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THE TEACHERS' DIGEST

THE ART AND SCIENCE OF ASSESSMENT

Teachers are reimagining assessments and reframing what it means to test students' learning

Assessment plays a crucial role in teaching. However, sometimes it seems like educators, students, parents and the general public are on different pages when it comes to their understanding of assessment.

For a long time, educators have talked about two major types of assessment: formative and summative. But the line between the two is not always clear, especially to non-educators.

One popular analogy for appreciating the differences comes from Professor Robert Stake of the University of Illinois at Urbana-Champaign in the US: "When the cook tastes the soup, that's formative; when the guests taste the soup, that's summative."

And yet, the comparison cannot be used to understand the students' role in assessment. Are they doing assessments to put grades in their report books to show parents? To understand what they have learned? To help a teacher determine what interventions (if any) are necessary?

Those questions cannot be answered with a pithy statement and a punchline. But we can tell you a few stories. In the following pages, we look at how schools introduce assessments as part of the learning process, rather than just at the end (see **p02**). We speak to the Principal of Damai Secondary about the challenges in removing mid-year examinations, and her guiding principles on implementing meaningful assessments (see **p14**). And we seek personal insights from Ms Tan Lay Choo, the retired Chief Executive of the Singapore Examinations and Assessment Board (see **p20**)

At the end of the day, it's about enabling every student to do their best and fulfil their potential – a message exemplified by the story of Ms Sem Hui Ling (pictured below), a Prison School educator working to influence those in her care for the better (see **p18**). And we consider some ways to take a step back and let our young ones deal with challenges and setbacks (see **p08** and **p16**).

Finally, if part of your 2019 resolution involves taking better photos in school, turn to **p24** for some tips on telling a story through pictures.

As ever, thank you for your support, tips and comments.

The *Contact* Team

In this issue, Ms Sem Hui Ling shares her story on working with students in Prison School.

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COVER ILLUSTRATION: JOSEPH TEY

THE ART AND SCIENCE OF ASSESSMENTS

As educators, we know education is more than examinations and grades. But when it comes to our own practice, how actively do we introduce assessments as part of the learning process, rather than just at the end?

The word "assessment" tends to generate a fair amount of anxiety – for students, parents, even educators.

"What do most people associate with assessments?" asks Dr Karen Lam, a specialist at the Ministry of Education, who taught Geography and the General Paper before working on curriculum development and assessment.

For the public, it's usually tests and examinations, she says. "But in education, we use the term assessment in a much broader sense. There are generally two categories. It can be formal, through tests and exams. Or informal, through talking to students, asking questions, looking at body language."

And there lies the rub.

Public concerns over the scaling back of school-based assessment have largely focused on whether students' learning can be accurately assessed without tests. For educators, however, the real issue is how to make assessment more formative in the way we teach and learn in schools, and less stressful.

We visit three schools to learn more.

Let's head out

THE BIG IDEA

CHIJ PRIMARY (TOA PAYOH) — The Term 2 assessment for Primary 2 (P2) English Language and Mathematics is a child's dream. It involves a visit to the zoo.

For English Language, teachers want students to be confident expressing their ideas, and speaking aloud. For Mathematics, the goal is to know how to read and interpret picture graphs. These two goals are met in what is an exciting experience for students. First things first, they need to do a little preparation.

HOW IT WORKS

Towards the end of April, P2 students spend around two weeks working on picture graphs during Mathematics lessons, and drafting short write-ups about animals during English class.

ILLUSTRATIONS **JOSEPH TEY**

These activities fall under what the school calls "pre-assessment". It is an assessment practice that all levels and subjects included in their lesson plans in the school this year, says Mrs Mischa Simon, Vice-Principal (Curriculum).

"It allows teachers to understand the starting point for each student," she explains, "their interests, abilities, prior knowledge, and their prejudices for a particular topic."

For the P2 cohort, following this is the much-anticipated excursion to count and document the array of creatures at the zoo. "They had such a good time filling in their worksheets," says Mrs Simon, "they didn't even know they were being assessed for both English and Math. That's what we're aiming for."

OTHER IDEAS

Teachers also include self/peer assessment through the use of rubrics and reflections, and one-to-one conferencing between teachers and students to discuss current strengths and areas for growth – not to mention, tech tools such as the Student Learning Space, Kahoot and Google Classroom to get immediate feedback on students' understanding of a topic.

"One interesting thing we started this year was replacing compulsory afternoon supplementary lessons for P5 and P6 with optional workshops for students," says Mrs Simon. "Students assess themselves; they decide where their gaps are, and they sign up for the relevant workshops."

"We used Google Classroom to coordinate the sign ups," she says, "and put up advertisements that went something like, 'Math has serious problems! P6 Math workshop: whole numbers and fractions.' If a student is strong in these, she might sign up for something else, say an English workshop on punctuation, Mother Tongue workshop on storytelling, or a lecture-style workshop."

Like the integrated assessment at the zoo, these afternoon workshops were difficult to plan. But it was worth it. "Students no longer looked tired," says Mrs Simon. "They were excited because they wanted to be there. And teachers saw how giving students a choice can motivate children to learn."

Let's talk about constructive feedback

THE BIG IDEA

JURONG PRIMARY — A central theme underlying discussions about assessment is the need to shift mind-sets toward the constructive use of assessment by all stakeholders.

In Jurong Primary, much of these conversations take place during meetings between teachers, parents and students. The school holds a parent-teacher conference with the child, and another just with the parents.

HOW IT WORKS

Since 2012, the school has replaced the mid-year Parent-Teacher Meetings with Parent-Child-Teacher Conferences (PCTC). These chats allow students to decide how to show their parents what they have learnt, along with their areas for growth, academic goals and aspirations.

"When we talk about learning outcomes," says Mdm Nur Rashidah, Year Head for Upper Primary, "PCTC is a valuable platform. As the conversation at PCTC centres around the child's holistic development, including soft skills and socio-emotional competencies, it's more rich and meaningful."

Of course, some parents may feel nervous about this. "We can't ignore academic performance," Mdm Rashidah acknowledges. "But we can continue to engage parents such that they are not depending on this one session in the year to hear about their child's academic progress."

To that end, the school is starting to schedule Parent-Teacher Conferences (PTC) before the PCTC. Ms Lee Ai Ling, Year Head for Middle Primary, says, "Sometimes, there are specific areas for growth that teachers may want to discuss just with the parents, or address stresses their child is facing that require both school and home support."

"For parents who tend to swing towards academic results," explains Ms Lee, "this is a chance for teachers to reframe and manage parents' expectations, and talk about how to help the child move forward. That's the purpose of PTC."

OTHER IDEAS

That said, how do teachers and students talk about assessment

Read Me First

Dr Karen Lam, assessment specialist at MOE, on getting students to read the feedback on their assignment without fixating on the grade.

