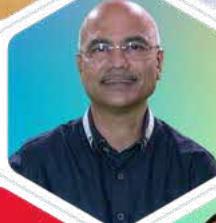


TEACH TO INSPIRE INSPIRE TO TEACH

PRESIDENT'S AWARD FOR TEACHERS 2022



20
22

TEACH
TO INSPIRE



INSPIRE
TO TEACH



TEACH TO INSPIRE
INSPIRE TO TEACH

INSPIRE



A TEACHER'S JOB IS OFTEN ASSOCIATED WITH HARD WORK AND SACRIFICE, AS WELL AS JOY AND FULFILMENT. AS WE CELEBRATE THE NOBLE WORK OF OUR TEACHERS, WE WOULD LIKE TO CAST THE SPOTLIGHT ON INDIVIDUALS WHO HAVE TAPPED THEIR DIVERSE STRENGTHS AND TALENTS TO COLLECTIVELY DEVELOP THE POTENTIAL OF THOSE UNDER THEIR CARE. TOGETHER, THEY ARE UNITED BY A COMMON MISSION – NURTURING THE LIVES OF OUR FUTURE GENERATIONS.

TEACH TO INSPIRE



INSPIRE TO TEACH

FOREWORD



Our teachers nurture their students' strengths and interests, cultivate important values, and inspire a love for learning through the rich experiences they provide in and beyond their physical classrooms. Their deep sense of conviction and exceptional dedication to constantly innovate and stay current help students to navigate the complexities of tomorrow's challenges and discover their sense of purpose.

As our education system shifts to become more flexible, inclusive, and diverse, the role of teachers becomes increasingly important. Beyond transmitting knowledge to students in the classrooms, teachers need to help students make sense of their world and acquire the critical skills to make decisions grounded on sound values. They do so by customising approaches in teaching and learning that support the varied learning needs of their students. In addition, by leveraging collective strengths in the fraternity to deliver quality classroom practices, teachers support one another to prepare students for possible future challenges in the world.

The 19th issue of *Teach to Inspire, Inspire to Teach* features the uplifting stories of 17 teachers who embody the ideals of passion, responsibility, care, and dedication as they lead, care and inspire our next generation of students. Their stories resonate with warmth as they demonstrate the purposeful and remarkable steps that they take to develop future-ready learners. I commend them for their pursuit of professional excellence in this meaningful vocation, and their unwavering commitment to helping our next generation succeed.

Congratulations to the recipients and finalists of the President's Award for Teachers 2022. May these stories inspire you even as you continue your noble pursuit to shape and mould the next generation of our country.

Lead. Care. Inspire.

Mr. Chan Chun Sing
Minister for Education

PRESIDENT'S AWARD FOR TEACHERS

The President's Award for Teachers was introduced in 1998 to recognise excellent teachers for their role in moulding the future of our nation. The Award is conferred by the President of the Republic of Singapore during the Teachers' Day Reception at the Istana.

These teachers inspire their students and peers, through their words and deeds. Since its inception, 120 outstanding teachers, including this year's recipients, have been recognised. They are caring and nurturing, dedicated to the holistic development of their students. Committed to developing their students to the fullest potential, they are passionate in adopting innovative approaches in their lessons. These teachers are also life-long learners and mentors to their peers.

These teachers are role models that exemplify the Ethos of the Teaching Profession.



PRESIDENT'S AWARD FOR TEACHERS RECIPIENTS

20
22

PRESIDENT'S AWARD FOR TEACHERS

RECIPIENTS AND FINALISTS 2022

GENERAL EDUCATION



PRESIDENT'S AWARD FOR TEACHERS

RECIPIENTS AND FINALISTS 2022

POST-SECONDARY
EDUCATION INSTITUTION



SINGAPORE EDUCATORS' PHILOSOPHY OF EDUCATION

ETHOS OF THE TEACHING PROFESSION

The Ethos is expressed in Our Singapore Educators' Philosophy of Education, the Teachers' Vision, the Teachers' Pledge, the Teachers' Creed and the Desired Outcomes of Education. Each of the above is an important facet of an integrated Ethos of the Teaching Profession.

The compass has been chosen to depict the facets of the Ethos of the Teaching Profession. Pointing to the true north, it symbolises the constancy of values in the lives of educators. New entrants to the profession are presented with a compass at the Teachers' Compass Ceremony.



Our Singapore Educators' Philosophy of Education captures the core beliefs and tenets of the teaching profession and serves as the foundation of teachers' professional practice.



The Desired Outcomes of Education establish a common purpose for the teaching fraternity, guiding educational and school policies, programmes and practices.



The Teachers' Vision articulates the aspirations and roles of the teaching profession, helping teachers to focus on what to do in pursuit of professional excellence.



The Teachers' Pledge constitutes an act of public undertaking that each teacher takes to uphold the highest standards in professional practice.



The Teachers' Creed codifies the practices of retired and present educators and makes explicit their tacit beliefs. It provides a guide for teachers to fulfil our responsibilities and obligations, and to honour the promise of attaining professional excellence.

TEACHERS' VISION

SINGAPORE TEACHERS: LEAD • CARE • INSPIRE

By word and deed, through the care we give, we touch the lives of our students. We make a difference - leading and inspiring our students to believe in themselves and to be the best they can be.

As individuals and as a community of professionals, we seek continually to deepen our expertise. Respectful of fellow educators, we collaborate to build a strong fraternity, taking pride in our work and profession.

We forge trusting partnerships with families and the community for the growth and well-being of each student.

We lead, care, inspire, for the future of the nation passes through our hands.

TEACHERS' *Pledge*

We, the teachers of Singapore,
pledge that:

We will be true to our mission to
bring out the best in our students.

We will be exemplary in the discharge
of our duties and responsibilities.

We will guide our students to be
good and useful citizens of Singapore.

We will continue to learn and pass on
the love of learning to our students.

We will win the trust, support and
co-operation of parents and the
community so as to enable us to
achieve our mission.



DESIRED OUTCOMES OF EDUCATION

The Desired Outcomes of Education are attributes that educators aspire for every Singaporean to have by the completion of his formal education. These outcomes establish a common purpose for educators, drive our policies and programmes, and allow us to monitor and assess the state of our education system.

The person who is schooled in the Singapore Education system embodies the Desired Outcomes of Education. He has a good sense of self-awareness, a sound moral compass, and the necessary skills and knowledge to take on challenges of the future. He is responsible to his family, community and nation. He appreciates the beauty of the world around him, possesses a healthy mind and body, and has a zest for life.

IN SUM, HE IS...



a confident person who has a strong sense of right and wrong, is adaptable and resilient, knows himself, is discerning in judgment, thinks independently and critically, and communicates effectively;



a self-directed learner who takes responsibility for his own learning, who questions, reflects and perseveres in the pursuit of learning;



an active contributor who is able to work effectively in teams, exercises initiative, takes calculated risks, is innovative and strives for excellence; and



a concerned citizen who is rooted to Singapore, has a strong civic consciousness, is informed, and takes an active role in bettering the lives of others around him.

POST- SECONDARY EDUCATION PHILOSOPHY

TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING LANDSCAPE IN SINGAPORE

One of the key roles of the polytechnics and ITE is to equip students with industry-relevant and work-ready skills in order to prepare them for jobs in a wide range of economic sectors. Looking back at Singapore's history, as our economy developed, skills training had to be conducted in tandem with evolving industry trends for the workforce to respond nimbly to market changes. To meet the training needs of our workforce, the five polytechnics and ITE were set up over the years to spearhead technical and vocational education and training (TVET) in Singapore.

- ★ The polytechnics and ITE offer a comprehensive range of programmes in a variety of sectors. These programmes adopt an industry-focused and practice-oriented curriculum that blends theory with application.
- ★ Industrial attachments have become an integral part of the curriculum over time, to allow students to gain valuable on-the-job experience.
- ★ Course offerings equip students with skills that are versatile and adaptable to the evolving needs of the future economy.
- ★ Innovation and entrepreneurship are emphasised to give students an entrepreneurial outlook and build their awareness of opportunities in emerging growth areas.

TEACHING IN THE POST-SECONDARY EDUCATION INSTITUTIONS

Preparing Students for the World of Work

Educators in the polytechnics and ITE play a big part in preparing their students for the future. Educators do not adopt a single approach, or a fixed set of methods to train students. Instead, they experiment, refine and share their experiences with the community of educators within and across the polytechnics and ITE. Their lessons are designed to engage students in their course of study, and encourage them to apply their learning at the workplace and to give back to society.

To continually enhance their students' learning experience, educators in these institutions stay up-to-date on industry trends and developments. Some also further their studies or take on courses to deepen their own skills in teaching, and some go on industry attachments, epitomising the spirit of lifelong learning.

SkillsFuture

The SkillsFuture movement, a national movement to provide Singaporeans with the opportunities to develop to their fullest potential throughout life, regardless of their starting points, has a significant impact on our education landscape and workforce. Educators in the polytechnics and ITE play an important role in this movement. They guide their students in their education, training and career choices and what it means to be a lifelong learner.

Educators in the polytechnics and ITE also contribute to the development of a high-quality system of education and training that caters to those already in the workforce. This includes training workers who wish to upgrade and deepen their skills to expand their job scope, or take up job opportunities in other industries. With the transformation of our economy, training needs will keep evolving and take on different forms. The role of our educators will become more important than before.

Our educators in the polytechnics and ITE are critical pillars of our TVET system. Their selfless dedication and commitment to maximise the potential of every student is a key reason behind the success of our institutions. As we look ahead, we are confident that our educators will take our TVET system to greater heights.

STORIES OF RECIPIENTS & FINALISTS 2022

MS HU LEONG HONG PAULINE (ITE College East) P52

MR TAN HUI MIN (National Institute of Early Childhood Development) P88

MR LIN SHAOJIE (Riverside Secondary School) P24

MDM CHEONG MAY FUNG, BEVERLY (White Sands Primary School) P34

MS TAY HUI CHENG (St. Anthony's Canossian Secondary School) P20

MDM CHAN WEE TENG DAWN (Dazhong Primary School) P60

MR NASRUN BIN MIZZY (Teck Whye Primary School) P56

DR TAY MIA ENG (Nanyang Polytechnic) P74

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MR LIEW WEI SHENG (Yuan Ching Secondary School) P78

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HARNESSING *Technology* IN TEACHING AND LEARNING





★ RECIPIENT

TAY HUI CHENG

HEAD OF DEPARTMENT,
MOTHER TONGUE
ST. ANTHONY'S CANOSSIAN
SECONDARY SCHOOL

SHE PUTS THE GO! INTO LEARNING CHINESE

When Mother Tongue educator Tay Hui Cheng produced a mobile app game and videos to make Chinese lessons fun, she uncovered tech talents she never thought she had.

Qing Long, your green dragon, grows in power if you pick the right Chinese word for your answer. Rearrange a sentence correctly and Zhu Que, your phoenix avatar, takes flight!

The characters borrowed from the world of Chinese mythology are brought to life in an online game produced by educator Tay Hui Cheng to – yes, you guessed right – to help students learn culture and language all in one app.

Hui Cheng, the Head of Department (HOD) for Mother Tongue (MT) at St. Anthony's Canossian Secondary School, is the brain behind the innovative game titled Chinese GO!, which was designed in 2018 to help students master the Chinese language progressively through gamification.



“ If the clips are meant for the students to watch and learn from, the students must want to watch it, and it is my job to create the most engaging videos I can. ”



During the COVID-19 pandemic, she also developed engaging Powtoon video clips for the same purpose – to make Chinese language learning fun for her students away from the classroom. With online learning, she found that she could not teach the way she used to and needed lots of engaging classroom activities to keep lessons interesting. "Every subject was basically fighting for air time and attention from the children, and my recorded Chinese lessons were simply not getting watched," she shares with disarming honesty.

As HOD, she knew that she needed something radical to grab students' attention and hook their interest. Since the students were digital natives who had grown up with technology, she wanted to deliver her lessons in the most engaging manner, leveraging the affordances of technology. While this was outside her

comfort zone, she realised it had to be done. She had to find the resources and inspire her team to create the content.

Hui Cheng taught herself how to use the apps and programmes to produce the clips. These clips comprised infographics, mindmaps and statistics to familiarise students with current affairs and equip them with key Chinese vocabulary to become effective communicators.

Each eight-minute Powtoon video clip took up to three days to produce, as Hui Cheng aimed for clean and crisp audio tracks and smooth transitions from segment to segment. How did she pick up the skills for this? From YouTube! "If the clips are meant for students to watch and learn from, the students must want to watch them, and it is my job to create the most engaging videos I can," she explains matter-of-factly.

None of these materials went to waste when the pandemic restrictions were lifted and students could attend school in person. Because of how engaging the materials were, they were readily incorporated into the department's bank of hybrid teaching resources.

BRINGING TOGETHER TALENTS FROM ACROSS THE TEACHING STAFF

Back in 2018 before the pandemic, Hui Cheng was already exploring ways to engage students using technology. The app, Chinese GO! has all the gamification features that draw students in. As students complete topical bite-sized Chinese language tasks, such as fill in the blanks and cloze passages — the kind that students typically drag their feet at completing in real life — they earn experience points. This motivates them to do more of the tasks to earn more points to level up and evolve their characters.

These tasks were created by Hui Cheng and her team. It was no mean feat considering the scale of it. They came up with 800 different vocabulary cards spread across over twenty broad topics, for the students to learn key vocabulary and skills. The teachers also recorded the accompanying audio clips.

This project then extended beyond the Mother Tongue department.

"Staff from different departments came together to volunteer their knowhow," says Hui Cheng. "We had a young Music teacher who composed the original background music for the game; English teachers who provided the English voice-over for the promotional video and helped me to clean up the sound quality of the trailer; and we even had an Art teacher who linked me up with the ex-student who ended up designing the characters in the game. I may have come up with the idea, but it was really the school's effort. I'm really very grateful."

Students were directed to download and use the game, with subscriptions paid by the school. The eEnd user survey shed light on students' reception and areas for improvement which helped the team make refinements. Hui Cheng learned from a student that her classmates designated every Tuesday "Speak Chinese Day" as a result of their interest in the game. "And she wasn't even a student I taught!", Hui Cheng shares with delight.

"I always tell my students that the game is truly born out of love for them from all the teachers in the school!" she says cheerily. This

teaching and learning innovation went on to clinch the Innergy Gold Award in 2018 and has been evolving since.

Here's another pleasant surprise: students whom Hui Cheng does not teach will approach her to thank her for her efforts in producing these resources and developing Chinese GO! for them.

For all these tech solutions, Hui Cheng is quick to add that she is no tech whiz in disguise: "I don't even have an active Facebook account!" she confesses with a laugh. Then what made her venture into producing her own tech-powered materials and how did she pull it off? "Because I find that it is the best way I can think of to help my students learn Chinese."

DIFFERENTIATED LEARNING AND EMOTIONAL READINESS

Scratch any thought of technology being cold. When Tay Hui Cheng talks about the mobile game she invented to teach Chinese, she exudes the warmth of a mother excited to connect with her teens on their favourite platforms.



Language mastery aside, Hui Cheng, who has 18 years of teaching experience, believes it is her job as a teacher to help her students be emotionally ready to learn. "Students who come into the classroom with an unsettled heart and clouded mind will not be able to learn properly."

It is little wonder then that Hui Cheng's classroom lessons are often life lessons in themselves. She may bring up news items for discussion, or matters that may affect the students' mental health. This opens channels for communication and avails help to any student in need. Some students have responded by privately approaching her for advice and emotional support.

Says Hui Cheng, "I went through a tough time making friends when I had to change classes in Primary 6, and felt really down and alone. While I managed to pull myself out of that state, it was really hard. It is my wish that my students will never have to go through what I went through."

"People don't care how much you know until they know how much you care". This quote from Theodore Roosevelt explains why Hui Cheng goes the extra mile, which includes customising prayer and motivational cards for her students in the Catholic school.

