REIMAGINING
TEACHER EDUCATION
IN A POST-COVID WORLD
<table>
<thead>
<tr>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>6</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>9</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td>14</td>
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<tr>
<td></td>
</tr>
<tr>
<td>22</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
The COVID-19 pandemic has impacted the world in unprecedented ways. The widespread disruptions caused by the virus has resulted in devastating consequences in many countries. While Singapore reacted swiftly to combat the virus, we were not completely spared from the fall-out that accompanied measures to slow down the spread of infections. Of significance was perhaps the 2020 Circuit Breaker when schools and institutes of higher learning were compelled to pivot to a completely virtual mode of teaching and learning. This experience prompted many NIE colleagues to (re)examine their existing approaches to teaching and learning.

As we leave the worst behind and move forward, it is an opportune time for us to reflect on how we can better negotiate this very uncertain world and how we can better prepare teachers to meet the challenges ahead.

We often seek inspiration from those who came before us because it is through their experiences that we learn to forge our own paths. The American essayist, poet and philosopher Ralph Waldo Emerson wrote, ‘Do not go where the path may lead, go instead where there is no path and leave a trail’. Dr Ruth Wong Hie King was that person. She was relentless in her pursuit of educational excellence and we have all been beneficiaries of her entrepreneurial dare and forward-looking ideas to push teacher education to the next frontier. She embodied a spirit that constantly questioned the status quo in education.

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Professor Christine Goh
Director
National Institute of Education, Singapore
The COVID-19 pandemic has forced us to rethink our pedagogical practices. Many educators in the past two years have had to balance quality teaching and learning with what was practical under very challenging circumstances. We did emerge from the experience better prepared but also more cognisant that we have still some ways to go. In essence, the pandemic has provided us with a timely opportunity to rethink our notion of ‘what works’ (practice), ‘how it should work’ (theory) and importantly, why both theory and practice should co-exist – what Professor Loughran calls the ‘dynamic relationship’.

Understanding what contributes to quality teaching and learning is crucial to ensuring that our teacher education curricula remain relevant. The work is highly complex – where developing the right values and attitudes towards the profession is as important as acquiring the knowledge and skills to teach. Dr Ruth Wong left an indelible mark in Singapore’s educational landscape. Her passion for education, teaching and teacher education continues today. Her indominable spirit in spearheading education policies and drive to push teacher education to the next frontier is still very much alive. As we pay tribute to a visionary who was relentless in her pursuit to champion quality education for every learner, let us also reflect on the lessons learnt during the pandemic. As educators seeking the best for our learners, it is essential that we continue to (re)imagine teaching and learning in these complex and challenging times.

Professor Loughran is Emeritus Professor at Faculty of Education, Monash University in Australia. As a Sir John Monash Distinguished Professor, he is well regarded internationally. Professor Loughran is interested in such topics as ‘How teachers learn how to teach and how they then put that into practice and develop their knowledge, skills and ability over time.’ Much of his research is centred on this important aspect of knowledge of teaching. His keynote address ‘Reimagining teacher education for a post-COVID world’ was thought provoking and aligns closely with the conference theme, which explored ideas about how education could be more transformative while aligning itself with new and rapid local and global developments in education. Professor Loughran engenders the view that theory and practice share a ‘symbiotic relationship’ - a point of view not dissimilar to Dr Wong’s. While there are those who continue to focus on the gap between theory and practice, he sees both as entities that are ‘inextricably linked’ and when we approach theory and practice in this light, we will begin to see them in a ‘dynamic relationship’.

To honour her contributions and legacy, the Dr Ruth Wong Professorship in Teacher Education was established in 2015 with the support and blessing of her family as a platform to positively influence a younger generation of teachers, teacher educators and administrators. It also aims to enhance the teacher education experience and expertise within NIE and the Singapore teaching community, as well as increase cooperation and activities between NIE, the teaching community in Singapore and the international education community. Since its inauguration, there have been two Dr Ruth Wong Professors in Teacher Education – Professor A Lin Goodwin in 2015 and Professor Clare Kosnik in 2017.

Since the onset of the professorship, every Dr Ruth Wong Professor has been invited to present a keynote address at the Redesigning Pedagogy International Conference. This lecture is also called the ‘Dr Ruth Wong Professorship in Teacher Education Lecture’, which is an extension of the memorial lectures established by Dr Wong’s family in 1983 to celebrate her vision and legacy. Due to COVID-19, the 2019 Redesigning Pedagogy International Conference, in which the third Dr Ruth Wong Professor was to have delivered his keynote address, was rescheduled. The third Dr Ruth Wong Professor in Teacher Education, Professor John Loughran delivered his keynote address virtually in June 2022.

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National Institute of Education, Singapore
The Dr Ruth Wong Professorship was inaugurated in 2015 in memory of Dr Ruth Wong Hie King, founding director of the Institute of Education (NIE’s predecessor). It welcomes renowned scholars to share their knowledge and advance the teacher education experience in Singapore. Another objective is to enable cooperation between the local and global education communities.

Typical areas of contribution by appointees include: advice on teacher education research, curriculum design, and professional development; conducting of lectures/seminars; and/or community engagement activities. Specific activities may include presentation of keynote addresses at conferences organised by NIE, dialogue sessions with student teachers in the Teacher Scholars Programme, and visits to schools that are involved in education research.
Professor Tan Oon Seng, former Director of National Institute of Education, was instrumental in establishing the Dr Ruth Wong Professorship in Teacher Education in 2015. Having had personal interactions with Dr Ruth Wong, Professor Tan shares his thoughts on how her ideas left an impact on both Singapore’s education and himself as an educationalist.
The Hallmark of a Good Teacher

The hallmark of a good teacher is one who is passionate about building the character and confidence of the child. This begins when a teacher shows care for his or her students. Following this, they should inspire in their students the confidence to take on challenges and be willing to bounce back from failure.

