

Dear all

Welcome to the latest edition of SEAB-link! In this issue, we will share with you updates on examinations and assessment, as well as corporate events.

With the affordances of technology, we have been transforming some of the pen-based examinations to electronic examinations (e-exams), to add value to candidates' assessment experience and the national examinations. Do you know which subjects have successfully transitioned to e-exams? What are the benefits of conducting e-exams? Find out more about the positive feedback for subjects which have implemented e-exams on page 3.

In 2021, we implemented the Candidates Portal and iEXAMS2 system to streamline the examination processes for candidates, examination personnel and SEAB. Most of the modules in the systems have been progressively implemented to date. Find out how these systems are used to enhance efficiency and ease examination administrative processes on page 10.

Do you know that there is a Research and Development Division in SEAB? One of this division's functions is the development of Assessment for Learning (AfL) tools. In this issue, we will share insights on the importance of AfL in a primary school setting, how teachers can use the AfL tools developed by SEAB to identify and address gaps in their students' learning and provide the necessary interventions.

As part of SEAB's efforts to raise assessment literacy of educators and learn best practices from our counterparts, SEAB not only engages local educators but also participates in international conferences and sharing sessions with other organisations. This issue covers the first overseas conference attended by SEAB assessment officers since the outbreak of COVID-19, the 23rd Academic Forum for English Language Testing in Asia (AFELTA) held in Thailand. Back on home soil, SEAB was also invited by the Home Team Academy to share about the principles of assessment. The insights gained from these local and international discussions allow us to study how we can further enhance our work. Read on to find out more about SEAB's engagement sessions and visits.

This issue also highlights SEAB's refreshed corporate website, which recently gained recognition at the Digital Awards 2022. The SEAB corporate website received an Honourable Mention as one of the Top 3 websites for the Most Popular Informational Service Award. Curious to know what other accolades we achieved at the Digital Awards 2022? Get the big scoop on page 29.

At SEAB, we work hard and play hard. This spirit was clearly displayed at SEAB Active Day 2022. Check out the different activities and events that were organised and how they helped to promote an active and healthy lifestyle among SEAB staff.

We hope that you find this issue informative and engaging. Enjoy reading!

SEAB-link Editorial Team



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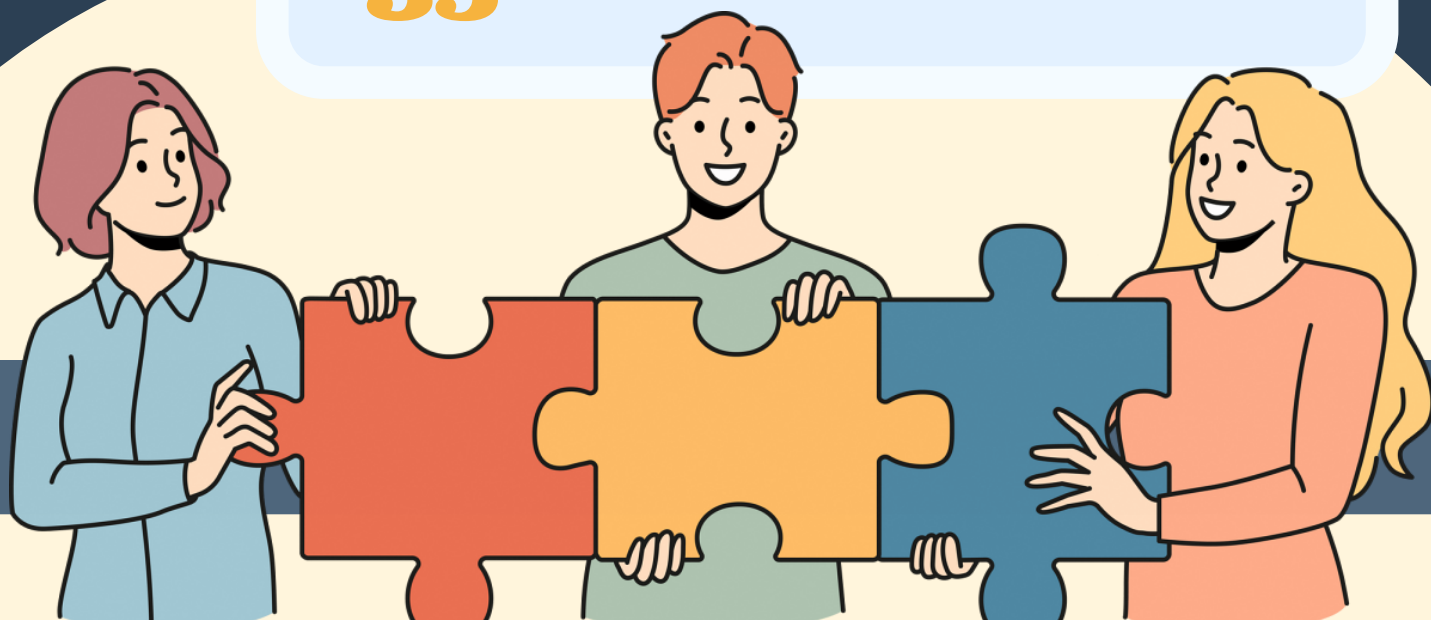
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Implementation of Electronic Examinations in National Examinations

In the previous issue of SEAB-link (Issue 01/2022), we introduced the transformation of N(T)-Level Music assessment leveraging technology, and the features in the revised N(T)-Level Science (Paper 1) examination. This issue provides more information about electronic examinations, including examples from other subjects.

Electronic examinations (or e-exams in short) refer to examinations that are delivered through an online system. In the national examinations, e-exams were first implemented in 2013 in the form of e-Written examinations for selected Mother Tongue Language (MTL) papers.

Since then, we have come a long way. e-Exams are now conducted in various modes, namely, e-Oral, e-Broadcast, e-Written, computer-based practical and e-Coursework. They cover a wide range of usage and purposes. Within each e-exams mode, there are innovative features that are incorporated to provide an engaging examination experience. Table 1 provides the key e-exam features for a few subjects.



Subjects	Key Features
N(T)-Level English Language	<ul style="list-style-type: none">• Computer text-input
N(T)-Level Science	<ul style="list-style-type: none">• Varied item types, such as drag-and-drop• Use of video, animation and interactive stimulus
O-Level Exercise and Sports Science	<ul style="list-style-type: none">• Use of coloured diagrams• Use of video stimulus
A-Level H2 Translation	<ul style="list-style-type: none">• Computer text-input

Table 1: Key features of e-exams

What are the benefits of e-exams?

In recent years, digitalisation and the use of technology have permeated many aspects of our everyday lives. In schools, the implementation of the Personalised Digital Literacy Programme (PDLP) has placed a Personal Learning Device (PLD) in the hands of every secondary student. The proliferation of Student Learning Space (SLS) and many other online applications has deepened the use of information and communications technology (ICT) in teaching and learning in both the classroom and home-based learning.



Assessment needs to keep pace and align with curriculum and pedagogy. The use of ICT should extend to assessment so that students' daily learning experiences and the ways they apply and demonstrate their learning are coherent. Through e-exams, we are also preparing our students for the future of work and the workplace.

Value-Add of e-exams and feedback from students

We have some insights on e-exams through our research studies and from students' feedback:



- **e-Exams are more interesting and engaging**

In studies conducted internationally and our own field research, students generally indicated positive perceptions towards computer-based tests. For example, there were about 250 students who participated in the N(T)-Level English Language Paper 1 e-exams research trials; 90% of them reported that their focus or attention was better during the e-exams trial and enjoyed doing the examination on a computer.

- **Authenticity of examinations with the introduction of multimedia in e-exams**

While multimedia can be easily incorporated in e-exams, this is done only where appropriate, according to the assessment objectives of the subject and when it can allow for pertinent disciplinary knowledge and skills to be assessed more authentically via questions that are otherwise difficult to set in a pen-and-paper test. In the later part of this article, you can read more about the engaging use of multimedia in the GCE O-Level Exercise and Sports Science e-exams.

Videos, animations and interactive simulations (VAI) will also be introduced in the upcoming 2024 N(T)-Level Science Paper 1 e-exam. We have shared the key features in detail in the previous SEAB-link (Issue 01/2022). Based on feedback received, teachers support the use of authentic and real-life contexts in the questions, which will be better enabled using VAI.



- **Ease of editing and organising of responses during examinations**

With computer text-input in an e-exam, students can edit and organise their responses. During our N(T)-Level English Language Paper 1 e-exam research trials, students reported that it was easy to edit and organise their responses even though it was the first time they were using the e-exams platform. Students also attributed their positive experience with the e-exams due to the fact that ICT is already used in the classroom for many curriculum subjects. They could use functions like cut-and-paste to edit and reorganise their responses without worrying about untidy cancellations or illegible handwriting.