"This is my way of helping students feel that they are noticed, that I care for them. I believe that all these little efforts will ultimately motivate them to learn better, because they feel like they are cared for."



"I really enjoy Mdm Tay's Chinese lessons. They are always fun and never boring! She keeps us engaged throughout by getting us to participate in class... Beyond my grades, she cares about my mental health and emotional well-being too."

Zheng Xinglu, 17

Secondary 4,

St Anthony's Canossian Secondary School



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BACK



RECIPIENT

LIN SHAOJIE

LEAD TEACHER, MATHEMATICS

RIVERSIDE
SECONDARY SCHOOL

RIGHT MINDSET, RIGHT TOOLS, RIGHT RESULTS

Putting students at the heart of his teaching, Mathematics educator Lin Shaojie designs innovative lessons with transformative use of technology.



Inside Riverside Secondary School's library, an Additional Mathematics lesson was in session. The air was filled with the quiet buzz of conversation as 40 Secondary 3 students worked on some mathematics equations.

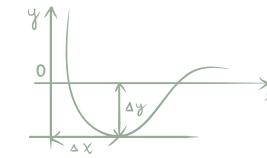
Working on their Personal Learning Devices (PLDs), the students moved seamlessly between different applications to extract data, analyse trends, construct theories and develop concepts. Occasionally, teacher feedback popped up virtually, to guide without giving away the answers.

Seated beside some of the students and observing them first-hand were UK experts from the Cambridge University Press and Assessment; the educators were on a learning trip to Singapore, hosted by the Singapore Examinations and Assessment Board.

"It was an honour to share how teaching and learning takes place in a one-to-one learning environment, with seamless interactions between my students and me, and their thinking made visible to everyone in the class via technology", recalls Lin Shaojie, Lead Teacher in Mathematics at the school. He also recalls how happy he was that his lesson on Euclidean geometry went well. The students not only managed to crack the equations in the time given, but they could also explain confidently to the guests their groupwork routines and share their thought processes. "I felt so proud of them," he says without hesitation.

LEVELLING THE FIELD THROUGH TECHNOLOGY

What has been exemplary about Shaojie's classes is how the delivery of each Maths topic



“ Teachers must realise we are making a difference in our students' lives every day. Every decision we make – how we deliver content, the way we design lessons, the way we talk to them – must maximise the chance of success for each and every child. ”

is thoughtfully planned with the students' learning needs in mind, including selecting suitable ICT learning tools and a right blend of assessment-feedback practices to engage and guide them along.

For every lesson to pack a punch, Shaojie starts by sparking curiosity and clarifying the lesson's success criteria — what exactly the students need to learn and demonstrate by the end of the lesson.

By that, he is not just referring to the syllabus but what each student should take away in relation to that syllabus. He personalises his teaching. Shaojie creates check-in lists to elicit students' prior knowledge, and actively monitors his students' responses and assignments to check understanding. He also gives specific feedback both in real-time observations in class and online. Questions are included at the end of his worksheets for students to reflect on their own learning, and as a reflective practitioner, Shaojie also includes questions for his students to indicate the usefulness of his feedback to them.

This is where ICT comes in as a transformative tool, Shaojie explains.

At each lesson, he uses an app as a digital whiteboard to share his mathematical workings in real time with his students. He also captures screenshots of the students' work done on their



iPad to use as exemplars to affirm good work and address any learning gaps. Shaojie also records his lessons and his interactions with students in real time using another app and uploads these videos. Students can access these videos anytime, anywhere for their own revision.

In so doing, students who have difficulty in grasping certain topics or concepts can revisit past lessons to revise at their own pace. As the classroom interaction between him and the students is captured on the fly as the lesson progresses, students can visualise the concepts easily and follow the explanations independently.

The motivation behind Shaojie's efforts is student-centricity and an effort to promote students' metacognition. He wants the students to think about their own thinking and to take ownership of learning. With 1:1 learning, he is able to place the power of learning in each student's hands, with students actively monitoring their own progress according to their own learning pace and ability. Thus, this could level the playing field for them.

HE USED TO SCOLD HIS STUDENTS FOR GIVING UP

To Shaojie, getting a child to learn goes beyond the classroom – he wants to address their affective needs, which is why he puts

himself in his students' shoes to see things from their perspectives.

He says, "The biggest challenge for me is when my students say something is too difficult and they give up. I used to scold them for giving up without trying, but when I reflected on this, I saw that I was just shifting the responsibility of their learning away."

Setting assignments and tests on content that they were already struggling with also only served to reinforce their doubts about their own abilities. He decided to take a different tack – by reshaping their self-beliefs and helping them build small successes, one Maths problem, one assignment, and one test at a time.

Instead of using the traditional drill-and-practice approach to Maths learning, he diagnosed the root causes of his students' learning problems and addressed those gaps. He broke down mathematics concepts into parts, and carefully designed scaffolds in his teaching and learning materials to help his students build up their understanding part by part. Eventually, his students picked up the concepts and learnt mathematical reasoning skills. They gained confidence in their ability to apply his feedback and problem-solve more effectively, and the impact is evident in their fluency in and love for mathematics.

GIVING MORE THAN JUST A SECOND CHANCE

Another secret to Shaojie's effectiveness is not technology nor pedagogy but his ability to connect with students very well.

"They know I will always be there for them," he says of his students, especially those who misbehave in class. "With me, they will always get a second, third, or fourth chance. I go all the way because I want them to enjoy the class. I want them to understand that learning must continue no matter the circumstance."

Some years ago, Shaojie started the semester with a Secondary 3 student who had anger management issues. He was aggressive to the point of hurting his friends emotionally and physically. There were many unaddressed emotional issues. To build bridges, Shaojie made it a point to meet him every morning, to speak with him, but the boy just ignored him. Shaojie persisted and sat with him quietly,

with no judgement made and just offering a listening ear.

By the end of one semester, the boy warmed up to Shaojie and opened up. He took Shaojie's advice – to think first before he acts and to learn to control his impulsivity. He also thought about his purpose in life and how he wanted to spend his time. Gradually, he learnt to control his temper and presented fewer issues in school. Two years later, he graduated as the top student in his Secondary Five cohort and secured a place to study Nursing – the polytechnic course of his choice. So grateful was the boy and his parents for Shaojie's efforts that they nominated him for the President's Award for Teachers.

Shaojie's ability to connect with his students has not gone unnoticed by his school leaders. In 2018, he was appointed as the school's Special Educational Needs (SEN) champion, a role he cherished as he set out to create a caring and inclusive community around his charges.

This coincided with Riverside Secondary School's move to a Full Subject-Based Banding pilot school, where students with diverse learning needs were distributed across all classes. With greater awareness of SEN, more colleagues also sought out Shaojie for his advice and learning support tips. He guided them to do differentiated instruction and how to leverage on technology for assessment for learning.

Together with his school's Allied Educator for Learning and Behavioural Support and his fellow teachers, Shaojie put his planning prowess to work – to ensure the SEN students could enjoy the same opportunities as every other student in their class.

For wheelchair-bound students, for example, the teachers were intentional about meeting their needs, carefully thinking through and planning for their access needs, addressing specific learning issues as well as building confidence. This could include arranging for an extra seat for a chaperone in class, and even factoring in more time for travelling so they have the time they need to join in an activity.

ASSESSMENT IS THINKING ABOUT WHAT THE STUDENTS NEED

For Shaojie, teaching is the visible aspect of his commitment to his students. What goes on behind the scenes is knowing each student and

how he designs the learning experience for the students.

His deep expertise and passion in pedagogy and assessment – his colleagues recount in admiration how he has devoured over a hundred books on this area – led to his leading role in his school's Professional Development (PD) team and a role model to emulate.

Shaojie generously shares his ideas and resources and conducts many PD sessions for his colleagues. He takes the same empathetic approach he has for students with the adult learners too. He engages his colleagues in dialogue and is acutely aware that teachers have diverse PD needs. For teachers to see the relevance of his sharing, Shaojie often role models for them and invites them to be his critical friends.

Recently, he posed this question to the PD team in the school he is leading: How can we think more about what assessments can do for students' learning and less about what students should do for assessments? It captured the imagination and led to a mindset change and a number of refinements in existing lessons, because

the student is placed first before planning for activities and assessment tasks.

"Teachers must realise we are making a difference in the students' lives every day," he stresses, his quiet demeanour brimming with sincerity. "Every decision we make – how we design lessons to help students achieve the learning goals, how we ensure students learn not just the content but in the process, acquire the love of learning for the subject and the necessary 21st century skills, and how we talk to them to encourage their minds and hearts – must maximise the chances of success for each and every one of them."



"In every lesson, you can see the amount of effort Mr Lin has put in for all the worksheets, notes and learning activities he prepared for us. He is empathetic and see things from the students' point of view. This is very assuring, and I am comfortable to ask him questions when I am unsure of certain concepts. Mr Lin is also a very good listener who always has our best interests at heart. Mr Lin is not just a mathematics teacher; he has also taught me how to become a better learner."

Nailul Aqil Bin Hairul Hafis, 15

Secondary 3 student,
Riverside Secondary School



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CHRISTIAN JAMES SETHMOHAN

SENIOR LECTURER/ACADEMIC MENTOR,
SCHOOL OF MEDIA, ARTS AND DESIGN
SINGAPORE POLYTECHNIC

HIS LIFELONG-LEARNING RECIPE: LEARN, APPLY, REPEAT

After returning to school as an adult, media lecturer Christian James Sethmohan is a living example to his students on pursuing their dreams and staying abreast of developments in his field.

Movie magic is often a combination of the fantastical, technology and art. While Christian James Sethmohan wants his students at Singapore Polytechnic to understand the theory behind it, he reminds them that huddling behind a computer isn't enough to help them master the craft.

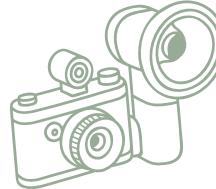
"I want my students to be constantly looking for opportunities to apply what they learn in the industry...I don't spoon-feed them," says James, who is Specialist (T&L) at Singapore Polytechnic's Media, Arts and Design School. The media arts being a fast-moving industry,

practitioners need to stay abreast of the latest technologies, companies and trends, he stresses. I always tell my students, "Don't just focus on the theory. Get out there, be connected and keep learning."

He himself stays connected — online and offline — with companies as far afield as San Francisco to keep up with the latest developments. It was through this kind of dogged sleuthing that led him to introduce cutting-edge projection mapping skills to his students years ago.



**“ Don't just focus on the theory.
Get out there, be connected and
keep learning. ”**



GRADUATING AT 33, LECTURING AT 45

A self-professed late bloomer, James shares readily with his students about the long journey he took to "keep learning". He passed his O Levels on his second try at 18 years old ("I played too much soccer"), but could proceed no further with his studies as he had to work to support his family.

After eight years with the Singapore Navy as a marine mechanical technician, he decided to feed his curiosity for filmmaking by joining Singapore Polytechnic's Educational Development Unit (EDU) as a technician, where he worked as a cameraman and video editor. Six years later, "I had a burning desire to go back to school", he shared, explaining how practical experience gave him clarity about this next phase in his career.

The polytechnic granted him a partial sponsorship to study mass communications in Perth. To fund the rest of his expenses, he and his wife sold their three-room HDB flat and a van.

At 33, he graduated with distinction and earned a place on the Vice Chancellor's list — "I really wanted to make my mum proud!" he shared with glee.

Back at the Polytechnic in an enhanced role as a Media Producer, James didn't stop stretching himself. While keeping his day job, he started teaching evening classes on video production for adult learners.

The satisfaction he got as an educator convinced him that a new career was in store. By 2007, he was lecturing fulltime at the School of Digital Media and Info-comm Technology (DMIT). After obtaining a full sponsorship to pursue a Masters in Visual Effects in Canberra, he returned a year later to take up the role of Course Chair for the polytechnic's new Diploma in Visual Effects and Motion Graphics course, a role he held for six years.

GET BUSY, BUILD YOUR NETWORK

James' adventures in work and education explain why he pushes his students to widen their learning circles, network for contacts, and take up industry projects — you don't know what you can do till you try.

These days, he teaches mostly Year 1 and 3 students, and constantly sources for project opportunities with external partners so his students can apply what they learn in the classroom. Besides, learning to cope with the pressures of the real world is valuable for them, he adds.

He cites a recent project on motion capture, a new technology that is taught in the curriculum.

A local publication had invited James and his colleague for a real-life project where the students analysed the smashing strokes of Singapore's first badminton world champion Loh Kean Yew.

"Basically, we put motion capture sensors all over his body, then we got him to smash the shuttlecock repeatedly – 11 times actually – so we could translate the movements into 3D animation," said James.

It was the first time his students got to put what they knew about motion capture into action. To boot, they were so thrilled by the experience that they went into independent research on the topic.

James' philosophy is straightforward: The more projects you do, the more you'll learn.



"I grew professionally because I was willing to try new things all the way," he says.

He shares the experience of a two-student team whom he mentored for their final-year project in 2020. The students were keen to create a video project on the impact of drug abuse on youths, but he challenged them to try a less conventional format – projection mapping, where video images are projected on 3D surfaces from as small as one's spectacles to as large as whole buildings (think Singapore Night Festival installations).

The technology was relatively new and the equipment needed was costly, so James sourced for an alternative equipment from San Francisco and gained the interest of the Central Narcotics Bureau for their Anti-Drug Abuse Campaign. The end-result was an art installation titled Monomania, released nationwide in 2021.

QUOTING FROM REAL LIFE

James' early start in the workplace has played a significant role in shaping his practical approach to education.

It also provides plenty of material for his lectures – James is big on story-telling to engage his students. Whether it's to catch the attention of a distracted class, or to motivate them, he has realised that the young adults respond better to anecdotes than instruction, especially when the stories come from his personal experience.

"I share from the heart – about myself, and how I pressed on to be where I am today,"

he says. When his own stories don't cut it, he draws from the lives of famous people like Nelson Mandela and Beethoven.

"Put her in one of the most poverty-stricken places on earth, and you have Mother Teresa. Take away her hearing and speech, and you have Helen Keller," he quotes from a friend's book of wisdom. "When my students work a bit harder and complain, 'oh, I'm so tired', I will tell them, 'every one of these famous people had to fight against great odds; success was never handed to them'."

"They listen, and I'd like to think that all my sharing helps them on their learning journey."



"We always look forward to his lessons. His teaching is solid – that's why so many students respect him, and most of us excel in his modules."

Joel R Stanley, 23

Year 3,

Diploma in Visual Effects and Motion Graphics, Singapore Polytechnic

BUILDING CONFIDENCE
AND TRANSFORMING
LIVES THROUGH A

CULTURE OF *Care*





★ RECIPIENT
CHEONG LEAD TEACHER,
 MATHEMATICS
MAY FUNG,
BEVERLY
 WHITE SANDS
 PRIMARY SCHOOL

BUILDING A FORMULA FOR CONFIDENCE AND RESILIENCE

For Beverly Cheong, Maths lessons teach students problem-solving techniques, but are also opportunities to help them with their problems.



Years ago, Beverly Cheong received an invitation from a student to attend his polytechnic graduation. He had won a prestigious academic award and nominated her to be one of his guests at the ceremony.

She vaguely remembered his name, and how he had faced some personal struggles in secondary school. For a few years after leaving White Sands Primary, the boy would visit the school every Teachers' Day. She could not fathom how she earned the honour of the visits or the invitation, but in true Mdm Cheong fashion, attended the polytechnic graduation anyway. No words were exchanged, but the boy's gratitude rang loud and clear.

"These are the small ways that show me that you never know, as a teacher, what kind of impact you have on your students," says Beverly, who has been an educator for 32 years. "At the end of the day, I always tell my students: 'People do not remember you by your PSLE score but by who you are as a person'."

SOWING INTO HER STUDENTS' LIVES

As an educator, Beverly starts from the simple premise that every child wants to learn and can learn.