A few months before Dr Ruth Wong passed on, she shared with me her beliefs about what should be imparted to the next generation. Dr Ruth Wong believed that the most important characteristic of a competent teacher is the ability to develop a child’s character and confidence.

Dr Ruth Wong was especially mindful about preparing teachers to be sufficiently competent in developing a child’s character and confidence. Since her early years as an educator, Dr Ruth Wong had a ‘soft spot’ for children and the youth who were disadvantaged in society.

Similarly, I believe that teacher education should continue to build on Dr Ruth Wong’s legacy by inspiring teachers to develop the passion in educating disadvantaged children in society.

Dr Ruth Wong’s Contribution to Education

Dr Ruth Wong devoted every ounce of her energy and her whole life towards developing Singapore’s education. After retirement, during her final days before she passed on, Dr Ruth Wong went on to teach some Normal classes in schools. Hence, she never really retired from teaching. Even after retirement, and at her age then, she continued preparing lessons to inspire students. This is testament to her care for students and passion in education.

In another example that illustrates Dr Ruth Wong’s care for her students, I was inspired by her practice in dedicating 10 to 15 minutes every day to individual students to connect with them in a deep and personal manner. Dr Wong would meet individual students either at the beginning or at the end of the school day. In this way, she would have met all 40 of her students within a month.

Dr Ruth Wong’s contributions to Singapore’s education have influenced teacher education programmes to imbue in our student teachers a similar kind of passion she had in educating the young. This kind of passion is characterised by a teacher who demonstrates care, and the ability to motivate and design the best learning environment for their students. Considering this, I foresee that the future of teacher education in Singapore will prepare teachers both from Singapore and various countries and, subsequently, impact children and youth from all over the world.

Dr Ruth Wong was a trailblazer. In fact, she was featured in the twenty-dollar commemorative notes that were issued to commemorate Singapore’s Bicentennial. Dr Wong was truly the face of Singapore’s education. In this view, I would argue that Ruth Wong is synonymous with Singapore’s education. Dr Ruth Wong had a breadth of vision and was committed to developing various aspects of Singapore’s education. Despite facing many constraints and limitations during her era in growing Singapore’s education, she could still envision that a teacher should be anchored in values.

Dr Ruth Wong’s Legacy

Dr Ruth Wong brought a research perspective, and a very strong theoretical framework and philosophy to education. In the then Institute of Education (IE), there was little support to drive education research, and research grants did not exist. Yet, she adopted a research mindset. I believe this was partly attributed to her time at Harvard as she studied under two of the most famous psychologists at that time – Jerome Brunner and Burrhus Frederic Skinner. Bruner believed in the ‘inside-out’ cognitive developmental approach, while Skinner believed in ‘external’ behavioural conditioning. Although Dr Wong learnt from two polarized and extreme views of education, she was still able to ‘marry the best of both worlds’ and used these ideas to steer teacher education.

Dr Ruth Wong planted the seeds and laid the foundation for the teacher education curriculum. We have many great faculty members in teacher education today, as she pioneered the idea of doctoral studies in teacher education. Dr Wong initiated many scholarships (e.g., Overseas Graduate Scholarship) by suggesting to the

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1 Normal stream – A secondary school course within the Ministry of Education, Singapore. Following primary school education, Singapore students are typically streamed to either an Express course or Normal course when they are posted to secondary school.
government to send her staff for overseas training. When IE was established, there were no doctorates; faculty members were contented with a Master’s degree and had little thoughts of completing a doctoral degree. However, following Dr Wong’s initiatives, scholars who benefitted from an overseas education brought the best international ideas back to IE. Learning from the best in education, these scholars created a very good model of teacher education. For example, our teacher education curriculum has distinct components such as ‘Education Studies’ and ‘Curriculum Studies’. Today, this good model of teacher education is taken for granted. While some teacher education colleges in the world today continue to struggle with finding the best model of teacher education, I believe we have gotten it right with our current model. I am confident to say that our current Teaching Scholars Programme and teacher education curriculum is one of the best in the world.

Over the years, teacher education has gradually shifted towards a more practice-oriented approach. Specifically, there is an emphasis on teaching practice in order to meet the many pragmatic needs of schools. Previously, when the concept of professional development was given little attention, the expectation then was to cover all teaching-related content during pre-service teacher education. Subsequently, it was accepted that it was difficult to ensure that pre-service teacher education is able to adequately cover all possible teaching-related content. Hence, teacher preparation in Singapore eventually placed greater emphasis on teaching practice through the practicum component. Following teacher preparation, teachers today continue to grow in other areas through professional development.

Dr Ruth Wong’s impact on teacher education is captured in the commonly used term “theory-practice” that establishes that all teaching should be evidence-informed. Dr Wong laid a foundation for teacher education in a very balanced way. I believe her experience teaching for 16 years and being immersed in the best intellectual environment allowed her to establish clarity in the concept of theory-practice. In today’s context, I believe teacher education will continue to develop this concept.

Actualising the theory-practice concept in education can be very challenging. Through some of my experiences as a Chen Yidan Visiting Global Fellow at Harvard Graduate School of Education and involvements in evaluating and reviewing various teacher education curriculums, I learnt that many teacher education institutions still struggle with trying to achieve strong theory-practice links.

I believe a key strength in Singapore’s teacher education is that our faculty are involved in research. They adopt a meta-perspective towards research which allows them to improve on their understanding of how theory should be applied into practice. In terms of practice, NIE strives to link its practice by collaborating with professionals in the Ministry of Education (MOE) and schools. The outcome of this collaboration is illustrated by the establishment of the Singapore Teaching Practice (STP) model.

