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Teachers' Conference 2016

Big Idea

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Lifelong Learning for Teachers

There is no end to learning—more so for those who teach. The recent Teachers' Conference 2016 focuses on how teachers might learn with and from one another on a lifelong journey to provide a better learning experience for their students.

To deepen knowledge and to re-examine one's perspectives about education—this is an ongoing process for every teacher in Singapore. In other words, teachers are constantly looking at bettering themselves in their profession. But why is this important?

As Director-General of Education Mr Wong Siew Hoong mentioned during his opening address at the Teachers' Conference 2016: "The good work of our teachers is a key national asset, and also a reason why we are able to move from the third world to first world in such a short time. Through this good work that we do, we can help shape our students."

As with the previous conferences, this year's Teachers' Conference, with a focus on *Maximising Learning: Collaborate, Engage, Inspire*, aims to support teachers in their professional learning by offering a wide range of learning platforms—many hosted by teachers for teachers.

Maximizing Learning

"Whilst the focus of the conference was on achieving broad and deep learning for our students, it also highlighted the importance for participants to learn maximally from the proceedings and from one another during the conference," explains Mdm Nadarajah Viyaya Rani, Master Teacher at the Academy for Singapore Teachers (AST).

In doing so, Mdm Rani also hopes that teachers can apply their learning to promote a collaborative, engaging and inspiring classroom culture for their students, who are at the heart of all professional learning of teachers.

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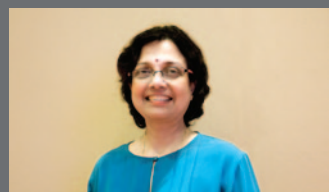
- Mdm Nadarajah Viyaya Rani,
Academy for Singapore Teachers



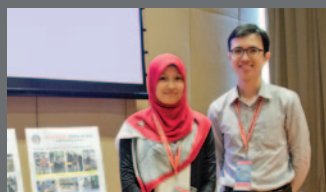
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RESEARCH within REACH

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Mdm Nadarajah Vijaya Rani and Mr Chan Yew Wooi hope that participants will transfer their learning from the conference into their classrooms.

Mr Chan Yew Wooi is Director, Professional Development, at the Academy of Singapore Teachers. His team is focused on enhancing the professional competencies of education officers, executive and administrative staff, and allied educators, through the advocacy of professional collaboration and teacher-led professional excellence. **Mdm Nadarajah Vijaya Rani** is a Master Teacher (Geography) at the Standards and Research Branch in the Academy of Singapore Teachers. She coordinates the work of the Geography Chapter to support the professional learning of Geography teachers.

“Ultimately, whatever we do as teachers, the goal of any professional learning is really to help our students learn better,” explains Mr Chan Yew Wooi, Director for Professional Development at AST. “So we hope that both our presenters and participants will be able to learn as much as they can at the conference.”

Learning from One Another

With more than 3500 participants and approximately 100 presentations (for both the pre-conference and conference from 30 May to 1 June 2016), these teachers had the opportunity to meet like-minded educators from different schools in Singapore and overseas. This allows them to interact with and learn from each other professionally.

At the conference, they had the opportunity to explore broader issues together. For example, at the 2-hour World Café Conversation session, local and foreign participants from diverse backgrounds were grouped together to discuss the concept of global citizenship and what it really means to be a global citizen. At the end of it, a facilitator collated their ideas for discussion.

“There was a lot of critical re-examination of the thinking behind Character and Citizenship Education”, says Mr Chan. He noted that the participants explored the concept of inclusiveness in Singapore schools.

Teachers shared what their schools are like in this aspect and examined the facts with a critical lens.

“I thought that was useful because they were asking each other questions like, why, or why not. And that was really the whole purpose of the critical conversations. It was a mind-opening experience for the teachers who participated,” Mr Chan notes.

Showcasing Local Expertise

A new feature at the Teachers’ Conference was the pre-conference programme. The programme was designed to accommodate the increasing number of teachers-participants who wanted to be part of the signature learning event. But more than that, it allows teachers to learn from some of the most experienced teachers in Singapore.

“This pre-conference created the opportunity for teachers to attend presentation sessions led by our Master Teachers and learn with and from them,” Mr Chan says.

“As a Master Teacher, I feel that for the first time, we were given the space at the pre-conference to share as local pedagogical experts,” says Mdm Rani. “So it was also recognition of how we have grown in terms of our own teacher-leader expertise.”

