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EDUCATION RESEARCH FOR TEACHERS

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Published quarterly by the Office of Education Research at the National Institute of Education, Nanyang Technological University, Singapore, *SingTeach* is a magazine dedicated to improving teaching and enhancing learning. Each article is crafted with teachers in mind.

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Redesigning Pedagogy International Conference 2022

SingTeach Editorial Team
Office of Education Research
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The *Redesigning Pedagogy International Conference* (RPIC) is the National Institute of Education's (NIE), Singapore flagship biennial conference organized by the institute's Office of Education Research. However, due to the recent COVID-19 pandemic, the conference, which was originally scheduled for 2020 was cancelled.

For the first time since its inception in 2005, the 2022 edition of RPIC took the form of a hybrid event in which there was a mixture of both virtual and in-person sessions held within the NIE campus. This ninth edition was attended by over 1,300 delegates from Singapore and beyond its shores across three days from 30 May to 1 Jun, and featured more than 400 presentations in the form of keynote presentations, paper sessions, workshops and symposia.

In this issue of *SingTeach*, we highlight some interesting paper presentations by two fellow educators and an NIE education researcher that focus on positive teacher language, reciprocal teaching and social emotional learning. We also feature three keynote addresses that shed light on how education should be like in a post-COVID world, why classroom discourse is critical to building robust societies, and current and future directions of education research in Singapore.

We also have seven teachers from both primary and secondary schools who share with us more about the creative ways they have used technology in their classrooms, as well as how they feel schools can strengthen their role in developing students' social and emotional skills.

If you had attended RPIC, we hope the takeaways from the many presentations and keynotes were beneficial for you in your professional learning journey in and out of classroom. For those who missed the conference, fret not—we hope this issue of *SingTeach* will have you covered! ■

ONLINE EXCLUSIVES

CLASSROOM PERSPECTIVES

Supporting Student Growth through Positive Teacher Language

PEOPLE

- Boosting Education Research to Prepare for a Volatile Future
- High-Quality Classrooms and Robust Societies

VIRTUAL STAFF LOUNGE

- The Art of How—Reinventing Education with Technology and Collaborative Innovation@Dunman High School
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SINGAPORE EDUCATION:

THE ROAD AHEAD

Since the start of the COVID-19 pandemic, there is a growing sense of urgency on the need to rethink and perhaps even redefine education if the nation were to develop resilient, confident and adaptable young people in the face of complexities. Despite the challenges that accompanied the pandemic the past two years, many educators have adopted a positive mindset, turning those adversities into opportunities for teaching and learning. At the recent ninth edition of NIE's *Redesigning Pedagogy International Conference (RPIC)*, educators from all walks of life came together to share their journey and experience in teaching and learning amidst these changing times. We speak to RPIC Conference Convenors Professor Tan Oon Seng and Dr Dennis Kwek on the need to reinvent education in Singapore for an ever-evolving tomorrow.

At the opening ceremony of NIE's flagship international conference on 30 May 2022, Minister for Education Mr Chan Chun Sing calls for teachers to change the way we learn and teach, given that the world has changed and will continue to change at an unprecedented rate. "Among the

many changes, we must also recognize the key ones for us to apply our minds incisively and focus our efforts on finding new ways to help our people learn and teach better," he says in his opening address to over 1,000 teachers attending the conference virtually.



This brings light to the theme of the conference, *"Transforming Education and Strengthening Society"*, which hopes to focus on pertinent education and societal issues through its virtual keynote addresses, paper presentations and symposiums, as well as in-person workshops and masterclasses.

Transforming Education and Strengthening Society

"Rapid changes brought about by the COVID-19 pandemic have caused educators everywhere to rethink and re-examine fundamental issues about education. This is something that we, at NIE Singapore, are deeply concerned about too," NIE Director Professor Christine Goh says at the opening ceremony of the conference at Nanyang Technological University's (NTU)'s Nanyang Auditorium.