Moving Forward

I believe that a great institution is characterised by its ability to leave a legacy. A legacy should inspire people with the willingness to build a better future.

A legacy is important because it is about preserving those values that propel us forward. This is because values are intertwined with purposefulness and it builds the idea of a belief system. Dr Ruth Wong espoused a belief in the child, a belief in humanity, and a belief in the growth of the individual.

Dr Ruth Wong’s legacy should go beyond a memorial lecture or a professorship and we should explore various avenues to grow it. We should aim to inspire more people, both in Singapore and beyond, to build on her legacy of care and visionary leadership.

References


2 STP - A model that makes explicit how effective teaching and learning is achieved in Singapore schools
Dr Ruth Wong transformed teacher preparation in Singapore. During her time as principal of Teachers’ Training College (TTC) and reappointment as director of Institute of Education (IE), Dr Wong initiated a series of projects that supported the development of teachers as professionals. Some of these key developments were: a restructuring of the teacher training curriculum that had more focus on developing student teachers’ professional competence and personal growth; inclusion of educational research as part of the student teachers’ curriculum; allowing experiments to be conducted in schools to improve pedagogical ideas and practices; and promoting in-service courses for teacher professional development. Arguably, these developments contributed to Singapore teachers being viewed as professionals today.

Following Dr Wong’s leadership, teacher preparation in Singapore continues to grow under capable leaders in teacher education. To develop a stronger appreciation of how teacher preparation has changed, the present and past deans of Teacher Education (TE), Associate Professor Liu Woon Chia and Professor Low Ee Ling share their insights.
What do you think are some of the key competences required of teachers today?

Teaching in the 21st century is difficult if the goal of education is to develop the whole child while preparing them to thrive in a fast-changing knowledge-based economy. Beginning with student outcomes in mind, teachers will have to be prepared in a manner that helps their students to be equipped with 21st century skills such as curiosity, self-direction, creativity, innovation, an inquiring mindset, and adaptive and lifelong learning. To develop these skills in students will therefore mean that the preparation of teachers should go beyond implementing a prescribed curriculum or simply teaching according to assessment procedures. Instead, our teachers should be equipped with foundational skills and competencies that allow them to eventually be confident in devising novel solutions to complex problems, managing non-linear information structures, interpreting and resolving conflicting pieces of information, and synthesising and building their own conceptual map of learning and development. Moreover, teachers have a crucial role in inculcating in their students 21st century values such as respect, equality, justice, responsibility, global-mindedness, and cultural diversity. In our current era characterised by complexity, volatility, high inter-connectivity, globalisation and diversity, teachers should be agents in educating their students for a shared future that is built on the well-being of individuals, communities and the planet.

In light of this, to teach effectively today will require our teachers to be developed in multicultural competencies and to imbue in them the willingness to change their current perspective of how education should be provided for their students. A 21st century teacher should eventually be promoting curiosity, connections, facilitating inquiring, encouraging self-directness, and shaping character in their students. A robust and relevant teacher education curriculum is one that prepares student teacher to be adaptable and be innovative in their teaching approach in order to meet the diverse needs of today’s learners. Finally, the teacher education curriculum should facilitate the development of a range of perspectives in student teachers for them to be ready to exercise good judgement to make decisions that best serve the interest of the child.

During your time as Dean TE, what were / are some of the key developments in TE?

A recent key vision we had for student teachers was to create a sense of ownership in their learning through TE programmes. To advocate this, we led a team in the conceptualisation of a Learning and Teaching e-portfolio. The e-portfolio was designed to be a precursor to the Professional Practice and Inquiry (PPI) portfolio. It facilitated student teachers to reflect and inquire into their practice, document their learning journey in NIE, collaborate with their peers on teaching-related matters, and showcase their learning artefacts and achievements.

Our TE team also developed the Singapore’s Enhanced Practicum Model with the introduction of Professional Focused Conversations and Reflective Practice so that student teachers can develop teaching competencies and judgement in applying their knowledge.

A final key development was when we introduced a three-prong framework of Community as Coach, Industry as Partner, and the World as our Classroom to provide student teachers with disruptive experiences to challenge their assumptions and broaden their perspectives. For example, the International Practicum course gives student teachers a chance to co-teach in another education system and develop a greater understanding of themselves and the world.

In hindsight, how different would the educational landscape or TE be without Dr Wong’s contributions to education?

Dr Wong has laid a foundational belief that preparing and supporting the growth of teachers must be synonymous
with quality education. A milestone development was when NIE made the move in 1991 to be an institute of the Nanyang Technological University (NTU). This move recognises the importance of research in informing practice and has allowed us to accelerate both the quantity and quality of multidisciplinary research. We are now a research-intensive institution that supports the current view of teaching as a highly regarded profession. This move may not have happened so early without Dr Wong imbuing this vision for NIE.

Today, Singapore teachers are highly regarded and trusted as professionals. Achieving such a status is testament to Dr Wong’s initiatives to revamping the teacher education curriculum during her time as Principal of the Teachers’ Training College (TTC) and subsequently, Director of IE. Her initiatives brought about a rise in the status of teachers both academically and professionally. Dr Wong believed that sufficient attention should be given to various aspects within the education system. In our current fast-changing and complex educational landscape, looking into and developing one aspect of education amounts to a huge difference. The proliferation of technology tools, big data, artificial intelligence, and multimodal learning are only some aspects that have transformed teaching and learning. These are only some examples of the need for us to continue to advance our understanding of teaching and learning and in doing so, influence how these innovative practices should be implemented on the ground. Dr Wong was mindful of examining the various components of education and how they form the whole system. In today’s context, achieving educational excellence should be a multi-prong effort and all educational stakeholders must work cohesively to actualise a shared vision.

