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TEACHERS' Conference 2019



Maximizing Learning: Engage. Collaborate. Innovate.



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CONTENTS

03 **Editorial Note** SingTeach Editorial Team 10 In Their Own Words

Teachers: Lifelong Learners and Motivators



04 The Big Idea

07 People Social-Emotional Learning: The Foundation of Future Success

12 Research In Action Transforming Teaching through Teacher Collaboration

14

Classroom Perspectives Teachers as Brain Changers: Understanding Cognition in Physical Education

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Published quarterly by the Office of Education Research at the National Institute of Education, Singapore, SingTeach is an e-magazine dedicated to improving teaching and enhancing learning. Each article is crafted with teachers in mind.

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Conference 2019

The Teachers' Conference is a biennial event organized by the Ministry of Education, Singapore that serves as a platform for educators to come together to discuss and share about pertinent issues that centre around education. First held in 2001, the ninth running of the conference held from 27–29 May 2019 at the Singapore Expo Convention Centre revolves around the theme of *Maximizing Learning:*Engage. Collaborate. Innovate.

In this issue of *SingTeach*, we feature a keynote address by Professor Maurice Elias from Rutgers University, USA in which he shares about the importance of nurturing positive values and developing social-emotional competencies in our young learners. This issue also highlights several concurrent sessions that cover a wide range of topics from physical education to at-risk students to teacher collaboration.

To encourage engagement with the *SingTeach* team, we also spoke to four teacher-participants at the conference about their professional development as an educator and their roles as motivators in the classroom. Their sharings are featured under the "In Their Own Words" section on page 10 of this issue.

The *SingTeach* team hopes that this issue will further reinforce all the excellent work that you, our local teachers, do within and even beyond the classroom. We also hope that you will be inspired to continually connect and engage with one another in an effort to build a culture of growth among educators and instil the joy of learning in our young students.

SingTeach editorial team

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CLASSROOM PERSPECTIVES

Building Self-Esteem in At-Risk Students



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TEACHERS AS TRANSFORMATIVE AGENTS OF CHANGE

The recent Teachers' Conference 2019 identified two key strands that are of particular relevance to educators today: designing holistic education and enacting innovative pedagogies. Deputy Director-General of Education (Professional Development) Mrs Chua-Lim Yen Ching tells us more about the focus of the conference and the benefits of bringing our local teaching fraternity together over the three-day teacher-led event.

As we continue our march into the 21st century, how is education evolving? For one, education is no longer defined solely by grades. Education needs to address an individual's social and emotional capabilities as well-key competencies that will determine one's success in life. Teachers also now play a crucial role in nurturing a lifelong love for learning in their students.

As Minister for Education Mr Ong Ye Kung mentioned during his opening address at the conference: "What we are seeing is that the mentality of competing for even higher scores in even more tests and examinations is giving way to a new movement to take a balanced approach in teaching and assessments, and bring about greater joy of learning."

As such, it is timely that the ninth running of the Teachers' Conference focuses on the theme of Maximizing Learning: Engage. Collaborate. Innovate. which reinforces the teaching fraternity's emphasis on student-centric education.



ENGAGING LEARNERS IN THE AGE OF DISRUPTION

"As we face an increasingly uncertain future moving forward, the acquisition of knowledge alone is insufficient," Mrs Chua-Lim Yen Ching, who is also Executive Director at the Academy of Singapore Teachers, shares. "Key competencies such as collaboration, communication skills, cultural awareness as well as critical and analytical thinking skills will become very important to students."

In his keynote address, Professor Maurice Elias from Rutgers University stressed the importance of understanding how the education system is evolving to a full and explicit integration of social-emotional learning, and its connection to character, achievement and citizenship goals. (Read more about his keynote address in the article "Social-Emotional Learning: The Foundation of Future Success" on page 7.)