As Singapore's sole national institute for teacher education and accreditation, Prof Goh shares that the NIE mission is to inspire learning, transform teaching and advance research. "Research at NIE is carried out with a view to supporting the Singapore education system to develop future-ready learners and teachers, inform policy formulation and programme design, and to build on the best educational practices with the future in mind," she adds.

According to RPIC Conference Convenor Professor Tan Oon Seng, who is also Director of the Centre for Research in Child Development at NIE, the future of education also lies in the development of character and competence. "These two Cs are important anchoring pillars of education," he says.

As such, the three-day conference aims to highlight the need and urgency for educators to develop in learners the relevant competencies that can help them navigate this new complex era while also strengthening society at the same time through values and character education. Prof Tan also asserts that developing character and building resilience in young children today are crucial especially in a digitized environment where the profile of young learners is rapidly changing.

Social Emotional Learning: The Foundation of a Good Society

"In the past, schools tend to pay more attention to the mental aspects of learning, but now, we begin to realize that actually, the cognition and

emotional interface are all linked together. That is why there is a need to pay attention to the social and emotional aspects of learning," Prof Tan says.

Fellow Conference Convenor Dr Dennis Kwek, Director of the Centre for Research in Pedagogy and Practice at NIE, also shares the same sentiment. "School is one of the primary places where students learn social and emotional skills. Research has also shown that acquiring such skills increase pro-social behaviours and decrease negative outcomes later in life, which contribute greatly to the foundations of a good society," Dennis shares.

So how can schools strengthen the social and emotional aspects of learning?

According to both Prof Tan and Dennis, this can be done by raising awareness of the various developments and interventions that inform both curriculum and classroom practices about creating a more positive environment for learners.

"While foundational skills are essential for children to navigate the complexity of their lives, I also hope that the paper presentations at this conference can offer our educators fresh insights and knowledge into how we can help create that right environment for our learners to develop empathy and manage emotions," Dennis shares.

He also notes that the importance of developing social emotional learning skills extends to not just the students but also to educators especially when COVID-19 has changed the entire educational landscape. "It is equally crucial for teachers to learn how to manage stress and emotions to be able to create a safe and supportive environment for their students in return," he explains.

The Ever-Evolving Education Landscape

The rise of online learning the past two years has inadvertently resulted in a completely different learning experience for students.

"Some of the schools that I work with have shared that online learning has afforded them with the opportunity to reinvent their lessons to one that can engage learners at a level that is very familiar to them," he shares. "Teachers began to pick up more digital-related skills in order to deliver their lessons which can highly appeal to our Generation Z learners."

One of the biggest and most important changes in the Singapore education, according to Prof Tan in his 40 years of experience, was the emphasis on meeting the different needs of every child. While factors such as curriculum, reduced class size, and family and community involvement contribute to student success in and out of classrooms, research have also shown that teacher effectiveness is one of the most influential factors.

"The student-centric, values perspectives in which every child is different was one of the most recent emphasis we had in Singapore education," he shares. "We have to acknowledge and understand that there are multiple pathways to learning and that children may be strong in various and different aspects of learning. As educators, it is our duty to help them see all these diverse pathways."

With changes constantly occurring and often almost unpredictably, how can teachers respond to these growing demands while seeking opportunities for professional learning?

Learning and Re-Learning for Educators

This biennial education conference has only one end in mind: the learners. "The conference is called 'redesigning pedagogy' simply because we want our teacher participants to understand how crucial it is to always relook, rethink and *then* redesign classroom practices all in the name of our learners," Dennis explains.

"We cannot deliver lessons the same way we were doing it two years ago. As the world changes, so must our pedagogies, so it is important that we

learn and relearn what we already know." Thus, it becomes crucial for teachers to constantly develop themselves with both the hard and soft skills required to engage students as the world changes and progresses.

"I hope every participant had the opportunity to be exposed to the various research strands and paper presentations, so that they are exposed to the different perspectives of best practices," Prof Tan says. "The conference hopes to afford teachers the opportunity to see a bigger picture of how we can best bring Singapore education forward."