As earlier mentioned, Dr Wong laid the foundation of teachers as professionals, not merely as technicians. For teacher preparation to be relevant today, there was a need for teacher education to move beyond subject-based mastery and more importantly, provide teachers the tools to think critically and for them to seek to understand how children learn. While the teacher education curriculum continues to evolve with advancements in technology and new knowledge, the legacy left by Dr Ruth Wong in developing teachers as key educational decision makers in both within the school and classroom continues to be relevant.

How could NIE best grow Dr Ruth Wong’s legacy?

For NIE, to best grow Dr Wong’s legacy would mean that teacher education must continue to inspire change in our teachers. Our programmes must continue to be relevant and impactful so that our teachers see meaning in their work.

I think we have adopted the right view that to inspire educational change; we must inspire in our teachers the drive to change themselves so that they internalise high standards, seek to clarify values and constantly question the status quo. The TE21: Empowering Teachers for the Future, with its enhanced V3SK Model, builds on the current TE21 model that aims to nurture student teachers to be future-ready teachers and it illustrates the importance of teachers in developing their ‘teaching DNA’. This DNA is a metaphorical representation of instilling the appropriate values and attitudes for our student teachers to thrive in a changing environment. In this view, to grow Dr Wong’s legacy would be to ensure that our programmes must facilitate the development of this ‘teaching DNA’.
What do you think are some of the key competences required of teachers today?

To answer this question, we must first acknowledge that the pandemic has changed the way we live, work, teach and learn overnight and forever. The roles of teachers have also multiplied considerably and in this light, new competencies have come to the fore although evergreen competencies must always be present. Let me start with the evergreen. A teacher must always be able to inspire each and every student to realise his or her fullest potential. To be inspirational, a teacher must be a good role-model, otherwise their students will not want to emulate him or her.

The new competencies that teachers must have are how to teach and engage their students in a digital or virtual and hybrid learning space. To do so, they must not just be digitally literate but be pedagogically digitally literate.

Teachers must also be able to ensure the mental well-being of their students or at the very least, be able to recognise those whose mental well-being are at risk. They need to possess the socio-emotional competencies to perform this role and be mentally strong and fit themselves.

Teachers must also be facilitators of lifelong learning as the pandemic and many global crises and disruptions have shown that we all need to engage in lifelong learning in order to solve the complex problems of the present and the future.

All of these competencies can be categorised by the blanket-term “future-ready competencies” and to develop these competencies, a teacher must possess the attributes of being adaptive and resilient and embrace an innovative, solutioning mindset.

During your time as Dean TE, what were / are some of the key developments in TE?

There were a number of developments but the ones that stand out to me were: the work of kick-starting the articulation of the Archetype of the Future-ready Teachers which was a work to enhance the TE21 Model, the V'SK Model and the Graduand Teacher Competencies (GTC) Framework; seeking to have greater learner agency and flexibility by catering to a diverse profile of student teachers and educators, and creating white spaces for self-directed learning, blended learning and “work-learn” modalities; repositioning Bachelor of Arts/Science (Education) programmes for a greater value proposition; restructuring and streamlining Initial Teacher Preparation (ITP) programmes; and a much greater emphasis on values-based education with the careful articulation of the Expanding Environment Framework for Values-based Education and kickstarting the design and delivery of the Character and Citizenship Education (CCE) core course.
These were pivotal in the work of reimagining teacher education to help teachers be more prepared for the uncertain future. (Figure 1)

Additionally, I also articulated the three anchors for teacher education vis-a-vis being: Values-driven; Evidence-informed; and Future-focused.

I led a suite of projects to inform the policy and practice of teacher education since 2009. I started with studying pre-service teachers, to beginning teachers and I am now studying teachers’ career-long professional development and what they need at different stages of their career.

In hindsight, how different would the educational landscape or TE be without Dr Wong’s contributions to education?

It would have been extremely different. I would like to highlight a few of her contributions that made our education system quite different and the ramifications of which are not limited to education but also extends to changes in society. Dr Wong promoted teaching as a profession, holistic education, being centred on the learner and education equality, and collaboration between all stakeholders. If not for her endeavours to push teaching as a profession by recruiting those of higher qualifications, we would not have such a high-quality teaching fraternity that has such a strong governmental support, we would not have a system that ballasts the education needs of our society, and we would not have an international reputation. Teachers would not have the deep respect they truly deserve and could have remained as information disseminators rather than facilitators of learning. Along with this, she was pivotal in elevating teaching to a profession that was evidence-based, which has given rise to NIE being situated in a research-intensive university, where research (and programmes) is one of NIE’s main pillars, along with partnerships and networks, and people and institutional capacity. She also mooted the idea of learner-centredness and education equality, and our education system is one that values the holistic development of each and every child. This is embodied in how MOE, NIE, schools and other education stakeholders believe that every child can and wants to learn, and is also the first value paradigm of our V3SK Model. If not for her encouraging collaboration between key stakeholders in education, Singapore may not have developed our strong tripartite partnership between MOE, NIE and schools, which has been cited as a key success factor of our education system.

How could NIE best grow Dr Ruth Wong’s legacy?