Mrs Chua notes that, "Teachers should be more aware of the key role they play in their interaction with students and in motivating them to learn. They should think of new ideas that can resonate with our learners."

In line with these goals, the conference also highlights innovative and effective pedagogies. Providing teacherparticipants with a greater insight into how innovation plays a part in education, the second keynote speaker Ms Janet Ang, who recently retired as Vice-President of IBM Asia-Pacific, addressed the issue of disruptive technology and how this disruption should fuel and drive us to innovate. She shared about how teachers can use technology to harness pedagogy in the classroom.

However, Mrs Chua cautions that "pedagogy is what drives technology, and not the other way round".

She explains further: "While technology strives to build first-class robots, as teachers, we must strive to build first-class humans. Values such as compassion and empathy as well as human relationships cannot be automated. A machine can give you the facts and information but human communication and social relationships are a different kind of connection."

NURTURING A GROWTH CULTURE

With about 3,900 participants (for both the Pre-Conference and Main Conference from 27 to 29 May 2019), TC2019 provides a platform for teachers to collaborate and synergize their efforts at the school and system level.

When teachers come together to learn in a group, the level of professional discourse is higher than when they learn as individuals. It can also strengthen the collegial culture of continual learning and improvement among

"It is important for our educators to see the nexus between theory and practice. For such a conference, it is not enough to just impart the skillset, it is also an opportunity for us to look into our teachers' mind-sets and see how we can develop our professional expertise," Mrs Chua explains.

She is heartened to learn that at the last Teachers' Conference in 2016, the teacher-participants had requested for more teacher-led concurrent sessions and so, this year, the number was increased from 79 to 126 sessions. This year, ExCEL Fest was merged with TC2019 and this also means that there were approximately 60 exhibition booths, with two-thirds of them related to teaching and learning, while the rest were about enhancing work processes.

"The conference encourages teacher participants to take an active role in developing their professional learning. Maximizing learning does not just apply to students, but to teachers as well," Mrs Chua emphasizes.

LEARNING, RE-LEARNING AND APPLYING NEW SKILLS

When asked what she hopes teacher-participants would benefit from the conference, Mrs Chua shares: "The success of a conference doesn't just lie on what teachers have learnt, but what and how they have applied what they learnt into their classrooms."

Due to the changing education landscape and how students learn differently today as compared to many years ago, it also becomes increasingly important for teachers to be able to design and enact new and innovative pedagogies. As such, Mrs Chua encourages teachers to remain open and be adaptable in terms of teaching strategies, especially when teaching students with different profiles. It is also important, she adds, for teachers to reflect on what they have done right and how they can improve, and whether their students have realized their potential.

"If we love our students and love the teaching profession, we will always continue to learn and become better teachers," she adds. While there may have been a number of recent changes in the education landscape today, Mrs Chua is confident that one thing will remain constant—the mission and passion of every educator to help each student realize his/her greatest potential.

Main Takeaways from Teachers' Conference 2019

The main takeaways from this conference are threefold: teacher conviction, teachers as agents of change and teachers' motivation. Deputy Director-General of Education (Professional Development) Mrs Chua-Lim Yen Ching elaborates more on these issues.

TEACHER CONVICTION

How can the success of the conference be measured?

According to Mrs Chua, "it is not so much about the ratings but the qualitative feedback and reflections received from participants that really matter."

She adds that the successful outcome hinges on how teachers have applied what they have learnt and made changes in their pedagogical practices.

"This can only happen when teachers not only understand, but believe in what they are doing and what they need to change," she says.

TEACHERS AS AGENTS OF CHANGE

One of the aims of this conference is to grow the teacherled culture of professional excellence in schools. As agents of change, teachers should be ready to think through what they have learnt, be ready to unlearn and relearn, and acquire the skill to balance between the rigour of learning and instilling the joy of learning.

"There are many overseas visitors who visited the Academy of Singapore Teachers and saw the teachers in action. They shared that while they would be able to replicate the best practices, they would not be able to replicate the spirit and passion of our teachers," adds Mrs Chua.

