



Rethinking teacher education in pandemic times and beyond

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Abstract

With disruptions such as the Fourth Industrial Revolution (4IR) and crises such as the COVID-19 pandemic drastically changing our lives and challenging all nations to rethink our current paradigms of teaching and learning and paradigms of living and working, the world needs to educate our young to be future-ready in more deliberate ways. Future-ready learners need to have a lifelong learning mindset that is instilled with the right values, attributes, skills, competencies and knowledge so as to ensure that their nation survives upcoming disruptions and crises and thrives amidst and in spite of the great challenges faced. Singapore is learning to adapt to the fast-changing and unpredictable landscape, seeking solutions to succeed beyond the difficulties and seizing opportunities amidst the myriad challenges faced. Drawing lessons from international best practices while contextualising them to our local needs and developing our own brand of innovations, teacher education at the National Institute of Education (NIE) anchors itself in taking a values-driven, evidence-informed and future-focused approach, building upon the past foundations. This article will detail how Singapore's sole teacher preparation institute is rethinking teacher education by seeking to articulate the archetype of the future-ready teacher, provide greater learner agency and flexibility and develop interdisciplinary programmes, and reimagining, restructuring and streamlining teacher education programmes. Ultimately, the aim is to nurture teacher educators, teachers, students and the entire education ecosystem to be future-ready.

Keywords Rethinking teacher education · Future-ready teachers · Lifelong learning and growing · Future-readiness

1 Introduction

Teacher education at National Institute of Education (NIE), an autonomous institute of the Nanyang Technological University, has a relatively young history beginning in 1950 as the Teachers' Training College. Other papers in this special issue document the major initiatives and shifts that have taken place by leading scholars and deans in the respective eras

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that have built a very strong foundation for teacher education in Singapore upon which we can continually build and enhance the quality of teacher education for the future especially in the midst of harsh and challenging circumstances faced in the global education landscape.

While the world was coming to terms with the volatile, uncertain, complex and ambiguous (VUCA) reality that was mostly brought about by the Fourth Industrial Revolution (4IR, Schwab, 2016), it met an unexpected crisis that persists even till today. The COVID-19 pandemic further compounded and added to the disruptions that were brought by 4IR. Described as a “double whammy” (Khanna, 2021), both disruption and crisis revealed many fault lines locally and globally. These were most seen particularly in how our nations worldwide were unprepared and not as robust and resilient as we thought we had built them to be, and how our societies were not as equitable as we had imagined. COVID-19 and 4IR together have led to grave consequences in the economic, legal, ethical, social and education domains (Ryder, 2018). Notably, three publications by the World Economic Forum (WEF) show the depth of the ramifications, where the top-10 skills that were most desirable by employers for job applicants to possess have changed significantly (see Table 1). While the first two articles (also noted by Liu in this Special Issue) may still exhibit some sort of synergy in terms of skills desired, the third publication reports on skills that previously were unimagined.

The current disruption and crisis have prompted us to rethink and alter the paradigms with which we learn, work and even live (Low, in press). In the education domain, roles of teachers are drastically changing, where the teacher is not only a facilitator of learning but also a social, healthcare and well-being worker, a technology helpdesk and any other roles required by students in pandemic times and beyond (Tan, 2020). This fuelled the already urgent need to rethink teacher education to include values, competencies and skills that were not emphasised till this time. Competencies also needed to be redefined to be not just a mere acquisition of knowledge and skills but which “involves the mobilisation of knowledge, skills, attitudes and values to meet complex demands” (OECD, 2019b). Teachers now need to possess the right values and professional attitudes, have relevant competencies

Table 1 Top-10 Skills Preferred by Employers for 2015, 2020 and 2025 (WEF, 2016, 2018, 2020)

2016 Report on 2015 Skills	2018 Report on 2020 Skills	2020 Report on 2025 Skills
1. Complex problem-solving	1. Complex problem-solving	1. Analytical thinking and innovation
2. Coordinating with others	2. Critical thinking	2. Active learning and learning strategies
3. People management	3. Creativity	3. Complex problem-solving
4. Critical thinking	4. People management	4. Critical thinking and analysis
5. Negotiation	5. Coordinating with others	5. Creativity, originality and initiative
6. Quality control	6. Emotional intelligence	6. Leadership and social influence
7. Service orientation	7. Judgement and decision-making	7. Technology use, monitoring and control
8. Judgement and decision-making	8. Service orientation	8. Technology design and programming
9. Active listening	9. Negotiation	9. Resilience, stress tolerance and flexibility
10. Creativity	10. Cognitive flexibility	10. Reasoning, problem-solving and ideation