In growing her legacy, we have to discern what is relevant to our context. We have to come to the acknowledgement that as she sought to develop NIE in its infancy, she saw the present needs with the future in mind. This was her being future-focused and future-ready while seeking to develop the fledging teaching fraternity at the time. This is the mindset we can and should adopt to keep growing her legacy. Being future-ready means to be in a state of constant evolution. It means being dynamic, always keeping in view present needs while looking to the future. For example, Dr Wong recruited teachers with higher qualifications to boast the quality of the system and to fill much-needed vacancies. For us, we have been seeking to not only recruit from the top 30% of each cohort, but also to ensure that these candidates have the right aptitude and character. We also have to acknowledge that whatever we do, it has to be seen in light of nation-building. While we seek to develop teachers, we must also keep in mind the development of learners and how they may contribute to society. In today’s context, this has gone beyond the need to nurture the youth but it must also be in consideration of nurturing them to be lifelong learners. Our teacher education programmes have to evolve accordingly to instil in student teachers the sense of purpose, the sense of nation-building, and the sense of nurturing the whole person from childhood to adulthood. Dr Wong’s legacy is one where she stood with other giants and we want to be part of that legacy to secure the future of our whole nation.

Another legacy of Dr Ruth Wong was that of the advocacy and role-modelling of lifelong learning. She entered into graduate school later in life as she placed the upbringing of her siblings at the fore, before her own academic aspirations. Today, lifelong learning is an essential feature for every teacher’s professional development and we can say that Skills Future for Educators (SFEd) had its early beginnings in the life and legacy of Dr Ruth Wong.
Emeritus professor John Loughran (B.Sc., Dip. Ed., M.Ed.Stds., PhD., D. Litt) is a Sir John Monash Distinguished Professor, Foundation Chair in Curriculum & Pedagogy and was Executive Dean of the Faculty of Education, Monash University (2010-2019). He 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 ten years before moving into teacher education. He is well regarded in the fields of teacher education and science education. Beyond his extensive journal publication profile, he has also published over 30 books working with publishers such as Routledge, Springer (also a series editor of self-study) and Sense (also a Series Editor for Professional Learning) and Teachers' College Press. He has been an author/section editor/editor of International Handbooks and Encyclopaedias in Teacher Education, Science Education, Self-study of Teaching and Teacher Education Practices, and Reflection. He recently co-edited the International Handbook of Teacher Education (Springer, 2016).

Professor Loughran was the co-founding editor of Studying Teacher Education and an Executive Editor for Teachers and Teaching: Theory and Practice. His competitive research grants exceed AUD$10M and he has supervised more than 40 PhD students to completion. He has also received numerous teaching and research awards nationally (e.g., university, State and Federal) and internationally (e.g., AERA).
I want to start with the idea that thinking about teaching and teacher education is an issue of quality. It doesn’t matter where you look in the literature and forever, it is always said, which are perhaps the type of assumptions that are carried in society, and sometimes in education faculties, and Darling-Hammond captured them really quite nicely when she said that, in many instances, “teaching is seen mostly as just telling others what you know”. This reaffirms what Minister Chan Chun Sing said earlier about transmission of knowledge, and that when it comes to teacher education, people learn primarily from more or less unguided experience. Sadly, education schools or faculties of education offer little more than just half-baked theories that are unnecessary and perhaps are even an impediment in learning the practical requirements for teaching.

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 pushback against all those assumptions in ways that haven’t happened before and offer ways to challenge the status quo.

Personally, I think it’s fair to say that there is a challenge to better understand teaching. And that’s important because these stereotypes and assumptions are not always clear on what quality teaching and learning is and therefore, lead to public misunderstandings. Hence, it’s very important for us to draw attention to what quality means in teaching and learning.

However, 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, the practice, the development of teachers and teaching, and to push back against what is often seen as the theory-practice gap. The theory-practice gap is usually a big point of contention in education, particularly in teacher education.

Instead of viewing the theory-practice gap as a gap, I’d like to think about 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 about it that way, it stops being a gap and instead becomes a dynamic relationship.
Viewing ‘theory-practice’ as a dynamic relationship requires us to have greater recognition of quality in teaching. And that becomes more evident through the notions of: responsiveness of teaching to context; by being informed about meaningful experience in teaching and learning; and through purposeful design that challenges and engages students in learning.

For me, those three things, capture the essence of what quality is in teaching.

Similarly, we need to value theory and I feel that’s captured best when theory 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 that is, “what happens in an individual classroom?”; while shedding light on the big picture of understandings of teaching and learning.

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

As I suggested earlier, and which Minister Chan Chun Sing also reinforced, COVID-19 has led to a new focus on teaching and learning by students, by teachers and importantly, by the public.

This new focus on teaching and learning was certainly evident during early COVID-19. Teaching during the great lockdown in Melbourne, captured nicely what the world of online teaching initially meant from the students’ perspectives and the excuses it allowed students for not doing what they were asked to do.

To reinforce this with an example, my daughter is a high school dance teacher. 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 simply by changing their screen, muting their involvement, or leaving the screen on but being ‘absent’.

In the world that COVID-19 pushed us into, we had to see that current view of teaching and learning had shifted. Even though there was a sense of ‘delivering virtually’ there were many and varied implications.

Firstly, we needed to see beyond the idea of transmission of information. ‘Telling and listening’ doesn’t equate with quality in teaching and learning, and the COVID-19 environment really brought that to the fore.

It also meant that theory in teacher education couldn’t simply be front loaded and that school practicum experiences required much more than performance or ‘stand and deliver’ experiences. I’m not quite sure how this played out in Singapore, but in Australia, it became a really big deal because we could no longer get student teachers into school and therefore, they were learning how to teach virtually through the online environment. This meant moving beyond the delivery of content was an immediate and very prescient issue for student teachers and for the teacher educators supporting them.

Probably the biggest breakthrough though was that parents began to see education in new ways because they couldn’t help becoming involved in supervising learning. You can look through many online blogs of parents to understand how were they were confronted by what it meant to supervise their children, and how they slowly gained new insights into teaching and learning.