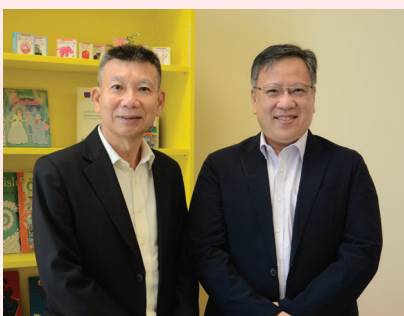
Some of the notable research strands at the RPIC include the following: Artificial Intelligence in Education, ICT in Education, Curriculum Development, Science of Learning, Character, Citizenship & Moral Education, Motivation, and Social Studies Education. After RPIC's last edition in 2017 before COVID-19 hit, it is now both Prof Tan and Dennis hopes that teachers will bring back to their respective schools the learning points that are useful for their classroom practices as well as for their professional development.

"We hope that this gathering of over a thousand practitioners near and far can help shape the road ahead for Singapore education," Dennis concludes. ■



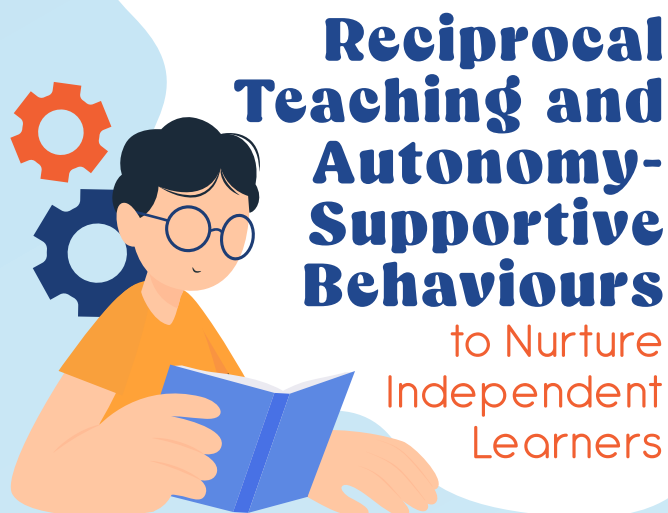
Scan the QR code to read about the **seven shifts in teaching and learning** as addressed by the Minister for Education at the RPIC opening ceremony in the full version of this article.

ABOUT THE CONFERENCE CONVENORS



Dennis Kwek is Director of the Centre for Research in Pedagogy and Practice and Associate Dean (Strategic Engagement) of the Office of Education Research at NIE. He is currently leading the institute's CORE Research Programme, a multi-million-dollar government-funded large-scale baseline suite of empirical studies into Singaporean classroom pedagogies.

Professor Tan Oon Seng is Director of the Centre for Research in Child Development at NIE. He was previously Director of NIE where he played a significant role in enhancing teacher education and revitalizing NIE's training programmes to raise the image and professionalism of teachers.



Reciprocal Teaching and Autonomy-Supportive Behaviours

to Nurture Independent Learners

Autonomy-supportive teaching refers to a set of teacher behaviours that can facilitate independent learning by identifying and developing students' interests and inner motivations (Reeve, 2016). It is based on an interpersonal relationship between teachers and students that can support the latter's need for autonomy. In his presentation at the *Redesigning Pedagogy International Conference 2022*, Dr Ravinder Mohan Sharma from Edgefield Secondary School discusses the six autonomy-supportive instructional behaviours as well as his research study on reciprocal teaching.

Reciprocal Teaching in the Classroom

Reciprocal teaching is a scaffolded instructional technique that is used to improve students' ability in reading and learning (Palincsar & Brown, 1984). It uses four main strategies in which the teacher guides the students to predict, clarify, question and summarize when working on a comprehension text.

"Reciprocal teaching is actually a dialogue between teacher and students. The teacher begins by modeling the use of the strategies and scaffolds the practice of this technique for students. The ultimate goal is for the teacher to relinquish control to students so that they can be responsible for their own learning," Dr Ravinder Mohan Sharma, Lead Teacher (Learning Needs), from Edgefield Secondary School, explains.

