



Editorial: teacher education in Singapore in the twenty-first century: the past, the present and envisioning the future

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Abstract

Singapore's founding Prime Minister, the late Mr Lee Kuan Yew commented poignantly that a country's citizens are only as good as its teachers. This underscores the important role that teachers play not just contributing to a high-quality education system but also to the more pivotal role of nation-building. The mission of teacher education in preparing teachers to rise up to this grand challenge of nation-building becomes of primary importance. The papers of this special issue stem from a webinar where five scholars recounted the underpinning philosophy of the initiatives they had led and implemented in their tenure as deans of teacher education of the National Institute of Education, Nanyang Technological University in Singapore. They provide an "insider" look at the challenges and opportunities faced. This editorial will expound on the key trends of teacher education as reflected the contributors in this special issue and discuss them against the concerns in each educational phase of Singapore's journey before suggesting the continued importance of providing a relevant, responsive and high quality teacher education for the nation's sustained growth and development amidst a rapidly changing global educational landscape.

Keywords Teacher education · Evolving education system · Nation-building · Singapore · Local and global perspectives

1 Introduction: changes provide opportunities for growth

Much has been said about the advancement of education and its importance to the progress of a nation, with many international scholars and policymakers recognising the power of education and the ill effects caused by major disruptions to education (ACAPS, 2020). International think tanks have produced significant publications with the goal of informing policymakers about the importance of rigorous and evidence-informed teacher education programmes in order to prepare teachers sufficiently to guide their learners for the competencies required for a rapidly changing workplace and society. In tandem, and many others have identified the vital need for teachers to be involved in career-long professional development (Organisation of

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Economic Co-operation and Development [OECD], 2009). Little, however, has been written about how teacher education responds to the fast evolving local and global landscape. This is quite perplexing since understanding how teacher education evolves as each jurisdiction advances will not only allow students and scholars to understand their historical evolution but crucially, to glean lessons learnt from both successes and failures throughout their development. Historical lessons also help systems prepare for the future and the pitfalls to avoid.

International scholars have noted that teachers are pivotal to nation-building efforts. For example, Green and Reid (2012) noted the historical significance of teachers in the building of Australia especially in its infancy. In the early nineteenth century, Australia needed an education system that would promote the Englishness of the English settlers. While “keeping Australia ‘white’” (Green & Reid, 2012, p. 363) would now be seen as objectionable, the early English colonists used teachers as a “strategic, planned invention” whom they saw to be crucial to their nation-building agenda. Agreeing with Grosvenor and Lawn’s argument, Green and Reid (2012) intertwined teacher identity with that of national identity. Over in India, Babu (2017, p. 54) noted the importance of teachers in 21st-century India, stating that “[t]he teacher can be rightly called a nation-builder”, whose role “is a multi-faceted one comprising academic, pedagogical and social roles” and whose “influence is more profound than any other personality in the lives of children”. As such, teachers “have to play a cardinal role in the building up of the character of the next generation” (p. 54), being “future-builders” who “are the basic source of education for most of the people of the country and they are the ones who build the future of the nation” (p. 54).

The likening of teachers, to be nation-builders, transcends just Singaporean rhetoric as demonstrated in the preceding paragraph. Thus, it is important that teachers are rigorously prepared for their important roles ahead. Singaporeans have been reported to hold teachers in high regard (Foundation, 2018), viewing teachers as professionals and nation-builders. While Singapore is a young nation having achieved independence only in 1965, it has, in its short history developed a world-class and well-respected education system and teacher education programme.

The aim of the webinar co-organised by the National Institute of Education (NIE), Nanyang Technological University (NTU), which is the sole teacher education institution and accreditation board in Singapore, and the Education Research Association of Singapore (ERAS) was to learn from the past and to prepare for the future. The webinar, entitled “Teacher Education: The Past, the Present and Envisioning the Future”, was held on 17 March 2021 and the panel comprised five scholars who held the appointment as Deans of Teacher Education (though nomenclature changes through the years) from the period of 2000 to 2021. These panellists shared their professional insights and in-depth knowledge on teacher education across different eras, and their sharing is now presented as articles in this special issue. This editorial provides an overview of the perspective offered by each scholar in their tenure as dean. It is clear that there was a coherent perspective about how pre-service teacher education is considered to be the initial stage of a teacher’s career-long professional development. Each dean also noted how global trends influenced their policy decisions during their tenure.