Here’s one such excerpt:

“… one of the biggest pivots has come from schools as they reimagine what learning can look like and how it can be delivered … the role of parents and caregivers in a young person’s schooling has been in the spotlight …

Just the other morning my daughter was doing schoolwork (or so I thought) when I realised that I could hear the distinct voices of everyone’s favourite animated underwater rescue squad, The Octonauts ... When I asked what she was doing, she told me she was watching the episode and writing down facts. At the end my daughter proudly came and read to me a report of all that she’d learned about the Everglades and showed me pictures she’d drawn of each of the animals that can 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 TV. However, it made me realise that values that we regard highly, curiosity and an 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.”

(Learning Creates Australia, n.d.)
I think that’s a powerful piece of writing from a parent whose experience of education is probably 20 years different compared to that what they experienced when supervising their children at home in a virtual learning environment. And I’m making this argument: What COVID-19 did was a game-changer in the way that it challenged the previous assumptions of education in a productive and positive way instead of allowing the status quo to continue.

There was a reason to begin pushing back against what was previously so often taken for granted, what was normal behaviour, and importantly, the assumptions that drive the things that maintain the status quo.

The argument I’m trying to put forth here is that 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 the need for learning to be different. However, it’s a different matter when you think about what it means to transfer understandings of learning into new pedagogical experiences both from a teacher’s and a student’s perspective.

Let me briefly touch on some ideas around learning theory and in doing so, it helps to illustrate how much knowledge of teaching and learning, as well as teacher education has to help encourage student teachers to grasp, understand and then put into practice.

The first problem is that understanding of learning can be quite limited outside of education faculties, outside of teaching, outside of the knowledge which comprises what teachers know, do, understand, and practice.

These views of learning fit perfectly with the idea that teaching is just the transmission of information and students just need to accept what is presented to them. The ‘classic’ argument that, “I taught the students, they simply didn’t learn; I did my job, they didn’t do their job.”

Let’s look into it more deeply. If learning theory matters, then developing teaching for understanding, or as Minister Chan Chun Sing said, “developing sense-making”, becomes a very demanding and difficult task.

Let’s address this by taking it in layers.

Think about different chunks of learning theory: behaviourism, cognitivism, constructivism. These words highlight how much teachers have to know about learning before considering what it might mean for teaching.

Let’s dig down a little bit more deeply. There are all of these learning theories: Piaget’s Theory of Cognitive Development; Vygotsky’s Theory of Learning; Bloom’s Domains of Learning; Kolb’s Experiential Theory; Rogers’ Humanist Theory; and Gardner’s Multiple Intelligences, which I have chosen just a slice of the learning theory with which we’re familiar with.

When we start to think “what does it mean?” for a teacher, for a teacher education programme, to do more than just deliver chunks of information about learning theory, it starts to get quite complex and demanding. Have a look at this list: Piaget, Vygotsky, Bloom, Kolb, Rogers, Gardner - and the list goes on - and you can’t help but think that for a teacher to understand learning, it means they are trying to get across a huge range of knowledge in order to make sense of what we know as learning theory, and to be able to respond to the diversity of learning needs in a classroom.
Let’s go another layer deeper. Bloom’s taxonomy is something that’s way too easily overlooked when one considers learning theory.

Bloom’s taxonomy illustrates the range of cognitive abilities - the strategies, the procedures, the actions - that happen in the different ways in which learning occurs. Unfortunately, many times, teaching stops at remembering and at gathering facts.

Consider too that all the other layers like developing understanding, applying information, analysis are all important.

Think about evaluation. What does this lead to? How about creation? And again, thinking about what the Minister Chan Chun Sing said in his presentation this morning, these things apply directly to the ‘shifts’ that he was talking about. As I think about what he was saying and as I reflect on the nature of what I understand in Singapore, and what Professor Hess said about her understanding of Singapore from the time that she’s been here. It seems to me that Singapore has a very structured, thoughtful and systemic approach that stands out in the world. I’ve always thought Singapore was wonderful in the ways in which it takes teaching and learning so seriously.

Thinking about learning theory, and about what it means for the development of quality in teaching, it suggests there’s an awful lot to learn, know and understand.

Here’s another example, think about Kolb, think about the idea of a cycle of learning based on experimenting, in developing, in reflecting, in observing, in abstract conceptualization (Kolb, 2015).

COVID-19 therefore, in having students learn online, was a wonderful way to see some of these learning theories begin to be translated into practice - online practice.

What’s important though, is that the ideas that these are driven by, respond differently to different types of learning. Finally, if I make reference to the original of Gardner’s multiple intelligences (Gardner, 1993), then it is a powerful example of where one of the learning theories, experienced a powerful transition into practice - certainly in Australia.

When Gardner first put out his original ideas about ‘learning styles’, they were immediately turned into ideas for practice. However, the drawback was that students were positioned as a particular type of learner, in essence ignoring other types of learning. In fact, with Gardner, learning theory became something that was both at the same time empowering, in terms of practice, but could also be very limiting, in terms of learning because if a teacher did not move beyond trying to label a student as a particular type of learner but try to broaden student learning across these multiple intelligences, then learning could be quite limited as it was seen as fitting into a ‘box’.

I think Gardner’s work really helped to break open the idea of translation of learning into practice; draw attention to a teacher’s ability to create diverse ways of encouraging us to think about a classroom of learners; teaching to a different group of students - all at the same time! Nothing illustrates more how difficult the teacher’s job is and why teacher education is such a difficult task more than thinking about a classroom of non-homogeneous learners. You can’t just do one thing and expect that to speak to all students.

Therefore, the overarching issue is to think in cognitive terms and to position the notion of metacognition as a linchpin in the translation of learning theory into practice.