1. Develop clear rubrics, and share them with students

Some people ask, 'If we don't have marks, how do we communicate what students have learnt?' Actually, having clear rubrics and checklists will give us the language to communicate what the assessment criteria are, and to find out what students know, and what they can do.

Students will also pick up that language. They can tell their parents, and anyone they meet, what they are good at and what they can do. In schools I've worked with, teachers say the rubrics actually help students ask higher level questions about their assignments. That is very encouraging.

2. Help students understand the purpose of feedback

We need to help our students make sense of assessment. We want them to be able to monitor, assess and improve their learning. For students who tend to focus on marks and grades, we must nudge them to focus on learning – focusing our feedback on mastery; showing them a new way to look at their attainment.

This can mean telling them two or three things you liked about their work, and one suggestion for improvement. Some students may require very detailed and precise feedback. Some may only require "progressive hints" that help them explore and discover new ideas.

3. Encourage students to see assessments as part of the learning process towards mastery

With the Learn for Life movement, we want our students to learn because they are curious and interested to know more, not because they are chasing after marks. We want to provide them with autonomy – to feel in control of their learning

For all the assessments we want to do, it must be to help students gain mastery. The assessment tasks we design must give them the opportunity to talk about their learning and set goals, and to attain successes. Otherwise they may give up, and that's when you lose them.

Ultimately, we should help them make connections between their school work and the contexts they can apply their learning to, and give them confidence to do so.

that's not captured by marks, scores and grades? "First, teachers have to be adept at formative assessment," says Mdm C Devi, Year Head for Lower Primary.

"They do this daily with their students," she says, "by determining each student's level of understanding, identifying gaps in learning, and planning their next lessons accordingly."

Second, teachers give students feedback that are both quantitative and qualitative. Mdm Devi says, "For example, in assessing continuous writing pieces, an English teacher will give marks based on a set of rubrics, as well as specific comments. Students will know exactly where they can improve in their next writing piece, and teachers may follow up to discuss what they can do to enhance their writing.

"A Mathematics teacher, for example, might group students to practise sums from a previous lesson while students who have gotten it can try their hand at more challenging questions," explains Mdm Devi. "The teacher may also assign confident students to guide their peers."

Let's look at technology

THE BIG IDEA

WOODLANDS SECONDARY — While a teacher could provide feedback to the class during lesson, not every student will actively engage with the teacher in a discourse about their learning.

So, how can teachers involve as many students as possible in classroom assessments? Like CHIJ Primary, Woodlands Secondary has been experimenting with the Student Learning Space (SLS) as well. In particular, the SLS has been useful for Mathematics teachers to quickly collect data on students' grasp of the lesson material, and use the information to plan future lessons or support sessions.

HOW IT WORKS

In short, students may be given an assignment or quiz on the SLS. Their responses are captured in the SLS' "Monitor Assignment" page that teachers access. In it are summary diagrams that show individual and overall performance of the class for that task. For each item in the quiz, a percentage bar tells teachers how many students got it correct, partially correct, or wrong; the bars are coloured green, yellow and red, respectively.

Ms Goh Hui Shi, HOD for Mathematics, says, "Questions with a greater amount of 'red' responses indicate areas that the class has difficulties understanding, and teachers can adjust their approach and address these learning gaps in the subsequent lesson before moving on."

She notes that this is especially crucial for Mathematics – a subject where students will revisit the same topics throughout their four to five years in secondary school, but with increasing complexity. This ensures that their understanding of basic concepts is sound, so they can build on that knowledge.

OTHER IDEAS

"Teachers also use various questioning techniques to check for understanding, provide feedback and close gaps using more examples or analogies," says Ms Goh.

For example, in a one-hour lesson on trigonometry, a teacher might break it up into three segments. The first is used to determine students' retention of concepts taught in previous lessons. Second, students are shown the day's success criteria, and may be given a novel problem to solve in groups. For instance, showing whether a triangle can or cannot be created given limited information, without any diagrams. (Editor's note: basic math for navigation and astronomy). Then, the class discusses the validity of each other's mathematical reasoning, which the teacher uses to assess their learning and give feedback based on the success criteria. Finally, the teacher introduces the more complex concept of inverse trigonometric functions, which can be used to find the values of unknown angles.

Ms Goh explains that this is what an "assessment-feedback-learning cycle" looks like. The idea is to sequence the lesson such that teachers are continually assessing students' learning, and intervening as needed to help them grasp or apply a given skill. "On top of that," she adds, "it is essential that teachers build students' ability to make sense of the feedback, act on it, and conscientiously monitor and chart their own progress."

Common Concerns

Mrs Jane Soon-Du, Year Head at South View Primary, shares how she answers some questions frequently asked by parents.

1. Without test scores, how do teachers know whether students have acquired knowledge or skills?
We get students to share with us their thinking and understanding. For example, our school uses mathematics journals to make that thinking visible. There are many ways of solving a math question, and journals let students practise writing out the reasoning behind a math concept. When it's not written clearly, that provides an opportunity for the teacher to reach out to explain and clarify the thinking.

2. What are schools trying to achieve through assessments? How do assessments help students learn better?
Schools are assessing children not only in academic areas, but also on personal qualities and learning dispositions, such as motivation, teamwork, communication, and self-management. Teachers monitor children's growth in these areas and provide feedback. Managing self, for instance, will include whether children submit work on time, how complete it is, and their daily attitude towards learning. When used in such a manner, assessments help build students' intrinsic motivation to learn by developing them into self-directed learners.

3. With fewer examinations, how will children know to "endure" a long exam, say go without a bathroom break?
We create opportunities for students to adjust to this over the years, from P3 to P4, to P5 and P6. The idea is to familiarise students with the way formal assessments are conducted, but with no added pressure. For example, prior to major examinations, we prepare children using pictures of examination settings. If toilet breaks are needed, they will know to ask for permission. Teachers also familiarise students with examination practices, such as leaving bags outside the classroom and only bringing in the necessary stationery.

Of her experience, Ms Goh says, when she initially gave students written feedback, many did not read it. So, she set aside some time in class for conversations on her feedback, which is based on a system of summary, explanation, redirection and resubmission – something educators know simply as SE2R.

"Students began to understand that the feedback given was personalised for them," she says, "on how they can make improvements to their work. By the end of the topic, students started coming forward to clarify when they did not understand certain phrases in the feedback."

In other words, assessment can be regarded as a learning opportunity for students, as much as it is a way to determine students' learning progress. Although tests and examinations still have their place, teachers are now using assessment in other ways to help students grow. There is no magic bullet, but rather a set of ideas and practices educators refine over time.

LET'S LOOK AT PLAN B

Let children learn from their mistakes? It is easier said than done, because it often requires us (as parents or teachers) to take a step back and let our young ones deal with challenges and setbacks. Two educators discuss how they create a safe space for students to find their own solutions.

Out, Out, Silly Tape!