“The students put in the effort to try because I build rapport with them and earn their trust. They know that there is somebody who cares whether they were learning or not.”

This was a lesson she learnt early in her career. She saw how some of her students lived across the Causeway and had to wake up at 4am to catch the bus and make the trip to school on time. They often got home late in the evening.

She wanted to match their dedication and sacrifice with her best care and attention, constantly checking in on them and not just on their learning.

When she encountered a student with selective mutism, she explored ways to get through to him. In time, he opened up.

"The students put in the effort to try because I build rapport with them and earn their trust. They know that there is somebody who cares whether they were learning or not," says Beverly. Regarding the students who blossom under her care, she reflects, "it is very touching for me to watch them receive their PSLE results and see them move on to the next phase of their lives".

USING MATHEMATICS TO TEACH CONFIDENCE

Beverly takes on Maths teaching like how she shows care – it is not 'one size fits all'.



This is why she uses different approaches to teach what can be an intimidating subject to some students, turning each lesson into an opportunity to build confidence.

Some methods make use of manipulatives, which appeal to tactile and visual learners. Others involve articulating the steps during problem-solving, such as the five-step Math Talk Moves process. By making their reasoning process visible, Beverly can quickly identify and address her students' misconceptions. By putting success within reach and increasing participation, she helps the students build self-esteem.

When Beverly cannot find a suitable solution for their learning needs, she creates her own. Over the years, she has customised existing teaching methodologies, devising methods such as ADAPTS (short for Analyse the problem, Determine the key concept, Arrange and Pull-out the information, Think of a heuristic, and Solve and check). With the acronym at their fingertips, students can easily recall the sequence of steps needed to tackle unfamiliar but challenging questions.

And how does she help them see the relevance of Maths in their lives? She connects the topics to what they can relate to. With a topic

such as Averages, she would use statistics on the average lifespan of a Singaporean, for example. "When we talk about facts such as Singaporean women living longer than Singaporean men, a student might point out that his grandfather is still living but his grandmother has passed on. These kinds of topics trigger more discussion and interest in the students," she adds.

TEACHING STUDENTS TO KEEP CALM AND CARRY ON

To Beverly, it is not enough to simply equip students with problem-solving strategies. As part of social-emotional learning, students need room to make mistakes.

"When they are trying out a certain heuristic (method), they may not get it right the first



time. I take this chance to show them that there is more than one way of answering the question. If the first method they use does not work out, then try another way. This builds resilience in them because they will not give up after one try," she says.

She keeps an eye out for students who are having problems keeping up in class by looking for tell-tale signs of frustration during their work – frowning during class discussions for instance. She pulls such students aside for one-to-one sessions where she can isolate and work through the problems with them. Once they are able to catch up with their peers, they become more ready and confident, she observes.

For Beverly, social-emotional learning equips students with skills that goes beyond any subject. "We teach the students how to handle and manage their own emotions when they are faced with difficult situations. It could be a particularly tricky Math question, for instance. They learn how to keep calm, break the problem up into parts and then apply what they have been taught."

When she looks back on her career teaching Mathematics, numbers have always been just a part of the equation. What she has been caringly cultivating in her students are the abstract benefits of resilience and confidence.



"Mrs Peh makes her Maths lessons come alive by bringing in items that we use in our daily lives, and using technology to make lessons more fun. We find it easier to understand the concepts after that."

Ong Rui Xian, 11

Primary 5 student,
White Sands Primary School





ALAN TAN ENG LEONG

SENIOR TEACHER,
MATHEMATICS

ANDERSON
PRIMARY SCHOOL

'WE WILL NEVER KNOW HOW THEIR EDUCATION JOURNEY ENDS'

Primary school educator Alan Tan knows he has done the right thing by his students when they come back to visit.

What happened to you?" Mathematics educator Alan Tan had asked his former student who had come back to visit him. The teen was acting rude and rebellious, very unlike the boy he had taught in primary school.

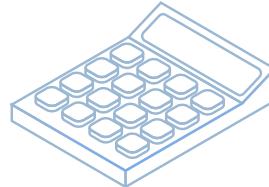
"He said in Chinese, 'I have changed'. His words broke my heart as I couldn't do anything about it then," Alan continues, his voice stiff with concern."

Years later, the teen would contact Alan again, this time to share that he had turned the corner, and also had done better than expected at school to secure a place at a polytechnic. He thanked Alan for the time and effort put in during his primary school days, when he felt adrift in a dysfunctional family and had problems with his mother.

"At the primary school level, we will never know how their education journey ends," says Alan wistfully. Customer feedback can make a difference to how a business improves; Alan gets plenty of feedback from his past students who visit him years later to thank him for what he did right.

Alan has been teaching at Anderson Primary School for 18 years – his first and only posting upon joining the teaching service. Asked what has made his career fulfilling thus far, he says half-jokingly that students don't run away from him when they see him.

"They come to me," he says, happy as a father who has good ties with his children. For those who have left school? "They come back to see me."



“ When there is laughter in the class, a connection is inevitably made between the heart and the mind...my students do actually retain information and schoolwork better when I use humour. Learning should never be a chore. ”



ALL THANKS TO HIS TEACHER MR TUANG

So what has Alan done right? What comes up consistently is how he treats every student differently because every student is different.

Alan, who teaches Mathematics, English and Social Studies, starts every school year aiming to figure out what makes every child tick, and what would work best to help them thrive. It could be through the subjects he teaches, the CCAs he oversees, or the projects and learning packages he develops with his fellow teachers for the school.

"It's important to me to relook the instructional strategies we use in the classroom, to help meet their learning needs according to their interests and readiness levels," Alan enthuses. "I aim to not only get to know my students well, but also allow them to know me better, through the sharing of my personal experiences in my daily life and the reflections from my school days."

Casting his mind back to his own Primary school days, Alan remembers how a form teacher by the name of Mr Tuang — a "very firm but very fair" man — has been a role model for him as an educator.

He recalls this seminal incident with a chuckle: "When Mr Tuang was reading out the positions of all the students in class, he announced that I got seventh place in class and I let out a happy whoop! Some of my classmates started laughing at me but I will never forget what he said to the class – he told everyone, 'He has a right to be happy.' "

Alan was grateful Mr Tuang spoke up for him from a place of understanding. "My teacher was affirming the effort I had put in, and not my intelligence or result."

He puts this experience to good use with his students. He is deliberate in recognising the individual strengths of his students and goes out of his way to show them that he supports them beyond their grades.

"Some students may look so lifeless in class, but they really come to life when they put on a pair of soccer boots or dance shoes," Alan says. "I try my best to turn up when they take part in the National School Games to cheer for them, or watch the videos of their performances at the Singapore Youth Festival. I want them to know that I truly see their talent."

A GOOD REPUTE GOES A LONG WAY

Alan's school is also no stranger to tailoring strategies to meet its students' needs. Anderson Primary School arranges for customised timetables for Primary 6 students who need one. Alan recounts how this has helped a student in his Primary 5 class who was struggling with anger management issues. It was not uncommon to hear screams emanating from his classroom and major meltdowns in class.

To minimise his stress in school without sacrificing progress in his education, the school arranged for him to attend only English, Maths and Science classes. In Primary 6, when Alan took over as the boy's teacher, he tried to get to know him better. He took an interest in the boy's CCA waterpolo, and they would speak every day about his matches or his lessons. The boy had also heard good things about Alan from his older brother, whom Alan taught, which oiled the wheels of conversation too.

Summing up, he says, "I managed to build a good rapport and trust with him. He never had a meltdown that year at all."

Has Alan always been this congenial with his students? As a jovial person who naturally loves kids, he admits it's hard not to be.

"In my earlier years, I used to smile at the class easily and cracked lousy jokes early on

in Term 1, before I got a handle on them," Alan remembers with a wry smile. "The students jumped on that and tried their luck, talking out of turn and never taking me seriously. I had to learn the hard way!"

Today, he is known to be a firm yet fair teacher – much like Mr Tuang was to him. And of course, he makes certain to keep his feedback positive even when his students do not give the right answers immediately.

PUTTING THE FUN INTO SCHOOLWORK

That's not to say Alan has lost his funny bone. When he gets more familiar with students, he loosens up and everyone contributes to the positive atmosphere in the air.

"When there is laughter in the class, a connection is inevitably made between the heart and the mind...my students do actually retain information and schoolwork better when I use humour. Learning should never be a chore," he emphasises.

How does Alan keep the pep up? He routinely deploys apps like Deck Toys and Blooket to weave fun activities and games into his daily lessons. He also looks out for Math concepts that can be learned in a fun way.

In one example, he got some of his students to take part in a mini game design competition, with the winning game selected for entry



into an annual mathematics competition organised by NUS High School and the Gifted Education branch.

"They learn so much from these annual competitions: time management, working as a team, presentation skills, and strengthening their mathematical concepts along the way," he explains. "And the game we submitted in 2019 even won a Commendation Award!"

Fun and games aside, Alan also reiterates the need for his students to rest sufficiently, as part of their overall well-being.

"Some parents will tell me their children only go to bed at 10 or 11pm, after they have completed all their homework for school and tuition. I will remind them that getting adequate sleep is actually part of exam preparation as well, since it helps them have a sharper mind to learn better in class the next day."

All in a day's work for Alan, who sees every child as his own.



"Mr Tan has the special ability to make what may seem like a chore become a fun activity. For example, he would insert our names into worksheet questions with a twinkle in his eye, and tell us it was purely coincidental that our names are there. My classmates and I always find this hilarious and it even makes us want to complete our work well."

Aiden Tan, 12

Primary 6,
Anderson Primary School





KOK BOON SIANG

YEAR HEAD
ST ANTHONY'S
PRIMARY SCHOOL

LEARN TO LOVE, LOVE TO LEARN

Nurturing grateful hearts and soft skills in his students are his focus, says primary school Year Head, Kok Boon Siang, because these qualities are key to thriving when they are adults.



A conspicuous plastic jar with a red lid sits on a table in Kok Boon Siang's Primary 1 class. Before lessons begin, he digs into the jar, pulls out pieces of neatly folded paper and faces his students with a broad smile.

"Do you have a dog?" he reads the anonymous question animatedly to the eager faces. He pretends to ponder the question seriously, then raises his eyebrows in dramatic fashion. "No, I don't, but my neighbour does!" he says in a singsong voice to giggles from the class.

It's a simple daily icebreaker that allows the young children in their first year at school to get to know him better day by day. They pop questions into the red jar – he calls it his Question Bank – with no rules for what they can ask him.

Boon Siang, the Lower Primary Year Head at St Anthony's Primary School who teaches PE and Health Education, is a big fan of dramatising his lessons. He is an even bigger fan of love.

"When a teacher shows students love by taking even just a few minutes a day to answer their questions, they will gradually be inspired to have an inquiring mind. That's important for their learning journey."

ENCOURAGING KIDS TO LOVE THEIR NEIGHBOURS

Evidently, Boon Siang takes love seriously. The educator of 25 years speaks in gentle tones about realising his vision of care for his students and his peers; he embeds it into the

“ Learning to live a life of gratitude starts early. The love that you give is often multiplied manifold. ”



school's culture through the programmes he designs and runs.

Together with the rest of the Student Development Team, Boon Siang spearheads programmes that develop the students' social skills and other key skills, including self-management and resilience.

Inspired by the Lasallian mission of empowering students "to learn how to learn and to learn how to live", Boon Siang advocates that students also "learn to love and love to learn". He teaches his students about expressing their love to their friends, families and neighbours, and to live a life of gratitude.

In one such initiative, he encouraged his students to pen thank-you notes to frontliners during the COVID-19 pandemic in 2020. The result: heartfelt well-wishes on coloured paper were turned into stunning collages and sent to organisations such as SMRT, the National Centre for Infectious Diseases and the Singapore Armed Forces.

These organisations in turn showed their appreciation by writing thank-you emails and letters back to the school, making it an important teaching moment for the students.

"Learning to live a life of gratitude starts early. The love that you give is often multiplied manifold," Boon Siang explains. "Academic

performance is important, but so are these values and soft skills that will help our students thrive in the future."

Boon Siang believes that students develop their love for learning when they are provided with opportunities to take ownership of their own learning. He gives his students the autonomy to construct their own games given a set of PE equipment and simple rules. The students are highly engaged and work together as a team to enjoy the games they co-construct with their peers.

Parents are important partners for the success of the "learn to love, love to learn" philosophy. Boon Siang and his colleagues take steps to build rapport with them through webinars and online workshops, so that they can understand the basis and impact of the initiatives. With their buy-in, parents can lend support more readily and reinforce the same self-management techniques for their children at home.

Happy parents have shared how much easier it is to get their children to put away stationery into their pencil boxes after use instead of leaving them strewn on the table – just as they do in class.

WHAT GOES AROUND, COMES AROUND

Boon Siang puts his own soft skills to work in other areas. Close to his heart are students



who come needing more support to keep up with others, namely children with special education needs (SEN) and those from disadvantaged backgrounds.

Having seen how his friends and relatives who have children with SEN struggle to cope with even their day-to-day activities, Boon Siang was determined to make a difference by playing his part. After all, a good day in school could spell a good day at home, and vice versa. To better understand the needs of children with conditions such as ADHD, autism and dyslexia, he attended courses at the National Institute of Education and obtained a Certificate in Special Needs Support. Following his training, he is mindful, for instance, about providing primers for autistic children to avoid surprises that may upset them.

He also applies the growth mindset when engaging children with SEN by removing any preconceptions about their abilities. For instance, he forms peer support groups comprising children with SEN, harnessing the strengths of their common understanding of one another. He saw how a boy with dyslexia grew to help a boy with autism and was encouraged by the friendship that blossomed from there, he says.

For children from vulnerable families, Boon Siang works with a teaching team to run ASCEND, an after-school care programme that ensures they have a diet of healthy and supervised activities in the afternoons. Currently, about 20 children from Primary 4 to 6 attend the programme, where they do their

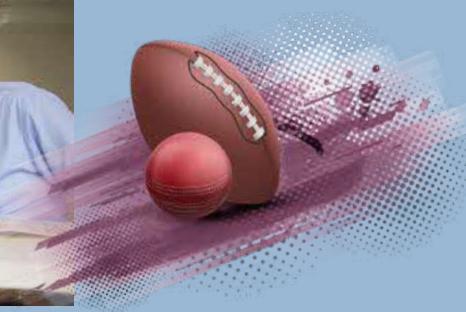
homework, explore interests and develop skills or play games in school.

The programme gives him greater visibility of the problems the students may be facing at home. Asked what some of these problems could be, the dramatic side to Boon Siang takes a backseat as his mind ripples quietly through the scenarios he has seen.

He shares how some years ago, he and his colleagues started to notice that a certain Primary 2 student was frequently absent from school. They paid a home visit and learned that the boy's father was working the night shift and would return home at 4am before going to bed. His mother had just had a baby and was too exhausted to tend to her older child.

Boon Siang and the school counsellor met with the father to impress upon him the importance of school attendance. It took some months to convince him that adjustments had to be made to fetch the boy to school. In the meantime, the boy was enrolled in ASCEND so that his after-school needs would be met.

Over time, the boy showed up for school regularly. "The father appreciated what I did for him," says a happy Boon Siang. The father then sought a way to give back to the school. Seeing as how Boon Siang was in the school's Safety Committee, he found a practical need he could meet—road safety. "Mr Kok, you want any traffic cones for the school carpark? I can donate to the school" recalls a smiling Boon Siang of the parent's line, turning his acting voice back on. "I'm very appreciative of that."



"PE is my favourite subject and I have learnt so much in Mr Kok's class. When I was in Primary 1, he trained me for our lower primary students' Sports Day. I won a Bronze in the obstacle race. That made me very happy and proud. I'm very grateful to him. He also teaches us how to stay healthy, how to be safe and how to ignore distractions."