such as resilience and be equipped with relevant skills accompanied by both broad and specialised knowledge in order to develop learners holistically to be future-ready citizens and lifelong learners. As encouraged by the Ministry of Education (MOE), teachers infuse Citizenship and Character Education (CCE) components into their subject domain that they teach, effectively making them CCE teachers (Johannis & Hung, 2020). At the same time, they must role model critical and creative thinking while exemplifying connectedness and compassion towards their students (Johannis & Hung, 2020). The high demands placed on teachers in pandemic times and beyond call for an urgent rethinking of our traditional paradigms of teacher education.

Yet, amidst these disruptions, there are many hidden opportunities emerging out of this “double whammy” era. Then Singapore Minister for Education, Mr Lawrence Wong, encouraged educators to seize the opportunity to reshape the education system for the longer term and to accelerate the improvements in the way we teach and learn (Wong, 2020). It is through the seizing of opportunities that the nation will be able to survive and thrive beyond the current challenges and learn to adapt and be resilient for future challenges that lie ahead. Educators need to be at the forefront of this transformative endeavour. The importance of teachers’ roles within a country was underscored by the late former Prime Minister, Mr Lee Kuan Yew, who credited a country’s success to its citizens and in turn, the determining factor for a citizen’s are its teachers (Lee, 1966). He likened the role of teachers to be that of nation-builders whose roles are critical in ensuring the sustainability of the economic and social growth of the young nation, city-state which achieved independence only in 1965. His view of teachers being nation-builders has guided the vision and mission of teacher education in Singapore. It is at this crucial inflexion point in world history that we need to seize the chance to rethink our education system and to make it far more resilient, nimble and innovative. To do so, the change must begin with teachers and teacher education lies at the heart of this transformative change. This paper documents the efforts to rethink teacher education in the present pandemic times and beyond.

2 Anchors of teacher education

Building on the firm foundations laid by the four predecessor scholar deans appearing in this Special Issue, teacher education from 2018 continued the work of nurturing future-ready teachers for future-ready learners while being faced with the rapid changes in the educational landscape brought about by the 4IR and the curved ball thrown by the COVID-19 pandemic. With the foundations laid in terms of the universitisation and professionalisation of teacher education to the introduction of the Values, Skills and Knowledge (VSK) framework to the conceptualisation and implementation of the NIE Teacher Education Model for the 21st Century (TE²¹), teacher education needed on hang on to strong fundamentals which have been articulated using the analogy of three anchors, namely being values-driven, evidence-informed and future-focused.

2.1 First Anchor: values-driven

The first anchor is that of being values-centred. While values are pivotal to living well, they are also the “guiding principles that underpin what people believe to be important when making decisions in all areas of private and public life. They determine what people will prioritise in making a judgement, and what they will strive for in seeking improvement”

(Haste, 2018 as cited in OCED, 2019a, p. 4). It is therefore essential to purposefully imbue values into the teaching and learning experience as values are the “essential building blocks on which an education for a humanistic and international society must be built on” (Iyer, 2013, p. 18) and this is why a values-based education (VbE) is central to Singapore’s teacher education programmes. VbE “instils educational and cultural values among students [and pre-service teachers] and aims at achieving multi-faceted development of a human being namely intellectual, physical, spiritual, and ethical development” with a main purpose being “to prepare students to meet the challenges of living as well as academics” (p. 17).

Values being at the centre of Singapore’s teacher education programmes is an important anchor to cultivating future-ready teachers. The genesis of NIE’s values-centred teacher education programme started with the Attitudes, Skills and Knowledge (ASK) Model where values were considered part of attitudes (see Cheah in this Special Issue); before transitioning to the VSK Framework, with a clear emphasis on values as articulated in the papers in this volume; and it was during the leadership of Tan (in this Special Issue) when a three-pronged set of values was conceptualised as part of the Values³, Skills and Knowledge Model (V³SK, which was part of the TE²¹ Model). Essentially, the values paradigms articulated are learner-centredness, having a strong teacher Identity, and service to the profession and the community. From 2018 onwards, the values dimension of Singapore’s teacher education programmes was further enhanced to include three aspects: (1) a VbE Expanding Environment Framework (NIE, n.d. b) that has roots in the V³SK Model, (2) a new course entitled “CCE in the Singapore Context” that is based on the need for pre-service teachers to be able to enact MOE’s CCE 2021 syllabus and (3) the setting up of an NIE–MOE CCE Centre to be housed physically at the NIE, Singapore, by 2023.