BY **MISS GOH PEISHI**
HOD FOR STUDENT MANAGEMENT,
CRESCENT GIRLS' SCHOOL

While discussing a Chemistry homework question in class one day, I observed my students taking out correction tape to erase their answers and write down the model answer I had given on the projection screen. When I asked why they had removed their original answers, they said they thought it would be better to "refer to the correct answers when revising".

From the time I was a student, I have always believed that the best form of learning takes place when one is able to reflect on and learn from one's mistakes.

However, I realise that this is not something that comes naturally, especially for our younger generation. I have come across students who are unable to accept mistakes in their pursuit of perfection while some find it hard to move on from their 'failures' when things fall below their expectations. As I watched my students struggle and try to come to terms with accepting their mistakes, I felt I could do more to help my students learn to embrace failure as part of their learning.

Hence, I told my class, "In future, correction tape is not allowed in my classroom. I want you to leave your mistakes there as that is the best way to learn – to face up to your mistakes and learn from them."

In 2016, to facilitate the student's learning process and to allow them to track and learn from their mistakes, my team of Chemistry teachers and I initiated the use of learning audits. With my own classes, I also reinstated the use of exercise books for class assignments. Students have to use corresponding blank pages for corrections and this forces them to leave in their mistakes and track their learning. They are to take down

ILLUSTRATIONS **JOSEPH TEY**

explanations on these blank pages to understand why they got a question wrong.

The use of learning audits and exercise books made some of my girls uncomfortable initially. To encourage them to adopt the new practices, I shared good practices from their peers and commended students who made efforts to try and keep trying. I wanted to get them to reframe their mindset, by showing them that I was focusing on their learning process, not just the end results.

OPENING UP TO CHANGE AND UNCERTAINTY

To develop a growth mindset in my students, I need them to be comfortable with uncertainty and be willing to take risks. Hence, in one Lower Secondary Science lesson on separation techniques, I had my students carry out an experiment, before teaching them the theory.

I asked my students to work in teams to separate the mixtures provided and extract pure substances using simple materials such as aluminium foil and wash cloth. One such task would be obtaining water from an oil and salt solution mixture. Students then had to explain their methods. The practical, experimental lessons forced them to move out of their comfort zone and take charge of their own learning.

I constantly tell my girls that they should be willing to fail and start over again when things go wrong. During an overseas service learning trip, a group of students had to prepare classroom activities for children in a local school. Being unfamiliar and shy, the girls soon realised that it was not easy to engage the class of 20 to 30 children. They did not manage to execute their planned activities smoothly.

> "I ENCOURAGED THEM BY GETTING THEM TO UNDERSTAND THAT INITIAL HICCUPS WERE UNAVOIDABLE AND WHAT MATTERED MOST WAS THAT THEY MUST BE WILLING TO REVIEW THEIR PLANS TO BETTER ENGAGE THE CHILDREN."

During the first-day debrief, the students said they felt discouraged that the children did not seem willing to participate in their activities. They also faced difficulties communicating with the children.

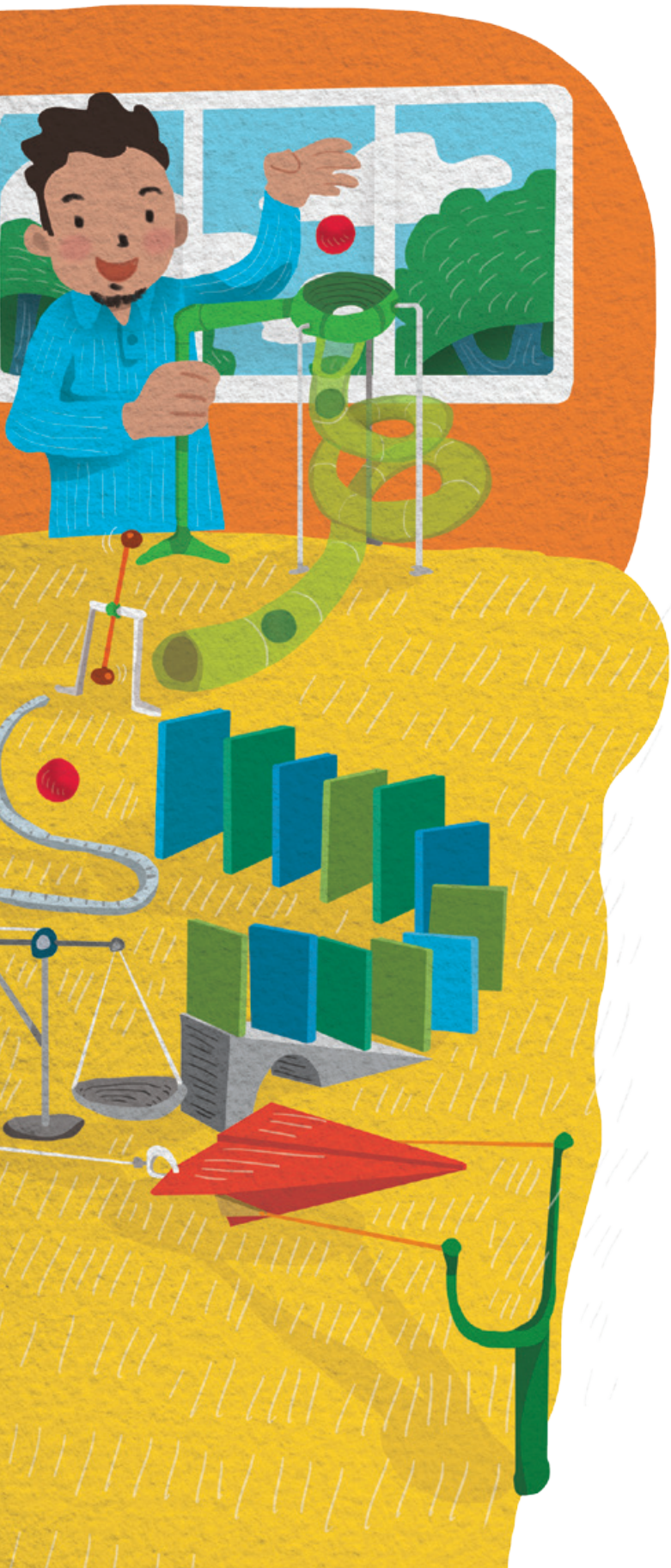
However, I encouraged them by getting them to understand that initial hiccups were unavoidable and what mattered most was that they must be willing to review their plans to better engage the children.

During the nightly debrief sessions, we looked at what went right in the day and what could be done better.

Towards the end of the trip, the girls gained confidence and were able to make adjustments to their activities according to the children's needs. Many of them shared that they were glad they did not give up when their plans failed at first.

It is always a joy to see my girls emerge as stronger individuals as they learn to be comfortable with uncertainty. They just need to take that first small step and get rid of their correction tape.

A version of this article was published in *Schoolbag.sg* with the headline "It all starts with saying "no" to correction tape".