Rayner Lee Jin Xian, 8

Primary 3,
St Anthony's Primary School

MENTORING ON BUILDING SCHOOL CULTURE AND OTHER TRICKY SITUATIONS

In recognition of his experience at forging stronger values in his students and colleagues, the school has been assigning Boon Siang to mentor other educators at the school cluster level.

Currently, he mentors three teachers under a peer programme titled *W4lk With Me* to conceptualise ideas to build a dynamic culture in their schools. They shared their plans with him and were supported with his guidance in their execution.

Informally, he has an open door to counsel and advise new teachers, especially in tricky situations where experience could help.

He cites an example of how there was a new teacher who was feeling very responsible towards her new charges and wanted to instil homework discipline in all of them. A parent perceived her actions as picking relentlessly on her child and sent her a barrage of texts on the matter.

The teacher was upset, not knowing how to handle the situation, and Boon Siang offered to share with her a different perspective. He suggested that lowering her expectations was not tantamount to reducing the child's chance

at success – on the contrary, it could help him see that the next goal was reachable. He also called for a face-to-face meeting between teacher and parent, with him as moderator. "We came to a common understanding," he shares.

Why is Boon Siang so passionate about spending time on his colleagues?

"The quality of our education system depends on the quality of our teachers," he says plainly. "Mentoring teachers can help to unleash their potential to become educators who deliver the best outcome for every child."





DR CHIRADIP CHATTERJEE

SENIOR LECTURER,
SCHOOL OF APPLIED SCIENCE
REPUBLIC POLYTECHNIC

BRINGING OUT THE VOICE IN THE QUIETEST STUDENT

It may take a boyband or just plain ol' time and patience, but Dr Chiradip Chatterjee believes all students will open up if teachers appeal to their interests and learning needs.



Korean boyband BTS, soy-based abalone feed, and equal opportunity for students – what do they have in common? Dr Chiradip Chatterjee, a senior lecturer in pharmaceutical science at Republic Polytechnic.

"If you're not smiling in class, the learning is not complete," says the affable educator, summing up what effective lessons mean to him. Calling himself a "true-blue educator and researcher", he wants to make learning fun and accessible to his students. So he reads their moods and adapts accordingly; it explains why on some days, he might put on pop music during lesson time to switch up the tempo, especially for classes taking place in the afternoons when everyone's energies are flagging.

"We listen to good music like BTS and we just talk," he says. "Teenagers get bored easily.

I am usually immersed in teaching, but I'd sometimes go with the flow and say, OK, let's do something new today."

Other days, he may be explaining antimicrobial resistance to a class on pharmaceutical chemistry and he would choose to test the students' understanding by asking them to craft their replies not in words but in cartoons. It's a different way of helping them to process their thoughts, he adds, and, what's the harm in the class having a few laughs at what goes up on the whiteboard?

One could call Chiradip a natural-born teacher. Born in Kolkata, India, he always knew that his calling was in teaching. His mother taught Science at a secondary school to mostly underprivileged girls, and Chiradip was amazed by how she could meet both their educational and basic needs.



“ My mindset is that all my students are equal. So, it is up to me to tweak the way I support them so all of them have opportunities to succeed. ”



Like her, he doesn't want his students' background or circumstances to affect their prospects. "All of my students are equal," says Chiradip, who joined the Polytechnic 12 years ago after obtaining his PhD in Chemistry. "It is up to me to adapt the way I support them, so all of them have opportunities to succeed."

MORE THAN A LISTENING EAR

One could say Chiradip has had some practice making lessons fun. He was a young uncle to a boy with autism, and discovered from spending time with him that he loved music and drama. And so, Chiradip would frequently arrange small family events where his nephew and other kids could put up skits, recite poetry or just jam online. When he visits during the holidays, he may engage him in baking, gift wrapping or outdoor fun. Seeing how his nephew, now 19, improved socially convinced him that a nurturing and positive environment is critical for a child's development.

"There are many reasons why some students clam up in the beginning," he explains of the newbies he sees every year. "Some may not be comfortable with English, some may have family problems, others may lack confidence."

"In the end, it's actually about how a teacher approaches his students and helps them. If you give them time, space and a happy environment, it's possible to draw them into class and to open up, or ask for help."

A case in point: a student who took a break from school for a few months due to mental health issues. When she returned, Chiradip sought to better understand the nature of her illness; for her final-year project, he adjusted the project scope so that she would not need to work in a team and mentored her more closely. She successfully completed her project and graduated.

Another student, William Tay, whom he mentored for a longer period of three years, has special educational needs and faced challenges with socialising and making friends.

"My role was to boost his confidence," Chiradip said, "He would text me whenever he needed a morale boost and I'd always tell him, you got this."

Gradually, he saw the student transform from a reserved boy who had few friends, to a hardworking and confident young man who connected well with his peers.

In 2020, this student topped his cohort and won the Harvard Prize Book for overall excellence. He currently majors in Chemistry as an undergraduate, and has set his sights on a career in drug research and possibly work towards a PhD – in Chiradip's footsteps.

CHAMPIONING INNOVATION THROUGH RESEARCH

When Chiradip is not teaching and mentoring, he is immersed in industry research. Managed by the Polytechnic's Office of Technology Development (OTD), researchers like him help to fill innovation gaps in the industry, benefitting startups and SMEs; some of their projects have earned product licences.

One recent project Chiradip is proud of involves developing cheaper feed for abalone, in place of feed made with fishmeal. Together with his students and peers, they created a protein alternative using soy pulp, called okara, a by-product from the processing of soy milk and tofu. Okara feed costs up to 30 per cent less and the baby abalone they fed the product with weighed 25% more; they also developed a healthier-looking purplish hue instead of the greyish colour of abalone fed with regular commercial feed. The team has reached out to abalone farms in the region to test the new feed.

As Chiradip works closely with his colleagues on these projects, he found himself to be an effective mentor to them. In 2019, he became a peer coach in his School of Applied Science, helping his colleagues attain their Compulsory Certification in Facilitation. He reviews their portfolio, observes their classes, and provides feedback on what works and what doesn't.

In summing up his contributions to his peers and students, he likens himself to a ladder that helps them climb their way up to achieve their dreams.

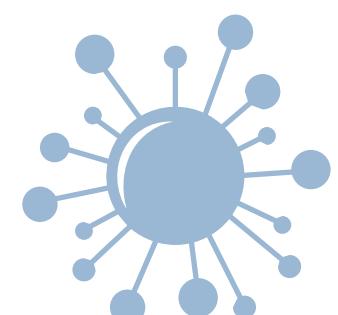
He has won numerous awards over the years, including the Teaching Excellence Award in 2019, and MOE Outstanding Mentor Award not one but four times. Yet, it is the personal touch he values the most. When William graduated, his mother gave Chiradip a chocolate cake in appreciation for his efforts. "I was very emotional when I received the cake," he says. "It's the most meaningful award to me."



"Dr Chiradip is a very kind, understanding, and approachable facilitator. I was very rigid in my thinking and wanted to focus on my studies only. I was also timid. He motivated me and gave me many opportunities to build my character and leadership skills. He would nudge me to take part in events, so I'd be exposed to different things outside of studies."

William Tay, 22

Graduate (2020),
School of Applied Science, Republic Polytechnic



SHARE TWEET DOWNLOAD BACK

ENGAGING STUDENTS THROUGH
INNOVATIVE TEACHING
Pedagogies





★ RECIPIENT

PAULINE HU LEONG HONG

LECTURER, SCHOOL OF
APPLIED & HEALTH SCIENCE (NURSING)
ITE COLLEGE EAST

HER NURSING STUDENTS ARE ALSO INVENTORS

Lecturer Pauline Hu is redefining what it means to be a nurse, constantly challenging her students to generate new ideas – even inventing devices – to solve patient problems.



When nursing is married to technology, a world of possibilities is opened up to solve problems creatively. Think of a mobile app that alerts caregivers when a patient wets his bed or a brace that locks when patients have a violent fit, thus protecting them and their healthcare worker. These products are the brainchild of Pauline Hu, who teaches the Nitec in Nursing course at ITE College East.

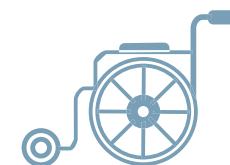
Graduating with a degree in computational physics, the former IT consultant switched to nursing before venturing into teaching 10 years ago. Clearly, she doesn't let labels and convention define her – something she preaches to her students too.

"I want them to think broadly and widely," says Pauline. She thinks nothing of organising student projects outside of the

curriculum that benefit from their nursing expertise. These include generating ideas to solve patient problems, then turning these ideas into real gadgets to be presented at local and international showcases. Along the way, students learn to do market research, create presentations and pitch their ideas confidently. These projects are sought-after and students have to interview for a spot on the team.

If none of this sounds like nursing training to the layman, Pauline intended it to be that way. She sees nurses as problem-solvers, no different from engineers or IT consultants, who should be trained to think out of the box.

"While I may have an idea, I don't provide my students with the solution. I ask questions, challenge them and get them to think



“Teachers are like the rudder of a boat. We are the ones to guide them on the right path.”

“When students like you, they will truly make an effort to learn. When their hearts move, learning moves. That is when I feel that I need to do even better for them. ”



at ITE College East; a few have attracted commercial interest.

Pauline isn't hung up on choosing students with the best grades for these projects. She believes that every student should have a chance, as long as they are committed.

"I'm very inclusive," she says with a chuckle. "I have students asking me why I chose them for the projects or overseas trips despite their low GPA. I'd say, don't worry because I will guide you."

LEARNING THROUGH THEIR HEARTS

Like a tale from a storybook, Pauline took up nursing when she was inspired by the nurses at the frontlines during the SARS viral outbreak in the early 2000s. It involved a huge pay cut, but her husband was supportive of what was a meaningful career switch to her.

She was a senior nurse at KK Women's and Children's Hospital for six years, spending about a year in paediatrics and five years in gynaecology. In her third year, she took on the role of mentoring nursing students on top of her regular healthcare duties. Realising how much she enjoyed working with students,



Some of the prototypes are the result of collaborations between the nursing and mechanical engineering departments



she combined both interests and joined ITE College East as a nursing lecturer in 2012.

When she started out, she struggled to relate to her students. It took her about a year to connect with them. Through her interactions with them, she realised that emotional bonds were what motivated her students. "They say 'Teacher, I study because of you'. When students like you, they will truly make an effort to learn. When their hearts move, learning moves. That is when I feel that I need to do even better for them."

Pauline nurtures the "can-do" spirit in her students by sharing with them the achievements and awards of students from previous batches. "I think this is very important because some students who enter ITE might not be strong academically or highly motivated," she explains. "I want to show them that by joining ITE, it's the beginning for them, not the end."

Over the years, she has implemented creative teaching methods to help her students learn better. For example, realising that most of her students are visual learners, she encouraged her students to create 3-D boards on each body system and colourful picto-graphical guides on key concepts and workflows, to improve their understanding.

To teach the importance of evidence-based work as a nurse, she had students pick any topic they liked to demonstrate their

understanding of research. One group was keen to investigate if fast food consumption in Singaporean households rose during the pandemic in 2020. They had to conduct interviews, analyse data to test their hypothesis and present their findings.

She elaborates, "The work of a nurse is very much focused on evidence. Students have to understand the evidence and carry out what's needed for their patients in a step-by-step manner."

Her keen interest in technology led her to partner Chinese gaming company NetDragon Websoft three years ago to create a virtual reality gamification tool. Students have experienced the thrill of learning about administering oxygen therapy to a patient through a virtual reality hospital setting. Her peers have also had a go with the gamification tool, as part of Pauline's regular sharing on best practices.



"I find Ms Pauline's teaching to be a mix of magic. She incorporates the teaching-learning processes together with many other components such as multi-care, multi-sensory and real-time interaction. Due to her experience as a professional nurse, she imparts a lot of real-life experiences and examples to prepare us for the good and the bad when we go for our clinical postings."

Long Zi Ru Melissa, 35

Year 2 Nitec in Nursing, ITE College East

MOTIVATING STUDENTS TO GO BEYOND

As part of exposure to work outside the classroom, Pauline also rallies her students to volunteer. Her students have supported teachers at Grace Orchard School during the pandemic, creating videos and props to supplement lessons on daily living skills for children with disabilities.

At Metta School, they conducted terrarium and craft classes for special-needs youths. Through these activities, the students familiarised themselves with the challenges of the community.

This is part of holistic development in Pauline's plan for her students, to constantly steer her

students to solve real-life problems beyond the standard nursing curriculum.

"Some of them who went on to polytechnics tell me everything is so easy, thanks to what they learned at ITE," she says happily. Her energy appears to be infectious: Some of her students recently started a Singapore Nurses Association (SNA) Student Nurses Chapter in their respective schools, to empower more nursing students to build up the profession. Pauline is the CCA teacher in charge of the Association's student chapter at the ITE.

"I want to keep creating opportunities for my students to learn in various ways," she says. After all, "teachers are like the rudder of a boat. We are the ones to guide them on the right path."



SHARE TWEET DOWNLOAD BACK



★ RECIPIENT

NASRUN BIN MIZZY

TECK WHYE
PRIMARY SCHOOL

HE PLACES THE STUDENT FIRST BEFORE THE OUTCOME

Nasrun Bin Mizzy always seeks to empower, enrich and enable his students and teachers, and to create better learning experiences for them.

Of all the inspirational figures in the world, it is the students from challenging backgrounds who motivate Nasrun Bin Mizzy the most.

For those who come from broken homes, don't have money for recess, or never hear a positive word from their families, Nasrun turns up for work every day at Teck Whye Primary School wanting to be a better teacher because of them.

"Despite all the challenges they face – challenges that would buckle even us as adults – these kids still show up in school, day after day," says Nasrun, the Head of Department for Physical Education (PE) and Co-curricular Activities (CCA) who has been an educator for 25 years. "They somehow defy the odds to come to school to learn, in spite of what they go through at home. And if they have

the resilience to keep going, we will do all we can as a school to support them."

As he shares about how his students overcome financial hardship and personal challenges, Nasrun could have been talking about himself. When he was eight years old, his father passed away and money became an issue for the family. On some days, Nasrun and his three siblings would be studying by candlelight and waking before dawn to help their mother out at a canteen stall. Meals on most days consisted only of rice, black sauce and some ikan bilis.

Young Nasrun found light on the football field and in the encouragement of his teachers, notably one Mr Jumari Sakom, who would later appoint him vice-captain of the school team. His confidence at his CCA spilled over to his studies; he would go on to complete



“ Despite all the challenges they face, challenges that would buckle even us as adults, these kids still show up in school, day after day. They somehow defy the odds to come to school to learn, in spite of what they go through at home. And if they have the resilience to keep going, we will do all we can as a school to support them. ”



his Masters in Education and become a PE teacher. From there, Nasrun's belief in the power of education, sports and emotional support on a child was sealed.

CHARACTER – A SPRINGBOARD FOR SUCCESS

Nasrun laughs easily but takes his educator role seriously. Every second with a child is a precious opportunity to empower, enrich and enable, he says.

By this token, he aims to maximise his students' PE time at school by infusing values, learning and meaning into every activity.

During a gymnastics module, for example, he has introduced the use of tablets for students to record and review their classmates' performance. This way, they are honing video skills while learning values such as empathy and kindness when giving feedback. They also act as resource persons for their peers while developing communication and analytical skills.

For lessons on cardiopulmonary resuscitation (CPR), Nasrun checks with the Science

department on when lessons on the circulatory system would be held, and holds the CPR lessons in the same week, where possible. "This goes a long way to help the students have a better understanding of both the CPR procedures and how the heart functions," he says, adding that unlike in the old days, "PE has gone deeper into the affective and cognitive aspects of learning, on top of the psychomotor domain". This allows students to find meaningful connections across the different subjects in school – a trait that can help them be future-ready citizens.

Nasrun and his team also take pains to explain the reasons behind their programmes and actions to their students.