In his five-week observation of reciprocal teaching that was adopted in two upper secondary English

language classes, he notes that the approach has received a positive response from students.

"Students gave feedback that using the four main strategies has helped them to be better self-directed learners and understand comprehension texts better," he shares. "Through repeated practice of the four strategies, we hope that they can have a deepened sense of how to apply them in the long run."

In his virtual presentation at the education conference, he discusses how teachers can leverage on reciprocal teaching to enhance autonomy-supportive behaviours.

The Six Autonomy-Supportive Instructional Behaviours

Ravinder shares that there are six autonomy-supportive instructional behaviours that teachers can adopt in the classroom to nurture independent learning.

The first is being **mindful of the students' perspectives**. "When teachers adopt the students' frame of reference, they become more empathetic and empowered to create classroom conditions to support students' autonomy," he says.

For example, teachers using reciprocal teaching as an approach are advised to first understand the students' level of readiness to work on a particular comprehension text. "The choice of comprehension texts used in the classroom determines whether the application of the four roles for reciprocal teaching can happen. Thus, when choosing a text, teachers need to match the difficulty level of the text with the students' readiness," he explains.

Second, it is crucial for teachers to consider how they can **nurture and develop student curiosity and intrinsic goals**. This will in turn build up their confidence in the subject.

"In reciprocal teaching, the teacher will provide opportunities for students to rotate within the four roles—predict, clarify, question and summarize—when working in groups on the comprehension text," he shares. "Curiosity and interest value are likely to increase when, for example, those in the 'predict' role are instructed to anticipate what might happen in the text."

The third behaviour is **providing an explanatory rationale**. This may include telling students the benefits of doing a particular lesson activity so that they will feel more motivated and engaged to learn.



"In teaching comprehension, teachers can explain why text analysis is important and how these strategies can help them later in independent work and assessments," he advises.

The language used when communicating with students matters too. He explains that teachers need to use **non-pressurizing informational language**.

"Non-pressurizing refers to the absence of words such as 'should', 'have to', and 'must' while informational language conveys choice and flexibility that encourages students to solve problems on their own," he notes.

In reciprocal teaching, teachers are encouraged to allow their students to provide a range of questions and possible answers. Adopting an encouraging tone, teachers also reassure their students that there are no incorrect answers during the discussion stage.

However, he notes that teachers should be prepared that some students may, for example, request not to participate or express doubt in their ability to engage with the lesson activity. Instead of dismissing their concerns, teachers need to **acknowledge the students' expression of negative effect**. In these situations, teachers may consider asking for suggestions on how to go about the lesson better.

The sixth and last behaviour is **having the patience** to withhold the answers to the questions and postponing help until a suitable time in the particular lesson. "Teachers should be responsive only when there is a serious need to. Students should be given the opportunity to work at their own pace," he explains.

He emphasizes that the six autonomy-supportive behaviours must be enacted synergistically over lessons. When practiced in tandem over time, the six behaviours can help students become more in sync with the learning activity or subject matter.

"Student satisfaction, curiosity, interest and goal progress can become high probability occurrences when teachers show new ways of interacting with the learning activity," he adds.

Challenges of Reciprocal Teaching

Ravinder admits that there are some limitations to reciprocal teaching. His research study has shown that more time and commitment are needed in order to build up student confidence in using the four roles.

"A teacher gave feedback that some students had requested for more explanations from him to ensure that they were on the right track. The need for more time remains a concern," he says.

He also highlights that there is a culture of deference to teachers that needs to be gradually reduced. In one of his observations, he notes that some students still preferred teachers to provide the explanations and answers.

"To encourage students to be independent learners, teachers have to be mindful that they have to withhold answers until a suitable time. The culture of deference needs to give way to more self-directed independence practices in order to raise student efficacy in their own learning," he affirms.

The research study has inspired Ravinder to look into how there could be a re-thinking of new and old strategies to improve students' independent learning in other English assessments such as oral communication and writing.

