGE "was not there to interfere but to give us support. I thought that was very nice, especially in my first year of having to manage a crisis."

"I once asked what are the important attributes of the CEO of SEAB, and I was told that I needed 'A strong heart and thick skin'. Over time, I understood what this meant, as SEAB may sometimes get blamed for things that we did not do, due to our work in exams."

Ms Tan also recounted the case of the loss of the GCE A-Level H2 Chemistry papers in 2018. "There was trust from the Board. After I appeared on TV, I received a message sharing that I did well. That was very affirming and assuring that as there was support given by the Board. This was what I needed most, and what the Board gave was the most appropriate at that time."

From these experiences, Ms Tan learnt that good leadership was not a "one-size-fit-all" formula but was about giving the right amount of guidance, using the right approach based on the situation. "There are two types of leadership – the first type of leadership for the organisation, which is essentially what you need to do for the organisation to excel and for accountability purpose. The second type of leadership is even more important for a stronger organisation, which is centred on relationships, and this is about showing leadership for the individuals in the right way, at the right time."

Leaders who inspired

Two of the leaders who had inspired Ms Tan were Mr Lim Siong Guan and a former Director in MOE. "I did not have a close working relationship with

Mr Lim, but I saw him very much like a teacher and learnt a lot from him. In fact, I would say that he is the most quoted person that I have used in my leadership journey.”

With regards to the former MOE Director, Ms Tan shared a memorable experience when she was an officer in MOE HQ. “When I was younger, I always had this fear of writing as I felt I was not strong in language skills. In fact, back in my school days, I was often worried about failing English. Hence, everytime I had to write a paper, I felt very stressed. Back then, we did not have spellcheck, so I would often use the dictionary to check up on spelling or grammar.”

This changed one day from an encounter with the former MOE Director. “I still remember that moment vividly. I met her along the corridor and she asked if she could share one of my papers with other officers as it was a clearly and well-written paper.” Ms Tan was encouraged by that brief moment of affirmation, and it made her realise that she did not have to feel limited by this fear of writing.

The bigger lesson she drew from that episode was how a change of perspective could often lead to deeper insights which could be helpful in overcoming challenges. “All the while, I was focused on my weakness in writing. I kept using the dictionary to help me and the stress I felt when working on the papers was energy sapping. Then I realised I could actually apply my strengths in Mathematics to writing too; Mathematics is always about being logical, clear and having a proper flow to a solution. I then started to apply the same principles that guided me when I wrote papers and the experience became more positive thereafter. Finding that positive angle to a challenge was very empowering.”

Ms Tan went on to summarise, “As a leader, be yourself and not try to be someone else you are not. We may look up to some people and try to emulate them in some ways. But if it is not connected with our true self, it will not be sustainable.”

Sowing the seeds for teaching since young

On what made her decide to become a teacher, Ms Tan shared, “I think the seeds were sown in my school days. I had wonderful teachers who made classes very enjoyable. In fact, I enjoyed school so much that I would ask my grandmother to bring me to school early in the morning. My grandmother had to explain to me that the school gates weren’t even opened yet. In those days, the security guard, also referred to as a ‘jagah’, and his family stayed in a house on the school grounds. I even suggested that we could move in to live in the jagah’s house so that I could be the first to go to school!”

Ms Tan also shared she was very close to her grandmother when she was young. “Although I only had about 12 years with her, I always admired her for her strength and resilience as she had to single-handedly take care of the entire household.”

Ms Tan fondly recalled a Mathematics teacher who made the class interesting and engaging, using various Mathematics activities. The teacher would get the students to pick a question card from coloured boxes and answer the Mathematics questions written on the card. Each coloured box contained questions that were of a specific level of difficulty and when one student has completed the questions in one box, they could move onto the next coloured box with more difficult questions. “There were a few times that I completed all the question cards, and there weren’t any more question cards left in the box. The teacher would then give me the task of creating new Mathematics questions, taking reference from the earlier ones she created. On reflection, that was when I realised that I had been learning about Diagnostic Assessment at a young age!”