Strivers, Follow My Lead

BY **MR MUHAMMAD KHALIQ**
SUBJECT HEAD FOR STUDENT MANAGEMENT, MERIDIAN SECONDARY SCHOOL

As the eldest in my family, I felt I had to be the role model of academic success. However, I did poorly in the Primary School Leaving Examination (PSLE), and was therefore unable to get into any of the secondary schools of my choice.

So, in secondary school, I gave my best in every single subject, and competed with my classmates to be the top scorer for all my tests. I believed, at the time, that life was about the survival of the fittest, and there could be only one path to success. I had to get good O-level results, go to a junior college, then university, graduate and hold a well-paying job.

With my determination, I indeed fared better in secondary school, but I had no clear idea of what my passion or interests were. I was discontented. Nonetheless, slowly, I began to step out of my comfort zone. Despite being adept in football, I took up rugby as my co-curricular activity.

When I was bored at home, I gathered items to create contraptions that were able to trigger the domino effect. Many years later, I learned that such contraptions are called Rube Goldberg machines.

Today, as a teacher, I aspire to be a guiding light and work to uncover students' potential, through designing engaging lessons that teach soft skills.

TEACHING VALUES AND LIFE SKILLS

I strongly believe in starting the class right. The first five minutes of each lesson are used to set the tone for the rest of the lesson. I will share nuggets of information that will enthuse my students and capture their attention, such as a recent football match, or the iLight exhibition at Marina Bay, or my determination to play football again despite my injuries and two knee surgeries.

Once, after a briefing on school discipline, I took time to explain the rationale of school rules to one of my classes even though it was time for their Science lesson. My students appreciate my efforts to bond with them and are comfortable to share their problems with me.

When I became my school's Subject Head of Student Management, I worked with my Head of Department to develop a programme to engage students with motivational and behavioural issues. We hoped to encourage them to do their best, beginning with after-school sports activities like floorball and futsal. We printed t-shirts with the name of the programme, 'STRIVERS', and students wore these with pride. After each session, they would surface to us issues they were facing, knowing that they were in a safe and supportive environment to share their growing pains.

Over time, participants began to encourage one another to do better, to come to school, and to behave well in class. Within a year, my colleagues started to see positive changes in the 'STRIVERS'. Besides improvements in their attendance and behaviour, they even began to positively influence others beyond the group.

I now lead a team of like-minded teachers to plan after-school activities that prepare Normal Technical (NT) stream students for life in our volatile and complex 21st century world. Through the Meridian Lighthouse Programme (MLP), each level of students focuses on different skills over 15 sessions, working towards a major activity at the end of the year.

Secondary 2 NT students, for example, have the chance to learn and practise skills such as map reading and currency conversion as they prepare to climb Gunung Lambak in Johor with their peers and teachers. They also appreciate how Geography, Mathematics, Computer Application, and English Language could be applied to daily life.

Aside from this climb, we also organise other exciting activities such as a round-island "Amazing Race" for Secondary 1 NT students, a two-day adventure trip to an organic eco-rice farm for the Secondary 3 NT, and a trek to Gunung Pulai in Johor for the Secondary 4 NT.

DIFFERENT FORMS OF SUCCESS

The programmes being implemented certainly have a positive impact on my school, and I derive great satisfaction from seeing the achievements of my students. When I look at them, I recall how narrow-minded my definition of success used to be. Now, I know better.

Success is seeing a student from a difficult family background pass her examination and further her studies. Success is when your student bids you a fond farewell after your last lesson for the year, lamenting how he would miss your Science lessons. Success is when students with disciplinary issues visit you on Teachers' Day and reminisce about the times you spent with them in class. Success is seeing the joy on students' faces every day as they attend school and greet you along the corridor when you do not even teach them.

Success is not the same for everyone but all teachers are the lighthouses that guide students to conquer challenges and find their own paths.

A version of this article was published in *Schoolbag.sg* with the headline "Being a lighthouse for my students".

Boost Your Assessment Power

As we nurture our students to learn for life, these are important considerations to guide our assessment practices.

Rethink These Practices

(a) During mid-year examination period, do we pause Teaching and Learning (T&L) for levels without mid-year examinations? (b) Do we conduct multiple exams or mock exams for graduating levels?

YES

a) This can result in less time for students to deepen their learning.

b) Teachers may spend more time setting and marking assessments, and less on analysing students' responses and closing learning gaps.

NO

GOOD PRACTICE:
When planning programmes and activities, schools should optimise time for T&L. Teachers should provide effective and timely feedback to address students' learning gaps.

Focus on learning for mastery through the formative use of assessment.

Do we schedule Weighted Assessments (WA) and Semestral Assessments (SA)
(a) too early in the term, or
(b) during the school holidays?

YES

a) Conducting assessments too early can result in less time for students to deepen their learning.

b) Testing students during holidays affect the well-being of both students and teachers.

NO

GOOD PRACTICE:
Schools should schedule assessments such that curriculum time is optimised for T&L.

Teachers should design lessons in a manner that ensures there is sufficient time within the school term to analyse students' responses and give effective feedback.

Do we use only academic results for class allocation, placement for subject combinations and subject-based banding?

YES

This can fuel an obsession on academic performance among students and parents; they will perceive assessments as having high stakes.

NO

GOOD PRACTICE:
Schools should encourage social mixing apart from ability grouping, and consider non-academic factors.

Avoid re-sorting students frequently to strengthen peer relationships.

GUIDING PRINCIPLE 1

Ensure manageable assessment load and demand on students – to support their learning and look after their well-being.

GUIDING PRINCIPLE 2

Design assessments according to the stipulated learning objectives in the subject syllabuses. Assessment should be fit for purpose and developmentally appropriate – to cater to students' profiles and learning needs.

GUIDING PRINCIPLE 3

Use assessment information to provide feedback to students, improve teaching and learning practices, and make sound school-based decisions. This includes triangulating data from multiple sources, without relying solely on quantitative data from tests.

Practices with Pros & Cons

Do we set overly demanding examinations to "scare" students into working hard, or apply overly stringent mark schemes?

YES

Such practices affect students' motivation and interest to learn. Some will turn to tuition for support, which may result in more drilling, and anxiety that can affect their overall well-being.

NO

GOOD PRACTICE:
Ensure content intended for upper levels is not taught and tested at the lower levels.

It is better to give students timely feedback, and provide opportunities for them to demonstrate how well they have learnt from their mistakes.

Conducting multiple bite-sized assessments

PROS

Builds a habit of regular revision. Provides more opportunities to check for students' understanding. Enables students to act on feedback provided.

CONS

May raise stress for students as they have to juggle tests, homework and other activities during the week if the load is not managed. Some may feel they need to consistently put in more effort for every piece of work.

GOOD PRACTICE:
Spreading class tests across the term could allow for deeper learning for each subject, provided students had sufficient time to learn before they are assessed.

