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# Advancing EDUCATION RESEARCH

How has education research evolved in Singapore? In 2002, NIE's Centre for Research in Pedagogy and Practice (CRPP) was launched, with the goal of advancing knowledge that raises the quality of teaching and learning, not just in Singapore but also the wider educational community. Since then, two other education research centres have been set up—the Centre for Research in Child Development, which focuses on children development and learning, and the Science of Learning in Education Centre, which brings together several research disciplines, including neuroscience, cognitive science, psychology, technology and education. Co-ordinated by NIE's Office of Education Research, the three education research centres are testament to NIE's firm commitment to be at the forefront of education research in Singapore and beyond.

This issue of *SingTeach* features interviews with important stakeholders in Singapore's education research landscape, including a policymaker, a teacher and NIE education researchers. We highlight how education research has, and will, impact how students learn and teachers teach.

We hope that you, readers, will gain important takeaways from this issue, including a better understanding of NIE's efforts in strengthening the bridge between research, policy and practice.

We also hope that you will be more inspired to partake in education research projects that can further develop and enhance your teaching practices. Let us be reminded of the ultimate goal of education and education research, that is to maximize learning outcomes for all students and to support their success in school and beyond.

***SingTeach* Editorial Team**  
Office of Education Research  
National Institute of Education

## Online Exclusive RESEARCH IN ACTION

Raising Bilingual and Biliteracy Proficiency  
in Young Children



## Talk to Us ASK A RESEARCHER

Do you have any questions on education research in Singapore? Or perhaps you have a query regarding a research project covered in this issue? We invite you to submit those questions to us. Scan the QR code below and we will have our NIE researchers answer them!



## Share with Us VIRTUAL STAFF LOUNGE

Virtual Staff Lounge (VSL), initially conceived during the COVID-19 outbreak, is a safe platform where education practitioners can share their teaching and learning experiences during and beyond the pandemic. VSL is a collaborative space where you can share innovative teaching methods and practices that you have implemented in classrooms, and/or fresh insights and perspectives that you have on the nature of teaching and learning. If you are interested to submit an article, scan the QR code below.







# Education Research

## at the National Institute of Education

**S**ingapore is no stranger to top global education rankings and this success can be attributed to the nation's rigorous and comprehensive education system. Additionally, the Singapore government also emphasizes the development of high quality education research through its investment in the National Institute of Education's (NIE) first research centre that was established in 2002, the Centre for Research in Pedagogy and Practice (CRPP). Twenty years on and with the birth of two other research centres, CRPP remains steadfast in its aim to nurture and build a community of education researchers, and develop comprehensive research programmes to facilitate classroom interventions, and impact policy and pedagogical practice. As Singapore continues to evolve and grow, how and why will education research remain a key priority for NIE?



## A COMMITMENT TO RESEARCH

Education research plays a critical role in improving the quality of education and ensuring that every student has equal opportunities to succeed. Furthermore, research at NIE helps to inform education policy and contributes to the enhancement of learning and teaching within NIE and the schools.

“Education research helps to identify effective teaching and learning strategies, curriculum design and instructional materials. These research findings help educators make informed decisions about what works best for their students, leading to improved student performance and outcomes,” shares Professor David Hung, Dean of NIE’s Office of Education Research (OER), a research office that coordinates the institute’s three education research centres.

The OER plans and delivers the research agenda of the office and institute at large. Apart from the Centre for Research in Pedagogy and Practice (CRPP), OER also oversees the Centre for Research in Child Development, which focuses on children development and learning, and Science of Learning in Education Centre, which brings together several research disciplines, including neuroscience, cognitive science, psychology, technology and education.

“Given that NIE has multiple research centres with different aspects of focus, we hope that the research findings we have generated over the decades can also help inform education policy,” Professor Hung adds. “Education research provides evidence-based information that can inform education policy decisions at the national level. Hopefully, our research findings can help policymakers make informed decisions about programme development for schools.”

As we take into account the fact that the education landscape is fast-changing, brought on by technological advances and the need for learners to manage increasing unpredictability, how can we ensure that education research at NIE remains relevant and useful for both our teachers and learners?

## INTER-DISCIPLINARY RESEARCH FOR THE UNCERTAIN FUTURE

“Every 5 years, our office takes stock of the changes that have happened in the education landscape and re-strategize its research agenda through the development of different research programmes,” Professor Hung shares. This helps to ensure that researchers will embark on projects that will produce findings relevant, timely and useful for schools.