Ms Tan also went on to share a surprising fact. “I used to sew very well, and I learnt that from watching my aunt when I was young. In fact, I used to sew a few of my own dresses when I was younger.” One other fond memory of school was how she picked up the leftover fabrics from class, and sewed a green and brown purse which was then put on exhibition in school. “I think all the teachers made a difference in shaping my interest towards wanting to join the education industry.”



Collection of Brooches

One of the most distinguishing item that is often seen on Ms Tan, is her brooches. Ask any SEAB staff and they will tell you that Ms Tan likes to wear a brooch. It has almost become a conversation topic at times, where staff would whisper to one another the brooch they noticed that Ms Tan was wearing on a particular day. Oftentimes, Ms Tan was asked, "How many brooches do you own?"

Ms Tan chuckled and remarked, "I have not counted, but definitely more than 50! I usually prefer geometry and symmetrical shapes." Her very first brooch was given by her uncle when she turned 21. "It was a brooch with a pearl, possibly because of the association with my name." Ms Tan slowly increased her collection of brooches when she starting wearing more pant suits for work.

She pointed to the brooch she was wearing, which was a bronze-coloured tree with pearls, "This is a little different as it is about nature. I bought it at a museum in Washington. It was my way of remembering a special milestone where SEAB had done a presentation for the first time in the US."



Painting by Ms Tan
"Wisteria", 1992

Passion for Chinese Painting

Ms Tan shared that she would like to devote some time to her interests after retirement. That was when she shared that she had studied Chinese painting in the past from the late artist Mr Chua Ek Kay. In fact, she once had one of her paintings, entitled Wisteria, featured at a SMU exhibition that was organised to remember Mr Chua, in 2009.

On Reflection

Ms Tan played many roles in her career, but it is without doubt that her favourite role was being a teacher. Many have benefited from her teaching, whether in school or in other areas of work. She will always be a teacher at heart and often advocates that one should always keep learning.

Thank you, Ms Tan, for being such an inspiring leader and teacher.

Development of SEAB's New Building



Artist Impression of the new SEAB building

The new SEAB building is a 9-storey, 22,000-square-metre, energy-efficient smart office-cum-examination centre that is slated to be completed at the end of 2019.

The new building uses technology to share information between systems so as to optimise building performance in the aspects of energy savings, good indoor air quality and better thermal comfort for the occupants. The building also harnesses and deploys natural lighting to light up the surroundings. In order to maintain the former lush greenery of the old Bukit Ho Swee (BHS) compound, the open spaces in the new building will adopt a biophilic design by incorporating natural elements such as an abundance of plants, trees and sunlight.

The redevelopment of the SEAB building, from demolition to the construction of the new building, is divided into 3 phases:

- Phase 1: Relocation from the former BHS site to two sites: the former Victoria School at Geylang Bahru as a holding site for the SEAB headquarters, and the Tiong Bahru Examinations Centre (TBEC);
- Phase 2: Demolition of the former BHS site, followed by construction of the new SEAB building; and
- Phase 3: Moving back to the new SEAB building in early 2020



Progress as at end June 2019

Construction Progress

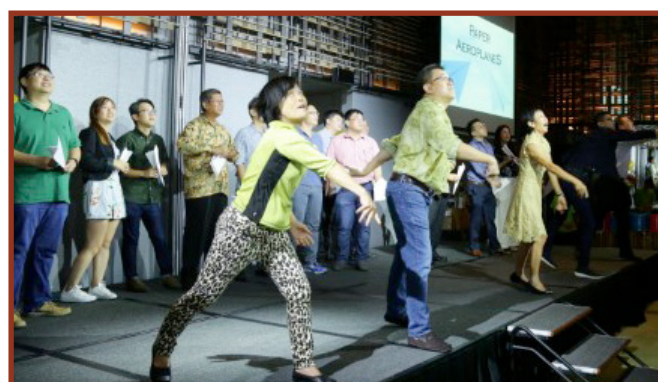
Since the demolition in March 2018 and groundbreaking in August 2018, the project has achieved significant progress and milestones within the construction timeline.