TEACHERS' MOTIVATION

Teachers' motivation is not extrinsic, but intrinsic; it refers to what drives them as educators. They must be prepared to try out innovative and effective teaching strategies that can help students academically and develop 21st century competencies like communication skills, collaboration skills and values education.

The teaching fraternity should, Mrs Chua says, bear in mind the Maslow's hierarchy of needs. "The highest level is self-actualization but a higher level than self-actualization is how to help others to have self-actualization. It is about us and we as a community," she affirms.



About the Interviewee

Mrs Chua-Lim Yen Ching (seated in the middle) is the Deputy Director-General of Education (Professional Development) and the Executive Director of the Academy of Singapore Teachers. She started her teaching career as a Science teacher at Dunman Secondary School. She held various leadership positions in various schools, before assuming the role of Deputy Director, Sciences Branch, Curriculum Planning and Development Division at MOE in 1998. From 2006 to 2011, she was the founding Principal of NorthLight School. Prior to her current position, she was the Director, Curriculum Planning and Development Division from December 2011 to 2013.

phile intellectual intelligence can open many doors for an individual, emotional intelligence is the key quality that determines how far one goes in life. In his keynote address at Teachers' Conference 2019, Professor Maurice Elias explains the role that social-emotional learning and character development play in nurturing students to become successful and participatory citizens.

The 2016 World Economic Forum highlighted that traditional academic competencies are no longer sufficient in preparing students for future jobs.

In fact, there are employers that do not even take test scores into account when making hiring decisions—one such employer is Google. Instead, what the search engine giant looks for in prospective employees are qualities such as teamwork, humility, adaptability and the ability to think outside the box.

As educators, we therefore have to go beyond imparting content knowledge and also focus on nurturing our students to be adaptable, good communicators, strong team players and effective problem-solvers—these are not merely social-emotional attributes that Google values in an employee, but the very competencies that are foundational to future success.

Developing Character through Positive Purpose

A key galvanizing ingredient to social-emotional and character development is positive purpose, which is the intention to accomplish something that is personally meaningful and in the service of a greater good. Having a sense of purpose is important for students as it keeps them grounded and empowers them to be engaged and contributing citizens in society.

So what can schools do to help students develop a strong sense of purpose?

For a start, educators have to guide students in identifying their strengths and talents as well as affirm their potential to be positive contributors in society. One way they can achieve this is to engage students in conversations about a fictional character or historical figure's purpose and ask them to think about the character's goal or why the figure made a particular decision.

When students reflect on how prominent characters or individuals have positively impacted society, they would also develop an understanding about how a sense of purpose guides human behaviour and actions. In doing so, they are better equipped to think about and articulate their own sense of purpose, which would eventually energize them to put their learning to constructive use and cooperate for social actions.

Of course, students' thoughts about their positive purpose will change over time, as they experience different life events and discover new areas of interest in and out of school. One should therefore not be surprised to observe changes in students' behaviour during a period of time when a positive purpose they once held becomes weakened or eliminated, or when they discover a new one after a period of searching.

How Social-Emotional Learning Empowers Students

Apart from helping students find their own purpose, schools must also have strong social-emotional learning (SEL) programmes in place to help learners acquire the dispositions that would take them far in life.

Within the United States, there is data that demonstrate a link between a school's commitment to SEL and students' achievement outcomes. In high schools with strong SEL programmes, not only do students perceive their teachers and principals to be supportive, they are also more motivated to strive for excellence in their pursuits.

Personally, I have worked with a middle school that had many students who were not only struggling academically, but also presented with disciplinary problems. The school's numerous attempts to remediate students' poor academic performance bore little success, so it decided to take a different route—make SEL and character development a priority.