Aside from that, Master Teachers also worked with teacher-presenters to hone their presentations for the conference. The presenters “deepened their professionalism because they need to put together a presentation, facilitate discussion with colleagues and help them distil their key learning points and how they can apply them in their classrooms,” says Mdm Rani. She now feels that there is a greater sense of teacher ownership in their professional learning as more teachers are coming forward to lead professional excellence at different levels.

With Master Teachers as pedagogical leaders in their subject disciplines, both teacher-presenters and participants were also provided opportunities to re-examine their own mental models and assumptions about teaching and learning.

A Holistic Experience

Be it a concurrent session or a keynote, Mdm Rani feels that the conference itself was a holistic experience for everyone.

“The conference was effective in engaging the participants and presenters through the varied modes of presentation and engagement, including keynote addresses, concurrent sessions, a World Café discussion, spotlight lectures and interactivity at exhibition booths, not to mention the free popcorn and ice-cream for participants!” These activities helped to foster a sense of camaraderie and opportunities for informal networking among participants.

To her and Mr Chan, it is these little things that contribute to the positive experience of the teachers at the conference.

But most importantly, it was how the conference facilitated the professional growth of teachers, and the networking within the teaching fraternity. Participants were seen exchanging contact details, so that they may continue their conversations.

“We hope that these informal connections that they made will crystalize into something more fruitful in future,” says Mr Chan “By interacting with colleagues from different schools, we expand our network and our spectrum of possibilities.”

Teacher Professional Learning

As with any conference, it is always hoped that the participants will get something positive and useful out of it. Master Teacher Mdm Nadarajah Viyaya Rani shares what she hopes the teachers will take away from the conference.

Meaning making

“I realized that at the start of every concurrent session that I attended, the teacher-presenters often start with the *why* and *what*,” shares Mdm Rani. “Why they are doing what they are doing, and what are the things that they are doing to make a difference to their students’ learning.”

Besides engaging the participants and helping them to enjoy the learning experience, it was important for participants to contextualize and connect the new learning to their schools’ contexts, for real transfer to take place.

Changing Mind-sets

This conference saw a mix of both new and veteran educators. “We have a whole variety of teacher experiences and expertise but within ourselves, we may all have different mental models, values and beliefs of how we think children must learn,” she explains.

Being able to collaborate with others, being open-minded and respectful of diversity, and being able to accept multiple perspectives, to Mdm Rani, are crucial dispositions of a resilient and nimble fraternity.

Motivating Colleagues and Students

“During the conference, there were many moments of affirmation from our keynote speakers and our Director-General of Education of the good work that we do as teachers.”

With that, Mdm Rani hopes that this will, in turn, motivate participants to lead, care and inspire their colleagues and students.

Research

Cognitive Coaching for Higher Self-efficacy in Teachers

At Regent Secondary School, key personnel and reporting officers use a 4-step approach of cognitive coaching to provide effective feedback to teachers. This facilitative approach is designed to inform and empower teachers to become key enablers who will make a difference.

With feedback comes awareness and improvement. But despite having one of the most important jobs in the world, teachers get almost no feedback on their teaching that will help them perform better (Gates, 2013).

As a School Staff Developer in Regent Secondary School, Madam Mohana Ratnam felt compelled to build the professional capacities and increase the self-efficacy of her colleagues.

When she was awarded a Fulbright Distinguished Award in Teaching Programme, Mohana decided to focus on using cognitive coaching to inform and empower teachers, as part of her Fulbright Capstone Project (now known as Fulbright Inquiry Project).

The Importance of Teacher Efficacy

“The key enabler for making every school a good school are the teachers. We make the difference,” says Mohana. But first, teachers must believe they can do the job, and do it very well.

Teachers with high self-efficacy possess confidence. “We want our teachers to go in front of a class of 40 students who might not be doing very well in their studies, and say: ‘Hey, let me be your hope,’” notes Mohana.

Find out more on the cognitive coaching process in our online version!

Reference

Gates, B. (May, 2013). Bill Gates: Teachers need real feedback [Video file]. Retrieved from https://www.ted.com/talks/bill_gates_teachers_need_real_feedback

Teachers should also have high expectations for their students. Regardless of whether they are in the Normal (Technical), Normal (Academic) or Express stream, teachers' high expectations for students will motivate them to achieve beyond what is stereotypically expected of them.

When Mohana visited the Charles A. Tindley Accelerated School in the US for a 4-month exchange programme, she saw for herself how expectations made a difference.

"These kids come from home environments that are very challenging," she notes. "But with high expectations from the teachers, they make it to top universities like Stanford and Harvard."

Persisting in the face of challenges is important, stresses Mohana. On top of that, empathizing with the challenges that students face is also necessary.

"The challenges that our students face might not be the challenges that we faced (as students)," she says. "Therefore, we need to understand them and have empathy towards their challenges."