- **e-Exams presents opportunities and benefits in terms of accessibility**

Currently, the use of a word processor is one of the Access Arrangements (AA) available to students. With e-exams, all students can carry out computer text-input. Other AA such as larger font size and readers can be provided in an e-exam through zooming and text-to-speech software. SEAB has also conducted e-exams research trials with students with a variety of special educational needs (SEN). We found that these students were at ease with e-exams because they were already familiar with ICT through daily classroom teaching and learning. They navigated the e-exams platform smoothly and were competent with computer usage. The timer feature in the e-exams platform was welcomed by all students to aid in time management as the duration remaining in the e-exams was clearly indicated.



- **Enhance efficiency in administrative processes**

In addition, e-exams can enhance efficiency in administrative processes for examinations, from resource savings to time savings. Some processes in a paper-based examination will not be necessary in e-exams: printing of examination question papers, checking the printing quality of the papers, counting the number of question papers and sorting them into classes, transporting physical question papers to examination venues on the day of examinations, issuing them to students, collecting answer scripts and accounting for them.

For marking, there is no need to distribute hardcopy scripts to different teachers or transport heavy piles of scripts around. e-Exam scripts can be marked digitally, with useful tools for giving feedback and computing marks effectively. Through e-exams, teachers can focus on professional matters while leaving the mundane tasks to the electronic system.

- **Testament of teachers' quality work**

The positive responses from the students who participated in SEAB's e-exams research trials over the years are a testament of their teachers' efforts to develop their 21st century competencies such as openness, the willingness to learn, analytical skills, as well as ICT skills. We are assured that students will embrace the implementation of e-exams.

Subject	Survey statements	% of students who agreed or strongly agreed
N(T) Science	I found doing the e-exams using the computer fun.	86%
	I like the e-exams experience.	91%
N(T) English Language	I found it easy to edit my responses.	91%
	I found it easy to organise my responses.	93%
	I found doing the e-exams using the computer fun	86%
	I like the e-exams experience.	90%

Table 2: Survey responses of students in the N(T) courses

e-Exams: Moving forward

The implementation of e-exams has been progressing at a measured pace. As technology and digitalisation advance, the use of ICT in curriculum and pedagogy as well as e-assessment and e-exams would also continue to innovate, enhance and enrich learning and assessment experiences, and prepare our students for the future.

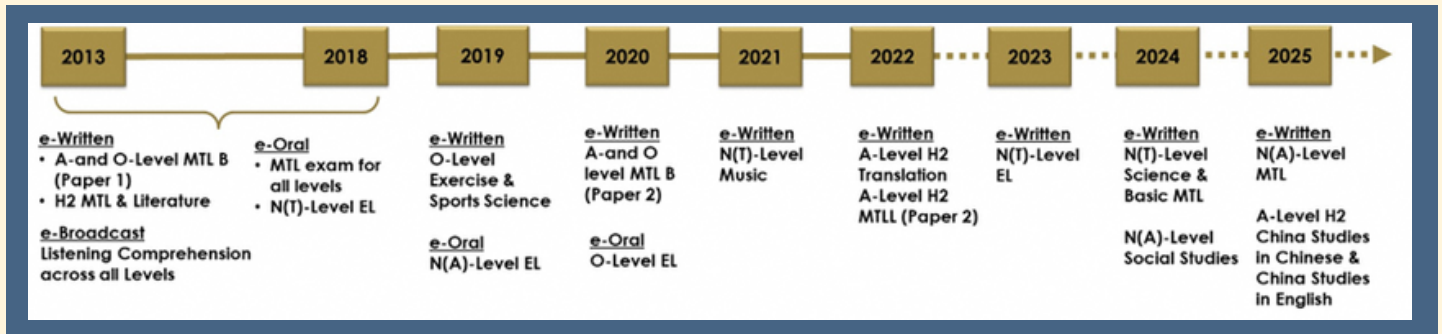


Figure 1: Progress of e-exams over the years

In the next few pages, we share the interesting e-exam features for two subjects, GCE O-Level Exercise and Sports Science and GCE A-Level H2 Translation (Chinese).

GCE O-Level Exercise and Sports Science

The GCE O-Level Exercise and Sports Science (ESS) Paper 1 is an electronic examination that utilises technology-enabled item types (e.g. drag and drop, matching) and constructed response items based on a sports- or exercise-related video of approximately 30 seconds duration.



Benefits of implementing e-exams for the ESS subject

As ESS is an applied subject, the emphasis of the Paper 1 examination is on the assessment of students' ability to apply skills and knowledge in real-world sports or exercise contexts. Paper-based examinations, even with the use of images depicting key movements in a sport skill or exercise-based scenario, cannot present qualities of movement such as speed or intensity of the actions enacted and the details as compared to a video stimulus.

The use of video stimuli enhances the authenticity and interactivity of the candidates' examination experience for better engagement. It also facilitates the assessment of candidates' critical and inventive thinking which are key elements of the MOE 21st Century Competencies (21CC). Specifically, the use of video stimulus enables candidates to be assessed on their ability to apply higher order thinking skills to analyse, evaluate and provide suggestions for improvement in constructs such as:

- game concepts and tactical decisions in dynamic competitive sports scenarios
- quality of movement patterns and techniques (e.g., sequence, effort, timing and trajectory)
- concepts that are subtly exhibited through behaviours and actions (e.g., sportsmanship)



Each of the six to eight items related to the video stimulus would assess candidates' ability to apply content knowledge from one of the five sub-disciplines of Sports Science (i.e. Biomechanics, Motor Learning and Development, Sports Physiology, Sports Psychology and Sports Sociology). These would at times be assessed in a synoptic manner in which the candidates would need to apply knowledge from more than one area of study in response to an item. This experience provides a model for candidates to understand how a multi-faceted, interdisciplinary approach could be used to frame, investigate and synergistically explore related issues and phenomena in an exercise or sport scenario, in order to improve the overall performance of an athlete or team.

- **Assessment of candidates' problem-solving skills**

Through the use of videos, sports and physical activities that candidates may be unfamiliar with (e.g. speed climbing and parkour) could be presented effectively as stimuli for assessing their ability to apply their knowledge in novel contexts. This method of assessment directs candidates away from rote learning and hones their problem-solving skills and cognitive flexibility to new and unfamiliar situations.

- **Mirroring real-life scenarios**

The viewing of video stimulus parallels the real-world practice of athletes reviewing video footage with their coaches to improve their performance. Studying the socio-cultural aspect of sports through videos also develops candidates' critical thinking skills to engage with issues that they would encounter in their sporting experience and the media.

- **Better assessment of constructs**

The use of video stimulus also enables better assessment of constructs such as observation, interpretation and inference skills, which otherwise could not be meaningfully assessed in the pen and paper mode. Candidates could use the media player control functions, such as time frame slider, pause and rewind, for closer analysis of the stimulus. For example, they could navigate and watch specific parts of the video or pause the video to observe movement patterns at specific time points.

- **Positive feedback from students**

In a 2019 survey conducted with students taking ESS as an O-Level examination subject, the students generally reported having a positive experience with the e-exams interface. Approximately 90% of the students reported that they were able to focus during the computer-based test. Close to 90% of them agreed or strongly agreed that they found it "engaging to use a video clip to answer the questions". Students also liked the affordances of computer-based tests such as the ability to type and edit their responses.

The screenshot displays the Singapore General Certificate of Education Ordinary Level (O-Level) examination interface. The top navigation bar includes the Singapore logo, the text "Singapore General Certificate of Education Ordinary Level", a "Time Remaining 1h 59m" indicator, and a "NEXT" button. Below this, the subject "Exercise and Sports Science" and the question number "6081 01" are shown. A progress bar at the top indicates the current question is 1 out of 7.

The main content area is split into two panels. The left panel, titled "The video is used for Questions 1 to 7.", contains a video player showing a speed climber on a large indoor wall. The video player has a play button and a progress bar showing 00:10 out of 00:33. The right panel contains the question text: "Refer to 00:09 to 00:18 of the video." followed by two parts: (a) "State the dominant energy system used by the climbers. (1 mark)" and (b) "Explain why the energy system identified in 2(a) is the dominant source of energy contribution used by the climbers. (2 marks)". Below the question is a text input area with a language dropdown set to "English".

At the bottom of the interface, there is a copyright notice "© MOE 2022" on the left and "Singapore Examinations and Assessment Board" on the right.

Figure 2: The use of videos allows constructs such as quality of movement (e.g. speed and intensity of movement) to be more effectively presented. In this item, the dominant energy system used by the climber can be inferred from the speed/intensity displayed in the movement of the climbers.

In alignment with real-life translation work, e-exams were introduced for the GCE A-Level H2 Translation (Chinese) in the 2022 national examinations. Considering that word processing software and online dictionaries are already the essential tools for real-life translation work, assessment for H2 Translation (Chinese) could thus be made more authentic by incorporating the use of computer text-input, word processing software and corpus-based e-dictionaries.