He cites how when the pandemic struck, they turned recess time into game time under the programme Play@Recess. To gain access to their assigned play areas, students were given autonomy to play, as long as they met safe-management rules on hygiene and responsibility. House points were also awarded to motivate them towards maintaining the collective goal of keeping everyone safe while embarking on activities that they enjoy with their friends.



"They followed our instructions wonderfully, adapting quickly to the ever-changing situation when the group sizes changed from two to five to eight and back to five," says Nasrun, beaming. It underscores his belief that when students see meaning behind what they do, results will follow.

For all these nurturing gestures, Nasrun is not one to be soft on discipline either. When it comes to sports, for example, he reminds his fellow teachers that they must not "sacrifice discipline for victory or glory". "I will not hesitate to bench students who do not display positive behaviours that we know they are capable of," he points out. "If you make poor decisions on your behaviour, you cannot represent your school." Work on "restorative practice" such as reflection and apology, rather than punishment, usually follows, he says.

LEVERAGING THE POWER OF COLLABORATION

Nasrun believes in the power of collaborative professional learning. The pandemic presented an opportunity for him to energise his peers in the teaching community.

He had a taste of it when he spent three years at MOE's PE and Sports Teacher Academy (PESTA), where he was involved in the development of PE teachers through workshops and in schools. He continued this

spirit of collaborative professional learning when he was posted to his current school.

During the pandemic, Nasrun believes that the learning of PE must be maintained. Together with a group of like-minded PE HODs, he took the initiative to share with the community the teaching resources that he was developing to improve the PE experience for his students as they were stuck at home during the Circuit Breaker period. Among the resources were ideas for live Zoom lessons, complete with a series of videos that taught students how to create modified PE equipment from common objects like paper for shuttlecocks, socks to make balls, and umbrellas for floorball practice.

Nasrun then created a Google site to upload these and other materials and links from other PE teachers both locally and globally. In these past two years, "my greatest contribution is rallying and enabling a community of PE teachers to support student learning during a period of national crisis", he says. Today, the website, titled PESG, still sees regular contributions and downloads, thus living up to its mission "For Teachers, By Teachers,



With Teachers". One of the site's highlights is a comic strip titled PE Chronicles, capturing nuggets of humour around school life that PE teachers can relate to – created by Nasrun!

What gives him the drive to step forward with this and other initiatives? "I believe in leading by example and initiating change through role modelling and having thick skin," he says.

Saying with a chuckle: "What this means is if there's a new teaching strategy that I want to try out, I'll be the one to do it first for my colleagues to critique. After I take in all the feedback, then we as a department will do it together – this is where learning together comes in." Then, they "have thick skin together" by sharing their newly found knowledge with others in the fraternity. That's where, he says, the power of collaborative learning can propel the learning trajectory for his teachers.

It's the same reason he implemented an "open-door policy" in his department, where any teacher can ask to sit in on another teacher's lesson. "In this way, we are always

open to trying different pedagogies, ICT, or assessment tools together, and we all have a chance to affirm and acknowledge one another. In this way, our social-emotional needs are met, and not solely the pedagogical."

His attitude towards peer enrichment is no different from his approach with his students – to create equal opportunities for all. "No matter who my students are, I will focus on the person rather than the outcome, the process rather than the product."



"To me, Mr Nas is like bright sunlight. To be honest, I felt like a shadow when I first met him, but after having him as my teacher, I feel like I've lit up and my life is hopeful."

Steven Owe Yu Hong, 12

Primary 6,
Teck Whye Primary School





★ RECIPIENT

DAWN CHAN WEE TENG

LEAD TEACHER,
MUSIC
DAZHONG
PRIMARY SCHOOL

HOW A VIOLA TAMED A TEMPER

Music educator Dawn Chan heads a junior orchestra so inclusive, every student gets a fair chance to learn music – and make amends too.



Lush strains of orchestral music fill the air at Dazhong Primary School twice a week. Some days, it may be Beethoven's 5th Symphony, other days, the Indonesian folk tune Dayung Sampan. Everyone knows that is the Junior Orchestra in session.

The orchestra was set up in 2017 to allow all students to make music, including those from families less likely to afford private music lessons. It is helmed by Dawn Chan, Lead Teacher of Music, who got together with a few colleagues to exchange ideas on using the orchestra to uplift students from disadvantaged families. To Dawn, music is a great equaliser that can give every student an equal shot at success in life.

The programme was inspired by El Sistema, a Venezuelan music education initiative

founded in 1975 by educator and social activist Jose Antonio Abreu. The classical ensemble programme pulls children from at-risk families and teaches them how to play an instrument. In the process, it rescues them from the streets, equips them with soul-stirring skills, and for some, a renewed focus in life.

Today, there are about 130 students in Dazhong Primary School's Junior Orchestra, about one-third of whom come from disadvantaged backgrounds.

DRIVING SOCIAL CHANGE WITH A MELODY

Like El Sistema, the Junior Orchestra brings joyful music to the community. The students do not participate in competitions, but



“ Every child is unique. They have their own strengths, passions and learning needs. As teachers, we must look out for them and help them to succeed in life. ”



instead play at events organised by Hong Kah North Community Club (the Junior Orchestra's strategic partner) as well as at other locations such as Gek Poh Community Club and the National Arts Gallery.

To provide mentoring by older students, Dawn, known as Mrs Kuah to her students, sought a partnership with a secondary school. MOE Arts Education Branch linked her with Methodist Girls' School, whose students were also eager to share their musical talents through their Values in Action programme to benefit communities.

Under Dazhong Primary's Arts Education Programme (AEP), every child learns to play the violin from Primary 1 to 3. The AEP is spiral in approach: after learning the violin, students can choose from a variety of arts-related CCAs such as Choir and Dance, as well as the Junior Orchestra which is an extension of the AEP.

With music being such an integral part of every student's life at Dazhong Primary, it's not surprising the many lives it has touched.

Dawn cites the case of an unruly student whose life changed when she started learning the viola. The lower primary student was untidy, unhappy, and prone to temper tantrums – she would shout at everyone and bang her fists on the table to get her way. Most of the teachers were at a loss as to how to handle her.

"But when she played the viola, she was a different person," says Dawn. "The music calmed her down. It was amazing to see how focused she became. During CCA time, I'd take the opportunity to teach her social skills as well, like managing her emotions and speaking with an 'indoor voice'." The latter refers to talking more softly; the student learned from there to adjust her volume to suit the occasion.

Through the discipline of learning an instrument, the student, now 14, extended that same discipline to other parts of her school life – she piped down and started helping her classmates out. Her model behaviour earned her an appointment as prefect. At Primary 6, she was invited by a few secondary schools to apply for Direct School Admission based on a non-academic talent, which in her case, was music.

'WHEN YOU PAVE THE WAY FOR SPECIAL NEEDS, YOU PAVE THE WAY FOR EVERYONE'

Besides helping students from disadvantaged families, Dawn is also passionate about her work with children with special education needs, or SEN. In 2011 before joining Dazhong, she was the form teacher of a Primary 3 class where about half of the 24 students had behavioural and learning problems. Between the teachers, they had enough experience to know that some of the problems stemmed from special needs.



As these students were undiagnosed and had no access to additional support, the teachers found it challenging to cater to them. "That was my turning point," she recalls. "I was determined to do good and be inclusive as a teacher. I had started on my Masters then and I worked on a thesis on how music could help children with Attention-Deficit/Hyperactivity Disorder (ADHD)."

She also started reaching out to parents, nudging them to seek medical help for their children. It was an uphill task. Eventually, nine of the children were diagnosed with conditions such as ADHD, autism and dyslexia.

At Dazhong, Dawn uses the Universal Design for Learning (UDL) framework to work with SEN students. At the heart of the framework is to understand the barriers to learning that a person faces, and to implement modifications and accommodations to remove these barriers.

Dawn recounts a situation she faced with two Primary 2 students with global development delay (GDD). Lacking self-control, they would run around and outside the music room and disrupt the class, not to mention their own learning. She studied the issue more closely and understood how they viewed the room and its extension as permissible space for expression. That's when she had a brainwave: She marked

out two large boxes on the music room floor with yellow tape and revealed to them the new boundaries in which they could roam.

"Surprisingly, it worked," she says happily. "They treated the yellow boxes as 'home' and were happy to run around within the boxes. That made it possible for them to participate in class."

In another example of how she gets everybody involved, she shares how a student with GDD and psychomotor challenges could not march to the beat of a song, so she handed him a drum to tap on instead.

"So, I tell my colleagues, when you pave the way for the SEN kids, you're paving the way for everyone," she said.



"Mrs Kuah doesn't just give her students opportunities to improve their talent in the arts. She also gives them opportunities to excel in life as well."

Ong Herr Yuo

Primary 6,
Dazhong Primary School

LESSONS WITH MORE THAN MUSIC IN MIND

When Dawn is not busy with the Junior Orchestra, she comes up with creative ways to make music lessons engaging for the students.

One way she does this is by fusing the school's Applied Learning Programme – which focuses on environmental issues – with music.

For instance, she would pick a video on sustainability, mask the music and get her students to create the soundscape clip for the video. Students use freeware such as BandLab to pick music tracks, select instruments they like, input the rhythm for the piece and even record their singing.

"I want the music lessons to achieve multiple objectives," she shares. "It's meaningful for them to learn about important topics like green plans and climate change while learning how to compose music via a computer."

"Our students are digital natives and you can imagine how excited they are about the music lessons," she laughs.

Being passionate about technology, she conducts workshops for music teachers and allied educators on tools including BandLab and Chrome Music Lab, where even young students can learn to create their favourite ring tones for their handphones.

Being in tune with music technology helps teachers keep abreast of what interests students, including the genre of music that appeals to them, she says. "I'm very happy to bring these tools to the teaching fraternity, so they have the skills and knowledge to teach their students all over Singapore."





ADOPTING
**INTERDISCIPLINARY
AND AUTHENTIC
PROBLEM-SOLVING**
Approaches
IN TEACHING AND LEARNING



DR FOO CHIN SHIN @ MAISHA

COURSE CHAIR, DIPLOMA IN PHARMACEUTICAL SCIENCE

TEMASEK POLYTECHNIC

PREPPING FOR HER STUDENTS' CAREERS FROM THEIR CLASSROOMS

By maximising her students' work exposure and mentorship opportunities, pharmaceutical science lecturer Dr Maisha Foo assures them of their choice of courses and career paths.

When Dr Maisha Foo joined Temasek Polytechnic as a lecturer, she was as fresh as they come, having neither teaching nor work experience.

She had just completed her PhD in pharmacology, which she dived into after obtaining her degree at National University of Singapore. At her first lecture to her pharmaceutical science students, she felt slightly embarrassed at having delivered a "rather mechanical" session, she recalls with a chuckle with a tinge of regret.

Was she daunted? No, because of what she had seen on the students' faces. What they were looking for was not just information but direction, and she felt inspired to help with that.

"Pharmaceutical science knowledge is translatable to many other allied health careers and even research," says Maisha, who in her own education journey had nurtured her fascination for chemical compounds, big data, research, and mentoring. Having had a clear sense of self and direction, which led her to her dream job as a pharmaceutical science lecturer, she was ready to encourage the same in her students.

"Students should be aware of all the possibilities and how well different jobs match up to their unique passions."

That was nearly 10 years ago. Maisha has since been committing herself to providing students with as much signposting and



“Pharmaceutical science knowledge is translatable to many other allied health careers and even research. Students should be aware of all the possibilities and how well different jobs match up to their unique passions **”**

work exposure as she can, so they can make informed career choices. She also networks extensively with industry to introduce more options for projects, internships, job offers and knowledge transfer.

In this way, her students can better understand the industries related to pharmaceutical science, and see how their skills and interests best fit with industry needs, she explains; they will not only find jobs more easily but find jobs that they want.

EXPOSURE TO REAL AND RETAIL ENVIRONMENTS

Since 2017, when Maisha was made Course Chair, she has been incorporating work opportunities into traditional classroom modules outside of the mandatory final-semester internship.

One programme she is particularly proud of is Work-based Learning (WBL), a 15-week part-time attachment in retail pharmacies.

Pharmacy graduates typically choose between retail and hospital-based environments when they start work as pharmacy technicians (PTs), but the polytechnic had up until then offered students to complete their internship either at the hospital pharmacies or retail pharmacies.



Maisha felt that the WBL programme would complement the student internship programme and give students critical exposure to both the hospital and retail work environment. She tailored it for third-year students to work at retail pharmacy chains like Guardian, Watsons and Unity and smaller outfits.

Reporting to pharmacists at each outlet, the students undertake a wide range of tasks, ranging from dispensing medicines to serving walk-in customers and inventory management.

Maisha and her team also detailed a weekly learning plan that is shared with the companies' human resources department and pharmacists, who are essentially the students' supervisors.

After WBL, students may choose to do their internship in their final semester at a hospital pharmacy. "Some may like the retail setting; others may like hospitals, which is fast-paced and has a different patient profile. The WBL on top of the internship help aspiring PTs decide which environment is more suitable for them," Maisha sums up.

WBL was also launched in tandem with two new subjects at the time: Health Management in Patient Care, and Pharmaceutical Legislation, Marketing and Management. The former covers ways to help patients manage chronic diseases, while the latter dives into drug laws, marketing fundamentals and the business aspects of pharmacy operations.

"The retail pharmacy setting lends very well to the learning outcomes of these subjects," says Maisha happily.

Feedback on the WBL has been positive from both the industry partners and students: While companies see this as an opportunity to train and retain potential interns and employees, students relish learning in a "real work environment", she adds.

GROWING HER STUDENTS' NETWORK OF MENTORS

Another significant way for polytechnic students to toe-dip into industry is through mentorship, which Maisha facilitates through the Industry Mentor Network (IMN) programme.

Students in their second year apply to join the highly subscribed IMN programme, and indicate their preference for a working alumni or mentor in certain industries. They meet their mentors at least three times per semester to seek advice in personal growth and career support. Some end up being offered internships and even full-time employment with their mentors.

"These mentors become part of your network. It's a relationship. You never know when you need to go back to this person for advice," says Maisha.

Her own network of relationships, with industry partners and her own team, also reaps returns in the form of career talks by industry practitioners, learning journeys to pharmaceutical companies and guest speakers at course lectures.

She contributes back to the network as part of the Ministry of Health Pharmacy Technician training and development committee, which ensures graduates meet competency requirements. She also organised the inaugural Partners in Career Guidance event in 2018 for parents to get acquainted with and support their children in their choice of career pathways.

Last year, Temasek Polytechnic organised the biennial Joint Polytechnic & ITE Pharmaceutical Science e-Forum where students could learn about trending topics and interact with speakers from the industry.

IMPORTANCE OF INTERDISCIPLINARY COLLABORATION

To round off students' workforce readiness, Maisha is a fervent supporter of interdisciplinary collaboration.

To give students a boost in data literacy, Maisha piloted an interdisciplinary learning (IDL) project between students studying Pharmaceutical Science and those in Big Data and Analytics. With at least two students from each diploma course in a group, the IDL project called for students to create a dashboard to analyse and visualise tablet quality during manufacturing.

While the Pharmaceutical Science students learned how to create a dashboard and present data in a compelling manner, their informatics-savvy peers picked up knowledge about pharmaceutical manufacturing.

It is a precursor to projects that students will have to undertake during their internship and possibly after they enter the workforce in future. "We work with data daily. What IDL does is give them exposure and an appreciation of data analytics and how it can be applied in the healthcare and pharmaceutical industry," Maisha says.

IMPACT OF A COURSE CHAIR

These and all improvements Maisha has pushed forth for her students were driven by the prospect of being able to make a concrete difference to their future.

Being in the course chair's seat added more vroom to her efforts. "After meeting industry partners, I can actually decide to put in certain subjects or make changes to subjects to make sure my students have the relevant knowledge and skillsets when they go out to work," she explains.