2.1.1 NIE’s VbE expanding environment approach

The expanding environment approach to VbE (see Fig. 1) guides the mandatory VbE courses that aim to nurture positive values, social and relational skills and build the teacher personhood of our pre-service teachers (Low, in press). The essential tent of the expanding environment approach as represented schematically in the concentric circles model is how values-based education essentially begins with oneself, emanates to one’s community, to

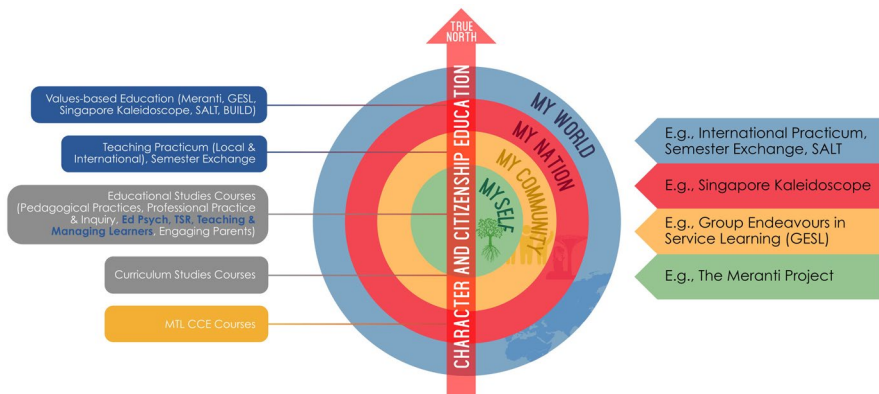


Fig. 1 NIE’s VbE expanding environment approach

the nation and finally globally to the world. This is represented in Fig. 1 and will be further elucidated below.

Accordingly to the concentric circles of the expanding environment, the courses offered also fall within each of these concentric circles of influence. Of significance is the SPINE of the expanding environment values education framework which is about “character and citizenship education” that helps our students to be good and moral citizens of our nation and ultimately, active, ethical and positive contributors to the world as global citizens. In each respective sphere of influence lies programmes and initiatives that help build values in our students.

Myself

At the undergraduate level, our pre-service teachers undergo a personal and professional development journey via the Meranti Project which is named after a strong and resilient tree symbolising their deep commitment to teaching, learning and building the future of our nation. At the postgraduate level, the Graduate Research and Academic Development Centre (GRAD) Centre fulfils the “SELF” part in holistic education in the sense that the student can improve their personal skills in communication and presentation, and other skills; for example, some are given opportunities to peer teach and serve as graduate teaching assistants.

My Community

All our pre-service teachers undergo a mandatory community involvement project known as the “Group Endeavours in Service Learning” (GESL) which helps them to work with a community partner of their choice and to serve that community through meaningful engagement. To date, more than 30,000 pre-service teachers have taken a Values-in-Action community involvement project that enables them to learn from service and are able to enact service learning programmes in their schools. This experiential learning is done through projects of their own choosing which allows them to be personally and passionately invested in the project. Third, for postgraduates, the NIE Graduate Student Club provides ample opportunities for both social and academic interaction through activities such as meeting new international students at the airport, graduate student conference, library tours, and so on.

My Nation

Our students take the “Singapore Kaleidoscope” (SgK) course which uses appreciative inquiry as a pedagogical approach for our students to appreciate the diversity of our culture and heritage. The Multiculturalism course “Appreciating and Valuing Diversity” also helps our students to appreciate Singapore as a multilingual, multi-racial and multi-cultural society.

My World

“My World” opens the world as a global classroom to pre-service teachers who through international practicum, semester exchange and the “Service And Leadership Training” (SALT) courses (for more details of each course, see Liu, 2021.)