He also hopes that reciprocal teaching and autonomy-supportive instructional behaviours can be extended beyond learning and reading comprehension. "Future studies can explore how the six autonomy-supportive instructional behaviours can be enhanced beyond the English classroom. We can look at how, for example, other forms of adapted reciprocal teaching can be used to teach the water cycle during Science lessons," he shares. ■



Scan the QR code to read more about the **four main strategies of reciprocal teaching** in the online version of this article!

ABOUT THE PRESENTER



Ravinder Mohan Sharma is Lead Teacher (Learning Needs) at Edgefield Secondary School. This article is based on his paper "Reciprocal Teaching to Frame and Enhance Autonomy-Supportive Behaviours" presented at the Redesigning Pedagogy International Conference 2022.

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Building Social and Emotional Learning in Schools

Social and emotional learning (SEL) is a combination of cognition, emotions and behaviours—soft skills fundamental to one's personal and social well-being, growing one's character, developing values and building positive relationships. Research have shown that immersing students in SEL-rich contents seem to have a significant positive effect on the way they think, feel, and behave, thus creating a profound impact on their well-being both in and out of the classroom. NIE Education Research Scientist Dr Betsy Ng shares some strategies that could help promote SEL in schools through her research which focuses on self-determination theory.

A Theory of Human Motivation

The self-determination theory (SDT) suggests that the motivation behind one's behaviour is influenced by three innate and universal psychological needs: autonomy, competence and relatedness. It is a broad theory on the intrinsic and extrinsic motivations that affect one's cognitive and socio-emotional development, their differences and behaviour.

Dr Betsy Ng, who has been actively involved in education research since 2009, shares that research has shown that these basic psychological needs have a direct influence on students' social and emotional learning (SEL). This inspired her to embark on a new research study that hopes to identify strategies related to SDT to promote SEL in Singapore classrooms.

"My research study is anchored on this macro theory of self-determination which brings up interesting areas of motivation," she explains. "It highlights the importance of reflecting upon what we have done, what we are doing now, and what we intend to do—all of which are in relation to our needs as human beings. So, if we bring this back to the school setting, we can help nurture SEL in our students."

"Through my research, I hope to answer the following question: What are the SDT-based strategies that can promote SEL in both teachers and students? As my research is still in its preliminary phase, implementation of these strategies will likely only be done in the second half of this year," she adds. Betsy has, however, already identified some potential strategies based on her literature review on SDT and SEL that could nurture SEL in schools.

Strategies to Nurture SEL

"It is not easy to gain the competencies that can help you deal with emotions. As teachers, we need to be able to regulate our own emotions while also be aware of how our students are feeling."

According to Betsy, these strategies require a mindful approach, which some teachers may already be familiar with but at the same time, find it challenging to apply in the classroom.

Take Student's Perspective

"To quote the famous author of *To Kill a Mockingbird* by Harper Lee," Betsy explains, "try to stand in the students' shoes, walk around in it and understand how they feel and then having known that, you're able to actually bring [the point] across to the students." Teachers can start by being mindful of students' needs and thinking of the elements of SEL while preparing for lessons.

Vitalize Students' Inner Motivational Resources

Students' inner motivational resources refer to students' interests and preferences. Teachers can make use of those by planning activities that could ignite students' intrinsic desire to learn. For instance, for a topic on insect life cycle, Betsy suggests bringing into the classroom a real insect or a video clip to get them excited about the topic and learn how life all begins.

Use Non-Pressuring Informational Language

It is often a challenge for teachers to be aware of what they say in the classrooms given all the tasks that need to be completed in a few short classroom periods. However, Betsy highlights that it is important that teachers recognize the importance of using non-pressurizing informational language and to avoid using modals such as "should" and "must". Words like "may" and "could" are less pressurizing and tend to give students the flexibility to nurture their motivations, such as during group work where they have options to select one out of two or a few tasks.

Provide Explanatory Rationales

With huge time pressure and demands from the syllabus, teachers may find themselves jumping into lessons right away. Betsy recommends that teachers share the objectives of the lessons and provide explanatory rationales to students for the lesson and the tasks within the day's lesson. This includes providing rationales when rewards are given, as compared to merely dishing them out.