"I can reach out to partners for job opportunities or even further education opportunities. I can help with articulation that will help students shave one year off their degree programme, for example. These are things I can actually do," she says, her voice both determined and delighted at once.

She considers her ability to connect with and influence students the most heartening part of her work as an educator. "Some of them come back after graduating to ask me for further advice. This is when I feel I've done my job, that I can share what I know not just while they're here."



"Dr Maisha has been helpful in giving us advice about the pharmaceutical industry, making sure we understand the realities around it. What I also love...is her optimism and positivity. Even when it's nine in the morning, she's so energetic it sets the mood for the rest of us!"

Mathilda Yeo, 18

Year 3, Diploma in Pharmaceutical Science, Temasek Polytechnic





TEO JOO CHEONG

HEAD OF DEPARTMENT, HUMANITIES (JUNIOR HIGH)

DUNMAN HIGH SCHOOL

IN HIS HANDS, A DIAGRAM WITH MIND-CHANGING POWERS

Knowing how to get through lessons and life doesn't come naturally, so Dunman High School's Teo Joo Cheong designed a learning model to guide his students' way.



There is a digital diagram of concentric circles and a checklist that Teo Joo Cheong carries on him all the time that has been coming in handy.

Joo Cheong, the Humanities Head of Department at Dunman High School, has seen its multiple powers of late – to change minds, inspire independence, launch a quest for answers, and even prepare students for the ultimate test – the school of life.

In fact, it is so useful and easy to understand that his school applies it to anything from weak essay-writing to CCA planning.

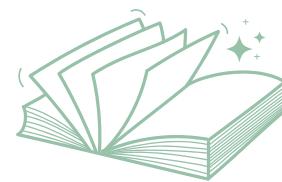
What is this seemingly magical tool that is deployed whenever students — and even his colleagues — need a nudge or some clarity of thought?

He calls it the Self-Directed Learning Model (SDLM), launched last year after a year in the making with some colleagues

But the idea likely took root over 10 years ago at Joo Cheong's previous school posting. There, he taught more than a few students who lacked lustre at their books but were more than adept when tackling life's inevitable curveballs. Today, one of them is still pushing on with his singing career despite doors closing in his face during the COVID-19 pandemic, while another student would go on to excel in his military career and earn an MBA while he was at it.

"These are all examples of lifelong learning that inspired and convinced me that being singularly focused on grades in school is counter-productive," says the educator of

“ What we love and remember are the life lessons, the things teachers said that made us change our perspective. ”



16 years. "Being self-directed in learning — like what my ex-students are doing today — is the real valuable skill I need to help my students develop."

HOW SDLM GUIDES DUNMAN'S STUDENTS

When Joo Cheong decided that a framework would be helpful to guide students in all kinds of self-directed learning — not just in relation to schoolwork — he sourced for ideas.

He found resonance in both the Ministry of Education's Framework for 21st Century Competencies and Student Outcomes and the work of famed American academic Gerald Grow. He then pulled together a team to brainstorm on a version that supports broader goals.

The result? The SDLM, a poster of which now hangs in every classroom at the school.

Essentially, the SDLM guides students towards better problem-solving and decision-making. It encourages information gathering, checking against one's beliefs and reality, and boldness to take action.

Its rings of words offer cycles of self-affirming mantras such as "I am receptive to feedback and willing to adjust my thoughts and actions", and "I think about my own thinking".

To further the point, the poster also features a table that lists the traits of a self-

directed learner ("reflects on and analyses what is taught", "learns actively", "sees setbacks as opportunities to learn and improve", etc.), juxtaposed against those of a dependent learner (uncritical, passive and avoids setbacks).

The poster ensures everyone is on the same page and share the same language when discussing their next steps in learning. "Self-directed learning is not about getting them to do everything themselves. It needs to be adjusted to where the students are," Joo Cheong explains further.

In the area of "Self-motivation", for "taking on new challenges" in History, for example, teachers of Year 1 students may align with the model by providing a greater amount of direction with a research project, and thereafter offer greater autonomy by allowing students to choose their topic of study or how they want to learn.

He elaborates, "When students are stuck at a new topic or experience, the teacher should give instructions, but once they become more interested, we become more of a motivator. When they are very driven to explore things on their own, we can be a facilitator."

FIRST A FRAMEWORK, NEXT AN EYE-OPENING CHECKLIST

To help with "Self-monitoring", students are given a diagnostic checklist. They score themselves in various areas, such as whether

they can identify their own strengths and weaknesses and if they can break a given project into smaller tasks.

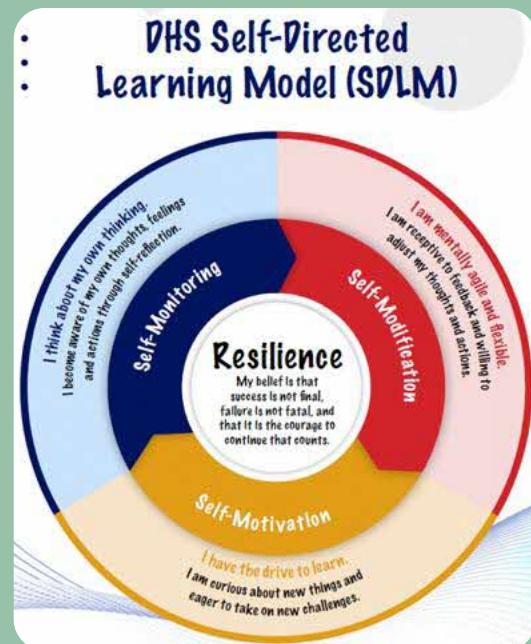
The framework and checklist have helped teachers to identify situations where students may need more help.

In one instance, Joo Cheong saw how one student had scored herself lowly in the area of "willingness to help others even when faced with obstacles", which prompted him to speak to her. She was highly competitive about her grades, and acknowledged her reluctance to help her classmates with their homework. "She thought she shouldn't help others because she needed to do better than them. It was a zero-sum game for her," he says.

Over time, Joo Cheong opened her to a new perspective, that coaching her peers can also reinforce her own learning too. A shift in mindset led to a change in behaviour – the student found joy in helping others. He adds, "Hopefully that will serve her well in life."

CRITICAL THINKING IS KEY

Indeed, the real magic of SDLM lies in its ability to help students develop strength of



character. Hence, "we're trying to go beyond academics and see how CCA teachers can use the model to design the leadership experience for their students", says Joo Cheong.

To better measure its success, he is also looking to incorporate a concerted e-journaling effort so students can reflect on their learning experiences.

The SDLM has also proven useful to spur critical thinking. Joo Cheong developed a complementary set of analytic rubrics to help his History students improve their argumentative techniques. This was derived from a marking scheme for teachers, but he reckoned it could also be student-friendly.

"It essentially helps students understand what makes an essay good," he explains. It lists criteria such as focus, balanced viewpoints, depth, coherence and accuracy of evidence, among other easy-to-understand elements.

Not only can students use this method of assessment on their own essays, but it can also be applied to pieces of writing outside of the classroom.

BRINGING THE SPIRIT OF INQUIRY TO THE COMMUNITY

When not dabbling with diagrams and metrics, Joo Cheong likes to challenge students on the spirit of inquiry. He applies Socratic questioning — such as questions that challenge assumptions and probe for alternative perspectives — to draw out his students' view of world events and inspire deeper thinking.

For more motivated students, he mentors them on independent research on topics they are passionate about. "Being able to do independent research offers an important learning experience where students can both be problem identifiers and solvers to help them hone important dispositions for 'doing life,'" he says.

The same spirit of inquiry spills over to the community engagement projects that he leads as part of the curriculum for Active Citizenry Education (the school's equivalent of Social Studies).

In the "Adopt-a-Hood" programme, a pilot partnership with the Municipal Services Office, four groups of Year 3 students are tasked with identifying problems faced by residents in the Jalan Batu neighbourhood — they conducted virtual interviews with grassroots leaders, Town Council members and even a Member of Parliament — and proposing solutions to counter them.

These students are in the midst of devising campaigns to combat noise and littering; one group is even looking at reviving the community garden to enhance bonding among residents.

Bringing such authentic learning experiences to students, and in the process gifting them a sense of purpose, is a vital way that Joo Cheong helps young minds find wisdom in

tandem with knowledge. And how does he know when he's succeeded?

"What makes me proud is when my students graduate and walk away from school confident and eager to explore the world," he says. "When they come back and say, thank you because your lessons helped me face what's out there, that makes me happy."

This reinforces his conviction that education has to go beyond knowledge. "Most of us can't remember our history grades or what our teacher taught in class. What we love and remember are the life lessons, the things they said that made us change our perspective," he says plainly. "This stays with you."



"On top of using interactive tools like Padlet and AhaSlides, Mr Teo talks about topics outside of the standard curriculum such as the Ukraine war. It makes me go search for more information on my own. I also like the Self-motivation sub-topic of his SDLM. I'm in a History research programme and we actually got to choose topics we were interested in. If it weren't for Mr Teo, I wouldn't be as interested and confident about History as I am today."

Chiew Yeam Tong, 15

Year 3 Student,
Dunman High School



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DR TAY MIA ENG

NANYANG
POLYTECHNIC

WE ARE WHAT WE EAT – AND TEACH

Food and Nutrition lecturer, Dr Tay Mia Eng, has made it her mission in life – and her students' too – to get the nation eating healthily.

Would you prefer to eat food as medicine or to eat medicine as food?"

This is a question that Dr Tay Mia Eng is fond of posing to turn people's attention to eating well. It is a job hazard, she concurs.

As a senior lecturer in the School of Applied Science at Nanyang Polytechnic (NYP), she has spent the past 13 years espousing the benefits of healthy eating to her students pursuing courses in Food Science & Nutrition.

What is interesting about the nature of her courses is that her students typically come to class with already long-held views about the subject, especially in food-crazy Singapore.

Take for instance, the adolescent love for fast food. Even her own students, who should have a heightened appreciation of good nutrition, are not immune to brushing off its potential ill effects. And do not mistake for a second that foodies make good food science students –



unfortunately, no food is consumed as part of learning in the classroom.

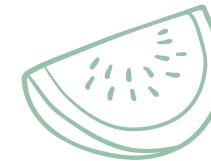
All these add to the challenges of Mia Eng's role, as some of these views may need unlearning and redressing. She takes it all in her stride, as she constantly dreams up new methods to get her students on track and embrace what they learn.

INFLUENCING THE NEXT GENERATION OF NUTRITIONAL ADVOCATES

Mia Eng thinks the best way for her students to learn is through experience.

In her course on Lifespan Nutrition, which covers eating disorders, she channels the power of walking in someone else's shoes. As they enact scenarios of treating patients, her students don't only play the part of the dietitian dispensing advice; they also act out the parts of the patient and patient's parents or guardians.

“Knowing what you like is very important in order to find a good career fit for yourself. At different stages of our life, there will be different things that matter to you. What I hope my students can take away from their time here with me is to love learning and to continue learning even after they have left school.”



The role-playing teaches them empathy and brings deeper issues to the surface; the students then better appreciate how they need to look beyond nutritional concerns to the social and emotional challenges that lie behind these complex medical conditions.

Similarly, to liven up what could be a very clinical topic of food labelling, Mia Eng doesn't simply dispense regulations but would assign case studies: Students have to set up imaginary companies with different labelling requirements. Doing so encourages them to practise and acquire the skills to interpret and evaluate food regulations to ensure compliance. Presenting the results can also improve their speaking skills and may even bring out their creative and entrepreneurial streak.

Mia Eng recalled how a student convinced a school canteen's bubble tea vendor to collaborate on a campaign to get fellow students to reduce the sugar level in their drink in exchange for a small discount. Another created a compilation of simple but healthy recipes targeted at her peers, while others produced YouTube videos or content that were uploaded to social media platforms.

These methods are all part of the authentic learning approach that Mia Eng subscribes to, to get her students to understand the real-world relevance of what they are learning. This overall move in education towards applied learning has even cascaded down to secondary schools, she noted, pointing out how her Secondary Two daughter had been tasked to design a diet for diabetics as part of her Food and Consumer Education class.

COOKING UP COLLABORATIONS WITH THE COMMUNITY

Mia Eng's expertise in food and nutrition has seen different organisations coming forward to collaborate with her in various community health initiatives (she has a PhD in Public Health Nutrition and Dietary Habits). One of these is TOUCH Diabetes Support (TDS), whom her students worked with on a series of healthy eating projects over the past few years.

As part of a festival to raise awareness for diabetes in November 2019, TDS sponsored the production of a recipe book developed by one of her students for her final-year project,

comprising dishes that adolescents can cook for their families.

TDS then requested for some of the recipes in the book to be adjusted for elderly folks with poor appetites. Together with her students, Mia Eng tweaked the recipes and conducted a cooking demonstration at a Senior Activity Centre. The "Bombay toast" they made uses basic ingredients like bread, eggs and milk. It is simple to cook but boasts a high nutritional content – perfect for seniors with small appetites.

Following the success of these projects, TDS partnered with three of Mia Eng's students to conceptualise another recipe book, this time for elderly diabetic patients. Called 'Eat Well Under \$4', the dishes can be easily reproduced using no special equipment except common cookware.

Apart from these TDS community initiatives that Mia Eng had a hand in over the years, she engineered practical collaborations with organisations such as Singapore Heart

Foundation, National Transport Workers' Union and People's Association to develop healthier dietary options for heart patients, bus drivers and members of the public.

LEARNING ABOUT THE JOB — AND THEMSELVES — ON THE JOB

Mia Eng wears another hat at Nanyang Polytechnic, that of a Para-Counsellor. With her experience and industry insights, she encourages learners to understand themselves and identify their strengths, before sharing with them the wide range of career roles available in the food science industry.

To this end, she is deeply involved in her school's Internship and Work-Study Programmes. As a master coach for workplace learning design, she works with food companies such as Dough Culture, Gardenia and Leong Guan (a noodle manufacturer) to develop On-The-Job Training (OJT) blueprints – comprehensive sets of training guidelines that companies can use to guide students there on internship or traineeship stints.



By spelling out the knowledge, skills and attitudes needed for the job roles, these blueprints provide a multitude of benefits for its stakeholders. Internship students gain clarity about their role and purpose during OJT, while companies can use them to train other staff in similar roles. Student internship mentors like Mia Eng also use the documentation to ensure that students are picking up the skillsets that are required of them.

These efforts come together to ensure her students understand themselves better,

and think more deeply about their future career paths.

"Knowing what you like is very important in order to find a good career fit for yourself. At different stages of our life, there will be different things that matter to you," Mia Eng pointed out.

"What I hope my students can take away from their time here with me is to love learning and to continue learning even after they have left school."



"The most important thing that I've learnt from Dr Tay is her passion and dedication to her job. Even when she had to stay on after school hours to help me, she remained very good-natured and cheerful. From there, I can see her genuine interest and devotion to her work. Not only is she approachable and caring, but she's also able to inspire her students to enjoy learning about the subject."

Elizabeth Yip Si Qi, 18

Year 3, Diploma in Food Science & Nutrition,
Nanyang Polytechnic





LIEW WEI SHENG

YUAN CHING
SECONDARY SCHOOL

HEAD OF
DEPARTMENT,
PHYSICAL
EDUCATION AND
CO-CURRICULAR
ACTIVITIES

DIFFERENT STROKES— AND EQUIPMENT – FOR DIFFERENT FOLKS

Head of Physical Education Liew Wei Sheng strives for inclusion in education, making PE possible for all students, including those with special needs and disabilities.

It was a setback like no other. Joanne* was a perfectly healthy girl in her early days of secondary school when she was struck by a rare medical condition. The spinal infection robbed her of the ability to walk, but would not quell her love for PE class, or physical education.

"Even though she was in a wheelchair, she told me she longed to participate in PE lessons in any way she could," says Liew Wei Sheng, the PE Head of Department at Yuan Ching Secondary School.