2 Tenures of deans and respective educational contexts

Detailing the years between 2000 and 2003 of which Professor S. Gopinathan was then Dean of Foundation Programmes, Gopinathan and Loh delve into the history of teacher education in Singapore and bring to light the steps taken towards the journey of

universitising teacher education. This included the change from training teachers to developing teaching professionals for the young nation that was seeing rapid economic and social growth in the 1970s and 1980s, and the integration of the Institute of Education to become the NIE, housed as an autonomous institute within the research-intensive NTU. This period saw the upgrading of teaching qualifications that were mostly education certificates and diplomas to undergraduate and higher postgraduate degrees. This phase of teacher education development coincided with the nation's Ability-driven education phase (1997–2011) that saw the following important education initiatives:

1. Thinking Schools, Learning Nation initiative (TSLN) (1997) aimed to prepare students to meet the challenges of the 21st-century future (Goh, 1997);
2. First Masterplan for ICT in Education (Masterplan 1) (1997) sought to build in each school a technology infrastructure (e.g. IT equipment, software and network connectivity) for students and teachers to access resources, and targeted for 30% of curriculum time to be dedicated to IT usage to help students and teachers be technologically literate (Teo, 1997);
3. National Education Curriculum (NE) (1997) was launched to develop national cohesion through the articulation of shared core values, and instilling the will to prevail thereby ensuring Singapore's continued success and well-being (H. L. Lee, 1997); and
4. Second Masterplan for ICT in Education (Masterplan 2) was built on Masterplan 1 and aimed for the effective and pervasive use of ICT in schools through the integration of ICT into the curriculum, the establishment of baseline ICT standards and the seeding of innovative use of ICT among schools (Tan et al., 2017).

Between 2003 and 2008, Professor Cheah Horn Mun was Dean of Foundation Programmes and he highlights a significant review of teacher education from 2003 to 2005 that incorporated a vital perspective to initial teacher preparation. While skills and knowledge were important for the nation in the early years of survival and subsequently growth, he articulated the importance of including values as an important outcome in the preparation of teachers, who were tasked not just to develop the minds of students but also to nurture and build their characters. He incorporated values to complement skills and knowledge, and this comprised the first iteration of the then-newly minted Values, Skills and Knowledge (VSK) Framework (see Fig. 1 of the article), which guided the design and delivery of the teacher education programmes under his tenure. The teacher values that were identified included (1) care and concern for all pupils; (2) respect for diversity; (3) commitment and dedication to the profession; (4) collaboration, sharing and team spirit; (5) desire for continuous learning, excellence and innovation; and (6) belief that all pupils can learn. With values-centred, skilled and knowledgeable teachers as rolemodels, it was envisioned that students would develop the attributes desirable for good local and global citizenry.

During his tenure, the Ability-driven phase of education was still in progress and key features included:

1. The introduction of the Integrated Programme (IP) and Direct School Admission (DSA) scheme (2004) based on the understanding that learners needed different pathways to achieve success and so while IP provided broader learning experiences through a direct and seamless 6-years programme from Secondary 1 to Pre-tertiary 2, DSA allowed students to gain admission to secondary schooling based on non-academic strengths like excelling in sports and the arts for example (Tan et al., 2017);

2. Teach Less, Learn More (TLLM) (2005) was built on TSLN efforts to encourage active and independent learning, and it did so by reducing syllabus content, promoting critical thinking and encouraging inquiry-based learning (Lee, 2004); and
3. The Revised Junior College Curriculum (2006) provided Junior College students with greater breadth and depth of learning, where they could study at least one subject beyond their main specialisation and had the choice of engaging in differing levels of study (termed H1, H2 and H3) within each subject (Tan et al., 2017).