In this instance, in April 2023, OER enters its 5th cycle of research funding from the education ministry and through an ecological scan of various factors including MOE’s research and national agenda, the institute has developed an overall strategic research agenda: “Strengthen Singapore’s Education for the Uncertain Future”. This agenda is set to serve the institute’s research direction until the next cycle in 2028.

“In the next 5 years, I envision the use of innovative approaches for examining diverse education-related questions,” NIE Director Professor Christine Goh says. “Education researchers must learn to work with researchers from other disciplines and beyond NIE to use cutting edge research tools to examine perennial and new questions about education for the future. Researchers from other disciplines will also learn to use their expertise by leveraging the expertise of education researchers to solve education problems collaboratively and synergistically.”

While the institute has always encouraged its education research scientists and academic faculty to collaborate on



research projects, the next tranche of research will likely see an exponential increase of such cross collaborations within the institute and even beyond. This could mean a combination of different focus areas such as brain sciences, physical education and language coming together in a single research project.

“I am confident that through such inter-disciplinary thinking and multi-disciplinary approaches, NIE will take the next leap in our research and education to inform policy, innovate new pedagogies, and provide research- and theory-informed applications in education. The result will be rich Singapore insights informing the global education community in these critical and promising areas,” Professor Goh adds.

### ADVANCING RESEARCH

Aside from building on inter-disciplinary research at NIE, Centre Director of CRPP, Dr Dennis Kwek, highlights how the institution is also furthering its efforts in developing collaborative long-term relationships between researchers and practitioners on the ground. Better engagement between researchers, school leaders and teachers, he says, is another crucial aspect of advancing education research in Singapore.

“Research-practice-policy partnerships refer to not just collaborative relationships among researchers and academic faculties, but also among practitioners and policymakers,” Dennis explains. “These partnerships are vital in our efforts to close the gap between research and practice. They are also crucial in developing and advancing impactful policies that are informed by evidence-based research.”

Professor Goh emphasizes how NIE remains committed to its mission of advancing research. “As Singapore’s national institute of education, research in education and education-related disciplines will remain NIE’s foremost focus. At the same time, NIE will continue to support the advancement of all faculty research that adds to human knowledge and inspires our student teachers and

postgraduate students in the pursuit of their respective disciplines,” she affirms.

### TEACHERS AS RESEARCHERS

In a classroom of diverse learning needs, how can teachers be responsive to the needs of their students and create more effective and engaging learning environments?

“One way to do that is by engaging in ongoing inquiry and reflection to improve their teaching practices,” Dennis, who is also Associate Dean (Strategic Engagement) at OER, says. “Teachers are professionals who work with students every day and as such, they are in a unique position that allows them to observe, analyse and understand their students’ learning process.”

By conducting research in their own classrooms, teachers can identify areas for improvement, test new teaching strategies and gather data to inform their instructional decisions. In addition to benefiting their students, the research findings can also contribute to the larger body of knowledge in education. Teachers can share their findings with other educators and participate in collaborative research projects to expand the understanding of best practices in teaching.

However, support from the schools is required for effective research to occur. Resources such as time and access to research tools are essential to facilitate meaningful research in classrooms. “Teachers also need training and guidance to develop research skills and methodologies that can be applied to their teaching,” Dennis adds. “As part of our efforts to encourage teachers to embark on research, we have created a platform called the Educator-Researcher Connect within *SingTeach* that aims to bridge teachers and our NIE researchers to collaborate on a research project.”

The concept of teachers as researchers recognizes the valuable contributions that teachers can make to the field of education through ongoing inquiry and reflection. By engaging in research in their own classrooms, teachers can also promote a culture of lifelong learning. ■

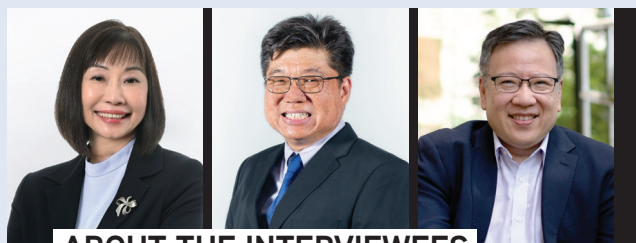
### THE EDUCATOR-RESEARCHER CONNECT

The Educator-Researcher Connect (or ER Connect) is a platform that aims to bridge research from NIE, and local teachers and school leaders in an effort to deepen, enhance and advance education research in Singapore. If you are interested to collaborate and be part of any NIE research project(s) listed in the ER Connect, based on your



school’s or your needs, please get in touch with the relevant Principal Investigator directly.