The student's determination to learn how to join in his classes despite her limitations was not only uplifting to Wei Sheng, but also set him on a path to inclusion, ensuring that he



develops PE lessons that cater well to all his students, including those with disabilities. The incident gave him greater clarity of purpose, as the educator of 12 years reflects with a chuckle on why he chose to be a teacher: "It was a profession that allowed me to help others and sustain a living at the same time."

TRAINING ON INCLUSION AND PARALYMPIC VALUES

Serendipity also came knocking around this time. The Ministry of Education's Physical Education and Sports Education Academy (PESTA) had released a professional development package on inclusive PE and organised training sessions on the topic of inclusion.

“The key is to recognise that all students can learn, and we should focus on what they can do rather than what they cannot do.”

Wei Sheng attended the sessions and then cascaded the learning to other schools in the same cluster support group he was chairing. The training was well-received, with several attendees calling for more training opportunities.

Along the way, he learned about the I'mPossible toolkit, an education programme designed by the International Paralympic Committee to provide teachers with lesson ideas imbued with Paralympic values.

"There are similarities between I'mPossible and PESTA's training package. The key is to recognise that all students can learn, and to focus on what they can do rather than what they cannot do," he says. He decided to adapt from all these resources to customise PE lesson plans for all the student profiles at Yuan Ching Secondary.

Now he makes it the norm for all his team members to take into account the various needs of the students and introduce flexibility, whether in the equipment, venue or rules.

In badminton, for example, a wheelchair-bound student may also learn the strokes but serve the shuttlecock into a basket rather than do a rally with another player. For students with special needs who are sensitive to noise, lessons are conducted at a quieter venue.



As for javelin, he procured spears of different weights — some are lighter in plastic for the student with mobility issues. Studying the thinking routines and assessment checklists for an inclusive PE lesson – based on teaching javelin-throwing – led to Wei Sheng and his team presenting their findings at a 2019 conference in Amsterdam.

SPREADING THE WORD SCHOOLWIDE – AND TO OTHER SCHOOLS TOO

Making adaptations for inclusion takes time and some creative thinking too, but Wei Sheng thinks the gains are manifold for all students — with or without special needs — and well worth the effort.

He shared how the school's signature track and field meet in 2019 cemented his passion for inclusive education.

He had invited Grace Orchard School, which caters to students with mild intellectual disability and mild autism disorders, to participate in a relay race with Yuan Ching's students.

The guests came in last but the spectators' roaring support was a touching sight. "The whole school cheered for them throughout the entire race. All the students learned to

embrace their differences that day," he said, still sounding moved at the recollection.

The partnership between the two schools continued thereafter in Play Inclusive, a programme led by Special Olympics Singapore and SportCares. Each year, students from both schools would train together in sports like basketball, badminton and football. After eight sessions, the mixed teams would go on to compete with other mixed teams from similar partnerships. These encounters foster a deeper understanding of the other school's students, something that may not less possible if left to chance, said Wei Sheng.

In 2021, he reached out to the Singapore Disability Sports Council to further extend the impact of inclusive education in his school with the introduction of para sports. In the end, goalball was infused into PE lessons across all levels by the end of the year.

In goalball, typically played by the blind or vision-impaired, three players defend the goal line while their opponents try to score by rolling a ball (that comes inserted with a bell) into the net behind them. All players are blindfolded and play while on their knees.

National goalball athlete Joan Hung, who is visually impaired, was invited to speak virtually to over 100 students and student



leaders about the game. She later visited the school to run training sessions.

CHALLENGES OF DIFFERENTIATED EDUCATION

In his bid to cater to students of different learning abilities, Wei Sheng has learned more about the range that comes under the umbrella of "special needs", from physical disabilities to dyslexia and attention-deficit hyperactivity disorder (ADHD).

"The needs of all students are different, and everyone has different triggers. Teachers need to know them well and know what to do when the students are not able to respond to the lesson as expected," says Wei Sheng, who knows firsthand just how the best-laid plans can go awry.

There was once when he had planned a series of blended lessons on the topic of running. Students were required to study a series of lessons online, follow up with physical practice, and return to the SLS to pen their reflections.

Despite Wei Sheng adapting the lesson to more than one group, there were moments when some students found the terms and concepts difficult. He had to be flexible and customise his lesson based on observations. "If not, some students would be disengaged

or not be learning much. For instance, there were at first seven cues to improve running form but I reduced it to three on the spot to make sure they could remember and understand them," recalls Wei Sheng.

Such adaptability hinges on training and experience, as Wei Sheng reiterates how he would mindfully return to the core priority of focusing on what students, regardless of ability, can achieve rather than the opposite. Such experiences prove that inclusivity pays off.

"The learning outcome was quite evident at the end. Everyone could remember the important parts of the running form, and hence the objective was achieved," he says.

'THANK YOU FOR BEING A FRIEND'

It isn't always easy to measure the success of inclusive measures, just as one is hard-pressed to grade someone's character. However, Wei Sheng isn't deterred. "As long as we take steps to educate our students in embracing differences, I think as a society, we would have progressed a lot further than the generations before us," he said.

His propensity for empathy and care show up when he receives his annual Quality of Teaching results — it's the students' appraisal of their teachers that his school introduced in 2020. For the second year running, he was one

of the highest rated educators in his school and received feedback such as "thank you for being a friend", "thank you for listening" and "thank you for emphasising character all the time".

"Those are the moments that keep us teachers going, that they don't see us as just imparting skills and knowledge," says Wei Sheng reflectively. "To be called a 'friend', that's powerful and keeps us going."

*Not her real name



"Mr Liew has always highlighted that we have special needs students everywhere and we should not treat them as outsiders because they are equal to us — we're all human beings.

He is like a friend because he makes us feel heard and he empathises. He's the kind of teacher whom I'll approach if I go through any problems outside of school or if I'm pondering my future."

Abigail Ann Kumar, 16

Secondary 4 Student
Yuan Ching Secondary School



TEACHING
VALUES
AND LIFE
Skills
THROUGH SCHOOL
PROGRAMMES





ARIVALAGAN S/O RAJANGAM

HEAD OF DEPARTMENT,
CHARACTER AND CITIZENSHIP EDUCATION
GREENRIDGE
PRIMARY SCHOOL

PURPOSE BEYOND SELF

To promote the school culture of thinking beyond self, Head of CCE Arivalagan S/O Rajangam didn't leave things to chance – he devised a six-year Values in Action Workplan to make it happen.



Every morning, when Arivalagan S/O Rajangam — or Mr Ari as he's more fondly known — steps into the classroom, his eyes sweep across the room. The moment he crosses his arms in silence, a flurry of activity ensues. It is time for 'Everyday Responsibilities'. He believes all the students should play their part in keeping their personal space clean before he begins any lesson.

Insisting that his students take ownership of their personal space is only the tip of what Mr Ari does to promote individual accountability and social consciousness among his students. Through his robust efforts to promote Character and Citizenship Education (CCE) at Greenridge Primary School, these young

students learn that their small actions can make a difference in the world.

"CCE is about doing the right thing, even when no one is watching," he says. "Everyone must grow up with strong beliefs and convictions. They must be able to give a voice to the needy and vulnerable and be involved in inclusivity and conservation of their environment."

FROM EGO-CENTRIC TO PEOPLE-CENTRIC

Mr Ari joined the teaching fraternity fifteen years ago and has been heading the Character and Citizenship Education Department for the past ten years. He developed the school's

“ Schools cannot be institutions where students just come to study and get good grades. Teachers must play an active role in developing the students' belief and values system, building their social and emotional competencies and encouraging their hearts to serve the community passionately.”



six-year Values in Action (VIA) Workplan outlining how students develop to become other-centric persons who actively contribute to the community.

"VIA is about stepping into someone else's shoes, thinking from their perspectives, and making informed choices to impact others positively. What I would like to see in the students is a better version of themselves before they graduate from primary school," says Mr Ari.

It is a tall order, and a profoundly important one for a generation that has not experienced hard times. Yet it isn't insurmountable, as the programme is designed in a student-centric, age-appropriate and coherent manner with clear learning outcomes. The students' sphere of influence and impact on others also broadens each year.

For instance, Primary 1 children are reminded to wash their hands and keep clean as part of learning personal responsibility. At Primary 2, the students learn to become 'Dengue Fighters'. They learn about the harmful impact of mosquito breeding and conduct

the five-step mozzie-wipeout at home to keep their homes mozzie-free. In Primary 3, the students learn proper skills to clean their personal spaces as well as common areas in the school.

"From Primary 4 to 6, the students start to exercise student agency in a structured manner through learning the design thinking protocol. "Students identify a school or community problem and develop creative solutions to solve it, hence demonstrating their heart to serve others," explains Mr Ari. He and his colleagues in school have led the design thinking workshops for students.

Students have since embarked on a wide variety of community projects. One group placed citrus peels in the school toilet to freshen the air. Another envisioned a paw-activated food dispenser for hungry stray cats in the community.

One particular project found its place in the community, encouraging pet owners to clean up after their pets. Students designed and put up advocacy posters at the lift landings of twelve HDB blocks near the school. The

students' efforts would have reached out to around 1,500 flats and up to 6,000 people in the vicinity.

Ari shares, "If someone sees the posters and brings a plastic bag the next time they walk their pet, you've succeeded. These are our students' small yet meaningful contributions to build a better society for everyone to live in." These community projects give students an authentic learning experience and embed the design thinking protocol in the students' minds so that they can readily recall these experiences for future problem-solving.

"As teachers, we must walk the talk and be good role models for our students. That is an important part when teaching values," says Mr Ari. During the food and clothing drives organised by the school, he would not just inform his students to encourage generous giving; he would also bring a bag of his own donations to class. He motivates the students to have a heart for the needy and collectively care for them. He also works with the nearby Residents' Committee to rally support from the community for the donation drives.

Mr Ari, who also heads the school's Partnerships Committee, has built a strong network of partnerships with community and corporate partners who add value to the students' learning experiences. Recently, he



arranged for the school's Green & Innovation Club to partner Zhenghua Community Club and residents from the community for a tree planting event. The event allowed students to present their posters and beliefs on how the young are playing a role in environmental conservation.

SHARING AN ABUNDANCE MINDSET AMONG THE FRATERNITY FOR THE GREATER GOOD

Mr Ari shares best practices from his school with the W5 Cluster CCE Champion Group, which he chairs. The cluster group consists of key personnel overseeing CCE from six primary schools. They come together regularly to have pedagogical conversations and develop resources to advance CCE education in all the schools in the cluster.

What defines Mr Ari's leadership in this group is the belief that unrestricted information flow benefits everyone. Whether it is workshop modules on student leadership or learning materials developed on cyber wellness, all resources are shared freely among the cluster schools. Schools can further adapt the resources according to their own school's needs and student profiles.

"I want to create an abundance mindset amongst teachers so that we can advance the fraternity together. As CCE teachers, we are teaching students the art of gratitude and giving. So, as teachers, we should also give and share generously," says Mr Ari.

TOUCHING LIVES THE CCE WAY

Mr Ari concedes that it is not always easy to bring focus to a non-examinable subject like CCE, which includes National Education (NE) and Social and Emotional Learning. In primary schools, various components of CCE are taught through school-based programmes such as assembly talks and form teacher guidance periods (FTGP). While schools can decide how the time dedicated to teaching the different elements in CCE is used, Mr Ari does not take any chances with it. He ensures teachers

spend quality time bonding and building positive teacher-student relationships during the FTGP lessons. It brings a smile to his face to see teachers conducting the FTGP lessons diligently or having a one-on-one session to get to know the students better during the teacher-student interaction time.

One notable example of the impact of CCE took place during an NE Show a few years back. It is a significant event on the NE calendar and one that all the P5 students look forward to. However, the father of one student who uses a wheelchair did not want to trouble the school with logistical issues and made his son sit out of it. Mr Ari talked to the boy and realised the boy was eager to attend the NE Show. So, he called the boy's father to convince him to drive his son to the venue and worked with his NE Coordinator to make the necessary special access. He followed the child with his father to the venue and stayed with him till the end of the show.

Mr Ari recalls, "On the day of the NE Show, when I pushed the boy's wheelchair to the arena, I saw the happiness on his face. When the fireworks lit up, both the boy and his father's faces lit up with joy. It is fulfilling to realise then the difference we can make in other people's lives. This, I thought, is the real influence and power of a teacher."

The boy is a grown-up now. A few years ago, he came back to visit his ex-teachers. On seeing Mr Ari, he asked, 'Cher, remember? We went to the NE Show together?' Mr Ari felt contented that the boy still remembers the experience and that, deep in his heart, he is still grateful for the school's efforts to make his wish come true.

For all the love he shares with his students and the teaching fraternity, Mr Ari cannot put the finger on what fills his cup. He reflects. "Maybe being able to do good for others fills my cup with positive energy and I look forward to going to work every day."



"Mr Ari is a caring and nurturing teacher. If we forget to do our homework, he will not reprimand us. Instead, he will ask why we could not complete our work and give us another one or two days to complete it. He shares many values-related stories where people encounter hardship and how they pull themselves out of difficult times. Through those stories, he teaches us about resilience and how we can find the silver lining amid adversities."

Meenakshi Sundaram Rudra Priya, 11

Primary 5 student
Greenridge Primary School





★ RECIPIENT

TAN SENIOR
MANAGER
HUI MIN

NATIONAL INSTITUTE OF EARLY
CHILDHOOD DEVELOPMENT

MENTORING STUDENTS SO NO ONE IS LEFT OUT

Tan Hui Min wants to impact the lives of young children through their educators – while caring for the well-being of the educators too.

Tan Hui Min always knew she wanted to make an impact on the lives of little children, when she was an early childhood educator. What she didn't plan for was how much she would enjoy teaching young adults.

As a lecturer at the National Institute of Early Childhood Development (NIEC), Hui Min teaches the next generation of early childhood educators. They make the most energetic students, and their antics keep her busy and laughing, much like the preschoolers she used to teach, she quips.

When they graduate and return to see her at NIEC, they joke about how she "saved" them during their days in preschool teacher training. "They actually remember things like how I helped a student open a classroom door to retrieve a water bottle, or telling another



what to do when she lost her EZ-link card!" she recounts with amusement.

Hui Min has been lecturing for 14 years after graduating with Master's degrees in applied linguistics and early childhood education, and working at a children's home and preschools.

Her bond with her students grew into a passion – for mentoring them, to ensure that they are supported, so that they can support the preschoolers they will care for in the future.

WHERE LECTURING AND MENTORING GO HAND IN HAND

"What I really teach my students isn't so much textbook knowledge," says Hui Min with a gentle smile that reaches all the way to her eyes.



“ I only have one lifetime to live. If what I do makes a small difference to the students I teach and mentor, it would be worth it. ”

"My job, really, is to teach students how to apply knowledge learned in their work, as well as to impart values to them through service projects."

One such service project she developed is called Project L.A.H, which Year 1 students undertake by partnering with a welfare organisation to serve the community. "Their experience serving in this tangible and real way helps them develop compassion and empathy for others."

Just as her students need awareness on how to care for the community, Hui Min is deeply conscious about looking into student well-being too. As an NIEC faculty teaching at one of its Campuses nestled in Ngee Ann Polytechnic, she is happy to oversee the Mentoring Programme, in place since 2017, for all students in the School of Humanities and Social Sciences with the majority being in early childhood courses.

HAVING A SAY IN A STUDENT'S PROSPECTS

Under the Programme, Hui Min co-trained the lecturers, who are assigned as mentors to one or two classes, in a 2.5-day session where they learn about the basics of mentoring and elements of positive psychology.

The trained mentors will then facilitate scheduled sessions as a class, in small groups and/or individually to discuss everything



from career options to self-esteem issues with their students.

"We want every student to feel that they can turn to their mentor as that trusted adult if they have any issues big or small, about school or in their personal lives," she says.

This increase in non-academic contact time may look like more work for everyone concerned, but the lecturers see value in the programme. "We're all educators first and foremost, so our hearts are definitely with our students."