In the GCE A-Level H2 Translation (Chinese) examination, candidates are required to do translation of texts, error analysis and comparative criticism of different translated texts. Annotation and editing tools are provided in the eExam system to support candidates in completing the papers.

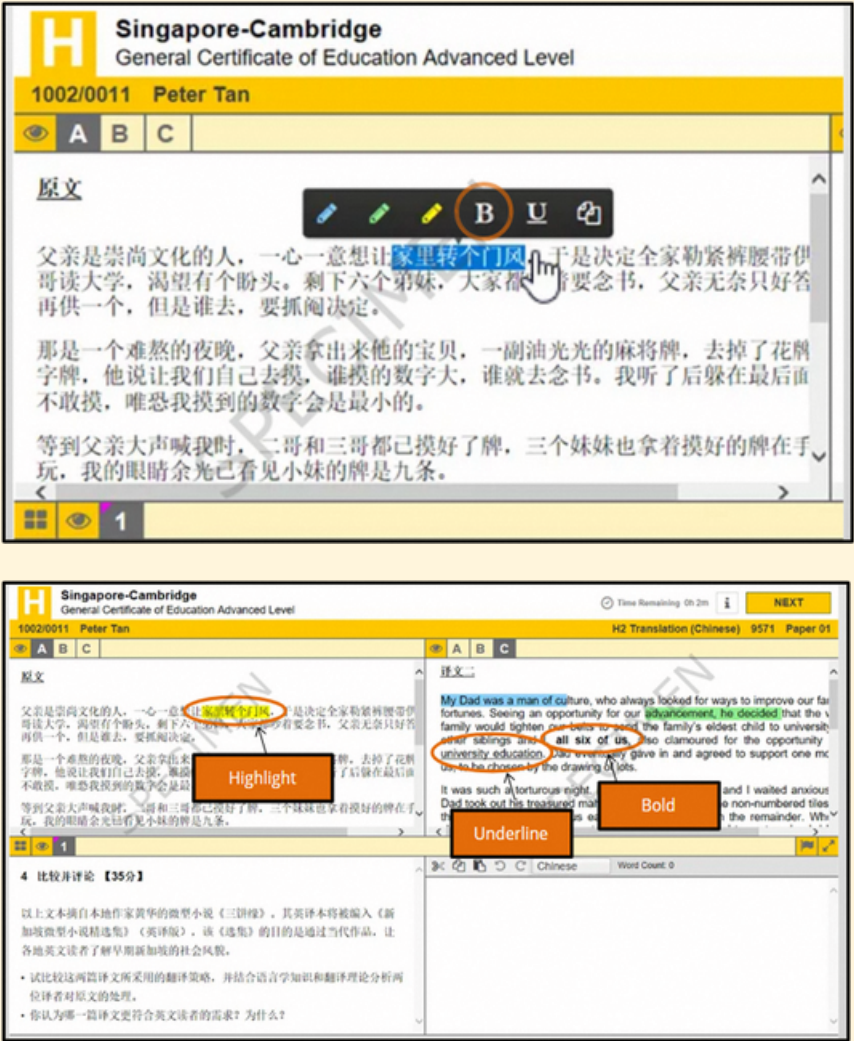

Functions	Screenshot(s)
<p>Annotation functions such as highlight, bold, underline.</p>	
<p>'Cut', 'Copy', 'Paste' functions to make crafting of responses more efficient.</p>	

Table 3: Tools available in the eExam system to support the H2 Translation (Chinese) assessment



Students' feedback

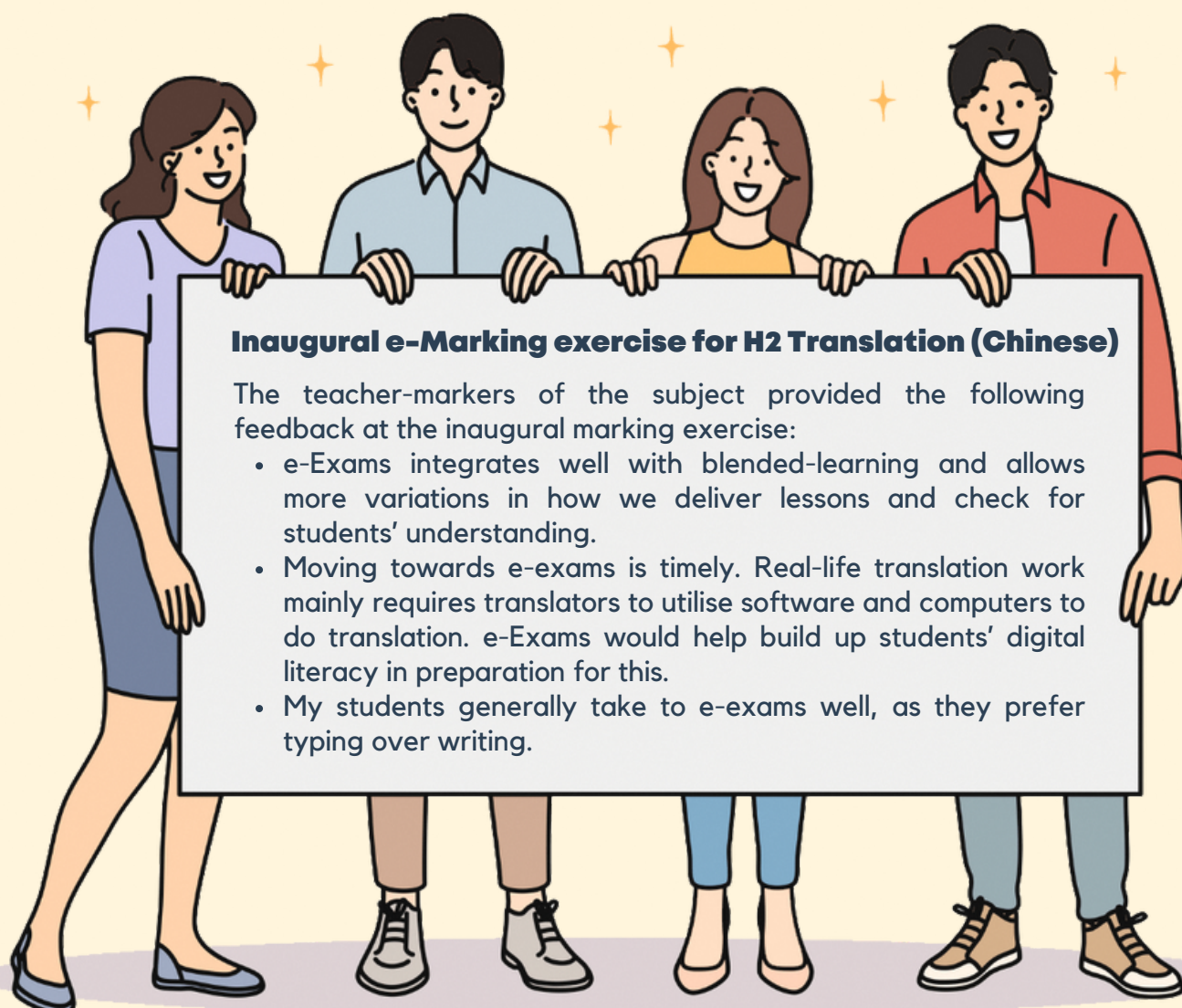
Prior to the rollout of the H2 Translation (Chinese) e-exams, a survey was done with students who took part in the e-exams practice session in April 2022. Some of the positive comments from students include:

We can copy and paste selected texts into the response boxes. This saves time and effort, as compared to handwritten examinations.

My typing speed is faster than that of writing. It is also more convenient as e-exams allow for easy edits.

The on-screen highlighting function is useful!

Completing tasks on the computer has become the norm. e-Exams are functional and allows us to hone a 21st century skill.



Inaugural e-Marking exercise for H2 Translation (Chinese)

The teacher-markers of the subject provided the following feedback at the inaugural marking exercise:

- e-Exams integrates well with blended-learning and allows more variations in how we deliver lessons and check for students' understanding.
- Moving towards e-exams is timely. Real-life translation work mainly requires translators to utilise software and computers to do translation. e-Exams would help build up students' digital literacy in preparation for this.
- My students generally take to e-exams well, as they prefer typing over writing.

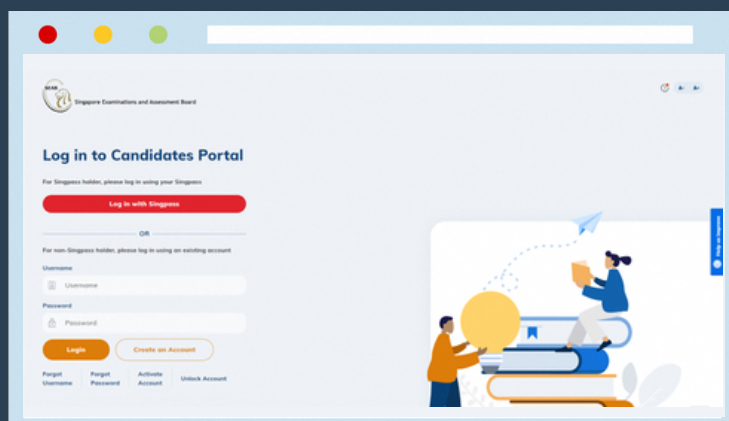
iEXAMS2 and Candidates Portal: A Seamless Digital Experience for Candidates and Examination Personnel

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As part of SEAB's digitalisation efforts, SEAB rolled out a new Candidates Portal and iEXAMS2 system to provide a one-stop portal for national examination candidates and enhance administrative processes for examination personnel.