In a process that lasted six years, the school became a "National School of Character" and the test scores of students improved. These outcomes are precisely the result of the school's commitment to SEL, which translated into a more nurturing learning environment, where students felt supported by their educators and were motivated to do their best. In fact, the students also gradually developed a love for learning and in the process, started to focus on what they can do with the knowledge they have gained.

Cultivating a Love for Learning

All learning must be emotion-informed and as educators, we have to recognize that learning involves many emotions, ranging from curiosity, excitement and delight to confusion, frustration, stress and anxiety.

If students experience negative emotions such as anxiety or frustration over the course of learning a subject matter, they would not enjoy the process of learning. After all, it is difficult to love anything that is a source of stress.

Nevertheless, negative emotions need not hinder learning or preclude a love for learning, for they are part and parcel of the process. Educators thus have to work with students to help them recognize and manage the emotions they are experiencing so that they would remain motivated to learn. Eventually, we can cultivate a love for learning in our students.



Ultimately, we cannot love what we do only when the results we desire come easily; we must also develop a love for the progress and the trajectory. In doing so, we would better appreciate our successes and achievements. Furthermore, overcoming challenges in learning is often anchored by having a strong sense of positive purpose, and feeling supported in your learning and goals by the adults and peers in your environment. This is as true for adults as it is for students!

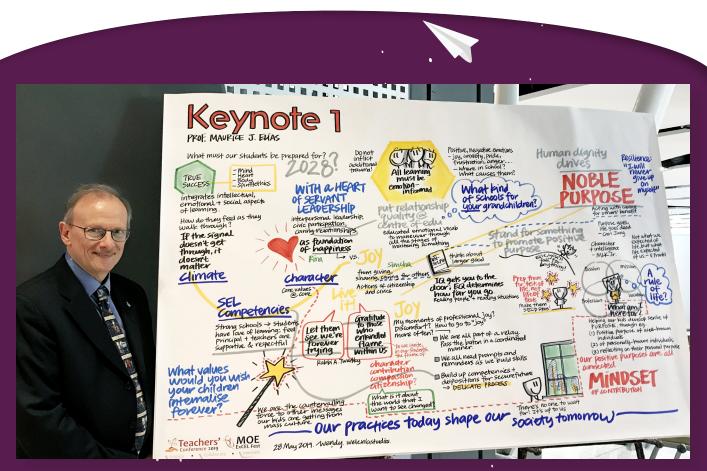
Teachers at the Heart of SEL

Many of us chose to become educators because we are committed to developing our students' characters and want them to contribute to society positively.

We therefore cannot regard SEL programmes to be less important than academic subjects as social-emotional competencies are what enable students to become active and engaged citizens who contribute their talents for greater causes.

Furthermore, we must also believe in our students if we want them to succeed in life. There are students who, despite having given up on themselves, turned a corner because they had a teacher who provided care and support but most of all, believed in them.

All of us have the capacity to ignite our students' flames of character, contribution, compassion and engaged citizenship. It is thus our responsibility to prepare them not only for a life of tests, but also for the tests of life.



About the TC2019 Keynoter

Maurice J. Elias is Professor of Psychology at Rutgers University and Director of the Rutgers Social-Emotional and Character Development Lab. He also serves as Co Director of the online Academy for Social-Emotional Learning in Schools, which offers certificate programmes for educators worldwide. He has published numerous books on social-emotional development for educators, parents and children and lectures locally and internationally on emotional intelligence, character development and school success. He delivered a keynote "How Social-emotional and Character Development Helps Schools Reach Achievement and Citizenship Goals" at the Teachers' Conference 2019.

TEACHERS: LIFELONG LEARNERS AND MOTIVATORS

In line with the theme of Teachers' Conference 2019 (Maximizing Learning: Engage. Collaborate, Innovate), the SingTeach team asked four teacher-participants at the conference about their thoughts on professional development and their role as motivators in the classrooms.