Scan the QR code to access ER Connect!



#### ABOUT THE INTERVIEWEES

**Professor Christine Goh** is the Director of the National Institute of Education (NIE).

**Professor David Hung** is Dean of Office of Education Research (OER) at NIE.

**Dennis Kwek** is Director of the Centre for Research in Pedagogy and Practice and Associate Dean (Strategic Engagement) of OER at NIE.



# Implementing **Student Self-Assessment**

in Primary Schools

**S**chool assessments in Singapore are often associated with high stakes tests and examinations. Beyond such assessments, however, there is an increasing need for the implementation of student-involved assessment in classrooms. Research shows this learning and teaching approach can involve and benefit students more directly. Building on two past research studies, Senior Education Research Scientist Dr Wong Hwei Ming from the Centre for Research in Pedagogy and Practice at NIE tells us more about her latest study on student-involved assessment—in particular, student self-assessment—conducted in primary schools.

## DEFINING STUDENT SELF-ASSESSMENT

According to Dr Wong Hwei Ming, student self-assessment occurs when learners deliberately reflect on their work, assess whether that work meets specific criteria, and then revise their learning based on these reflections.

“This learning approach gives students the space to self-reflect on aspects of their own learning such as knowledge, understanding and skills against a set of objective criteria and standards,” Hwei Ming says.

Student self-reflection can deepen their understanding of the subject matter and improve their learning outcomes. Teachers can also supplement and support the self-assessment process by providing their own feedback to the students.

However, research conducted on the use of student-involved assessment such as student self-assessment has not been equally done across all levels; Hwei Ming points out how research in this field has been mainly located in secondary schools and higher education



institutions. There is a perception, she says, that “young children’s cognitive immaturity will prevent them from self-assessing with acceptable accuracy” (Fontana & Fernandes, 1994, p. 407).

“On the contrary, my research carried out on younger students in primary schools indicated that with training, students are capable of using student-involved assessment, in particular student self-assessment. They are able to assess their learning fairly, given the time and practice,” she clarifies.

## BUILDING TEACHER LEARNING COMMUNITIES

In her latest study, Hwei Ming and her research team leveraged on teacher learning communities (TLCs) in schools to develop and refine teachers’ capacities in implementing student self-assessment.

“Professional development sessions on student self-assessments were introduced during monthly TLC meetings. The teachers were then engaged in the TLC learning cycles of using and revising the student self-assessments,” she explains.

Recordings, questionnaires, teacher and student focus group discussions were used to document and examine the implementation of student self-assessment in classrooms. Student and teacher views on the assessment itself were also collected.

## A POSITIVE EXPERIENCE FOR BOTH TEACHERS AND STUDENTS

### Teacher Feedback

Hwei Ming shares that the teachers involved in the study viewed their student-self assessment experience positively. The teachers made the observation that their students have increased their awareness of learning, confidence and motivation, as well as efforts put in their work.

“Interestingly, some teachers also gave the feedback that the use of self-assessments has alerted them to

“*Interestingly, some teachers also gave the feedback that the use of self-assessments has alerted them to students who are falling behind. This has allowed them to provide timely assistance to help these students.*”



students who are falling behind. This has allowed them to provide timely assistance to help these students,” Hwei Ming comments.

She also mentions that it has been inspiring to see how teachers are motivated to seek and value students’ feedback to improve their instruction, thus making it an interactive process between students and teachers.

### Nurturing Self-Directed Learners

Hwei Ming shares that students found the experience to be most helpful for developing their self-directed learning skills. “The post-intervention questionnaire showed that almost half of the students believe that self-assessment has helped their independent learning the most. Almost half of them also reported they find it useful to be able to self-reflect and track how they are doing in their learning.”

The focus group discussions with students revealed that they have made efforts to change their learning behaviours since participating in the project. For example, they now practise the habit of checking their work and making revisions before submission, making



“  
Giving enough opportunities for students to practise self-assessment as well as strengthening support received from school leadership will make the execution of student self-assessment more effective as well.”

ensuring sustainability and further dialogues amongst teachers about student-involved assessment,” she adds.