Candidates Portal

Integrated with Singpass, the Candidates Portal (CP) is a one-stop portal for private candidates to perform their transactions for the national examinations and admission tests. Candidates who are Singpass holders get to experience a seamless registration process as their personal particulars from MyInfo are automatically imported to their registration records if they opt in. On the other hand, non-Singpass holders are only required to create an account on CP before they proceed with their registration for the examinations.

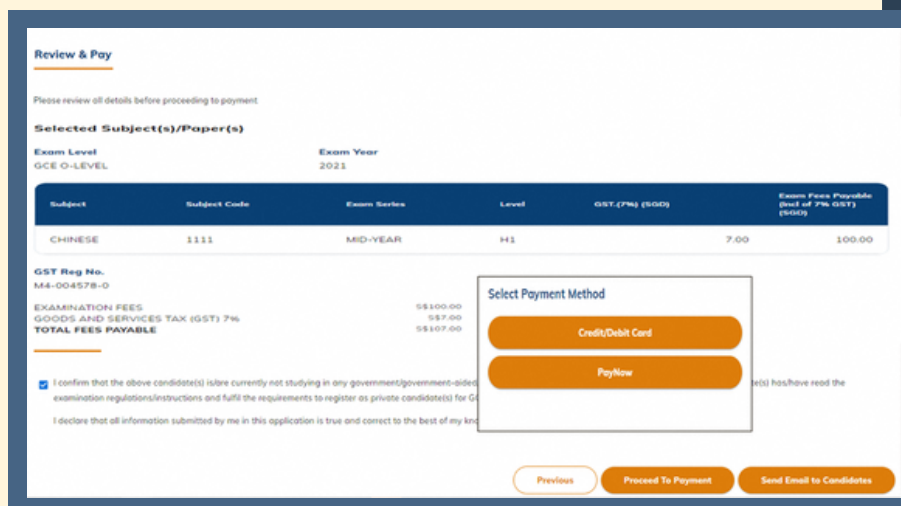


Welcome page of SEAB Candidates Portal

In CP, candidates are able to perform a wide range of activities which were rolled out progressively in CP between 2021 and 2022. These activities include:

- **Payment of examination fees**

Leveraging robust digital payment infrastructure, the CP adopts the use of e-payment solutions such as PayNow and Credit/Debit card. This delivers a smooth and safe payment experience for prospective candidates. In comparison with the previous mode of payment, whereby candidates had to make transactions physically at SingPost or via SAM machines, this infrastructure-light approach has definitely improved and smoothed the entire payment process for the registration exercise.



Users get to complete payment process conveniently via the digital payment methods

- **Viewing of personalised examination timetable and retrieval of entry proof**

The candidate's Entry Proof has gone digital as part of SEAB's ongoing efforts to streamline and digitalise services to serve candidates better. Instead of waiting for their physical Entry Proof to be delivered to their registered address, candidates can now download their Entry Proof from the CP and print it at their convenience.

- **Requests to amend examination registration**

CP also serves as the main touchpoint for candidates to submit requests like subject amendment or withdrawal from examinations. With this online interface, candidates no longer need to submit application forms via email. They can be more assured that their submitted requests will be received by SEAB for follow up, hence reducing the overall waiting and processing time for both SEAB and candidates.



- **View examination results**

The release of examination results process has also been streamlined to ease the administrative burden on schools and SEAB. On the day of the results release, both school and private candidates can view their examination results online via CP. They no longer need to wait for the delivery of the hardcopy documents. This includes school candidates who are unable to turn up at their school in person to collect their examination results.

Subject Name	Subject Code	Grade Alphabetical	Grade Numerical	Language Medium
Humanities (Social Studies, Geography)	2272	B	Four	English
Mathematics	4048	B	Three	English

An example of how a candidate's examination results is displayed on CP during the results release period



As a citizen-centric service platform, CP improves the operational and administration efficiency of examination administration processes for SEAB.

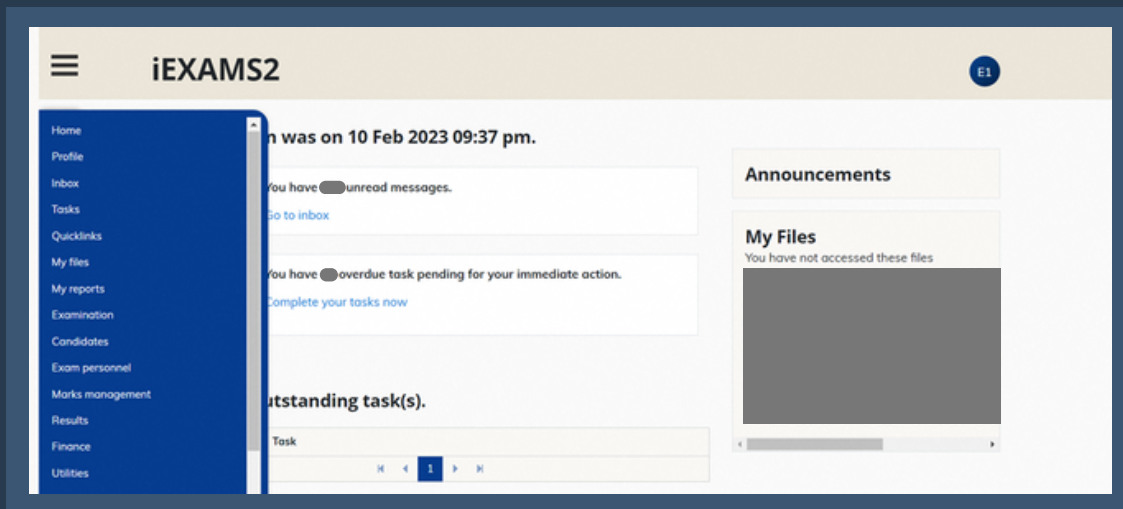


Integrated Examinations Management System 2 (iEXAMS2)

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Since its rollout in 2021, the Integrated Examinations Management System 2 (iEXAMS2) can be considered as the central nerve of the national examination ecosystem. Each year, the iEXAMS2 manages data (e.g. personal particulars, teaching and marking information, candidate information, examination results, etc.) and examination administrative processes with about 120,000 candidates, 28,000 school personnel from 350 schools and 35 private centres.

Providing a seamless integration with other systems is one of the key features in iEXAMS2. The dynamic structure of the system allows for the exchange of data with several other systems managed by SEAB, such as Integrated Digitisation of Scripts and Electronic Marking (iDSEM), eExam system, e-Coursework system, Candidates Portal, Exam Personnel Portal, as well as MOE's systems which include Human Resource and Payroll (HRP) portal, Financial and Accounting System and School Cockpit.



A screenshot of the iEXAMS2 interface

Furthermore, with the intent to streamline administrative processes for school leaders and school personnel, the iEXAMS2 also incorporates present-day features to allow schools to submit online applications for Access Arrangements, special consideration and appeals for review of results on behalf of their candidates. The iEXAMS2 is also built with robust features to strengthen the current operations of examination personnel and SEAB officers managing the conduct of examination processes. These include accounting of scripts, taking of candidates' attendance and submission of examination personnel duty and transport claims.

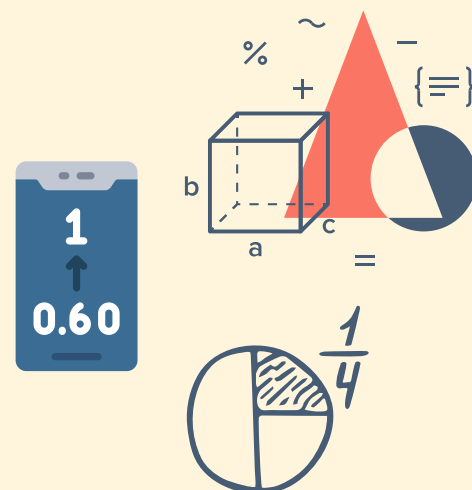
All in all, the iEXAMS2 is an integrated system that benefits school and SEAB with the greater ease of access to the information required to facilitate the end-to-end conduct and administration of examinations.

SEAB will continue to enhance our systems to provide customer-centric services to our customers such as candidates and examination personnel.