"As teachers, we ought to face these challenges together with the students, and we need to keep persisting until they can overcome."



Providing Effective Feedback for Capacity Building

The answer to improving teachers' efficacy lies in providing effective feedback to the teachers.

"It has been studied that many teachers report positive impact following feedback they received about their work, including their classroom teaching practices," notes Mohana. "The feedback that they received led to positive changes in both their teaching practices and use of student assessment to improve student learning."

Research literature also shows that feedback without coaching is insufficient. This means that having a coach in the process of providing feedback will lead to a greater improvement on the job.

At Regent Secondary, the role of a coach falls on the shoulders of the reporting officers (RO) and key personnel (KP), exemplified particularly during pre- and post-lesson observations and work-review sessions.

When conversations allow for reflections by design, it brings about a deeper understanding of the self, thereby empowering teachers to really care and inspire others through a shared vision.

- Mohana Ratnam,
Regent Secondary School

Even though Mohana notes the importance of a coach in evaluation and feedback, she emphasizes that the agenda of any lesson observation or work-review session has to be set by the teacher.

"The key role of an RO is to inspire, develop and guide," says Mohana. "Directives should be removed when mitigating the learning gaps." (Read more about the coaching process online.)

"Through this, an environment of good climate for teacher growth is created while teachers make meaning of their own experiences," she continues.

The Cognitive Coaching Process

With all these in mind, Regent Secondary developed a 4-step cognitive coaching approach with the help and expertise of a consultant engaged by the school. Each step is accompanied by key strategic questions.

The steps are: identify main issues, explore possibilities of the issues, identify critical success factors, and conclude with reflections.

All ROs and KPs attended workshops to familiarize themselves with cognitive coaching.

For cognitive coaching, accountability rests with the teachers as they decide what they want to improve on.

During her presentation, Mohana played a video of a post-lesson observation session between a RO and a teacher. Mohana noted that the RO did not tell the teacher what was not done right.

Instead, in the video, the RO prompted the teacher with reflective questions. "You'll notice that the teacher himself becomes self-critiquing," says Mohana. "This practice helps shift the

conversation from one where teachers defend their practice to one where teachers discuss how their practice goes towards attaining their own goal.”

Mohana shares that some colleagues found the process strange initially and fumbled over the questions. But through self-practice and video recording of the practice sessions, the process started to feel more natural to them.

Teachers appreciate the deep conversations, as it allows them to reflect deeper on what they wish for their students, she says.

“When conversations allow for reflections by design, it brings about a deeper understanding of the self, thereby empowering teachers to really care and inspire others through a shared vision.”

Mohana notes that teacher coaching and feedback must occur within an atmosphere of trust. “It must be a comfortable atmosphere in a collaborative and non-judgmental context.”

“Today, our teachers welcome their RO’s feedback because they now trust that they are not being judged,” says Mohana.

With the right environment and structure in place for effective feedback, teachers will be able to be more confident of their teaching and help even more students.

Mohana Ratnam is the School Staff Developer at Regent Secondary School. She has been teaching for 27 years, and was awarded the President’s Award for Teachers in 2010 and the Fulbright Distinguished Awards in Teaching Programme in 2014. This article is based on her presentation “Empowering Teachers to Become Transformational Leaders through Reflective Conversations” at the Teachers’ Conference 2016.

Classroom

Learning through Making: Within and Beyond Curriculum

Beginning with the revamp of their Design & Technology workshop into a design and maker space, teachers and students at Commonwealth Secondary School have embraced maker education in their curriculum and beyond.

It was dark, sometimes dirty, and usually empty. Only one to two upper secondary classes used the Design & Technology (D&T) workshop for their GCE N-Level coursework.

Noticing that the space was underutilized and taking into consideration their school’s Total Curriculum Framework, teachers from Commonwealth Secondary School (CWSS) started to look into how they could redesign this workshop into a makerspace for all students.

An Upward Spiral: The Creativity Framework

Mr Eugene Lee, Head of Department of Research, Innovation and Design at CWSS, talks about Constructionism as a learning theory, and how it calls for students to apply what they learn.

“We want to make Constructionism part of our curriculum in school,” explains Eugene. “We believe that learning occurs when you connect a new experience to existing knowledge.”

“The emphasis is not on the theory, but getting the students to try it out and learn actively in a hands-on manner,” he adds.

And the best way to do this is to have the students make something, and then show and share it. This reflects the school’s creativity framework that resembles an upward spiral.

“We want the students to go through this process of imagining, creating, experimenting, sharing their work, and then reflecting before spiraling back up to imagining again,” Eugene says.