One recommendation she would like to see implemented is providing adequate training to students in the use of self-assessments as soon as they start primary schooling. Student self-assessment is an important skill to develop for lifelong learning which is aligned with Ministry of Education’s efforts under the Learn for Life movement to nurture the whole child and develop them into lifelong learners (MOE, 2018).

“Giving enough opportunities for students to practise self-assessment as well as strengthening support received from school leadership will make the execution of student self-assessment more effective as well,” she concludes. ■

less careless mistakes due to the use of rubrics, as well as being more aware of their areas of improvement.

## BARRIERS AND FUTURE RECOMMENDATIONS

Hwei Ming reiterates how TLCs play an important role in the implementation of student self-assessment. Having a knowledgeable mentor to guide the teachers in the design of self-assessment pedagogies is an especially critical component.

“It is also vital to conduct regular reviews of teacher professional development needs, and for school key personnel to give regular feedback to improve teachers’ formative assessment practices. The support received from school leadership is invaluable,” she remarks.

However, she acknowledges that implementing the TLCs in conjunction with the student self-assessments was not without its challenges. A weak review structure in schools, for example, can hamper efforts to better support teachers’ formative assessment practices.

“Annual changes to TLC teams and shifts to focus on other pedagogical practices could also be barriers to

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### ABOUT THE INTERVIEWEE

**Wong Hwei Ming** is a Senior Education Research Scientist and is the Programme Director of the Schools, Leadership and System Studies Research Programme at the Centre for Research in Pedagogy and Practice (CRPP), National Institute of Education (NIE). She is Principal Investigator of a research project titled “Building Teachers’ and Students’ Capacities in Student-Involved Assessment in Primary Classrooms”, funded under the Education Research Funding Programme managed by the Office of Education Research at NIE.



THINKING ABOUT

# Future Selves

TO IMPROVE  
LEARNING OUTCOMES



**Identity-based motivation theory posits that by helping learners experience school as the path to their adult future identities, it can help boost student outcomes. Can this framework be applied to low progress learners? How can we better motivate these groups of students so that they can be more engaged in their studies? We talk to Ms Annie Ng from Saint Anthony's Canossian Secondary School who was recently involved in an identity-based motivation intervention research project.**

## KEEPING LOW PROGRESS LEARNERS ENGAGED

Based on her experience teaching and interacting with low progress students, Ms Annie Ng from Saint Anthony's Canossian Secondary School makes the observation that many of these students tend to face various challenges in their lives.

“Many of them experience personal struggles such as mental health issues, poor habits and negative peer influence, as well as having to cope with family issues,” she says. “These factors may in turn, affect their readiness to learn.”

It is also common for them to be stressed about not meeting academic expectations put on them by teachers and parents. All of these stressors can cause them to have a myopic view of their school life and adversely affect their school motivation and engagement.

“While teachers do have a repertoire of strategies and pedagogical skills to help students stay engaged, more can be done to help educators on how to better nurture high-quality teacher-student relationships and improve intrinsic motivation among low progress students,” she comments.

“When we heard about the Identity-Based Motivation (IBM) intervention research project helmed by Dr Arief Liem from NIE's Psychology and Child & Human Development Academic Group, we were keen to see if it could bring about a positive impact on our students especially in their academic performance and cognitive well-being,” she adds.

## GUIDING STUDENTS TO VISUALIZE THEIR FUTURE

IBM theory is a social theory that directs learners to explore their future possibilities in different areas of life



(e.g., education, career, family life, contributing member of the society). It recognizes that motivation can be a key mechanism for enhancing learning outcomes.

For students, IBM helps them make a connection between their future and their school life. “The research intervention guides students in charting their pathways in life,” she shares. “Along the way, they can also identify challenges that they may encounter, and think of possible solutions to these challenges.”

She highlights that the resources and materials were well designed for the students involved—a group of Secondary 2 students from the Normal Technical stream.

“The worksheet that the students had to complete, for example, was well adapted to suit the needs of students who may have language difficulties,” she comments. “NIE facilitators had prepared picture cards with different occupations and possible work scenarios, which provided them with good visual cues.”