Display Patience

Displaying patience towards students by giving them time and space in turn demonstrates to them how they could also watch and listen when working with their peers, especially in groupwork. This may be trying, especially during stressful periods such as when examinations are near. Hence, teachers may consider having such learning opportunities for students during other times of the year, to work at their own pace to build up their self-awareness and self-management skills.

Acknowledge and Accept Negative Affect

Affect refers to any experience of feeling or emotion. "Acknowledging and accepting negative affect is often easier said than done," Betsy acknowledges, while sharing her teaching experience years ago. Nonetheless, she encourages educators to do so, explaining that this showcases the empathy they have for their students and their own emotional regulation. "When your students are feeling restless, or when your students are getting a little bit not so enthusiastic, you could ask, 'Is there something that you would like to have the next time?'" Betsy suggests. Welcoming suggestions to get students to play an active role may even help teachers in crafting a project or task that encourages students' interest in the activity.

Challenging but Worthwhile

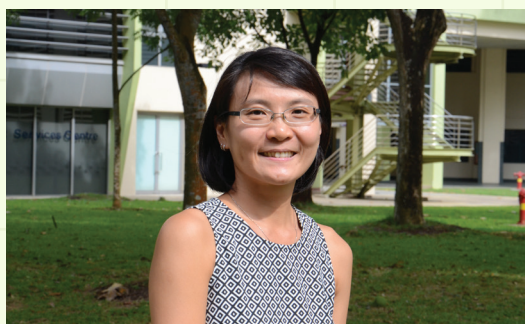
"Teachers need to be good listeners and observers to understand students' needs and interest level on the tasks. In addition, we must also be aware of one's own body language where we may unwittingly display a lack of patience that discourages students from voicing out in the process," Betsy explains.

In employing these strategies, Betsy also emphasizes the importance of first having to develop the very social-emotional skills that we seek to inculcate in our student which includes having a high level of self-awareness, and being reflective thinkers and doers.

As with most things, Betsy advises that it is okay to start small first. "It is probably challenging to immediately work on all the strategies at one go, so what we can do is try the one that is the least challenging. Like say for me, it is first learning to take students' perspectives." ■



ABOUT THE PRESENTER



Betsy Ng is Education Research Scientist with the Office of Education Research (OER). Her PhD research was on student motivation and learning in secondary schools. Her areas of expertise include motivation and lifelong learning. She also has research interests in educational psychology, adult learning, educational neuroscience, and gerontology. This article is based on her paper "Understanding Social and Emotional Learning: The Self-Determination Theory" presented at the Redesigning Pedagogy International Conference 2022.

If you are interested to learn more about Betsy's research findings on SDT-based strategies that can promote SEL in Singapore teachers and students, you may get in touch with her at betsy.ng@nie.edu.sg.

EDUCATION IN A POST-COVID WORLD



Often, assumptions about teaching can lead to challenges in understanding what is meant by quality teaching and learning. Australian Professor Emeritus John Loughran from Monash University believes that there is a need to better understand teaching and teacher education in a post-COVID world. This article is based on his keynote address titled “Reimagining Teacher Education in a Post-COVID World” at the *Redesigning Pedagogy International Conference 2022*.

Assumptions of Teaching and Teacher Education

When we talk about teaching and teacher education, there seems to be many assumptions in terms of quality. It doesn't matter where you look in the literature and forever, it is always said teaching is mostly just telling others what you know—a transmission of knowledge. That for teacher education, people learn primarily from more or less unguided experience. And that faculties of education offer little more than just half-baked theories that are unnecessary and perhaps may impede the learning of practical teaching requirements.

These are assumptions that seem to live around teaching and teacher education.

My argument now is that COVID-19 has given us an opportunity to push all those assumptions away in ways that haven't happened before—to push the status quo.