In the years from 2008 to 2014 when Professor Tan Oon Seng stepped into the Deanship of Teacher Education, Tan and Chua noted Professor Tan's personal reflections on the launch of the Model of Teacher Education for the 21st Century (TE²¹; NIE, 2009) and the conceptualisation of the Values³, Skills and Knowledge (V³SK) Model. The V³SK Model built on the VSK Framework with a refinement of the three-pronged set of professional values that a teacher of the twenty-first century would require, i.e. Learner-centredness, a strong sense of Teacher Identity and Service to the Profession and Community values. The authors provide insights on how it was important to engage all stakeholders in enacting successful teacher education through collaboration with the Ministry of Education (MOE), policymakers, school leaders and practitioners in the classrooms. In his tenure, there was an increasing international interest in how high-performing education systems in internationally benchmarked tests of student performance such as the Programme for International Student Assessment (PISA) such as Singapore could help inform other less high-performing systems. Highlighting the importance of values once again, the authors noted that "[i]n essence, we were building on roots, culture, values, and wisdom as we tapped on science and evidences", which is reflective not only in the way Tan approached the conceptualisation and development of the TE²¹ Model and the V³SK Model, with the emphasis of values as the core pillar of the model, around which skills and knowledge deemed necessary for a twenty-first century teacher were wrapped.

His tenure was between the Ability-driven education phase and the Values-driven, Student-centric education phase (2011–2018), where the following initiatives were launched:

1. Revised Desired Outcomes of Education (DoE) (2009) which specified four desired student outcomes, namely, (1) a confident person, (2) a self-directed learner, (3) an active contributor and (4) a concerned citizen (Tan et al., 2017);
2. Third Masterplan for ICT in Education (2009) that aimed to use ICT to help in students' development of self-directed and collaborative learning (Tan et al., 2017);
3. Framework for 21st Century Competencies and Student Outcomes (21CC) (2010) that expounded Singapore's education vision for 21CC student outcomes, which spelt out overall desired 21CC and student attributes with an emphasis on socio-emotional competencies and values at the core of this framework (MOE, 2021);
4. Primary and Secondary Education Review and Implementation (PERI and SERI) (2010) enhanced the quality of primary and secondary education in the areas of lifelong learning, socio-emotional development and placed great emphasis of the importance of the non-academic co-curriculum (Tan et al., 2017);
5. Teacher Growth Model (TGM) (2012) encouraged teachers to pursue professional lifelong learning throughout their career, and articulated five desired teacher outcomes, namely, (1) a competent professional, (2) an ethical educator, (3) a community builder, (4) a collaborative learner (5) a transformational leader (Academy of Singapore Teachers [AST], n.d. a);

6. Values in Action (VIA) (2012) encouraged students to be involved in the community and nurtured them to become socially responsible citizens through engaging in community involvement projects (Tan et al., 2017); and
7. Applied Learning Programme (ALP) and Learning for Life Programme (LLP) (2013) where ALP focussed on interdisciplinary knowledge and the application of skills to professional real-world settings and LLP aimed to nurture students' character and values, and develop their interpersonal skills (Heng, 2015).

From 2014 to 2018, Associate Professor Liu Woon Chia was Dean of Teacher Education. Globally, the disruption caused by the Fourth Industrial Revolution (4IR), a term coined in 2016 by Klaus Schwab, precipitated the realisation that employment in this 4IR era would deviate from the traditional. In teacher education, this resulted in the need to help prepare student teachers to be ready to facilitate inquiry, self-directed and collaborative learning that would be both meaningful and transferrable their future students. Through four pillars (i.e. deepening learning, strengthening teaching, broadening pedagogies and developing perspectives) that were enacted by enhancing and expanding course structures and offerings to develop thinking professionals, teacher education in Singapore focussed on how teachers could be better equipped with 21st-century values, competencies skills and knowledge that would help them to nurture twenty-first century learners. This period coincided with the Values-driven, Student-centric education phase, which saw the following initiatives:

1. Fourth Masterplan for ICT in Education (Masterplan 4) (2015) aimed to develop future-ready and responsible digital learners who were masters of their subject disciplines, aligned to the student-centric and values-driven focus of education (Tan et al., 2017); and
2. Singapore Teaching Practice (2017) articulated Singapore teachers' core beliefs and effective instructional practises in Singapore's classrooms, expounded on what it means to be student-centric and helped teachers develop in four teaching areas that comprised several teaching practises and created a common language for use from pre-service to in-service (AST, n.d. c).