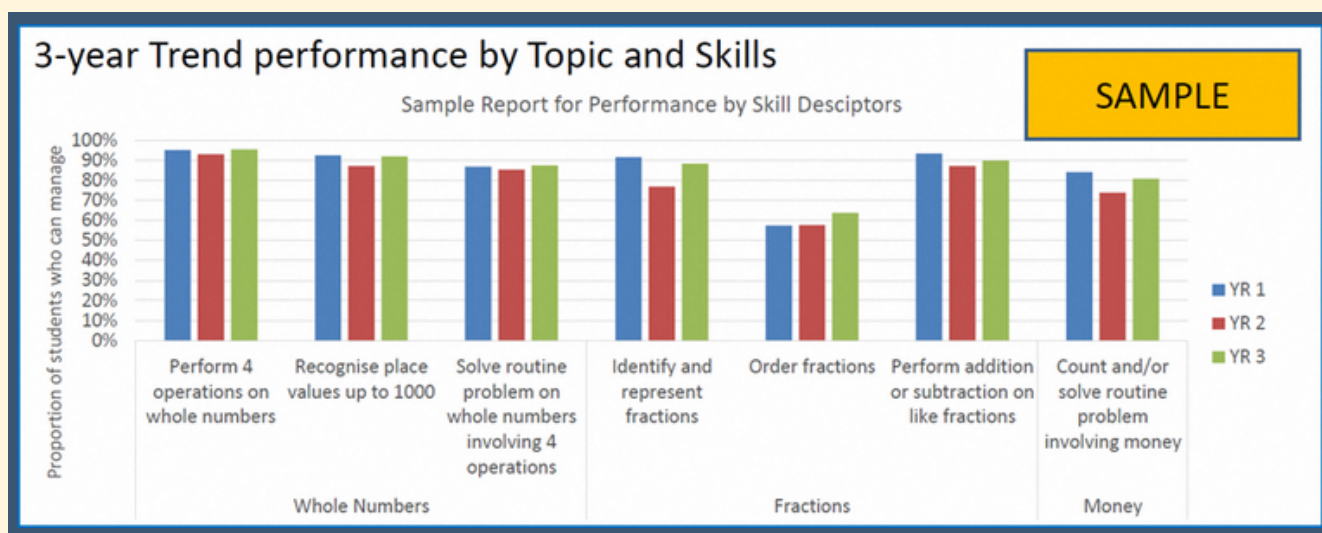
Assessment for Learning Sharing: How SEAB supports teachers in improving teaching and learning

Many know about SEAB's core work in national examinations which supports Assessment of Learning; less known is our work in Assessment for Learning (AfL). Since 2012, SEAB's Research and Development Division (RDD) has been expanding our assessment expertise to develop AfL tools to support schools in classroom teaching and learning. RDD has introduced AfL tools to primary schools. These include MathsCheck for Primary 2 (MCP2) introduced in 2014, followed by MathsCheck for Primary 4 (MCP4) in 2018. Topical CATalytics was launched in 2022 with Decimals, Fractions, Geometry, Measurement and Area & Volume.



The primary purpose of these tools is to support teachers with qualitative feedback on students' performance in core knowledge and skills in Mathematics, which are referenced to the MOE Primary Mathematics syllabuses' learning outcomes. The reports for participating schools provide two important pieces of information to identify the group of students who need help and their learning gaps. Over the years, many teachers have benefitted from the use of these AfL tools by actively using the data to develop intervention programmes and improve lesson design, leading to better student outcomes.

RDD continues to research on AfL tools. Efforts are made to improve the existing tools and to develop new ones. For example, the MathsCheck reports have been enhanced with the use of Tableau which has many helpful features to visualise the data and locate key information. Each school also receives additional information on their students' performance by topic and skill, one as referenced against population performance and another as a 3-year trend as illustrated below.



Reaching out to more educators

To increase awareness of how these AfL tools can support teachers and to update schools on the new features and related initiatives that are rolled out, SEAB organised the inaugural Assessment for Learning Sharing in May 2021. At this sharing, participants had the opportunity to hear from SEAB's research officers as well as our collaborators:

- Ms Tan Hwa Mei, Lead Research Specialist, and Mrs Chen-Theng Geak Seng, Lead Assessment Specialist, shared on MathsCheck and CATalytics respectively.
- Ms Pauline Wong, Senior Assessment Specialist, presented her analysis of students' common errors from MCP2 data.
- Master Teacher Ms Teh Wan, from MOE's Academy of Singapore Teachers (AST), shared on the Topical CATalytics Intervention Programmes, a collaboration between RDD and AST to support schools with intervention strategies to close learning gaps.

The sharing was well-received by the teachers, and they appreciated the useful insights provided by the sharing on students' common errors and the intervention programmes.

Highlights of the 2022 Assessment for Learning sharing

In 2022, SEAB engaged key personnel from schools with years of experience participating in MathsCheck to share how they have made use of the tool in their schools' mathematics programmes. The Vice Principal of Holy Innocents' Primary School (HIPS), Mrs Theresa Chua, and the Head of the Mathematics Department, Mrs Pansy Ong, presented their process and approach for using MathsCheck, as depicted below:

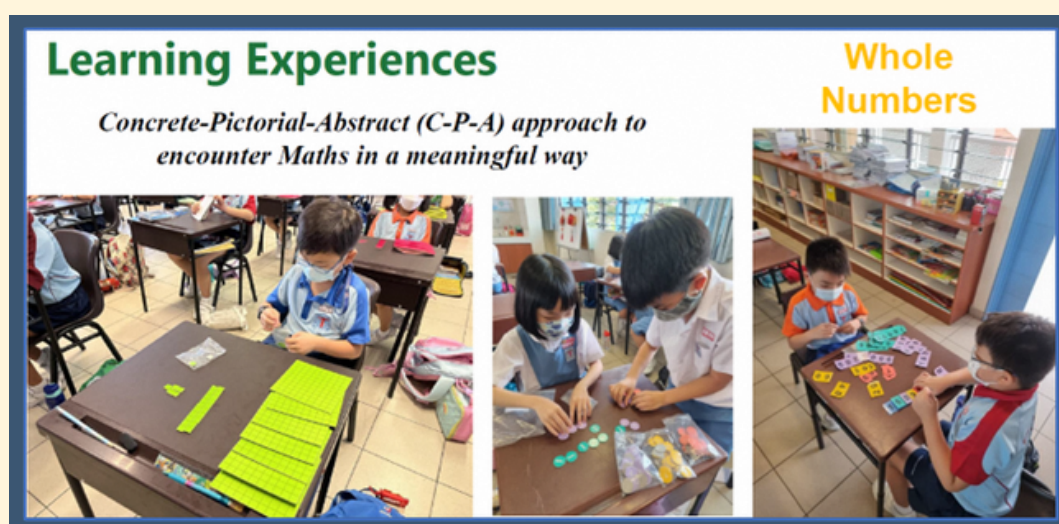


Legend:

- LO refers to Learning Outcomes
- AFGs refer to Areas of Growth

From trends seen in the MathsCheck data, the teachers from HIPS identified areas for growth to design intervention packages and create meaningful learning experiences. Key concepts and skills were further reinforced for their students through learning centres.

Some of their learning experiences are shown below ...



Learning Experiences

CPA approach to help students learn concepts through self-exploration, discussions, and collaborative learning.



CPA approach to help students learn new ideas and build on their existing knowledge



Let's hear from some of their teachers ...

It helps me to plan more focused and accurate follow-ups to help students. As a level rep, I use the data to plan level activities ... (Level Head)

MathsCheck is useful in analysing our students' progress and identifying their areas of growth. It helps me review my pedagogies and rethink of new strategies that can value add to my students' learning ... (P5 teacher)

The data is useful especially when I am taking over a new class. It helps me to have a sensing of the skills that students are lacking and require more practice with ... (P6 teacher)

Using the data from MathsCheck, I am able to differentiate my lessons according to the different topics. I am able to plan remedial lessons effectively to target weak topics ... (P1 teacher)



AFELTA 2022: Instruction, Learning and Assessment in the Next Normal

The 23rd Academic Forum on English Language Testing in Asia (AFELTA) was held in the Land of a Thousand Smiles, Thailand on 5 November 2022. There were good reasons for the members to smile as some could finally attend it in person after the COVID-19 pandemic outbreak while others participated virtually as the AFELTA Conference was conducted in a hybrid mode. The Chulalongkorn University Language Institute (CULI) hosted the AFELTA.



Representing SEAB, Ms Kerstin Wong and Ms Teng Lay Eng from the Assessment Planning and Development Division attended the AFELTA Conference in Bangkok.



A token of appreciation was presented to the Director of CULI, Associate Professor Dr Jirada Wudthayagorn

Background of AFELTA

The AFELTA is made up of ten member organisations. They include English Language testing agencies in China, Hong Kong, Japan, Singapore, South Korea, Taiwan, Vietnam as well as Thailand which joined the assessment fraternity recently. The strong network and partnership established since 1998 has enabled member organisations to take turns to host the annual conference. Despite the many disruptions caused by the COVID-19 pandemic in the last two years, member organisations have kept the spirit of professional engagement alive through the sharing of recent assessment research findings, designs and practices.