He is of the opinion that not only does maker activities inspire inventive thinking, they also help students develop soft skills when they collaborate for projects.

The Making of a Makerspace

Mdm Rubiyah Binte Kamis, Subject Head for Craft and Tech at CWSS, was part of the team that worked on the redesign and renovation of the D&T space.

Along with her colleagues from the English Language (EL) and Humanities departments, she brainstormed with facilitators from Singapore Polytechnic to conceptualize the new space.

We believe that learning occurs when you connect a new experience to existing knowledge.

- Eugene Lee,
Commonwealth
Secondary School



Mdm Rubiyah Binte Kamis and Eugene Lee were part of the team that revamped the school's D&T workshop in a design and maker space.

"We adopted the methodology of design thinking such as understanding users' needs and gathering insights collaboratively," shares Rubiyah.

"I enjoyed the diversity of the teachers working together, as it uncovered different perspectives as to how we want to use the space creatively."

The design-thinking process to revamp the space took about 6 months; the renovation took about 4 months. By April of 2015, the space was ready—not just for D&T teachers and students, but for students across all subjects.

"We had to redesign the space to make sure it was usable not just for D&T but other departments as well, to enthuse them into making something," Eugene says.

The new space is now bright and open and much more organized. The workshop is now separated from the main space which features mobile furniture and whiteboards. These features allow teachers and students to quickly and easily shape the space to suit their use.

With the makerspace ready, the teachers began to put in place programmes that encourage students to become makers.

Maker Activities in the Curriculum and Beyond

To integrate maker activities into the curriculum in a meaningful way, each subject has their own alternative assessment that utilizes hands-on activities.

"When we can engage students meaningfully through maker activities, their intense energy and focus on their projects can be leveraged to bring benefits for them," says Eugene.

Some subjects that have maker components featured include Math, Science and even EL.

Rubiyah showcases some objects that students made for their EL classes. Among them are a bag made from floppy disks and cable ties, a shield and sword, and Thor's hammer—items that students brought to life based on the books they have read.

For Math, students did origami, made models and used software to design logos and create shapes using graphs.

"Besides the integration of maker activities into classes, we also wanted students to drop by the makerspace to work on their own projects outside of the curriculum," shares Rubiyah.

This led to the birth of Maker Thursdays—a weekly 2.5-hour workshop facilitated by teachers from the Craft and Tech department conducted at the makerspace every Thursday.

"Students can come and work on anything they like within the confines of the design space", Rubiyah remarks.

Another extra-curricular programme includes a partnership with Sustainable Living Lab, whereby students take part in a "Repair Kopitiam" initiative (see box story online).

Final Piece of the Puzzle: Professional Development

During Rubiyah's sharing of the planning process for the makerspace, she notes: "The place and programmes were in place, and it's down to the people. They were actually the most important part of the planning as you need to get teachers on board."

Teacher capacity was built by sending the teachers, including herself, to the Centre for Research and Applied Learning in Science (CRADLΣ)—a teaching and Research & Design hub at the Science Centre Singapore.

"At CRADLΣ, we picked up hardware and software tools like Arduino, Makey Makey, simple programming and coding and the hacking of toys using simple electronics," shares Rubiyah. This did not involve just D&T teachers, but the Humanities, EL and Science departments as well.

"They need to know the things that they can do, use, or make in their curriculum," notes Rubiyah.

Eugene Lee is the Head of the Research, Innovation and Design Department at Commonwealth Secondary School. **Rubiyah Binte Khamis** is Subject Head of Craft and Tech at Commonwealth Secondary School. This article is based on their presentation "Maker Education: What Is It and Why Is It Critical for 21st Century Learning?" at the Teachers' Conference 2016.

The school also took part in a maker symposium that was held earlier in March. Through that, the school gained more awareness and knowledge of the current maker scene in Singapore. This helped when they were implementing their maker activities.

Eugene and Rubiyah are both encouraged by what they are seeing so far, even though they are unable to quantify the project's success based on the students' grades.

"What's important is to see most of them taking that first step of courage to try something new," Rubiyah says. "Even when they failed, they knew that it was not the end of it and they didn't give up."

The purpose of the maker education programmes is to enrich their students' learning experience under the school creativity framework. Rubiyah adds, "What better way to invoke the spirit of inquiry and curiosity than to indulge in the making and failing, and eventually realizing that there's a lot more you can explore beyond textbooks?"

Online Extras!

Read more about Commonwealth Secondary School's partnership with Sustainable Living Lab in our online version!