TO WHAT EXTENT DO YOU
THINK TEACHERS HAVE A
ROLE TO PLAY IN MOTIVATING
THEIR STUDENTS TO BE ACTIVE
LEARNERS IN THE CLASSROOM?

Teachers hold the torch and ignite students' passion for learning. As teachers' practices impact students' learning, it is important for us to continually upgrade our skillsets to allow us to better enact pedagogies in a way that meaningfully impacts learners.

Judith Ho Teacher, Springfield Secondary School

66 Teachers play a key role in motivating, encouraging and engaging students to be active learners and giving them the confidence to excel in their pursuits. As long as we focus on our students, our efforts to engage and enrich their learning will not go wrong.

Vasundhara Reddy Vice Principal, Anchor Green Primary School HOW CAN TEACHERS ENCOURAGE ONE ANOTHER TO CONSTANTLY DEVELOP THEMSELVES PROFESSIONALLY?

To motivate each other to develop professionally, you first have to be with the right company. I am lucky that my colleagues always keep a look-out for relevant courses, seminars and workshops. We share useful readings with one another as a way to motivate one another to learn. My company of friends are passionate learners. When you are surrounded by people who talk about new things, you increasingly also want to learn about it. So the formal or informal sharing of information can help motivate one another to develop professionally.

Teo Mui Li Character & Citizenship Education Branch, MOE

66 Teachers can do it through peer-coaching. Teachers can help each other develop themselves by examining their own teaching practices. The traditional way of doing this is through lesson observations. However, what makes peer coaching different is that, they can carry out constructive dialogues which help them reflect on their pedagogy. The conversations need to draw on each other's strengths as well as building and refining new skills. It helps if teachers can share with one another new perspectives and classroom practices that work which can be put into use in the future. In essence, we have teachers who come from a wide range of backgrounds and it is always helpful to have an ecosystem to facilitate mutual professional development moving forward.

Aminurashid Bin Juma'at Teacher, Chung Cheng High School (Yishun)

Transforming Teaching through Teacher Collaboration

o man is an island, and teachers are no exception. Teachers today are expected to be highly effective collaborators who have their hearts centred on their students and student learning. Teacher collaboration involves more than just working as a team. What can teachers do to deepen their understanding of being collaborative professionals to improve student learning outcomes?



For the past year, Associate Professor Angelia Poon, who is with the English Language and Literature Academic Group at the National Institute of Education (NIE), and Dr Tay May Yin, Principal Master Teacher/English Language with the English Language Institute of Singapore (ELIS), have been supporting a team of secondary school English Language (EL) teachers and their Heads of Department (HOD) to enhance classroom practices.

Engaging in Self-Reflection and Dialogue

Each week during the school term, Angelia and May Yin held one-hour Professional Learning Community (PLC) meetings with five Secondary Two EL teachers and their HODs. During these meetings, the teachers would reflect on their EL classroom practices.

The teachers kept journals in which they penned their self-reflections according to a questioning protocol. The first question focused on what they had done well in their EL lessons the previous week and the justifications for their thoughts.

"The second question that we asked was, 'How did you know learning had taken place?' to prompt them to provide us with the evidence," Angelia says. "Introducing the idea of evidence-based learning forces teachers to take notice and be aware of their students' responses and questions."

Additionally, teachers also reviewed the challenges they faced, which provided opportunities for their colleagues to give feedback or help find possible solutions to any problems faced. "These three questions, when discussed during the weekly meetings, serve to enhance teacher collaboration through deep and meaningful dialogue," she explains.

Peer feedback and Identification of Areas for Growth

Soon, however, Angelia and May Yin observed that the quality of discussions during these meetings began to plateau.

"We wanted to move on to a higher level and decided to have the team of teachers engage in video-based critical inquiry. This involved teachers video-recording their lessons and choosing a snippet for critical reflection with their peers," Angelia shares. Such an approach allowed the teachers opportunities to provide candid and constructive feedback while also empowering them since they could choose which aspect of their lesson they wanted help with.