I think now then it's fair to say that there is a challenge for us to better understand teaching. And it's important because these stereotypes and assumptions lead to public understandings that are not always clear on what quality is in teaching and learning. So, it becomes very important for us to now draw attention to what quality means in teaching and learning.

But responding to that requires a thoughtful approach. We need to think about teaching and teacher education as a way of developing better support for the transmission of knowledge, and to push back against what is often seen as the theory–practice gap.

The Theory and Practice Relationship

I like to think about the theory–practice gap in a different way. Instead of thinking of it as a gap, I like to think of it as a symbiotic relationship where practice informs theory, and theory informs practice. The two go together—they are inextricably linked and if we think of it that way, it stops being a gap and it starts being a dynamic relationship.

And these two things capture the essence of what quality is in teaching.

In a similar way, we also need to value theory, and that's captured best, I think, when you see theory that creates frameworks that help us to better understand practice; that offers insights into the teaching and learning relationship; and that captures the sophistication of the specific “what happens in an individual classroom?” while also shedding light on the big picture understandings of teaching and learning.

So those things become important not just in thinking about teaching and classrooms, but particularly in shaping teacher education and what a programme with a systematic approach to teaching and learning about teaching, might entail.

Education in the Time of a Pandemic

COVID-19 has led to a new focus on teaching and learning. The great lockdown in Melbourne happened and I was there at that time. The lockdown captures nicely what the world of online teaching *initially* meant from students' perspectives and the excuses it gave students for not doing what they were asked to do.

My daughter is a high school dance teacher and it was really interesting to be at her place sometimes, watching her teach dance online where you can see the number of students who did and did not participate. So, teachers then become the important element in what teaching and learning is during a pandemic.

In the world that COVID-19 has pushed us into, we need to see beyond this idea of transmission of knowledge. Telling and listening doesn't equate quality in teaching and learning, and the pandemic really brought that to the fore. It also meant that theories in teacher education couldn't simply be front loaded; and that school practicum experiences required much more than "stand and deliver" experiences.

I am not quite sure how it played out in Singapore, but in Australia, this became a really big deal because we could no longer get student teachers into school and so they were learning how to teach virtually through the online environment. This meant moving beyond the delivery of content was an immediate and very pressing issue for student teachers and for the teacher educators supporting them.

Parental Involvement Greater Than Ever

Probably the biggest breakthrough was that parents began to see education in new ways in that they couldn't help becoming involved in supervising learning. You can look through many online blogs of parents who were confronted by what it meant to supervise their children, and their efforts to get new insights into teaching and learning. So, here's one and I'll read it out to you.

“Just the other morning, my daughter was doing school work—or so I thought—when I realized that I could hear the distinct voices of everyone's favourite animated underwater rescue squad, The Octonauts, a very topical and a favourite cartoon show here in Australia.

When I asked what she was doing, she told me she was watching the episode and writing down facts. At the end of the show, my daughter proudly came and read to me a report of all that she'd learned about the Everglades (a swampy grassland) and showed me pictures she'd drawn of each of the animals that could be found there. This was not a school activity; it was certainly not set by me and it was definitely initiated by my daughter as an excuse to watch the television.

However, it made me realize the values that we regard highly—curiosity and enthusiasm for learning—were on fine display. And it struck me that my role as a parent in this education puzzle is to foster that curiosity and that I have an opportunity to support my children to experience more autonomy in their learning during this time. ”

I think that's a powerful piece of writing from a parent whose experience of education is probably 20 years different to what they are experiencing right now, supervising children at home in a virtual learning environment.

And I am now making this argument: What COVID-19 did was a game-changer in the way that the previous assumptions that I put up for you were challenged, and challenged in a productive and positive way.

So, quality in teaching and teacher education means that learning theory has to be translated into practice. It's well and good to be making arguments about learning needing to be different. But it's a different matter when you think about what it means to transfer understandings of learning into new pedagogical experiences both from the teacher's and student's perspectives. ■

ABOUT THE KEYNOTER



Professor John Loughran is a Member of the Australian College of Educators and a Fellow of the Academy of Social Sciences in Australia. John was a science teacher for 10 years before moving into teacher education. He is well regarded in the fields of teacher and science education. He has also published over 30 books working with publishers such as Routledge, Springer and Sense and Teachers' College Press. John received numerous teaching and research awards internationally. His competitive research grants exceed AUD\$10M and he has supervised in excess of 40 PhD students to completion.