"My colleagues and I are already mentoring some students on an informal basis, so the structured timetable of the programme gave us scheduled slots to meet with our mentees, saving a lot of time in finding common time slots to meet," says Hui Min.

This mentoring programme allows lecturer-mentors to offer day-to day support and strengthen their rapport with students. The school will also be able to see the students as whole persons, who may be struggling with family or personal problems during that particular period, and not just another ID number on the screen, when student issues arise.

GETTING USED TO NOT HAVING UNIFORMS

One surprising challenge that emerged from her early days of mentoring was how her students struggled with change. And the biggest change of all? Having to choose and wear their own attire to campus, unlike how they all wore uniforms in their primary and secondary school years.

"I then realised that uniforms are more than just clothes, they act as a leveller. Whether you are poor or not, no one knows from your uniform," says Hui Min, slightly sad. "With the chance to wear your own clothes, suddenly you're categorised and judged — maybe you're cool, or you're not fashionable."

"At their age, self-confidence is a big thing. How their friends perceive them, their looks, the way they dress... It all matters so much to them." To help the students work through all this, the mentors help with self-management: knowing what others think yet choosing

to focus on what's more important, such as being neat and presentable for school.

Five years into the programme, what counts as success? When Hui Min ran a survey with the 2021 graduating cohort of students who enjoyed the full training and mentoring effort, she was heartened that 80% of them chose to take part and shared positive results.

Today, Hui Min adds that she is also conducting courses on mentoring for preschool educators under NIEC's suite of Continuing Professional Development courses. These trained preschool educators will, in turn, return to their workplaces to share their newfound knowledge and skills with their fellow colleagues and mentor student interns.

How does she feel about making an impact on young children and their educators through the mentoring route? Says Hui Min: "I only have one lifetime to live. If what I do makes a small difference to the students I teach and mentor, it would be worth it."



"She's the most patient and understanding lecturer I've ever met. I can be myself when I'm with her and I never need to worry about being judged. Thank you for always answering all my questions, for always being there for me."

Nur Nashitah Ong, 20

Year 3,

Early Childhood Development and Education,
National Institute of Early Childhood Development (in Ngee Ann Polytechnic Campus)



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★ RECIPIENT

HUANG KEXIN

FUHUA
SECONDARY SCHOOL

EVERY CLASSROOM A GREENHOUSE

Inspired by the Maker Mindset, Science educator, Huang Kexin, got her hands dirty setting up a vertical garden and remaking the school library to show students they have the power to make things better.



Huang Kexin's first brush with teaching was a two-month stint as a relief teacher at a secondary school right after the A-Level examinations.

Despite her inexperience, she found the students responding well to her and received positive feedback from them. She recalled this one conversation she had with the students: "I asked them what their ambition in life was, and they said plainly that they didn't know what 'ambition' meant. They had never heard of the word before."

The response by the students set her thinking hard about her own purpose and mission in

life. She realised then that she would want to help others forge and realise their ambitions. Thus, even though she had already committed herself to pursuing an electrical engineering degree, she decided that upon graduating from the degree course, she would sign up with the Ministry of Education to be a teacher.

EMBRACING THE WHOLE CHILD

Kexin's first batch of students proved to be a rich learning experience for her. Posted to a junior college, she was tasked to teach a class of students with diverse talents and abilities. She quickly realised that while some of her students may not be so academically inclined,



“ I am always aware that what I see in the classroom is just one dimension of my students. It is our job as teachers to acknowledge the complete child behind that picture and help them to discover themselves and to develop holistically as a person.”



they more than made up for it with their grit, determination and passion. After a long day of lectures and tutorials, the students would find their second wind to give their best at the sports training sessions or performance rehearsals. Some, driven by passion and determination, would take up student leadership positions in the student council. To support them, Kexin made it a point to attend at least one event or match that each of the students in her class is involved in.

What she saw on the stage, the court and the field made her appreciate the individual gifts and talents of each child. She was determined to empower her students to bring out their own version of their best.

"The valuable lesson my first batch of students taught me is that I must remember that what I see in the classroom is just one dimension of the students. It is my job as their teacher to acknowledge the complete child behind that picture and help them discover themselves and develop holistically as a person," she says.

MAKING LEARNING MATTER

As Head of Department for Science at Fuhua Secondary School, she had the opportunity

to attend the 2018 Maker Faire held in San Francisco, USA, together with her school's Vice-Principal and other educators in the W7 Cluster.

There, she learnt much about "Maker Education" and the "Maker Mindset". "The Maker Mindset, simply put, gives students the appetite to make things better through identifying problems and coming up with solutions by asking questions and self-learning," Kexin explains. It teaches 21st-century life skills such as critical thinking, collaboration, and communication. Teachers with the Maker Mindset will not be too quick to offer solutions. Instead, they will facilitate the student-directed process of probing and solving.

Maker-centred learning is interdisciplinary in nature. Students are prompted to think with depth within a discipline and breadth across different disciplines. It is not unusual for students when studying Physics to be asked to design and make a chair, for example. When trained in making, students will not be scratching their heads – they will quickly dive into understanding the requirements of designing and building a chair, draw in expertise and solutions from other disciplines

and apply what they have learnt from the Physics lessons at the same time.

The Maker Mindset also helps teachers understand the importance of not teaching in silos.

After the learning journey to the Maker Faire, Kexin applied the Maker Mindset to the teaching and learning of Science at Fuhua. She conceptualised and contextualised a fun and authentic approach to teaching lower secondary science. The approach, which uses play as a medium for learning and incorporates elements of science inquiry, problem-based learning as well as collaborative learning, encourages students to create.

A learning journey to Panasonic Singapore to learn how indoor greenhouses can contribute to food security and sustainability had Kexin thinking how it would be useful to have a greenhouse at Fuhua to teach students the importance of food security and sustainability.



This saw her spearheading the 'greenhouse classroom' initiative. The initiative materialised in 2021 with the school installing its own vertical garden to serve as a cross-sciences and multi-disciplinary classroom. The Food and Consumer Education students plant and harvest the plants grown in the vertical garden to use as ingredients in the dishes they cook. The Geography students study temperature control in and outside the greenhouse. The school's Environment Club members also help to look after the vertical garden.



MAKING IS FOR EVERYONE

To further cultivate the Maker Mindset in her students, Kexin engaged the school population in the re-making of the school library.

To transform the library into one that is not only user-centric but also a place where students and staff can engage in various modalities of teaching and learning, she engaged teachers and students to contribute ideas on the types of space and furniture that they needed. "We wanted to seed in our school culture the belief that everyone – both students and teachers – has a voice and can contribute. There is no lousy idea. We are all here to make the school a better place," she enthuses. She also consulted colleagues from the National Library Board on how to optimise the use of space. "As the design proposal was taking shape, whoever would listen to me, I would just shamelessly share the design with them", Kexin shares with a laugh.

"It turned out beautiful," she says of the year-long project. The floor space of the existing library was expanded offering more multi-use spaces for quiet and or noisy activities and for various group sizes. "The students and the teachers enjoy using the new library."

Even as Kexin encourages students to learn beyond the classroom, she too does the same. When GovTech approached the

school to explore developing learning tools for students, she jumped at the opportunity to forge a meaningful collaboration. The collaboration gave birth to the mobile application called 'What's This? Snap!'. Built around the school's Applied Learning Programme (ALP) in Forensic Science, the app allows the students to virtually transform any location in the school into crime scenes. This helps make the Forensic Science programme more authentic and realistic.

"It is about helping students see that what they learn in the classroom is meaningful," she says. "Knowing how things are applied in daily life and how it impacts the world around them helps them understand the authenticity and application of the knowledge."

Ultimately, she explains, "by growing their enthusiasm towards learning, we hope to cultivate active and self-motivated learners for life".



"In Ms Huang, I could see that a teacher's calling is not just to impart knowledge. Ms Huang is a teacher who nurtures, encourages and motivates her students to be the best that they can be. She does not just teach me Physics; she also teaches me values and how to live them."

Dyerian Shah Aqil Bin Sahlan, 16

Secondary 4 student,
Fuhua Secondary School



PRESIDENT'S AWARD FOR TEACHERS

PAST AWARD RECIPIENTS

1998

Mrs Lim Tai Foon
St. Hilda's Primary School

1999

Mrs Juliana Donna Ng Chye Huat
Nan Hua Primary School

2000

Mrs Ng Peng Huat
Nan Hua Primary School

Mdm Tan Liang See
The Chinese High School

2001

Mrs Chin Ngan Peng
Kong Hwa School

Mr Lim Chiow Huat
Broadrick Secondary School

2002

Mdm Stefane Tan Hugue Hwan
Meridian Primary School

Ms Koe Heong Yin
The Chinese High School

2003

Mdm Long Miaw Ying
Jurong West Primary School

Mrs Roger Teng Siok Fun
North View Secondary School

2004

Ms Goh Siew Hong
Admiralty Primary School

Mr Koh Cher Hern
St. Hilda's Primary School

Mdm Ranjit Singh
Pasir Ris Secondary School

Mrs Geetha Creffield
Anglo-Chinese Junior College

Mr Wilfred Philips James
Dunman Secondary School

Mrs Caryn Ann Leong
Ping Yi Secondary School

Mrs Nora Teo
Punggol Primary School

Mrs Audrey Ting Yee Han
Nanyang Girls' High School

Mdm Tong Wai Han
Ang Mo Kio Secondary School

Mrs Kheng Samuel nee Chua Mui Yee
Lakeside Primary School

Mrs Pramageetha Velmurugan
Huamin Primary School

Mdm Rabiathul Bazriya
Compassvale Secondary School

2005

Miss Lim Siew Gek
Ahmad Ibrahim Primary School

Mr Chew Tec Heng Edwin
Sembawang Secondary School

2006

Mdm Bong Fui Lian Shirley
Montfort Junior School

Mr Nur Johari Salleh
Deyi Secondary School

Mr Sulaiman Bin Mohd Yusof
Sembawang Secondary School

2007

Mdm Yip Jee Cheng Jessie
Mayflower Primary School

Mr Yeo Leng Quee
Peirce Secondary School

2008

Mrs Ong-Chua Li Ling Eileen
Haig Girls' School

Mrs Lim-Ng Yee Ping Diana
Coral Secondary School

2009

Mr Terry Tan Chee Liang
Anglo-Chinese School (Primary)

Mdm Wong Lai Fong
Anderson Secondary School

2010

Mdm Emelyn Soon Bee Hong
CHIJ (Kellock) Primary School

Miss Teh Wan
Townsville Primary School

2011

Mdm Chua Mui Ling
Woodlands Ring Primary School

Mdm Dianaros Bte Ab Majid
Haig Girls' School

Mr Ganesan s/o Raman
Fairfield Methodist School (Secondary)

Mdm Noorismawaty Bte Ismail
Jin Tai Secondary School

Mrs Tan Swan Liang Doris
Temasek Primary School

Mrs Goh Hui Cheng
Paya Lebar Methodist Girls' School (Secondary)

Mdm Parameswary d/o Sundar Rajoo
Montfort Junior School

Mdm Norlita Binte Marsuki
Sembawang Secondary School

Mrs Lee Kok Hong
Temasek Primary School

Miss Cardoza Sharon Ann
Farrer Park Primary School

Miss Lucy Oliver Fernandez
Catholic High School (Secondary)

Mr Devindra Sapai s/o Indrasapai
Seng Kang Primary School

Mrs Mohana Eswaran
Regent Secondary School

Miss Serene Han Tui Kin
Montfort Junior School

Mr Chong Jack Sheng
Woodlands Ring Secondary School

PRESIDENT'S AWARD FOR TEACHERS

PAST AWARD RECIPIENTS

2012

Mdm Anwara Khatun d/o Moklis Khan
Haig Girls' School (Primary)

Mdm Tan Ying Fong Irene
Telok Kurau Primary School

Mr Yap Boon Chien
Tanjong Katong Girls' School

2013

Mdm Shakila Jamal Mohamed
Da Qiao Primary School

Mr Lee Beng Wah
Bedok Green Secondary School

Mdm Lim Chye Ling @ Nurul Huda
Kent Ridge Secondary School

2014

Mdm Lim Yen Peng Linda
Da Qiao Primary School

Miss Sim Lucy
Guangyang Primary School

Dr Muhammad Nazir Bin Amir
Kent Ridge Secondary School

2015

Dr Tay Lee Yong
Beacon Primary School

Mdm Safidah Bte Samsudin
Da Qiao Primary School

Mdm Tan Dai Hwee
Anderson Junior College

2016

Mdm Juliana Bte Johari
Qihua Primary School

Mdm Tang Sheng Lien Michele
Catholic High School (Secondary)

Mr Tharmendra Jeyaraman
Siglap Secondary School

Ms Koh Su-Cheng
Da Qiao Primary School

Mr Gejendran s/o V Krishnan
Geylang Methodist School (Secondary)

Mdm Chee Mui Choo Valerie
Xinghua Primary School

Mdm Lee Yee Tyng
Hougang Secondary School

Mdm Chan Puay San
Innova Junior College

Miss Rezia Rahumathullah
Da Qiao Primary School

Miss Wong Yoke Chan Wendy
Geylang Methodist School (Secondary)

Mdm Tauled Tunisha Bte Mohd Paser
CHIJ (Kellock) Primary School

Mdm Halimah Bte Jumaha
Bedok South Secondary School

Mr Muhammad Salahuddin Bin Ibrahim
Serangoon Junior College

Ms O Guat Bee
Temasek Primary School

Mr Anil s/o Vasudevan
Marsiling Secondary School

Mdm Phoon Lyvenne
Spectra Secondary School

2017

Mr Jahangeer Bin Mohamed Jahabar
Endeavour Primary School

Mdm Lim Hwee Sian
Cedar Girls' Secondary School

Ms Asrina Bte Abdul Samad
Institute of Technical Education

2018

Ms Goh Wai Leng
Geylang Methodist School (Primary)

Mr Ong Yong Cheng Matthew
St Andrew's Junior School

Mr Edzra Bin Iskandar
Bedok South Secondary School

Ms Tan Lay Khee
Temasek Polytechnic

2019

Mdm Sarah Koh Hui Khoon
Holy Innocents' Primary School

Mr Syam Lal s/o Sadanandan
Bukit Batok Secondary School

Mr Lim En-rui, Joel
Fairfield Methodist School (Primary)

Dr Koh Noi Sian
Nanyang Polytechnic

2020

Mdm Shanti Deenathayalan
Guangyang Primary School

Miss Yeo Cheng Yong
Fuhua Secondary School

Mr Tang Yee Fun Francis
Outram Secondary School

Dr Chia Hui Teng
Singapore Polytechnic

2021

Ms Chua Siew Kheng
Sengkang Green Primary School

Mrs Ng-Siah Siew Ling
Corporation Primary School

Mdm Edwina Cheng Wei Na
Compassvale Secondary School

Mr Leung Yulun
Yuan Ching Secondary School

Dr Ow Yeong Wai Mang
Bishan Park Secondary School

Ms Kwa Lay Ping
Singapore Polytechnic

Mdm S Nirmala Devi
Guangyang Primary School

Ms Ng Sheh Feng
Ahmad Ibrahim Secondary School

Dr Lim Yi'en
National Junior College

Mr Teo Keng Ann
Singapore Polytechnic

Mr Chew Ansheng, Victor
Rosyth School

Mr Mohamed Azhar Bin Mohamed
Innova Primary School

Ms Siu Yee Nar Ella
Republic Polytechnic

Mdm Wong Bing Sum
Radin Mas Primary School

Mdm Ira Wati Bte Sukaimi
Mayflower Secondary School

Mr Oh Chee Kiat
Institute of Technical Education College East

Ms Khairiah Bte Hairoman
Peirce Secondary School

Ms Tang Iman
Temasek Polytechnic

Mr Jeff Koh Hock Tong
ITE College Central

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