For schools which are considering to conduct multiple bite-sized assessments, think about the overall assessment load on students.

Conducting Alternative Assessments (AA), e.g., performance tasks or projects, as Weighted Assessments.

PROS

Allows students to demonstrate their learning in different ways beyond what pen-and-paper tests could assess.

CONS

Requires considerable time and effort for teachers to design the tasks and/or projects, and for students to complete them.

GOOD PRACTICE:
Each assessment mode serves a different purpose and should be used appropriately, not just to add variety.

For schools which are considering to conduct AA, think about how to design AA to achieve learning objectives, and be mindful of the frequency and demand of AA on each student.

What's Not on the Test

A conversation with Ms Chan Wan Siong, Principal of Damai Secondary, on the guiding principles behind effective assessment practices.

PHOTOGRAPHY **VERNON WONG**

Last year was ground-breaking for Damai Secondary. After the merger with Bedok North Secondary, the school not only implemented Subject-Based Banding (SBB), but also took the opportunity to review its assessment practices – and removed mid-year exams for Sec 1 to Sec 3, beyond what the Ministry of Education is stipulating today.

Naturally, teachers were concerned about students coping with the changes and demands, and paid greater attention to how they were reaching out to the last student. The year-end results for 2018 provided that much needed relief and validation for their efforts.

"The removal of mid-year exams did not adversely affect students' progression rates and overall results," says the new school principal, Ms Chan Wan Siong. "SBB students not only moved on to take those subjects at the next level, some also transferred laterally into the course."

Crucially, without the mid-year examinations, teachers now had more time for their schemes of work, and more flexibility to try new ideas.

"We saved three to four weeks from having to prepare for exams, conduct the exams and do post-exam analysis," says Ms Chan. "The attitudes of students also changed. They do take the weighted assessment seriously, but we can now get students to look at studying and learning not from a grade or mark perspective, but whether or not they are preparing themselves well to move on to the next level."

> "IT WILL BE A PROBLEM IF THE TEST MARK BECOMES THE ONLY MEASURE OF LEARNING. OUR TEACHERS FOCUS ON WHAT MAKES STUDENTS INTERESTED AND MOTIVATED TO LEARN."

***Contact:* What's in the basket of assessment practices a teacher brings into the classroom?**

Ms Chan: It can be questioning techniques during the lesson, for the teacher to gauge whether or not the students are understanding, say, a new concept. By asking questions, and getting students to reflect on what is being taught, that is a kind of assessment. It can also be quizzes that teachers conduct in the interim, as part of the lesson plan. There are ICT tools that allow teachers to capture these responses quickly. It can also be group discussions, after a number of topics or concepts are taught. Assessment is an ongoing process, as part of the teaching and learning.

Of course, written assessment is another way, for instance when homework is assigned at the end of the lesson. However, the task or piece of written work must allow students to use and apply the knowledge that's learnt, and for the teacher to know whether the majority have gotten the concept.

***Contact:* What are the supports in place to refresh those practices?**

Ms Chan: There are standard courses by MOE that teachers attend. Within the school, we have timetabled time when teachers work with learning communities on tasks, projects or lesson packages they are looking to develop, or a new strategy they want to implement. It's a weekly thing, so teachers can enact a lesson, try out a method, and then discuss with their colleagues what worked, or not, and get new ideas.

They might talk about assessment as part of the lesson delivery; about pacing of the lesson and fine-tuning it based on feedback from students' reactions or responses. We also analyse tests and exam results at the department level.

***Contact:* How can teachers be more effective in using their assessments formatively?**

Ms Chan: It's a process that the school is working on. Teachers may be used to the old ways of teaching a topic and then testing before going to the next topic, sometimes re-testing. The frequent testing was to ensure we knew whether students are learning, and to prepare them for "The Test" or "The Exam".

But we want them to move away from that, to really help students understand: What is it they are learning, and why is it important? How does it feature in their lives, in society, and what does it mean to know all these things? Is what they are studying now connected to other subjects and disciplines?

***Contact:* How do teachers implement this in the classroom?**

Ms Chan: When we do our walkabouts, we don't need a quiet classroom. Sometimes, teachers have the misperception that when the principal walks past, all must be quiet. It's not true. When there's discussion, there will be noise, there will be excitement. That's what we want to see in the classrooms.

Students need to know that learning is about wanting to know more, beyond preparing for a test. It will be a problem if the test mark becomes the only measure of learning. It is not. When our teachers focus on what makes students interested and motivated to learn, many of them find that class discussions become very rich.

***Contact:* How do you guide parents who rely on test scores to track their child's progress?**

Ms Chan: Instead of a mid-year exam, we have two weighted assessments, in Term 1 and Term 2. Parents still see marks in the report book, but that's just one component of assessment. When we conduct Meet-the-Parent sessions in May, we remind parents that we're not inviting them to collect the report book. Rather, it's an invitation to have a personal chat with the form teachers, to better understand the progress of their child.

Let us affirm the strengths of the child, and talk about areas the child can work on, and what we can do together to help the child. This conversation happens with the child.

Fundamentally, this also means that teachers must know their students. They must know how to help students not just meet the minimum criteria, but also to go beyond and move on to the next level.

Making space

Youngsters want the room to explore, experiment and do things differently – sometimes outside our own comfort zones.

Julie Lythcott-Haims first observed over-parenting during her tenure as dean of freshmen at Stanford University. "In the late 1990s, the first of the millennial generation began going off to college," she wrote in her book *How to Raise an Adult*, "my colleagues and I at Stanford began to notice a new phenomenon – parents on the college campus, virtually and literally. Each subsequent year would bring an increase in the number of parents who did things like seek opportunities, make decisions, and problem solve for their sons and daughters."

Her book served as inspiration for the illustrations you see here. "Are you a helicopter parent?" made headlines when it was first published on Schoolbag.sg – the message resonated with many.

Interestingly, Julie also notes in her book, "Whereas once upon a time I was a dean at a highly selective university tut-tutting the behaviours of over-involved parents... I've slowly come to appreciate that I'm not much different from parents I once rather breezily chastised. In many ways, I am the problem parent I'm writing about."

It got us thinking: are we – as educators (and parents, for many of us) – also guilty of hovering over our young ones in a way that runs counter to raising a generation to independence? What is our role in these scenarios?

> "Whereas once upon a time I was tut-tutting the behaviours of over-involved parents... In many ways, I am the problem parent I'm writing about."
>
> **JULIE LYTHCOTT-HAIMS**, AUTHOR OF *"HOW TO RAISE AN ADULT"*

Do his Art projects for him so he can get an A for Art.

Debate with his teacher over one more mark so he makes it to the next grade up.

Fly to school with your child's homework when he forgets to bring it.

Have you found a balance between supporting your students, and giving them enough opportunities to solve their own problems and learn from make their own mistakes? Share your experience with us. Send your stories to **contact_online@moe.edu.sg**

Why not help your children fly on their own instead?