SEAB first participated in the AFELTA Conference held in Hong Kong in 2000. Assessment Officers from the Languages and Literature Department have been representing SEAB to present papers on assessment innovations at the conference since then. In line with the conference theme, Instruction, Learning and Assessment in the Next Normal: Research and Practice, Ms Kerstin Wong gave a presentation entitled, 'Building a Speech Corpus for Artificial Intelligence (AI) Powered Oral Assessment'. Her presentation focused on how the Speech Evaluation for English Reading Aloud project sought to harness AI in the development of a speech engine which would be trained to automatically score students' performance in reading aloud and provide audio model reading for students to listen to and improve their reading aloud proficiency independently. She also discussed the conditions required for speech data collection, the processes put in place during speech data collection to acquire quality speech data that would be suitable for machine learning, and the scoring process to ensure reliability in scoring.



Ms Kerstin Wong gave her presentation to an online audience via Zoom and to a live audience.

It was enlightening to learn how other testing agencies such as the Korea English Language Testing Association (KELTA), Hong Kong Examinations and Assessment Authority (HKEAA), and Shanghai Jiao Tong University have been harnessing technology in English Language assessment.



The process of developing reading comprehension items has always been intense. It came as no surprise that the audience were anticipating KELTA's presentation. The comparative study conducted by KELTA explored the feasibility of using commercialised Automated Item Generation (AIG) programmes to develop reading comprehension test items. Three in-service English Language teachers engaged by the research team found the items generated by AIG software to be suitable for assessing reading comprehension. The research findings presented by KELTA on the possibility of leveraging AIG has provided some food for thought.

From other presentations, participants also learnt how different testing agencies developed standardised English proficiency tests whereby scores from these tests would help them in making important decisions regarding matters such as admission to educational institutions, enrolment in courses, and career opportunities.

Although the hybrid mode of the conference did not allow all participants to meet face-to-face for greater interactions, it was an enriching learning experience for all. Needless to say, those who attended it in person had the opportunity to forge and strengthen friendships during tea breaks and lunch. The next AFELTA Conference in 2023 will be held in the Land of the Rising Sun, Japan, and all members are certainly looking forward to one that brings everyone together face-to-face for more professional sharing and networking.



Taking a group photo in the hybrid mode with online attendees and representatives from Japan, Singapore, Vietnam and Thailand who attended the conference in person.



SEAB's sharing at the Home Team Academy's Community of Practice for Curriculum Developers and Trainers

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The Home Team Academy under the Ministry of Home Affairs organised a Community of Practice for Curriculum Developers and Trainers (CD CoP). The CD CoP is a platform where trainers and curriculum developers under the Academy come together to build networks and learn best practices. Held on 9 February 2023, the virtual event was attended by about 257 Home Team officers. SEAB was invited to do a sharing at the CD CoP.

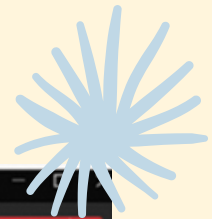
Dr Alwyn Pang, Lead Assessment Specialist from the Assessment Planning and Development Division, shared how the principles of validity, reliability and fairness are pillars of quality in assessments. He also presented examples of how these principles are operationalised in SEAB.



Specifically, he explained that:

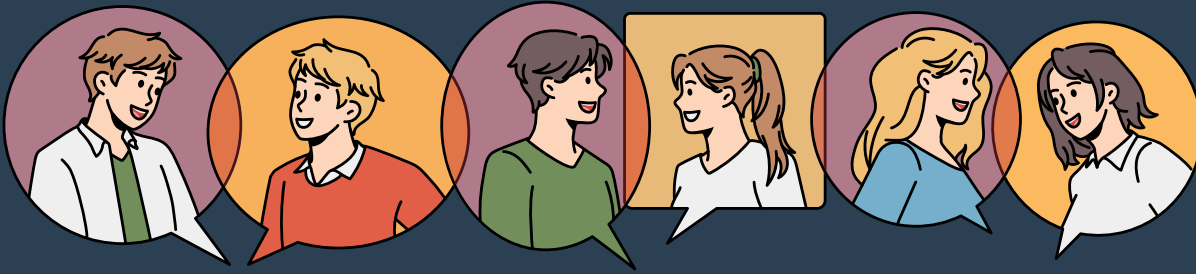
- Validity prescribes that assessment begins with the clarity of purpose;
- Reliability lends confidence to test score interpretations;
- Fairness provides learners with equal opportunities to demonstrate their ability.

SEAB is thankful to be involved in this successful CD CoP event!



Dr Alwyn Pang (left) conducted the virtual sharing on the principles of assessment with over 250 Home Team officers.





Connect and Engage – Conversations that matter

It has always been SEAB's endeavour to reach out to our stakeholders, such as teachers and schools, to better understand ground sentiments and address any misconceptions they may have. As part of our outreach efforts, SEAB conducts engagement sessions every year to meet and gather viewpoints from educators. These sessions are hosted by SEAB's senior management and the conversations centre around open and rich sharing of the national examination processes.

These meaningful conversations have helped SEAB forge bonds with fellow educators whose feedback on the national examinations have also contributed to the development of our processes.

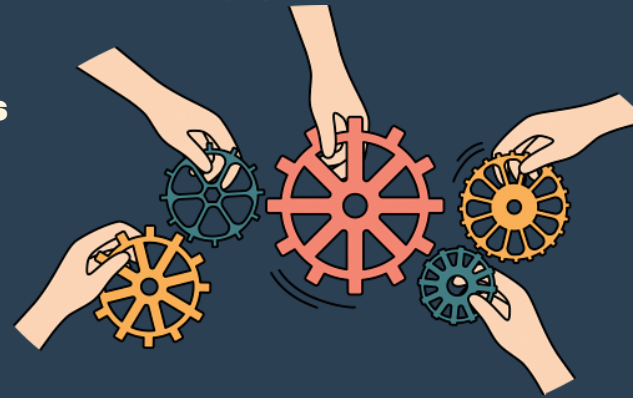
With the easing of Singapore's COVID-19 measures, SEAB resumed onsite engagement sessions with stakeholders in the second half of 2022.

Engagement sessions with teacher participants

Dialogue with SEAB Senior Management

As part of the Certificate in Examination and Assessment in Education (CEA in Edn) programme, participants were invited to attend a dialogue session with SEAB senior management on 2 August 2022.

The SEAB panel for this session included Chief Executive, Mr Yue Lip Sin; Senior Director of Corporate Cluster, Ms Selena Yeo; Director of Exam Operations Division, Mr Pang Chong Han; and then Director of Assessment Planning and Development Division, Mr Lee Ah Huat.



What is CEA in Edn?

The CEA in Edn programme is part of the SkillsFuture for Educators (SFEd) Professional Development roadmap designed to support in-service teachers in their continuing professional growth in Assessment Literacy.

CEA in Edn was designed to develop teachers' thought leadership in making decisions and recommendations in their context to address diverse assessment issues both in their daily classroom assessments and school-wide approach to assessment. It is anchored on reflective practice enriched by critical engagement with established and new strategies and methods generated from the programme content, interactions with fellow educators and performance in the assignments after the completion of the instructional units of each module.





Group photo of SEAB panel and CEA participants

16 participants attended the dialogue session and were very enthusiastic during the discussions. They showed great interest in the digitalisation efforts made by SEAB and raised questions on the electronic examinations as well as onscreen marking (OSM).

The CEA participants gave feedback that they had enjoyed the session and appreciated the open and sincere sharing from the SEAB panel.



CEA participants fully focused and engaged in discussions



SEAB panel (left image) addressing questions from CEA participants (right image)

Engagement of Master Teachers

Master Teachers (MTTs) are teacher leaders, who play a key role in leading a culture of professional excellence in the teaching fraternity. They propagate effective pedagogies in the classroom, prototype new teaching methodologies, and support policy and programmatic work related to teaching and learning at the national level.



MTTs visited the Heritage Gallery to find out more about the evolution of national examinations in Singapore

On 28 September 2022, SEAB organised a learning journey for 49 MTTs. The session aimed to share the key processes of onscreen marking (OSM) with the MTTs. As part of the programme, the MTTs also visited the SEAB Heritage Gallery to understand the evolution of Singapore's national examinations. They also had an opportunity to understand the script scanning processes, see how the storage and retrieval system for examination materials works, and experience how OSM is conducted.



MTTs also had the opportunity to visit the Social Studies Marking Centre

Overall, the MTTs were engaged throughout the whole programme. They were most interested in OSM as they were able to see how the tools of OSM have improved the efficiency of marking.