Scan the QR code to view the **full keynote address**.

TAPPING ON TECHNOLOGY;

DEVELOPING SOCIAL AND EMOTIONAL SKILLS



Let us take a few steps back and think deeper about the theme of this year's *Redesigning Pedagogical International Conference (RPIC)* "Transforming Education and Strengthening Society". What does transforming education mean to you and how can we contribute to strengthening society as educators? We ask RPIC teacher-participants two questions related to digital technology and social and emotional learning, and here is what they have to say.

What are some of the creative ways you have used digital technology to enhance students' learning?

The value of technology serves to empower my students as curators and creators of their learning. With this belief, I have tasked my students to design formative assessment quizzes for their peers. Upon receiving their peer's responses, they have worked in groups to evaluate the responses and to co-create their "marking" key with explanations for each response. This allows them to examine the different responses and elicit the key concept. The ability to discuss, discern and deliberate leading to the convergence of a collective response on a digital platform synchronously was one way technology can enhance students' learning.

Wen Hui

Academy of Singapore Teachers



I use *Google Earth* and *Google Map* to teach primary Science and Math. *Google Earth* is used to teach the topic of man's impact on the environment. Global warming due to pollution has caused the ice at both poles to melt and water levels to rise, disrupting weather patterns. The children can actually see the decreasing size of the frozen ice at the North Pole. *Google Map* also allows me to enhance their understanding of area, perimeter and distances between cities. By zooming in from outer space to our school's courtyard, we can measure the area and calculate how big it is. I ask my pupils to imagine: If I have to build a fence around the school's courtyard, how many meters of fencing would I need?

Mohammad Fadilah Admah

Madrasah Irsyad Zuhri Al-Islamiah



Digital field trips have been a boon when it comes to enhancing my students' learning. Due to the COVID-19 experience, helping my students with some authentic learning was a challenge as showing them pictures just wasn't sufficient. Digital field trips enhance my students' learning by allowing them to experience the closest to reality as they were guided through the virtual programmes. I also gathered their feedback, which was a powerful opportunity that allowed me to curate, consolidate and quantify my students' learning in a meaningful manner.

Clifton James

Peiying Primary School

How can schools strengthen their role in developing students' social and emotional skills?

Schools can strengthen our role in developing students' social and emotional skills by using a whole-school and many helping hands approach. We need to partner with parents so that there is alignment between the home and school spheres, and parents can reinforce what teachers inculcate in schools. Educators need to role model good social and emotional skills during their interaction with students, colleagues and parents. We also need to leverage peer leaders as students also look to influential peers who can influence them significantly.

Shir Nee Ong

Kuo Chuan Presbyterian Primary School

Enable time for teachers to build positive classroom culture that encourages students to experiment and learn from failure. Teachers play the role of a facilitator to engage students' reflections in the learning process that help develop their thinking and emotions. We can also plan for classwork that encourages peer and group interaction, and problem solving.

Karen Low Lai Fong

Punggol View Primary School

Schools can leverage student leaders by training and equipping them with the necessary skills that they can pass on to their classmates during their interactions. This will be effective as students may not be comfortable expressing themselves fully in front of teachers, thus their peers would be able to reach out to them more meaningfully. Also, schools can do their part by conducting workshops and using scenario-based learning to help students better develop their social and emotional skills.

Elena Thein Ying Jie

Admiralty Secondary School

We need to leverage their curiosity and make them share what they feel is worth discovering. This requires them to ask questions that could have no answers rather than accept answers that cannot be questioned. The keyword I usually drive at is "epiphany", in which their sudden realization can be used collectively to level everyone's fear of interacting intelligently, since they see themselves being in the same boat.

Aidal Razali

Madrasah Wak Tanjong



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