To elicit more detailed responses and deepen the conversation, Angelia and May Yin provided a questioning framework for the teachers to do self-inquiry into their classroom practice.

"Teachers had to describe their current practices based on the video-recordings, analyse what they did, and why they did what they did; probe into their practice by questioning the assumptions, values and beliefs underlying their practice; and reconstruct their assumptions, values and beliefs by taking an active reflective stance and making decisions for next steps in their practice," Angelia explains.

Both Angelia and May Yin found this approach to be useful in enabling teachers to take ownership of their learning as they became empowered to be more critical and self-reflective of their teaching.

The next step in May Yin's view is diagnosis. "Being able to recognize one's areas for growth is an important aspect of teacher learning," May Yin adds. Two key areas of teaching competencies for teachers to focus on are Subject Content Knowledge (SCK) and Knowledge of Pedagogy (PK).

"Teachers tend to prioritize PK in their decision-making but in classroom enactment PK has to interact with SCK. This interplay between SCK and PK is referred to as Pedagogical Content Knowledge (PCK). PCK is the manner in which teachers use SCK to consider different ways to represent it (i.e., PK) and make it accessible to students," May Yin explains.

Through the video-sharing sessions, teachers reported that they were able to think more critically about their lessons as well as the knowledge bases they possessed. The discussions also had, to some extent, encouraged teachers to pay more attention to student learning rather than simply focus on examination preparation and results.

The Way Ahead

Moving forward, May Yin and Angelia are keen to study the impact of collaborative teacher learning on student outcomes. "This is a question for the long-term which we have not been able to measure or sense yet, but we do believe that there can be positive outcomes for students," Angelia shares.

For now, May Yin and Angelia are working on bringing about sustainable change in the department. They believe that focusing on shifting teachers' beliefs, dispositions and attitudes is key to shifting classroom practices to impact student outcomes. "This remains a work-in-progress as we found the focus on examinations to be quite strong but we hope over time to shift the emphasis to a focus on students as learners," Angelia says.

May Yin and Angelia are also working on building a viable model of teacher collaboration that would ensure teachers continue to develop professionally and eventually mentor other colleagues.

"There is a need to review our conventional approaches to teacher learning. We want teachers to co-construct their lessons and co-teach," May Yin says. Both Angelia and May Yin stress the importance of rigorously planning the appropriate structures and learning experiences for teachers to develop the necessary competencies. Teacher professional learning, they add, is best situated in classroom and school contexts.

May Yin concludes that collaborating professionally is more than just putting people together. "It is about taking into account the myriad of factors that will contribute to the most conducive ecosystem for teacher and student learning," she says.



About the TC2019 Speakers

Angelia Poon (left) is Associate Professor with the English Language and Literature Academic Group at NIE. Her research interests include postcolonial literature and theory, Singapore literature and contemporary literature with focus on globalization and transnationalism. Tay May Yin is Principal Master Teacher, English Language with ELIS. Her current research interests are teacher identity, the practice of teacher professionalism, and impacting teacher learning. They conducted a session "Collaborating Professionally: What's in it for Teachers?" at the Teachers' Conference 2019.



TEACHERS AS BRAIN CHANGERS: UNDERSTANDING COGNITION

IN PHYSICAL EDUCATION

🌈r Hanif Abdul Rahman, Principal Master Teacher of Physical Education (PE) at Physical Education and

At the Teachers' Conference 2019, Mr Hanif Abdul Rahman starts his session by prompting the participants in the room to start thinking. First, he asks them to think about a student they have just taught recently.

Then, he asks them to think about what this student may be thinking in the PE lesson. Next, he asks them to think about the environment of their lesson, what this particular student is thinking about the skill he or she is trying to learn, and what they themselves as teachers are thinking about.

"So ladies and gentlemen, I have just brought you along on a thinking exercise... about thinking," he proclaims with a flourish at the end.