For student teachers to understand the importance of developing students’ metacognition, their ability to question their own learning, to take control, of their thinking and questioning, teacher education really must accept a central role. In being able to help them teach for metacognition, it needs to be acknowledged that it is not only really important but is also very difficult; particularly in the virtual environment brought on by COVID-19.

Let’s push these ideas a little bit further. A good teacher helps their students understand and make clear, that being metacognitive and developing metacognition is a way of helping them to be autonomous in their own learning. Therefore, learning tasks cannot be set as simple “do this, learn this” types of activities.

In a metacognitive view, the learning becomes a sense making activity. Yes, there is information. Yes, there are facts. Yes, there are things that need to be known. But how do you move beyond it? Through supporting metacognition, a teacher is able to elicit questions that lead to good inquiry and encourage the thinking that is able to create and respond to a diversity of learners. In fact, it’s not unlike what Professor Hess was saying about “what’s set and forget” in the classroom discussion and what’s “open and ready to move”. Hence the idea of metacognition as a way of taking learning theory, moving it forward and translating into practice. Metacognition is a very powerful way of considering what teacher education is being pushed into placing at the centre of learning and teaching for understanding – especially now in a post-COVID-19 world. Teacher education needs to grasp the opportunities that were created by the imposition of
virtual learning environments, and not fall back on the previous world and the status quo. In order to progress teaching and learning, teacher education must actively move forward.

So in a sense, a better understanding of learning becomes crucial for what teaching and teacher education can and should look like now. As a consequence of the challenge, but also the great opportunity that COVID-19 forced upon education, and made possible.

Establishing stronger connections between teaching and learning requires the development of a teacher’s pedagogical reasoning – the ‘why’ that underpins the use of their teaching procedures. Therefore good teachers, quality teaching, the types of things that I’m arguing, that the COVID-19 environment has pushed us toward, now encourages us to be ready to better grasp and question what a teacher does, and to examine and scrutinise their pedagogical reasoning – their ‘why’ that underpins the use of teaching procedures.

I am arguing that a good teacher chooses to use a teaching procedure for a reason, not just because it breaks up the normal routine. Professor Hess mentioned the teaching procedure ‘think-pair-share’. She noted how when she first used it with her colleagues, they thought it was a great new world. Well, in a similar way, some teachers may think of something like ‘think-pair-share’ and say, “Well, this is great, it stops me from doing too much talking”. But quality in teaching and learning means ‘think-pair-share’ is used for a reason. The pedagogical underpinnings of a teacher’s practice becomes clear when they can articulate ‘why’ they use a teaching procedure. Therefore, the use of a teaching procedure should neither because it’s fun for students, nor because it takes the focus off the teacher, but because it encourages purposeful learning with engagement and outcomes that respond to the diversity of learners involved. Hence, that’s why I think this notion of: pushing for development and articulation of pedagogical reasoning really matters.

COVID-19 encouraged some freedoms in this way of operating in the world. First of all, it encouraged pedagogical risk-taking. Experimenting was important. I don’t know how these ideas are talked about publicly in Singapore, but in Australia, we’ve had a lot of pushbacks against the idea that a classroom is a place where experimenting with teaching and learning is important. The general public seems to think that there is a ‘right way’ of doing teaching and that experimenting, or risk-taking, is then putting student learning at risk. However, I think it’s the complete opposite.

The more a teacher plays with teaching procedures and tries to understand how different types of teaching procedures create different learning environments, the more the teacher is able to actively develop what they want for their students and to create possibilities in learning that leave them better off - and that occurs when their pedagogical risk-taking teaches them about creating learning environments that respond to a diversity of learners’ needs and concerns.

However, teachers can’t create possibilities in student learning when there is a theory-practice ‘gap’ - where teachers have to understand it theoretically - which creates a chasm between the theory and the reality of practice. Pedagogical risk-taking is about playing with these ideas. Teachers have to play with these ideas with students to understand theory and practice together. And quality teaching is evident when teachers are learning through this type of pedagogical risk-taking. In fact, I would argue that it’s not really a risk: it’s a professional expectation for teachers to better understand the learning environment that they are creating with (and for) their students.

Although the use of terms like ‘risk-taking’ and ‘experimenting’ suggests some sort of ‘playing around’ and not knowing what’s going on, it is actually quite the opposite. It’s working with teaching procedures to better understand how to respond to the diversity of learners in the classroom.

Again, linking these ideas to what it means to be a teacher, illustrates the incredible professionalism required of a teacher to be able to manage a diverse learning environment. COVID-19 has made clear that a diverse learning environment is now something that is not only better publicly understood; it’s something that’s being encouraged to be developed and responded to. It’s no longer acceptable to simply teach to ‘the middle’. It’s more about trying to better grasp what it means to teach all of the students in a classroom. And in fact, I don’t mean it as the teacher delivering these types of learning experiences and then expecting the students to grab the bit that suits them. It’s about the teacher manipulating, using, managing, working the learning environment, so that students are immersed and engaged. It’s a dynamic, thoughtful, and an engaging environment.

The teacher is the creator of that learning environment and that more than captures why ‘telling’ isn’t teaching and ‘listening’ isn’t learning.
Creating meaningful learning environments through well-considered pedagogical experiences can be done online or face-to-face. It's all about the environment that's being created. It's not just about information to be delivered. That's the heart of what I think COVID-19 pushed us to begin to better understand; as teachers, teacher educators, students, and the general public. Often in COVID-19 times, we found that experience preceded understanding. Teachers did things and then came to understand what it meant for student learning. There's nothing wrong with that. It's a good thing. It brings my argument about practice informing theory, informing practice together in a focused way - doing things and then, learning about them as a teacher, seeing the theoretical through the practical, and the practical as testing the theoretical - also known as knowledge creation. As a consequence, teachers became much more informed about the nature of the learning that they were encouraging and developing the ‘what’, the ‘how’, and the ‘why’ of pedagogy. Indeed, experience often precedes understanding. Knowing something doesn't necessarily suggest comprehension. Having experience with a different teaching procedure, making sense of using concept maps in class for example, can only be done by actually having experience and then the understanding will come as a consequence of it and that understanding will grow and develop; the more the procedure is used, and the more experience favours a teacher's professional knowledge development.