As if the disruptions of 4IR were not enough, the COVID-19 pandemic altered the way we lived, worked and learnt overnight and forever. The pandemic struck within the first 2 years of Professor Low Ee Ling's tenure as Dean of Teacher Education from 2018 to 2021, Her challenge was simply to keep learning going no matter how uncertain the future was and in the midst of school closures and national lockdowns. Rather than simply being reactive to the challenges faced, however, opportunities for reform were seized especially in the digital space. Opportunities were leveraged to develop future-ready teachers for future-ready learners who must become lifelong learners, equipped with future-ready values, dispositions, attributes, competencies, skills and knowledge to thrive in an uncertain and unpredictable future. Low's article details how Singapore seized the pandemic to re-think teacher education through three main anchors of teacher education, that is, being values-driven, evidence-informed and future-focussed. The enactment of such a programme involved articulating the archetype of the future-ready teacher, providing greater learner agency and flexibility and developing interdisciplinary programmes, and reimagining, restructuring and streamlining programme offerings. The

ultimate goal was to prepare the entire education ecosystem of teacher educators, teachers, and students to be ready for the post-pandemic world.

The Learn for Life education phase (2018–present) characterised this period, which saw a major initiative to support the lifelong learning endeavours of teachers:

1. SkillsFuture for Educators (SFEd) (AST, n.d. b) was introduced in 2019 and aimed to improve teachers' competencies and to encourage lifelong learning in six priority areas viz. Character and Citizenship Education, Special Educational Needs, Inquiry-based Learning, Differentiated Instruction, Assessment Literacy and e-Pedagogy—with four levels of practise mastery viz. emergent, proficient, accomplished and leading (see Low's article for more details).

3 Teacher education for nation-building

As detailed in the articles appearing in this special issue, the evolution of teacher education in Singapore has been very much tied to both local and international factors. With the role of teachers being equivalent to nation-builders, it is clear that each dean had to balance between the economic needs and educational focus of the nation and how to translate these into the teacher education programmes. Of significance to this special issue are the commentaries by Ng and Shirley who respectively bring a local and an international scholarly perspective to the articles published.

The many disruptions to education starting from the 4IR that first made us rethink the future skills required by employers to the COVID-19 pandemic forced us to reimagine the way we live, work and learn, and most recently, the Russia–Ukraine War that is making us reconsider both political and cyber security issues, it is clear that education has an almost impossible mission of preparing our young for the unknown, unpredictable and complex future ahead.

The current crisis is reminiscent of Singapore's history when the fledging nation, with hardly any natural resources except for its people, was in a very precarious and tenuous position after the separation from the much larger Malaysian federation. Yet, through grit and resilience, the young island, city state has managed to not just survive but become one of the wealthiest countries in Asia, with an education system that is lauded internationally. Turning crises into opportunities seems to be the magic formula that has helped build the country through the decades. Singapore's education system, as documented by the scholars in this special issue continues to evolve in tandem with the changing local and global needs. The Learn for Life education phase is fast morphing from "Remaking Pathways" to cater to the diverse profiles of our learners and reviving the joy of learning to building a generation of Singaporeans with a "Confidence for a New Tomorrow" (MOE, 2022). With the overarching goal to "develop confident Singaporeans, a competitive Singapore and a cohesive society", one key strategy to achieve this goal is to empower educators to be stewards who promote positive change in their learners.

To paraphrase the words of the late Founding Father Mr Lee Kuan Yew's (1967) about how a nation is only as good as its citizens and its citizens as good as their teachers, the importance of teacher education and career-long professional development and its constant evolution with relevance and responsiveness to the changing realities of the local and global landscape cannot be over-emphasised. For this reason, teacher education in Singapore will always be a constant work in progress.

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