People

Being Creative and Taking Risks

Professor Louise Stoll from the UK believes that creative teacher collaboration in professional learning communities is essential for educators to be better practitioners and provide the best for young learners. In her keynote address at the Teachers' Conference 2016, she shares with participants the importance of creativity and risk taking in today's changing educational landscape.

I would like to share with you what people are saying about the changes in teacher professionalism and why these changes are essential. While we all have great challenges, we also know that we want to provide the very best for our children and young learners. It is absolutely critical that we want the highest quality in whatever we do because they deserve nothing but the best.

If we want our children to excel, teachers have to be adaptable and flexible, and able to change with the times. They need to be able to think on their feet and be creative. That is why we need creative professional learning communities.

Creative Professional Learning Communities

A professional learning community (PLC) can sometimes be seen as a small group of teachers who is given some time to get together, have conversations and investigate their practices and work together. But when I think of a creative PLC, I also think about a school-wide culture where everybody is collaborating—not every minute of the day, but working together, feeling a professional sense of responsibility not only for the child's learning but for each other's learning too.

It is where teachers de-privatize their teaching practices. It is about: "Please come and disturb me because there is something I can learn from you and you can learn from me, and we can work together to develop further."

So teachers can't do it alone. That means they also need school leaders and leaders at the system level who are able to create those conditions that will help the teaching profession to flourish.

A creative PLC is also about investigating your practices, testing out new ones, learning with each other, learning from each other, and sharing your learning with others. And of course, you need to be creative—to be open, to take risks and to get out of your comfort zones.

Bidding Comfort Zones Goodbye

When did you last try something new that took you out from your comfort zone?

Guess what I learned 3 years ago that made me ask you this question? I did a 7-week stand-up comedy course!



If we want our children to excel, teachers have to be adaptable and flexible, and able to change with the times. They need to be able to think on their feet and be creative.

Prof Louise Stoll
University College
London, UK,

One thing that we know about powerful professional learning is that challenging your thinking is a fundamental part of changing your practice.

- Prof Stoll on the importance of challenging one's thinking

Professor Louise Stoll is Professor of Professional Learning at the London Centre for Leadership in Learning, University College London, Institute of Education. Her research interests include creative leadership, leadership development, professional learning communities and professional learning networks. This article is based on her keynote address at the Teachers' Conference 2016.

I don't consider myself a stand-up comedian but I wanted to do something that would push and challenge me, particularly since I have come out here to tell everyone you need to challenge yourself. And I thought, if I can't walk the talk, then I am really not fit to be here. So I am suggesting to the MOE that they have compulsory comedy school for every single teacher in Singapore!

But seriously, what is it that you can do to extend and challenge yourselves and your thinking?

What we are talking about here is trying to get people to move out of their comfort zone. But we know that we all find it much easier to stay in our comfort zone. Still, we need to encourage people to venture into the learning zone while not pushing them too much into what Tom Senninger (a German adventurer and pedagogue) calls the panic zone.

Taking Risks

But to be creative, we also want you to take a risk, and also challenge and deepen your thinking. One thing that we know about powerful professional learning is that challenging your thinking is a fundamental part of changing your practice. It causes dissonance, which means that you don't easily assimilate the learning. Instead, you start to question the way you have been doing things.

But to take risks, you also have to feel safe. As part of my research, we interviewed over 300 people who told us that it was really important for teachers, staff members and leaders to feel safe in order to feel comfortable enough to make mistakes and learn from them.

But leaders sometimes have difficulty in letting go, which is what they need to do if their teachers are to be creative and take safe risks. When we are faced with someone who seems afraid to try something new, we ask them: Is it a real risk if you experiment with your practice, and try and do something different? Isn't it riskier never to try anything new?

What helps one person to be creative can be very different for another person. I found that some people become creative when they have the time, whereas others like to have a problem to solve; some prefer to be on their own, while others feel more creative when they have the opportunity to collaborate. So, you need to find situations that will help you feel creative.

If you have powerful teacher collaborations, you will not only do things differently, but will also be thinking differently. You will be able to articulate what you are doing differently, how and why.

When you learn together in powerful ways, it makes a difference for children and young learners. It makes a difference in terms of how they perform and also how they feel about their learning. While there are many different ways to look at children and know if they are ready for their lives ahead, you also need to be able to know their starting points so you can determine later the difference you have made.

It is absolutely critical that you take charge of change to support your students' learning. Now is the time to make changes, to take action and then to check if you have made enough of a difference to your young learners.

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Online Exclusives



Instilling Positivity and Resilience with Positive Education



Letting Learners Own Their Learning



Engaging in Argumentation in Class



Learning: Fast and Slow; Big and Small