As at the end of June 2019, the contractor has completed all piling works and is in the process of casting the ninth storey beam and slabs. The construction progress is on schedule for the completion and handover of the new SEAB Building at the end of 2019. More updates on the progress will be shared with you soon and we welcome you to visit us when it's ready!

SEAB Day 2019 - Cherish the Years



SEAB's 15th anniversary celebrations took place on 29 March 2019. All staff came well-dressed for the occasion in green, brown, or beautiful flowery prints, fitting harmoniously with the décor of the venue. The theme "Cherish the Years" was chosen for the event, for staff to look back on the journey that the organisation has led to the current day, and to express their heartfelt appreciation to colleagues who have guided and supported them throughout the years. This year's SEAB Day was extra special as it was also in part a retirement event for Ms Tan Lay Choo, SEAB's Chief Executive for the past 11 years.



This year's event was specially hosted by an external emcee, along with staff co-host Joyce Liu. The duo's enthusiastic stage presence really kept the audience's energy level high throughout the day, especially during the various stage games. Staff members had fun competing against each other after attempting to fold paper airplanes that can fly the furthest, and showcased their linguistic talents in a hilarious football commentary game. The day was off to a great start and promised to be a truly memorable one for everyone.



The celebrations kicked off with an energetic opening act by the organising committee. Rhythmic drum beats accompanied a nostalgic photo montage showing photographs from all the past SEAB Day celebrations. Ms Tan's surprise entrance midway through the performance was wholly unexpected and was greeted by thunderous applause from the audience.

In Ms Tan's opening address, she reflected on the journey that SEAB has taken in the past 11 years, and the various changes that were implemented during her time as Chief Executive. These included the introduction of systems such as e-Examinations, iEXAMS and iKMS, the formation of the Research and Development Division, the development of the new SEAB building, the outreach to the education fraternity in the form of teacher training and information sharing, the

growth of the PS21 Community, and the changes to the PSLE scoring system and secondary-level national examinations.



Ms Tan expressed her gratitude to all who had supported her through her journey, and encouraged everyone to continue to dream big, embrace challenges with a growth mindset, take action one small step at a time, and always be prepared for what is to come.



Ms Ho Peng, SEAB's Chairman, congratulated SEAB on another year of accomplishments. She commended the collective efforts of all staff who have worked together to establish a strong foundation for SEAB. She highlighted the key strategies that will enable SEAB to steer ahead in meeting greater demands in the field of examinations and assessment – harnessing



technology, investing in its people, reaching out to external stakeholders, and connecting with assessment professionals from around the world. On this Crystal anniversary, Ms Ho urged everyone to “cherish the years, draw on our strengths and work together as SEAB staff continues to take SEAB forward into an exciting future”.



Ms Ho acknowledged the invaluable contributions of SEAB's second Chief Executive, Ms Tan, who has led the organisation to grow not just professionally, but also in terms of its organisational culture and identity. At the end of her speech, Ms Ho proposed a toast to Ms Tan, wishing her good health and happiness upon her retirement.

Various ceremonies were held on this day to recognise staff's contributions in the different areas of their work, such as the appointment of the various PS21 committee members, awards to recognise project teams and individuals for excellence in innovation and service, and the promotion and long service awards.



This year's celebrations also saw the members from the three PS21 Committees come together to present a heart-warming rendition of the SEAB



Song "Walk with Me", which was first performed during SEAB Day 2018. The lyrics of the song resonated deeply with each and every one, and it was a truly affecting moment when more and more staff from the floor joined in to sing along with the performers on stage.



To ramp up the mood and energy in the ballroom even further, "Broadway Beng" Sebastian Tan put up a spectacular guest performance with sonorous singing and side-splitting stand-up comedy. Everyone was thoroughly entertained.