A series of video interviews were also shown to the students to help them respond to the worksheet questions. She notes how the videos encouraged students to think not only about the challenges they were currently facing but also those in the foreseeable future. Most importantly, it also triggered the students into thinking of how they may overcome both current and potential challenges.

“In the video, two students from the Normal Academic and Normal Technical streams shared about their personal challenges and how they persevered to succeed in pursuing their dreams,” she shares.

## NURTURING EMPOWERED LEARNERS

The worksheet prompted students to come up with strategies that they can work on to achieve their goals for the coming year. There was also a list of strategies they could choose from.

“They were given time to contemplate and discuss which strategies would work for them. It actually opened up opportunities to explore strategies which they had not thought before, thus empowering them to think for themselves,” she notes.

The worksheet also instructed students to identify good choices that would help them attain their goals as well as bad choices that they should avoid.

“This exercise was interesting as I could see that each student’s areas of concerns were different from one another,” she observes. “For instance, some identified laziness as something that they should avoid while some said they should avoid getting in trouble at school.”

The intervention, she shares, encourages students to be more self-aware; the facilitators too, gave students the autonomy to discuss and conclude with their own responses without making any judgements.

“*When given an opportunity to discuss and chart their academic pathways, learners will be able to experience school as being relevant to their future goals, and not just as an institution of learning.*”

“The ability to identify future goals as well as make good choices to achieve those goals are valuable life skills,” she points out.

## NOT JUST AN INSTITUTION OF LEARNING

Reflecting more on the experience, Annie says that it is important to support students, especially those in the low progress group, in having ownership over their own learning trajectories. “When given an opportunity to discuss and chart their academic pathways, learners will be able to experience school as being relevant to their future goals, and not just as an institution of learning,” she says.

Seeing how the facilitators provided a safe space for the students to share ideas has also opened her eyes on how a high-quality teacher-student relationship is crucial in developing a culture of trust and confidence in the classroom, where teachers are receptive to hearing students’ ideas.

“Participating in this intervention project has given me insights on the best practices, practical pedagogies and strategies that I can apply in the classroom to support learner autonomy and intrinsic motivation among low progress students,” she shares. “I am encouraged to hear from students that they are now more motivated to do well in their studies.” ■



### ABOUT THE INTERVIEWEE



*Annie Ng is a Math teacher at Saint Anthony's Canossian Secondary School. She has been teaching at the school for 7 years. She is a committee member in the school's Educational Support Committee. The purpose of the committee is to empower students with learning needs to achieve their full potential. The committee's objectives include providing comprehensive support to students with diverse learning needs, equipping teachers with the necessary pedagogical knowledge and skills to effectively engage and support these students, and fostering an inclusive school culture where every student can thrive and succeed.*

# Singapore's Education Research Vision



**S**ingapore is globally recognized for its excellence in education, with students consistently scoring in international assessments. Behind this success lies a deep commitment to education research, with the Singapore government’s investment in this area to ensure that its education system remains relevant and responsive to the needs of the 21st century. Singapore's education research agenda is driven by a vision of developing students who are critical thinkers, effective communicators, and adaptable learners, ready to thrive in a rapidly changing world. In this article, Director-General of Education Ms Liew Wei Li from the Ministry of Education, Singapore shares more about the ministry’s education research agenda.

## OVERVIEW OF MOE-WIDE EDUCATION RESEARCH AGENDA (MERA)

MERA-Education Research from LIFE COURSE Perspective			
<i>Teaching and Learning</i>	<ol style="list-style-type: none"> <li>1. Learning as a biological, social and cultural process</li> <li>2. Technology and how it transforms teaching and learning</li> <li>3. Transference of learning and skills across domains and contexts</li> </ol>		
<i>Progression and Pathways</i>	<ol style="list-style-type: none"> <li>4. Progression in education and at work, with a focus on critical transitions and group differences</li> <li>5. Impact of societal context and social structures on educational outcomes</li> </ol>		
<i>Ecosystem Development</i>	6. Factors that impact education organisations, and their contribution to the education & skills ecosystem		
<i>Optimal Development and Well-Being</i>	7. Development of social and emotional well-being		
 <b>Early Childhood Education</b> Early Childhood Research Agenda	 <b>General Education</b> General Education Research Agenda	 <b>Higher Education</b> Higher Education Research Agenda	 <b>Adult &amp; Skills Education</b> SSG Research Agenda
<i>Higher Education and Skills</i>			

### Why is it important for Singapore to invest in education research?

Singapore has a unique context and our education system has many unique features. In order for us to improve teaching, learning, curriculum, systems and our education outcomes, we have to conduct our own research in Singapore. This is essential as our country relies more on our people’s capability compared to other countries that have a wider range of resources.