2.1.2 CCE

As mentioned earlier, a central spine to the VbE Expanding Environment Approach is the “CCE in the Singapore Context” course, which acts as the pre-service teachers’ moral compass pointing to the true north aiming to cultivate in pre-service teachers the values, character, social–emotional well-being and citizenship dispositions (MOE, 2020) that they require not only to teach their students but also to serve as role models. It is based on helping our pre-service teachers to enact the MOE’s CCE 2021 syllabus (MOE, 2020) which aims to provide an integrated approach to the holistic development of students. It notes how the individual (which includes the family, friends and others), the school and the school–family–community partnerships are integral to a student’s overall growth of a good character, resilience and social–emotional well-being, future-readiness and active citizenship. The CCE 2021 curriculum includes National Education, Sexuality Education, Mental Health, Education and Career Guidance, Cyber Wellness and Family Education.

As CCE forms the spine in the VbE Expanding Environment Approach, the course links each expanding layer, which allow pre-service teachers to see the connections between them, and guides the development of values within each pre-service teacher. Wrapped around the spine are the various service learning courses listed as well as educational studies courses, curriculum studies courses and mother tongue language courses, which reinforce the CCE efforts. The next step in these efforts is the joint effort between MOE and NIE on the setting up of a CCE Centre to be launched in 2023.

2.2 Second Anchor: evidence-informed

Evidence forms a vital knowledge base that provides sound basis for action (Georgiou et al., 2020; Ferguson, 2021) and strengthens one’s position in holding fast to a belief as true (Biesta, 2010 as cited in Ferguson, 2021). While decisions on teaching or programme design are not solely based on evidence, it is only with research evidence that helps one to gain an objective perspective that is steeped in research rigour and acts as a corroborator to one’s professional judgement and in situ knowledge. Scholars (Darling-Hammond, 2016; Georgiou et al., 2020; Low et al., 2012) are in agreement that evidence-based practices are important in the field of teacher education, with research being critical to the professional learning of teachers and teacher educators, and the development of teacher education programmes, practice and policies alike.

Singapore’s teacher education model has always been informed by international research and scholarly evidence provided by worldwide colleagues and contextualised to suit Singapore’s education landscape. Of note is how evidence-informed programmes are never static and are intended for continual development. For example, the evolution from the ASK model to the VbE Expanding Environment Approach exemplifies how as new evidence is brought to light, they are contextualised and implemented into programmes, eventually leading to new research questions. The VbE approach is therefore a work in progress and will continue this iterative stance of research informing and enhancing teacher programmes that will generate new research questions to constantly improve the quality and relevance of our programmes.

A good example of our evidence-based approach is the suite of research projects that have built an evidence base for the design and delivery of teacher education and development from 2009 to the present known as “Building an Evidence-base for Singapore Teachers” (BEST). Through the projects, it was found that (1) there was a need for the

theory–practice to be strengthened, (2) more opportunities for authentic learning was needed, (3) contract teaching experiences (where prospective teachers are sent to schools before enrolling into an initial teacher preparation programme to evaluate if teaching is suitable for them and for MOE and schools to evaluate if the teaching candidate is suitable for teaching) made a difference on pre-service teacher learning, (4) more support for beginning teachers was needed, (5) structured, not organic, mentoring programmes were important for beginning teachers, (6) teachers at different career stages needed to have different forms of professional development to keep them committed to the profession and (7) that while the theory–practice nexus was greatly enhanced in a recent programme enhancement for the Postgraduate Diploma in Education (PGDE) Programmes, clear areas of enhancement were essential especially in the areas of working with parents, for example.

Collectively, these findings have important impact on MOE’s policies on how they recruited and employed teaching candidates by ensuring that contract teaching and the enhanced school experience were made compulsory to all PGDE pre-service teachers, as well as mandating that more schools should assign protected time for mentoring and lesson observations in order to support beginning teachers. They further led to the enhancements of the Teaching Scholars Programme, the Enhanced Bachelor of Arts/Bachelor of Science (Education) Programme, the Enhanced 16-month Post-Graduate Diploma in Education (PGDE) Programme and the Teacher Leaders Programmes.

Equally as important in using evidence to inform teacher education programmes is the generation and communication of such research evidence, which must be easily accessible, relevant and applicable (Ferguson, 2021). Much of this is conducted by the Office of Education Research at NIE as well as collaborations and committees such as the Teacher Professionalism and Learning–Teacher Education (TPAL–TE) Steering Committee that are committed to translating research into impactful programme and policy designs, and communicating these efforts to bolster the body of teacher education knowledge. Efforts include ideation sessions that bring together MOE, Academy of Singapore Teachers and NIE partners to generate more research areas of interest; webinar series that engage teacher educators to translate TPAL research into teacher education programmes; and published collaterals that are tailored for an audience comprising teachers, policymakers and local and international scholars. Additionally, projects funded at a Tier 2 level and above have to include a briefing to MOE stakeholders about how findings can be translated for the enhancement of policy and practice.