Let them...

Do their own homework.

Help them think through and arrive at the solutions, without feeding them the answers.

Stand up for themselves.

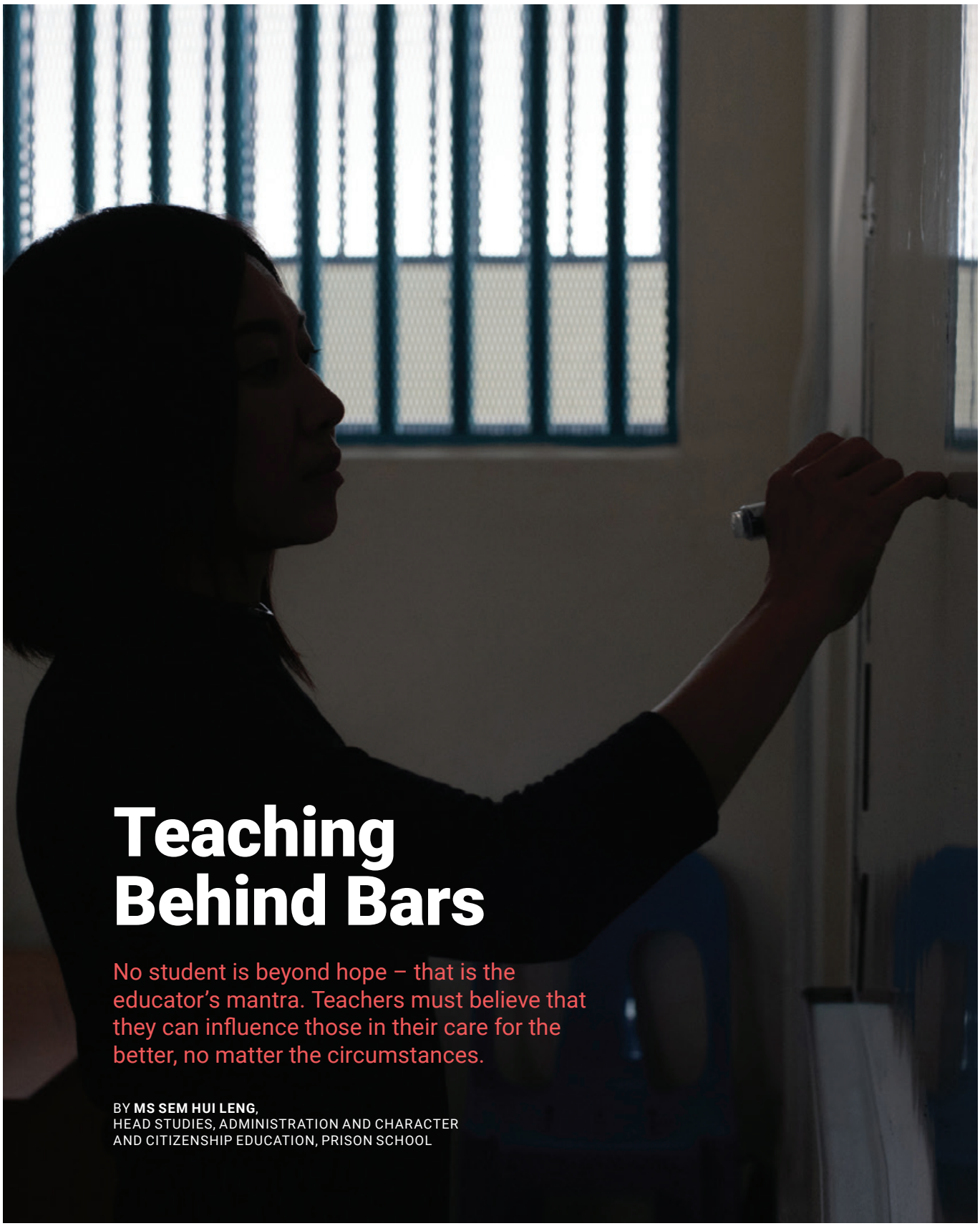
Forgot homework? They should face the consequences (and the teacher) themselves to build character.

Develop their own goals.

Avoid telling them how many marks you expect. Instead, guide them to set achievable goals and improve!

Know it's ok to fail.

Every mistake is a learning opportunity. Share how you've learnt to do so from your own stumbles.



Teaching Behind Bars

No student is beyond hope – that is the educator's mantra. Teachers must believe that they can influence those in their care for the better, no matter the circumstances.

BY **MS SEM HUI LENG**,
HEAD STUDIES, ADMINISTRATION AND CHARACTER AND CITIZENSHIP EDUCATION, PRISON SCHOOL

PHOTOGRAPHY **SINGAPORE PRISON SERVICE**

On my first day at Prison School, I was impressed that students in my Form Class took the rags and began cleaning the tables, chairs and windows. This was orientation day, and I hadn't given them any instructions.

Within a few minutes the thick dust that had gathered during the school holidays instantly vanished. Then, the students formed groups – one to discuss the design of our noticeboard; another set about painting murals on the walls.

In the months that followed, my students automatically collected learning materials for cellmates who were absent from lessons.

They cleaned the whiteboard for teachers without being asked, and grabbed the heavy stacks of worksheets from me when I stepped into the classroom.

All these little acts warmed my heart, and made my work at Prison School a pleasant one.

Teaching in prison is a race against time. We have to complete four years of secondary school curriculum within nine months. The Prison School's curriculum is compressed, allowing inmates to move on to more advanced levels in a shorter amount of time and allows for more inmates to benefit from the limited vacancies every academic year. So, every lesson missed is one too many.

The classes also comprise of students ranging from the ages of 17 to 60 and varying in the years since they last attended formal education. Their level of motivation to study also varies.

One teaching strategy that has worked well is peer teaching – where a student with better performance is paired with a weaker one. Stronger students feel more confident, with raised self-esteem when they get to tutor their peers. In turn, students with weaker performance benefit from one-to-one coaching.

Over the years, I also try to simplify explanations of concepts, and use relevant real-life examples that students can relate to. When teaching simple and compound interest, I infuse correctional education that informs the class that smoking is not only bad for the health of smokers and their family members, but it is also bad for their wealth. I got the students to work out the amount they could save if they do not smoke for 10 years and work out further how this sum of money will grow if they were to invest it with banks that pay simple and compound interests. Some were awestruck by the savings and told me that they will quit smoking.

Many of my students told me that they have never passed their Math examinations during their school life prior to prison. Some candidly shared that they hated the subject. So, a few months later, it was reassuring to hear the same students tell me that they have started to love the subject.

Although my students whine whenever I set them homework assignments (as you'd expect), they have never failed to complete and submit their papers by the deadline – some even earlier!