Conversations with SEAB

SEAB hosted four sessions of Conversations with SEAB for the educators attending the National Institute of Education (NIE) programmes, namely the Teacher Leaders Programme (TLP) and Management and Leadership in Schools (MLS). A total of 120 educators attended these sessions in August 2022, October 2022 and February 2023. All educators benefited from the engagement sessions with SEAB.



TLP participants learning about the history of national examinations at the Heritage Gallery



A must-have photo pitstop for the Heritage Gallery tour - MLS participants posed for a group photo with the Bishop Browne's chair that was gifted to SEAB as a mark of the long-standing relationship between Singapore and Cambridge Assessment.

In these sessions, the participants were given a presentation on how assessment standards are managed before they were invited to share their thoughts and concerns regarding the national examinations or assessment related matters during the question-and-answer session. SEAB's Chief Executive, Mr Yue Lip Sin, and Directors from the various Divisions had dialogues with the participants and answered their queries.





SEAB panel engaging with TLP participants during Q&A session



TLP participants sharing their questions with the SEAB panel



There were active discussions about the challenging examination questions and the teachers' feedback on OSM. The teachers' confidence in OSM was raised as they learnt about the quality assurance processes in place to ensure that marking standards are adhered to.

The teachers' questions on the setting of examination papers according to the examination standards were also addressed as the panel expounded on the balanced mix of easy and challenging questions. The panel also discussed the rationale for the scoring bands of the new PSLE Achievement Level (AL) scoring system. The teachers were also assured that the AL bands were carefully designed to accurately reflect the students' achievements of the assessment objectives for the subjects.



Conversations with SEAB sessions with MLS participants on 7 October 2022 and 27 February 2023

The sessions were kept informal and interactive, and the open sharing clarified the educators' misconceptions about the work of SEAB and national examinations. During these sessions, the educators had meaningful conversations with SEAB, and they were able to gain insights to further enhance their assessment literacy.



SEAB panel with TLP participants on 22 Aug 2022



SEAB panel with TLP participants on 23 Aug 2022



SEAB panel with MLS participants on 7 Oct 2022



SEAB panel with TLP participants on 20 Feb 2023



SEAB panel with MLS participants on 27 Feb 2023



SEAB also received interest from overseas education bodies to visit SEAB to learn about Singapore's national examinations.

Hosting the overseas delegates provided a good opportunity for SEAB to forge closer connections with our foreign counterparts and facilitate knowledge exchange in best assessment practices.

Uzbekistan State Inspectorate for Supervision of Quality in Education

In light of Uzbekistan's ongoing education reform, an Uzbekistan delegation was in Singapore from 20 to 27 November 2022 to learn more about the Singapore education system. The delegation expressed interest in learning about the development and conduct of national examinations in Singapore and specifically requested to visit SEAB. The members of the delegation were:

1. Mr Odilov Asliddin Akhmatjonovich, Head of the General Directorate for Certification and State Accreditation of Educational Institutions
2. Mr Makhmudov Anvarjon Zokirovich, Head of the General Directorate for Monitoring the Quality of Education
3. Mr Nazarov Baysun Fayzillayevich, Head of the Department of Quality Assurance in Qualification Courses and Retraining Institutions
4. Ms Khojimurodova Madinakhon Bakhromovna, Head of the International Relations Department
5. Mr Umid Khojikhonov, Third Secretary, Embassy of the Republic of Uzbekistan



SEAB's senior management team comprising Chief Executive, Mr Yue Lip Sin (4th from left), Director of Exam Operations Division, Mr Pang Chong Han (3rd from right), and then Director of Assessment Planning and Development Division, Mrs Cheah Mei Ling (rightmost), hosted the delegates on 21 November 2022.

SEAB also received interest from overseas education bodies to visit SEAB to learn about Singapore's national examinations.

Hosting the overseas delegates provided a good opportunity for SEAB to forge closer connections with our foreign counterparts and facilitate knowledge exchange in best assessment practices.



SEAB Chief Executive, Mr Yue Lip Sin (left) receiving a token of appreciation from Mr Odilov Asliddin Akhmatjonovich (right)

Education and Training Quality Authority from the Kingdom of Bahrain

SEAB hosted Dr Tariq Al-Sindi, then Chief Executive of the Education and Training Quality Authority (BQA) of the Kingdom of Bahrain, on 28 November 2022.

Dr Al-Sindi was interested to find out more about SEAB's test development, marking and grading processes as the BQA was implementing changes to their national examinations policy.

Chief Executive of SEAB, Mr Yue Lip Sin and Deputy Director of Exam Operations Division, Ms Santhakumari Seranjeevi hosted Dr Al-Sindi during his visit. Mr Chong Tze Wen from SEAB's Assessment Planning and Development Division shared with Dr Al-Sindi about SEAB's work and the national examinations. SEAB hosts also addressed Dr Al-Sindi's questions about the conduct of electronic examinations and the complexities involved in such examination modes.



Dr Al-Sindi (right) engaging in a discussion with SEAB hosting panel



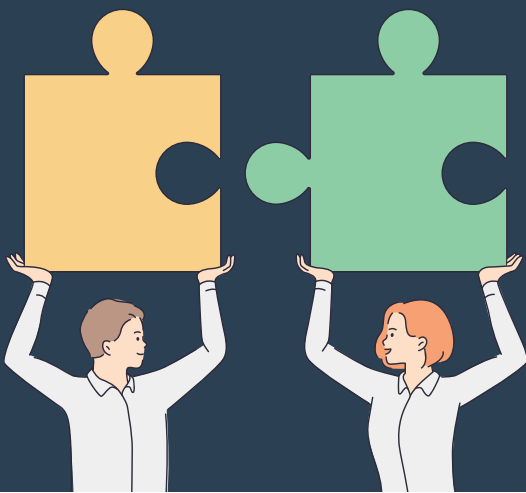
Group photo of SEAB panel with Dr Al-Sindi on 28 November 2022

Dr Al-Sindi conveyed his appreciation to SEAB with the following message:

"It was a pleasure visiting SEAB during my visit to Singapore. I thoroughly enjoyed the visit and was impressed with the rigorousness of your operations.

It has been an enriching experience which I appreciate as it has given me an opportunity to get a glimpse of your assessment practices and engage in professional dialogue with your leaders.

I look forward to future opportunities of cooperation and collaboration between our organisations."



Visit by U.S Fulbright Award Recipients

The U.S Fulbright Programme is a flagship international academic exchange programme sponsored by the U.S. government. It offers award recipients the opportunity to pursue graduate studies, conduct research or teach English overseas.

Through the coordination of the Academy of Singapore Teachers, SEAB was happy to host three U.S. Fulbright Award recipients for a visit to our Heritage Gallery on 21 February 2023. The sharing touched on the history of Singapore's examinations and the roles that national examinations have played in shaping Singapore's education landscape. Through the visit, the award recipients gained an understanding of SEAB's work and the national examination processes.



U.S. Fulbrighters at their recent visit to the Heritage Gallery to learn about the evolution of examinations in Singapore.

The U.S. Fulbrighters also shared some feedback of their visit to SEAB:

SEAB (Heritage Gallery) was interesting. I liked viewing the historic documents. The tour helped me better understand the assessments and Singapore's advancements in education.
- Lauren Hubert

I really enjoyed the visit to the SEAB Heritage Gallery. It was great to see the history and evolution of examinations in Singapore. And as always, the hosts were wonderful.
- Damon Peterson



SEAB's Corporate Website Gains Recognition at Digital Services Awards 2022

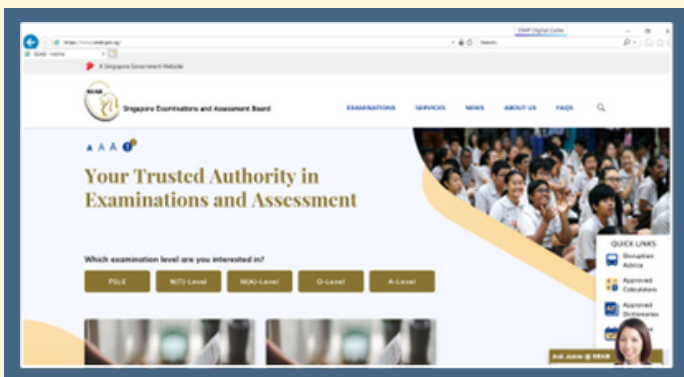


Do you know that this badge can be found on the homepage of SEAB's Corporate Website? Are you curious to know how SEAB has managed to achieve it? Continue reading this article to find out!