The Ministry of Education (MOE) has been supporting the Education Research Funding Programme (ERFP), a research funding scheme managed by NIE’s Office of Education Research, since early 2000s. The ERFP aims to improve classroom practice, enhance student outcomes, and build organizational and teacher capacities. The new 5th Tranche (2023–2028) ERFP will start in April this year and funding is open for application to all researchers from Singapore.

## Can you share more about the MOE education research agenda?

Education research is a wide field. MOE has developed an education research agenda (MERA) to signpost to researchers the areas of research which we consider strategic for Singapore and would best meet our students' needs.

- MERA therefore takes a life course approach, encompassing the strategic priorities of four learner groups: early childhood education, general education, higher education, and adult and skills education.
- Some of the grand challenges MOE faces straddles learner groups. Hence, MERA also articulates four horizontal "life-course" research themes, in (a) teaching and learning; (b) progression and pathways; (c) ecosystem development; and (d) optimal development and well-being. The infographic (shown on page 12) articulates MERA visually.

## How does the seven priority research areas in the infographics complement each other in the whole framework?

The seven priority research areas further scope the useful areas to focus on within the four horizontal research themes in MERA. Advancements in these areas can provide MOE with the knowledge needed to plan, curate and deliver more engaging and effective education experiences for our learners. Even though each area focuses on one aspect of education, connections can and must be drawn between their findings, in order to make real impact, in terms of new and better practices, programmes and policies that can change the life of our learners.

## What are some of the ground-level impacts that the ministry hopes to achieve from MERA?

The ultimate aim must be to help our students learn more effectively and be healthy, thriving persons in a Singapore community. To achieve that aim, the research would have to help teachers teach better in a system that is continually better organized in anticipation of the future. Our schools will also provide joyful and meaningful learning experiences, tailored to the changing cohorts and times.

## How do you think NIE's research can complement MOE's?

NIE is MOE's key partner in teacher training and development, and provides deep expertise in education research. NIE plays a critical role in achieving MOE's goals in our research agenda. MOE consults NIE and taps on its reservoir of experience and capability. Close and complementary alignment of NIE and MOE's research agendas is therefore a natural outcome.

However, the research agenda of MOE and NIE need not completely overlap. NIE is a world-renowned school of education, internationally recognized for its quality of teacher education and education research. We look to NIE for other cutting-edge and blue-sky research that will help us chart the future of education.

## Any word of advice for our teachers who might be interested to start their own research work in schools?

1. Research can be viewed as a systematic process of asking good questions, finding existing answers, and gathering new evidence.
2. Ask good questions – Research is about exercising one's curiosity muscle. I encourage our teachers to be open and curious, and be brave to ask questions. Bouncing ideas with one another can lead to better, sharper and more pertinent questions.
3. Find existing answers – We can see further if we stand on the shoulders of giants. While all of us can come up with good questions, they are most likely related to what others have asked and investigated. I encourage our teachers to read widely and deeply. Be exposed to different areas and go deeper. Just like we need to be curious to ask good questions, we also need curiosity and openness when searching for relevant existing answers. These can come from other fields, even those not directly related to education.
4. Gather new evidence by working with others – This is the step that many teachers consider real "research". Teachers spend much time and effort to learn and apply research theories and methodologies in order to gather new evidence rigorously. I encourage teachers to work with other like-minded people. Working together has two benefits. First, it allows us to tap the expertise and knowledge of others, especially if our partners have different skills, knowledge, experience and even dispositions. Second, it allows us to focus and specialize on one area which we are most passionate about and can contribute most to. We can gather the necessary evidence, without spreading ourselves thin, and can still focus on what we find most meaningful. ■



### ABOUT THE INTERVIEWEE

*Liew Wei Li is Director-General of Education at Ministry of Education, Singapore since April 2022. Prior to her current role, she was Deputy Director-General of Education (Schools) and Director of Schools.*



# Dusty Shelves TO Dynamic Spaces

INSIGHT FROM EDUCATION RESEARCH



**A** former secondary school teacher, Associate Professor Loh Chin Ee from NIE's English Language and Literature Academic Group now advocates for students' access to reading resources and practices. Her research interests are in literacy and equity, with a current focus on reading in print and digitally and school libraries. She is the co-editor of *Little Things* and *Poetry Moves*, two literature anthologies that are used in schools, and have been used to explore how literature supports place-based pedagogies. In this section, she shares some insights on how education research can impact schools and what makes a good library.