I only interact with the inmates during scheduled lesson and curriculum hours – unlike in mainstream schools where teachers can catch up with students after lessons end; students in Prison School are scheduled for other rehabilitative programmes. In a typical week, I spend four hours and 30 minutes (five to six periods) teaching Mathematics for one class, and another 90 minutes for Character and Citizenship Education (CCE) lessons.

Having spent six years teaching in Prison School, I've seen education serve as an opportunity for students to turn their lives around. It is a social leveller. For inmates, it helps them build a better future for themselves and their families; to become more responsible, resilient and valuable members of the community upon their release.

I taught Ethan (not his real name) in 2016 when he enrolled for the O level examinations in Prison School. He was incarcerated for drug and criminal charges and was released in December 2017.

Although he struggled in his studies initially, he persevered and performed well in his O Levels and subsequently his A Levels in 2017. He also participated in the National Youth Achievement Award (NYAA), an experience that he says, taught him valuable problem-solving skills. He is currently pursuing his degree in NUS. He believes that with a positive attitude and a strong mind-set to persevere, one will definitely see the outcome of his labour.

Ms Sem started teaching with MOE in 2000. She joined the Prison School in 2014.

STEPS TO WORKING WITH STUDENTS IN CHALLENGING CONTEXTS

1. **Establish clear boundaries** that youths feel are fair, reasonable and can be applied consistently right from the start. If possible, involve them in the setting of ground rules, which makes students more likely to keep their word. And always make sure you state the consequence of breaking the rules.

2. **Consider the student's perspective**, and show empathy. If they are willing to share, offer a listening ear. You need not comment or give advice. Your aim is to let him or her feel at ease sharing their thoughts and struggles.

3. **Never give up**. Work towards recognising and nurturing potential talent in the students.

4. **Build rapport and a good relationship**. Winning their trust and respect makes them more willing to connect with you and heed your advice.

EXAMS SHOULDN'T MAKE CHILDREN CRY

Ms Tan Lay Choo, the retired Chief Executive of the Singapore Examinations and Assessment Board, offers some parting thoughts on stretching students without demoralising them.

PHOTOGRAPHY **VERNON WONG**

What is the standard of a good test? "As a young teacher in the 1980s," says Ms Tan Lay Choo, "we were taught that a difficult test is a good test. I took pride in setting a test that, somehow, a lot of my students couldn't do."

Ms Tan majored in Mathematics, at the then University of Singapore. She graduated and started teaching in 1981. She describes her first batch of students at the Chinese High School as "bright kids". Allowing herself a wry smile, she continues, "and a good test for bright kids was pretty challenging."

But only up to a point.

"It was on personal reflection that I realised this is not quite right," she says. "If I did this as exercises in class, it's good. It's formative when I followed up, got feedback, and gave them feedback. But doing it for an exam, and putting that grade in the report book, that's probably not right. That's not their standard, or the expectation for that level."

She subsequently spent a bulk of her career working in MOE's headquarters – 13 years planning the curriculum and development of the Gifted Education Programme, two years in manpower planning, four years as Principal of Bukit Panjang Government High, a year as a Cluster Superintendent, and four years as Deputy Director of Psychological Assessment and Research, which included two years' double-hatting as Deputy Director of Psychological Services.

Her last 11 years were at the helm of the Singapore Examinations and Assessment Board (SEAB). Her appointment as Chief Executive in 2008 coincided with the 'Teach Less, Learn More' initiatives steadily rolled out by the ministry, amid growing concerns about Singapore's over-emphasis on academic performance. A national preoccupation that centres around the Primary School Leaving Examination.

SITTING FOR TEN YEARS OF PSLE PAPERS

"As a student, I never liked exams," says Ms Tan. "Even when I was good in math, I got exam anxiety. Being involved in SEAB, the PSLE seemed to be the most painful exam, not just for kids, but parents as well. I heard about kids crying, I heard reports of 'killer' questions, and I wondered, do I really know what the kids experience when they take the test?"

So, when it was time for Ms Tan as the new SEAB chief to review the PSLE papers, she started by setting aside time to "do it like a kid".

"My first look of the paper is very precious," she explains. "I time myself to see how long I take to do the tests. I try to read slowly and write neatly. That's when I see the load. I experience what it's like just responding to the question."

In her subsequent reviews pf the paper, she is SEAB – looking after all the technical aspects of the one assessment that sums up a child's six-year journey through primary school. Is it a good question? Is it aligned to the curriculum? Is it in the syllabus? Are we testing language or testing math?

Eventually, she told the exam-setters, "No paper should make kids cry."

Ms Tan explains, "If you don't know that you don't know how to do a question, you'd give a wrong answer, but you'd still try. But when you're totally stumped, then you cry."

She led SEAB to develop PSLE questions that are still challenging, but with invisible scaffolding. "At least, they can get started," she says. "Kids will feel, 'I can do part one, just not part two.' But part one may give them a hint to part two and so on."

With summative assessments, Ms Tan sees a chance to "make exams a more human experience" instead of treating it as a technical tool, and encourages her staff to see examinations from the students' perspective.

She says, her role as chief executive of SEAB is not about what she can do for exams, per se. "It's what I can do for the kids. I never see assessment as an end in itself. It's a means to communicate to students what they've learnt. A human being is involved. We always have to be mindful of this interaction between a person and the exam or test," she explains.

"I HEARD ABOUT KIDS CRYING, I HEARD REPORTS OF 'KILLER' QUESTIONS, AND I WONDERED, DO I REALLY KNOW WHAT THE KIDS EXPERIENCE WHEN THEY TAKE THE PSLE?"

"At the end of the day, I remind the setters, there's a kid who is answering your question. This is more than just setting good exams to give a mark or grade to decide on the fate of the kid."

At age 61, Ms Tan is officially retiring after 37 years in the education service. If the start of her teaching career was marked by the introduction of streaming, her retirement in 2019 takes the journey one full circle, with the phasing out of streaming.

"MY TEACHER DID SUBJECT-BASED BANDING!"

On the concept of subject-based banding, she has a personal account to illustrate its benefits – from the 1960s.

"Actually, my teacher did subject-based banding," Ms Tan says, recalling her primary school days, "or something almost like it." It was her mathematics teacher, in particular, who had to manage a class of students with varied motivations, capabilities and family backgrounds.

Her teacher would bring three boxes of cards, with math questions pitched at different levels – each box was a different colour. She would teach a concept, and then task the class to take a card from one of the boxes to work on. After solving the math problem (rightly or wrongly), students brought their work to the teacher for marking, and then they would be asked to take another card to work on.

"It turns out that she was differentiating her lessons," says Ms Tan. "At that time, very few primary school children had gone

to kindergarten; some were totally averse to school and tried to run away. That was a skilful way in trying to deal with a wide range of students, systematically. We didn't feel like the teacher was teaching anyone differently, but she was."

Ms Tan had been taking cards from the red box.

"One day, my teacher told me, 'Go to the green box and take another card.' I went to the green box, but there were no more cards. I'd finished all the cards there." What her teacher did next was most illuminating.