UNPACKING COGNITION

The word "cognition" comes from the Latin word "cognoscere" which means "get to know", explains Hanif.

"It's about acquiring knowledge and understanding to produce an appropriate response," he explains. "In our subject (PE), an appropriate response mainly takes the form of movement."

Hanif goes on to explain that cognition helps us understand information and make sense of the world around us. He emphasizes the important role cognitive process plays in a PE lesson as it would enable students to interpret information and execute the kinds of movements that are desired.

Thus, he is an advocate of paying attention to the critical and inventive thinking aspects of PE to allow students to "create their own meaning-from sense-making to meaning-making."

COGNITIVE OPERATIONS AND MAKING THINKING VISIBLE

"Basically, there should be a stimulus at the start, most commonly in the form of questions," says Hanif. "Other forms of stimuli could be an emotion, an object, an environment or a task—something that gets them thinking."

The stimulus will then cause a cerebral itch and a need to know, and this is where dissonance happens, he explains.



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"Something is bothering me in my mind and I need to do something about it," Hanif elaborates. This motivates the search for an answer that arises in the form of mediation. When a solution is found, a response is executed and at this stage, loops may start appearing as new stimuli appear.

"Generally, this is how the brain thinks and what we want to enact in our students (during PE lessons)," says Hanif.

The start of making thinking visible generally takes the form of a question, which aligns with the start of the cognitive operations loop. However, Hanif cautions that, "if you ask questions as a teacher, you must also be willing to listen to the answer."

"There's no point asking questions if you don't wait for the answer, or don't demand proper response," he explains further. When students answer questions either verbally or through the execution of a movement, it also serves as a form of assessment to show where they are in terms of the learning process.

TEACHERS AS BRAIN CHANGERS

"We know that the brain is wired in a certain manner." says Hanif. Specific parts of the brain are developed in certain ways to enact certain things, he explains. "The way we design our lessons can help our students develop their brains in a more balanced way."

First, the content of the lesson—the "what" of teaching has to be age-appropriate, with reference to prior knowledge students already possess. "I strongly believe in the spiral and distributed approach to teaching PE, because the content will be revisited again and again, layered with a more complex context," says Hanif.

This means that the brain consolidates the reinforced and proliferated content, which will not be pruned off easily by the neuroplasticity of the brain.

Next is the intensity—the "when" of teaching—in terms of how often and how long. "Practice does not make perfect, it makes permanent," says Hanif. "If they keep practising the wrong thing, it may be difficult for them to unlearn later."

"Students must be reflective of their movement so that as they repeatedly do it, they refine and improve on what they do," he adds. This drives the brain to reorganize, reconnect and prune off unused connections or experiences.

Then comes the methodology—the "how" of teaching which he terms "ReNEW" (Reinforcement, Novelty, Enhance attention and Well-being).

TEACHING TO SPARK JOY

Dopamine released during carefully timed and structured reinforcement, as well as during novel experiences, increases the likelihood that newly learned information will be retained, explains Hanif.

"If you always perform the same drill again and again, there is no dopamine release in the system and thus no motivation," he says.

At the same time, educational interaction that engages with some novelty will stimulate neuromodulators in the brain and this helps to enhance attention. Lastly, a feeling of well-being associated with serotonin translates to the joy of learning.

"That joy of learning can be reinforced by us teachers praising our students, affirming them, and telling them that they are doing a good job and why they are doing a good job," says Hanif.

"Ultimately, we want to identify the sweet spot from framing neuroscience and educational psychology together to inculcate the joy of learning in our students, and also to create a culture of thinking in the PE department."

About the TC2019 Speaker

Hanif Abdul Rahman has been a Physical Education teacher for 21 years, and is currently a Principal Master Teacher of PE at PESTA. This article is based on his presentation "Cognition In, Through and About Physical Education" at the Teachers' Conference 2019.

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