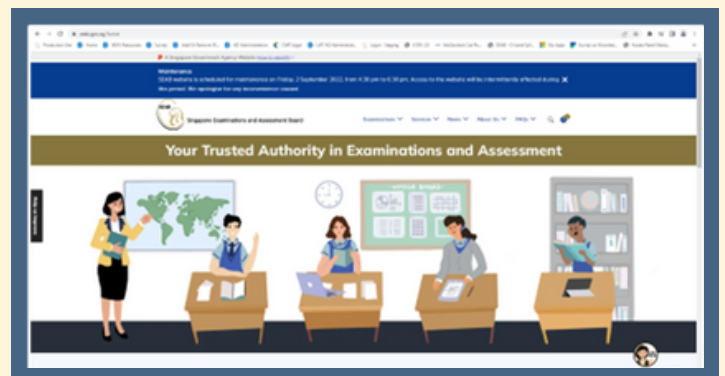
The journey to improve SEAB's Corporate Website began in 2021. Prior to embarking on the design refresh project of the website, the project team comprising officers from the Information Technology and Corporate Communications Departments conducted a Usability Check study. The study invited key users of the website, including teachers, parents and students, to provide their feedback.



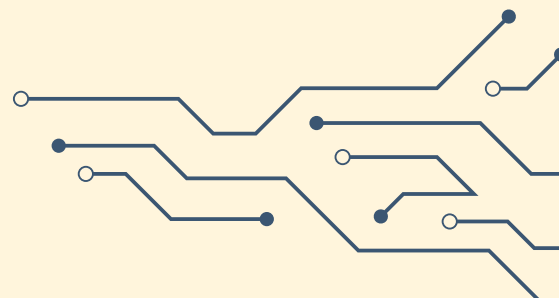
Leveraging feedback from the Usability Check study, findings from the Whole-of-Government Application Analytics (WOGAA) and references to best website design practices from other public agencies, the major facelift for the website was revealed in May 2022. [Read page 26 of the previous SEAB-link issue](#) for the features of the refreshed website.



Website before 30 May 2022



Website from 30 May 2022





The Digital Services Awards serve to recognise the outstanding achievements and commitment by government agencies to maintaining excellent digital service standards for websites and e-services used by members of the public. The 2022 edition was the second time the Digital Services Awards were presented since they were first introduced in 2021.

Vying for the Best Usability – Accessibility and Citizens' Choice Awards, the project team submitted SEAB's refreshed corporate website as an entry. The awards were assessed by a panel of judges from both the private and public sectors.

To the project team's delight, SEAB's Corporate Website emerged as a Top 10 finalist for the Most Popular Informational Service award under the Best Usability – Citizens' choice category. The finalists went through a final round of voting by live audience during the 2022 Digital Services Awards ceremony held on 23 November 2022. The winner of this award was then decided based on the highest number of votes received.



At the end of the 2022 Digital Services Awards Ceremony, SEAB's Informational Services attained the following achievements:

SEAB's Corporate Website received an Honourable Mention, as one of the Top 3 for the Most Popular Informational Service Award.



SEAB's Informational Services also came in:

- **2nd runner up for the Best Search Engine Optimisation (SEO) Award and**
- **5th place for the Best Improvement Award.**



Award Categories	Judging Criteria
Most Popular Informational Service Award	Based on the highest number of live attendee votes during the award ceremony.
Best Search Engine Optimisation (SEO) Award	Based on the highest Search Engine Optimisation score derived from agency's average mobile and desktop Informational Services (IS).
Best Improvement Award	Based on the overall average percentage improvement in functionality components such as Search Optimisation Engine (SEO), Accessibility and Page Load Time.



Although SEAB did not achieve the top place for the nominated award categories, it was a very meaningful and rewarding journey for the project team.

As the saying goes, "Success is a journey, not a destination. It requires constant effort, vigilance and re-evaluation."

The project team will continue to review and enhance SEAB's Corporate Website to make it more accessible, user-friendly and inclusive for our customers.

SEAB at the 2022 Digital Services Awards Ceremony

2022 SEAB Active Day – Stay Together, Journey as One

In celebration with Singapore's 57th Birthday, the highly anticipated 2022 SEAB Active Day was held on 8 August 2022 with the theme of 'Stay Together, Journey as One'. The annual SEAB Active Day aims to get all SEAB staff active, and the 2022 edition was the first onsite celebration after a 2-year hiatus due to COVID-19.



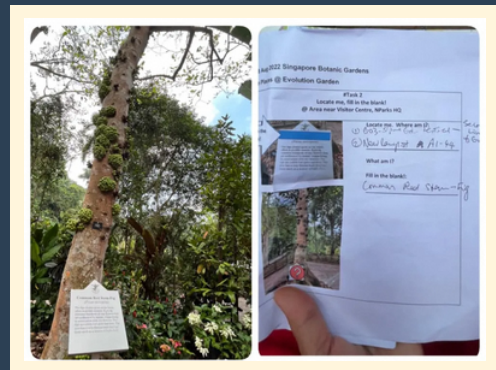
The activities were planned to bring SEAB staff "Back to School". Firstly, all staff gathered for an early morning assembly at the SEAB hall to sing the national anthem and recite the national pledge as part of the National Day Observance Ceremony. They subsequently headed to the Singapore Botanic Gardens for an excursion.



During the excursion, SEAB staff split into various groups to look for specific flora and fauna across various parts of the Singapore Botanic Gardens, in order to complete their group's assignments. All groups were treated to a scenic view at the palm valley park where they bonded over a picnic.



SEAB staff exploring the Singapore Botanic Gardens while completing their "assignments"





Photos of SEAB enjoying their time at the Singapore Botanic Gardens and National Orchid Garden

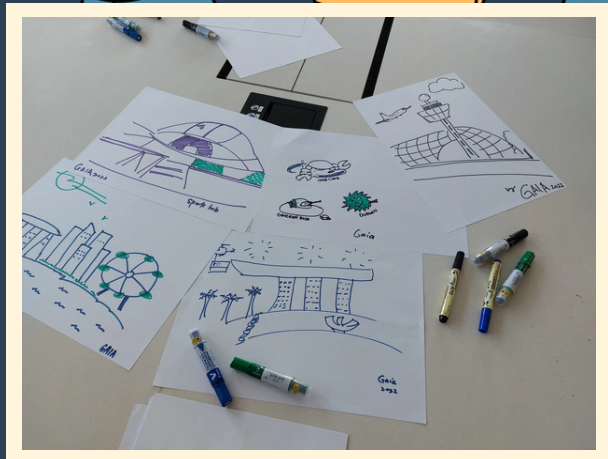


After the morning excursion, SEAB staff returned to SEAB premises for lunch before continuing with the second half of the programme, an Amazing Race between the six SEAB houses which serve to build camaraderie and a spirit of collective effort among staff members.



As this was the first time that SEAB Active Day was held at the SEAB's new building, the Amazing Race was designed to give staff an opportunity to know their office (or second home, as some might say) better. There were game stations at various places such as the Roof Top Garden, Fitness Corner and a few meeting rooms, on different levels of the building. Grouped in their respective Houses, SEAB staff competed in activities such as picking Saga seeds with chopsticks, drawing their favourite Singapore Icons, and doing the Singapore Workout. SEAB staff mustered their competitive spirit as they participated actively in these activities to gain points for their representative Houses.

SEAB staff picking up saga seeds using their non-dominant hand



Drawing the icons of Singapore



After the Amazing Race, SEAB staff returned to the main hall for the finale of 2022 SEAB Active Day: a huge sing-along session featuring classic National Day songs. There were also old-school snacks like wheel crackers and ice gem biscuits for staff to savour. The camaraderie and teamwork of SEAB staff were evident from their full participation in 2022 SEAB Active Day, as they reflected on the journey of working together as one to overcome all challenges, especially during the COVID-19 years.



SEAB staff gathered for a group photo to conclude the 2022 SEAB Active Day



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

- Research Officer, Assessment Research

Please refer to [SEAB's website](#) for more information on the position and application process.

Temporary Positions

SEAB is looking for personnel to take on temporary positions.

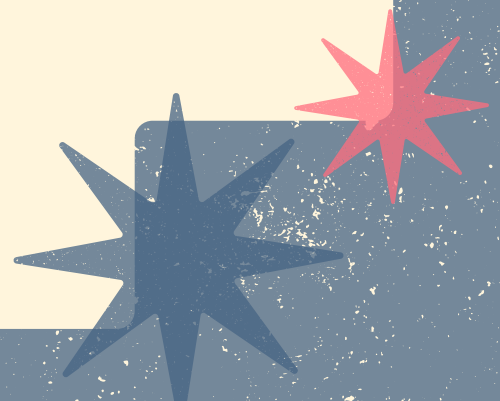
If you are a former full-time Education Officer with the Ministry of Education, you may apply for the following positions from March 2023:

- Markers (Primary and Secondary-level English Language / Secondary and JC-level Mother Tongue Language)
- Oral Examiners (Secondary and JC-level Mother Tongue Language)

If you are a retired or former Education Officer from the Ministry of Education, Singapore Ministries or Statutory Boards, you may also apply for the following positions from March 2023:

- HQ invigilators
- HQ Presiding Examiners

You can find out more details and apply for the temporary positions via the [Careers@Gov](#) website. In view of the large number of applications, we regret that only shortlisted candidates will be notified.





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