After the singing of the SEAB Song, everyone also sang the "Happy Birthday" song together as one voice, as sparkler candles lit up the room during the Cake-cutting Ceremony.



Lucky draw prizes for the day were generously sponsored by the management members.



The afternoon programme of SEAB Day 2019 was dedicated to Ms Tan Lay Choo, and was filled with special performances and tributes by different groups of staff to express their sincere appreciation for and well wishes to a visionary and nurturing leader. In between nostalgic photo and video montages of Ms Tan's time here in SEAB, staff across all divisions took the stage to present special performances and tokens of appreciation to Ms Tan.



rootedness, gave wings, and inspired dreams. The Finale performance of the day was a surprise item performed by Mr Yue and all five directors, specially dedicated to Ms Tan. It was an enchanting handbell rendition of the famous Chinese folk song "Jasmine Flower", and the crisp beautiful sounds of the handbells were certainly a joy to listen to. To end off the day, the song "Stand by Me" was played



The Acapella Singers from one of the Divisions presented a special medley of songs by Theresa Teng, captivating the audience with the beautiful harmonies within. Staff from another Division performed retellings of "CE Ms Tan's Stories" through a series of short departmental skits, and put forth their well wishes in a touching video montage. The Swayers lit up the stage with their vibrant dance item choreographed to the song "Sway". Their colourful costumes also grabbed the audience's attention.



Following the series of performances by staff, the directors also took turns to pay tribute to Ms Tan. Ms Selena Yeo started off the segment with a solo rendition of "You Raise Me Up", which moved many to tears. Mr Lee Ah Huat, Mrs Cheah Mei Ling, Mr Pang Chong Han and Ms Tay Lai Ling recounted many of their experiences working with and learning from Ms Tan, and expressed their gratitude towards her. Mr Yue Lip Sin described Ms Tan as "a great mentor" who developed

using colourful Boomwhackers, made possible by the enthusiastic participation of all SEAB staff in the ballroom. This song was dedicated to Ms Tan to thank her for standing by all staff throughout her years in the organisation.

SEAB Day 2019 closed on a high note. Many fond memories and friendships were created on this day and in the days leading up to it. This is certainly a special day to remember and will remain in the hearts of everyone for many years to come.

Workshops on Formative Design of Levels-of-Response Mark Scheme (LORMS)

“ If students are to learn desired outcomes in a reasonably effective manner, then the teacher’s fundamental task is to get students to engage in learning activities that are likely to result in their achieving those outcomes...It is helpful to remember that what the student does is actually more important in determining what is learned than what the teacher does. ”

Thomas J. Shuell, 1986

A series of workshops on Formative Design of LORMS for the Source-Based Case Study (SBCS) were conducted in March 2019 for about 160 Upper Secondary Social Studies Teachers. Through the study of students’ responses, teachers were guided on how to understand the different pathways undertaken by students and the different perspectives that they held, and invited to reflect on these in formative ways in order to enhance and sharpen their students’ source-handling skills.

At the workshops, Upper Secondary Social Studies Teachers revisited the principles guiding design of LORMS for SBCS. They shared their current practices and experiences with LORMS and discussed the positive and negative implications of these practices/experiences on teaching and learning. The workshops also gave Upper Secondary Social Studies Teachers the platform and opportunity to:

(i) reflect on which Level of Thinking about Teaching (Biggs and Tang, 2011) influences them and what their lessons are like as a result of their Level of Thinking about Teaching,

(ii) understand why Formative Design of LORMS (Aljunied, 2019) is necessary and significant for developing students’ critical thinking skills, and

(iii) use and develop basic tools and strategies such as the 3-Level Approach, Depth Model and Response Code Scoring to help students identify gaps in their understanding and application of skills, develop students’ awareness in how to

self-monitor progress, and enhance students’ repertoire of skills for SBCS.