Not all experience, of course, leads to the type of learning outcomes we want. However, because experience precedes understanding, we have to allow space for teachers and students to experience things, and then to move into the world of sense-making. Sense-making is really important. The ‘what’ that is happening in teaching and learning is that sense is being developed in the process. It's the teachers’ professional knowledge that can help create a powerful learning environment for the students to make sense of information, ideas and concepts, and is the essence of that which is created through the pedagogical experiences teachers create.

The other big deal about COVID-19 was that quality teaching really came to the fore as a consequence of teachers needing to be responsive to the context. Students were sitting at home, in very different places to what they were used to in a classroom. Teachers were trying to create experiences and opportunities for them, that had to be responsive to the nature of the context in which they were working in. That was one of the greatest ways of teachers beginning to see their professional knowledge coming to the fore as they took risks in the way they created the learning opportunities for their students. As a consequence of experience, teachers saw how responsive they needed to be to the context in which their students existed in the world in which teaching and learning was being shaped, and no longer lived in the status quo of the ‘normal school classroom’. Finally, this pedagogical decision-making which teachers do all the time really started to be understood as dynamic and demanding. Think about how difficult the role of the teacher is. Teachers are always asking questions like “what’s happening in their environment?” That decision-making became much harder, through COVID-19, because the face-to-face aspect - the ability to scan the faces of the classroom and see where students were in their thinking, how learning appeared to be progressing - was removed in some instances. But in other instances, it was brought down to an individualistic situation. Hence, the dynamics of pedagogical decision-making came to be much greater. It slowly became better recognised and understood, and that was really important for creating a teaching and learning environment in which students could be autonomous, in which their metacognitive skills could be developed, and in which teachers could transfer their ideas of learning into practice in ways that resonated with students and created high-quality teaching and learning opportunities.

Now, I say all these things as if this was easy, but I'm not in Singapore at the moment because COVID-19 has been a two-year experience for us. In Australia where I am, we've been through so much with our lockdowns. However, teaching has now come out the other side as a much more highly-valued and much more important aspect of the world of education. It's led to developments where people understand that teachers' professional knowledge is important. That the life of a teacher is not easy and parents are very happy to hand their students back, to send them back to school.
CONCLUSION

In conclusion, I think we now have, as a consequence of COVID-19, a deeper understanding of teaching and learning. I would argue teaching is a complex and sophisticated business. Expert teachers purposefully direct and support quality learning. These are the things that we’ve come to see and understand. I think, in teaching, we always knew it. In teacher education, we always knew it. Now, there is a much more powerful public statement that better connects to that which we always knew.

What we need to do, as a consequence of COVID-19, is we need to build upon the shifts that have been allowed to take hold. We don’t want to go back to what used to be. We need to keep going forward.

I’ve made an argument around what quality in teaching and learning begins to look like when we think about the themes I have presented today. We need to grasp those ideas and we need to move forward in a positive and productive way.

In essence, we need to recognise, value and reward teaching for understanding – sense-making. Because in the end, that is the high mark in any education system.

If it is the case that from COVID-19 we are able to advance education by highly regarding the work of teachers, by creating high quality learning, and by recognising that teaching is a complex and sophisticated business, then we will certainly have made clear that teaching is a demanding profession. A profession that needs to be highly valued, highly regarded and highly rewarded. If that was to be the case, then I think COVID-19 might be remembered as time when quality in teaching and learning became better understood not only within the profession but also by the public more generally.

References


The Dr Ruth Wong Professorship Lecture was held alongside the 2022 NIE Redesigning Pedagogy International Conference. Due to the COVID-19 situation, the series of events were largely conducted on virtual platforms. Below are highlights from the 2022 Dr Ruth Wong Professorship Lecture.
# Professor John Loughran’s Visit to NIE
**Dr Ruth Wong Professor in Teacher Education**

## Summary of Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>30 May 2022 Monday</th>
<th>31 May 2022 Tuesday</th>
<th>1 June 2022 Wednesday</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>Keynote Speech</td>
<td>Sharing Session with Dean, Teacher Education and Teacher Education Executive Committee</td>
<td>Virtual Meeting with NIE Senior Leadership</td>
</tr>
<tr>
<td></td>
<td>Ruth Wong Visiting Professorship - Professor John Loughran</td>
<td>Teacher Education Executive Committee</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>Fireside chat with Bachelor of Arts (Education) and Bachelor of Science (Education) Teaching Scholars Programme (TSP) student teachers</td>
<td>Teachers as Thinkers (TaT) Talk</td>
<td>Networking session with Teacher Leaders Programme (TLP) Alumni</td>
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<tr>
<td></td>
<td>Video interview - managed by Public, International and Alumni Relations (PIAR), NIE Venue: online</td>
<td>Title: Reimagining teaching in a Post-Covid World</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TIME</th>
<th>2 June 2022 Thursday</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>Conversation with Graduate Studies and Professional Learning (GPL)</td>
</tr>
<tr>
<td>PM</td>
<td>Conversation with Academy for Singapore Teachers (AST) Master Teachers</td>
</tr>
</tbody>
</table>