## How does education research contribute to the development of the education system?

Education research can inform decision-making at school and national policy level, influence teachers' thinking and help with envisioning educational futures.

Firstly, education research inform decision-making at school and national policy level. Educators can draw on existing research for decision-making, gather data about outcomes to determine effectiveness of interventions,

and collect local evidence for dynamic school-relevant decision-making.

Secondly, education research influence teacher thinking and as a result, shape practice. Vygotsky's Zone of Proximal Development which identifies the space where students can learn new skills with expert guidance is an example of a well-used conceptual tool to aid teacher thinking and practice about everyday curricular and classroom practices.

Finally, education research help us envision what the future of education, and society, should look like. For instance, sociologists study the social factors that influence schooling to question what makes for a just educational system in terms of distribution of and access to educational resources. These findings can inform macro-policies about allocation of funding and distribution of resources to support learners from different social backgrounds and with varied needs.

## After years of research in school libraries, can you share a few important features you would want incorporated into them and how they benefit users?

Well-designed, stocked and supported school libraries are crucial to maximize students' independent reading and learning in schools.

An important feature of good libraries is that they stock high-quality and high-interest books. Loan rates increase when the collection quality improves as students are more motivated to read. Ways to keep the print collection fresh include asking students for suggestions and utilizing the National Library Board e-reads as a complementary strategy. Giving students time to read and curating exciting programmes around reading can also draw students into the library. We have also learnt that school libraries are inclusive spaces that support student well-being.

Schools looking to redo their library space should begin by identifying the core functions of the library and considering their students' needs before organizing the



Scan the QR code to read more about the project's **21st century school libraries framework**.



Scan the QR code to read more about **Chin Ee's work on school libraries**.



Associate Professor Loh Chin Ee at the launch of the Cedar School Library with Mr Ong Chin Meng (HOD English), Mrs Chan-Tey Kah Hwee (School Principal), Skyler Ng, Lim Qianwei and Lisa Lim (former Cedarians involved in the library redesign project), Dr Elizabeth Pang (MOE), and Ms Gemma Pereira (Library Coordinator).

space to support these functions. The project's 21st century school libraries framework, which has been integrated into MOE guidelines, provide a useful starting point for thinking about what is important to your school library to support your students' reading and learning needs.

### What could be your next area of research, and why?

There are so many things that need attention and there is so little time! I am currently working on an edited collection, tentatively titled *International Perspectives on the Reading Lives of Teens in Contemporary Times*, with chapter contributions from around the world. By collating diverse perspectives of adolescents' independent print and digital reading, the edited collection will become a resource for scholars, policymakers, and educators to learn from each other.

As a researcher who works primarily from ethnographic perspectives, I immerse myself in school and out-of-school communities to observe the everyday literacy practices of individuals. Given the many changes in the

educational system from the issuance of the personal learning device, full subject-based banding, and rapid technological changes, I would like to conduct a longitudinal study of adolescents' reading in print and digitally over time to better understand how their ways of reading for leisure and to learn shift in response to these changes. An ecological, historical and lifespan approach that considers learning over time may provide perspectives to improve educational policy and practice for greater equity and effectiveness. ■



#### ABOUT THE INTERVIEWEE

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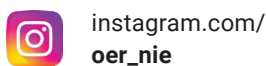
The Educator-Researcher Connect (or ER Connect) is a platform that aims to bridge researchers from the National Institute of Education (NIE), Singapore, and local teachers and school leaders in an effort to deepen, enhance and advance education research in Singapore. If you are interested to collaborate and be part of any NIE research project(s) listed in the ER Connect, based on your school's or your needs, please get in touch with the relevant Principal Investigator directly.

The list of research projects on the ER Connect page will be refreshed periodically. We encourage you to share about ER Connect with your fellow colleagues in your school. We hope that providing such information will serve to reduce the research-practice gap and inspire you to embark on an education research journey alongside NIE experts.

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