Levels of Thinking about Teaching

Level 1: Focus: what the Student is (Blame Student theory)

Level 2: Focus: what the Teacher does (Blame Teacher theory)

Level 3: Focus: what the Student does (Student-Centred Model of Teaching)



Teachers hard at work unpacking student responses



Teachers reflecting & sharing on their experiences with LORMS

A major takeaway from this workshop:

How to engage students in the learning process so that they will be better equipped to handle sources and be critical thinkers. (Samson Hu, Changkat Changi Secondary)

The authentic approaches to respond to SBCS, with focus on conceptual understanding of skills. (Karen Chia, Bowen Secondary)

What I like about this workshop:

It is very informative, insightful and provided much needed clarity on formative tools for SBCS. (Royston Low, Queensway Secondary)

It was a wonderful workshop. It is superb that we are moving away from our obsession with templates and thinking linear ways about sources. (Khairani Junid, Pasir Ris Crest Secondary)

Post-Training Feedback:

After the course, I went back and applied a few of the strategies, such as Checklist and the 3-Level approach in my Secondary 4 Social Studies lessons and my Secondary 4 English lessons (teaching of speech writing). It is amazing to see how the tools can be used across different subjects/disciplines. On the occasions that I employed these tools, the understanding and learning in my classes were very rich. My students and I found the lessons very meaningful. We stepped out of the lessons knowing that we had achieved something for ourselves. (Leow Hui Li, North Vista Secondary)



Trainer Sharifah M Aljunied closing one of the workshops

Welcoming New Members to SEAB Board

SEAB warmly welcomed Ms Juthika Ramanathan, Chief Executive of Judiciary Administration & Operations, Supreme Court and Mr Chin Chi Leong, Deputy Chief Executive Officer (Building Control)/Commissioner of Buildings of Building and Construction Authority (BCA) to our Governing Board in 2019. Read on to find out more about them.



Ms Juthika Ramanathan has been the Chief Executive of Judiciary Administration & Operations, Supreme Court of Singapore since 2013.

Prior to this appointment, she was a former solicitor in commercial practice before joining the Registry of Companies and Businesses as an Assistant Registrar in 1986. She eventually became the Chief Executive of Accounting and Corporate Regulatory Authority (ACRA) from 2004 to 2013.

Ms Juthika Ramanathan obtained the Public Administration Medal (Silver) in 2000 and the Public Administration Medal (Gold) in 2018. She is also a member Board of Trustee, Singapore Management University and has been a member of the Presidential Council for Religious Harmony, Ministry of Home Affairs since August 2017.



Mr Chin Chi Leong is currently the Deputy Chief Executive Officer (Building Control)/Commissioner of Buildings of Building and Construction Authority (BCA).

He oversees the regulatory functions and building control policies relating to the entire life cycle of a building from design, construction to maintenance and is responsible for building maintenance and strata management functions. He oversaw the implementation of the Code on Accessibility in the Built Environment 2013, which took effect on 1 April 2014, and was instrumental in engaging the industry stakeholders, the general public and the younger generation through various activities and programmes to showcase the benefits and importance of Universal Design in the Built Environment.

Mr Chin obtained the Public Administration Medal (Bronze) in 2001 and the Public Administration Medal (Silver) in 2009. He has been the external member of Department Consultative Committee, Department of Civil & Environmental Engineering, National University of Singapore from January 2017 to December 2018.

Career Opportunities

SEAB offers a rewarding and challenging career. We are looking for suitable candidates to fill the following positions:

- Research Officers
- Assistant Manager / Manager, Exam Systems

Please refer to [SEAB's website](#) for more information.



Singapore Examinations and Assessment Board

Our Vision:

A trusted authority in examinations and assessment,
recognised locally and internationally.

Our Mission:

We assess educational performance so as to certify individuals, uphold
national standards and advance quality in assessment worldwide.

Our Values:

Integrity | Value people | Commitment | Professionalism | Teamwork