"She said, 'Okay, I'll give you something else to do. I'll give you a blank card, and you try to come up with a set of math questions that look like the cards from the green box, but change all the numbers. The condition is you must be able to solve them.'"

For Ms Tan, this was a shining example of challenging all the students – and not just some – to be as good as they can be. "I was quite happy making cards for her. I didn't know I was already setting questions when I was in Primary 4," she says. "For many years, it didn't occur to me how significant this was," she says. "In the sense of how much you can learn from the teacher depended on you, even beyond what she brought to class."

Like subject-based banding, it is about giving students the opportunity to demonstrate their best effort.

THE NEXT FRONTIER FOR ASSESSMENT

Singapore's education system has evolved, so too must assessments. "It is a natural cycle of events," says Ms Tan. "We've developed our curriculum, we've grown pedagogy, now there's a lot of potential to grow our assessment skills." The next frontier, she says, will be centred around 21st Century Competencies (21CC).

Before the internet, exam-setters were focused on testing for facts and procedures. Examinations, in turn, were the standard for good assessment. "As students, we relied on the ten-year series as a reference point, and some of us kind of became the teachers that did as well," jokes Ms Tan.

"It's only in the last decade or so that we talked a lot more about the importance of assessment for learning," she says, "about using assessment to facilitate learning, and how to differentiate between standardised summative exams versus school-based exams."

This is more crucial today than before. Not all learning outcomes for the 21st century competencies can be assessed using written examinations only. Competencies such as collaboration and creativity can only be assessed by teachers in the classroom.

Today, these are infused into Singapore's mainstream curriculum under the 21CC framework. What's interesting, however, is that many of these ideas started in the Gifted Education Programme.

The GEP began in 1984, the year Ms Tan got posted to work on it. "We started things like project work, collaboration, research skills," says Ms Tan, "and it pushed us to think about how to assess thinking skills. We talked about skills like 21CC, but didn't call them that."

Over the years, many of these initiatives were cascaded into mainstream schools.

"Today, project work is in every school," Ms Tan says. "When it was first introduced in junior colleges, teachers had to grapple with assessing skills that don't have right or wrong answers. They had to grapple with assessment of work done in groups, looking at student behaviours and oral presentations. It took about a decade for teachers to get used to these things."

"NOT ALL LEARNING OUTCOMES FOR THE 21ST CENTURY CAN BE ASSESSED USING WRITTEN EXAMINATIONS ONLY. COMPETENCIES SUCH AS COLLABORATION AND CREATIVITY CAN ONLY BE ASSESSED BY TEACHERS IN THE CLASSROOM."

In the middle of her posting, she pursued a Master's degree in education evaluation and research at the University of California, Los Angeles. She returned to the Gifted programme, to evaluate and develop it further.

The juice was worth the squeeze. By the early 2000s, Singapore was ahead of the curve. "I remember Hong Kong came to learn from us," says Ms Tan, "and then they introduced independent research as one of the qualifications for a new diploma.

"Subsequently, I hosted the South Australian Certificate of Education, and they introduced a form of project work in their examinations. More recently, Finland's head of the exam board and their equivalent of director-general visited us, too. They were all searching for ways to assess 21CC."

Now that Ms Tan has more time on the personal front, what is on her mind? She is searching for a deeper understanding of one competency that has intrigued her for decades.

"Creativity is still an elusive concept," she says, referring to her interest in Chinese ink painting (a hobby she has maintained for over three decades).

"The process is not very visible even to the artists themselves. If they become too procedural, they won't be happy with their work. They'd say, 'I can produce this one hundred times with the same level of consistency, but I'm not happy with it.'

I'm always fascinated by the concept, and the best way to understand it is to be involved in the creative field. I'm still in that pursuit. It's about personal creativity and the concept of creativity as a teacher. That's my next personal goal."

WEARING DIFFERENT LENSES

In reviewing the national examinations, the former chief executive of SEAB says she does three rounds. For each round, Ms Tan Lay Choo considers the perspective of different stakeholders.

Round 1: As the student
"My first look of the paper is very precious. I try to set aside time to do it like a kid. I time myself to see how long I take to do the tests. That's when I see the load. I experience what it's like just responding to the questions."

Round 2: As the Singapore Examinations and Assessment Board
"I'm SEAB, looking at all the technical things. Is it a good question? Is it aligned to the curriculum? Is it in the syllabus? Are we testing language or testing math?"

Round 3: As the general public
"I'll do one more round before we finalise the paper. I ask myself, if the public looks at it, can it face scrutiny? If you say a question is easy, but people say it's tough, is it because of the language?"

5 TIPS FOR A BETTER PHOTO STORY

A photographer's guide to using a series of images to bring a story to life.

TIP 01.
START YOUR STORY WITH AN ESTABLISHING SHOT
(Where is the place? What is the overall mood?)

TIP 02.
ADD AT LEAST ONE "WOW" PICTURE IN YOUR STORY
(Action/emotion/surprise/ OMG moments)

TIP 03.
TELL YOUR STORY WITH DETAILS.
(What are students actually working on?)

TIP 04.
ADD A BEHIND-THE-SCENES PHOTO IN YOUR STORY
(What happened before the event?)

TIP 05.
REMEMBER TO CONCLUDE YOUR STORY
(What happened in the end?)

Want more tips? Download our workshop notes at the 'Our Schools, Our Stories' website: www.moe.gov.sg/osos

OUTSTANDING YOUTHS IN EDUCATION

Adela Josephine Tandar
Juying Primary School

Martin Goh Poh Huat
Temasek Primary School

Joel Tan Han Rong
Fairfield Methodist School (Sec)

Abirami d/o Archunan
CHIJ (Kellock)

Kevin Joseph Francis
Spectra Secondary

Lim Wei Sheng
Jing Shan Primary School

Donica Tang Li Hui
Cantonment Primary School

Clement See Wei Liang
Compassvale Secondary School

Angela Ho Jiawen
Serangoon Garden Secondary School

Benjamin Pooi Ming Shurn
Chua Chu Kang Secondary School

Ow Yeong Wai Kit
Bukit Batok Secondary School

Lim Chuan Li
Temasek Junior College

Our heartiest congratulations to the recipients and finalists of Outstanding Youth in Education Award (OYEA) 2019! OYEA honours the achievements of young educators who have a passion and commitment to teaching, inspiring and nurturing their students.

Launched in 1999, it recognises young teachers for their youthful idealism, enthusiasm, energy and active involvement in the development of youth beyond the formal curriculum.

Look out for their stories on Schoolbag.sg!

Assessment in Progress

We need to change our language of communication with parents, away from… 'examinations are important and a lot is at stake'… to the question, 'What makes your child's eyes light up?'
– Minister for Education, Mr Ong Ye Kung, at the Schools Work Plan Seminar 2018.

ARTWORK BY **DON LOW**