2.3 Third Anchor: future-focused

The third anchor of future-focusedness is of extreme importance to present state that education finds itself in, as is the case for all other societal sectors, particularly when considering the ramifications of 4IR and COVID-19, and the recent terrors of war in Ukraine. While disruptions may have more direct consequences, the world found the pandemic to be more than just a medical issue, having greatly affected politics, economies and livelihoods. Together, these disruptions and crises precipitated urgent drivers of change that revealed how future-focused endeavours must be complemented with a future-ready mindset. This stands in stark contrast to the past of “how”, “what” and “how” education was carried out. Where specialisation and depth of knowledge were prized in both education and the workforce, the future requires interdisciplinarity, flexibility and lifelong learning instead. As such, all educators, whether they be pre-school teachers or university professors, will need to meet these requirements and be future-focused and future-ready role models to the

students they teach, having both a depth and breadth of knowledge while being agile to any change that may come and be solvers of “wicked problems” that are ill-defined, mutating and transcend disciplinary boundaries and established bodies of knowledge (Tan, 2020).

As an illustration, when faced with COVID-19 for the first time in Singapore, teacher education programmes that are framed by the 5Ps of future-readiness (i.e. Rigorous Programmes, Innovative Pedagogies, Multiple Perspectives, Professional Practice and Teacher Professionalism) responded to deal with the changing context during the Circuit Breaker period that lasted from 7 April to 1 June 2020, which mainly consisted of the move into the virtual platforms and the adjustments to assessments (for more details, see Low, in press). First, all on-campus teacher education classes and laboratory sessions, local clinical practice stints and international practicum for pre-service teachers who had yet to embark to partnering international universities went 100% virtual through videoconferencing platforms. This also was the case for pre-service teachers of the prestigious Teaching Scholars Programme who were attached to partnering organisations during their “Building University Interns for Leadership Development Programme” (BUILD) elective, which “provides a structured process for the students to derive optimal experiences and benefits from learning and serving with relevant institutions, organisations, agencies and companies so as to develop them in their future roles as educational leaders” (Office of Teacher Education, 2017).

While these may seem to be a setback, opportunities could be found in the “virtualisation” of these teacher education programme components. For example, pre-service teachers who were posted to schools for the high stakes final practicum only had 5.5 weeks of face-to-face clinical practice and had to move to virtual home-based learning (HBL) for the next 4.5 weeks with support from their school cooperating teachers, while struggling to adjust to HBL had to serve as their mentors and supervisors. This mixed-modality approach proved to be advantageous since these pre-service teachers would be ready for any other similar events in the future where HBL needs to be enacted to prevent disruptions to learning in the event of future school closures. It was through the circuit breaker that education stakeholders in Singapore recognised that enacting a virtual lesson and being assessed on it is going to be an essential competency of a future-ready teacher. While pushing for more virtual and blended learning has been aspirational for many education systems, the pandemic with global school closures made it essential for all to pivot overnight into the virtual teaching and learning space and it helped turn a dream into a reality of envisaging what a collaborative and virtually open global classroom of the future might look like.

Second, while there has been a great deal of discussion on reimagining assessments to little success, the curbs on physical movement led to many adjustment opportunities. Traditional pen-and-paper final assessments were no longer the “sacred cows” we needed to evaluate our learners by. All final written examinations were cancelled for non-final year pre-service teachers and final assessment scores re-calibrated based on previously completed and any to-be-submitted non-examination assessments. Those on clinical practice also had their assessment criteria adjusted, for example, lessening the number of mandatory observations. On hindsight, many found the experience insightful and enriching as they were the unique batch of pre-service teachers who experienced a mixed-modality final practicum with both face-to-face and HBL clinical practice.

Other aspects of the changing local and global education landscape relate to the constantly changing operating context which include higher publication expectations and aspirations, ageing population and falling cohort sizes, economic weight shifts to Asia, educational inequality and social mobility, a more diverse society with citizens who have more diverse needs (e.g. special educational needs). At the same time, teacher education

in Singapore must be cognisant of the education vision of the parent university where NIE belongs, the Nanyang Technological University (NTU), and its NTU 2025 vision, as well as MOE's Learn for Life (LfL) initiative. NTU 2025 seeks to achieve uniformed excellence in all its activities; to grow its national, regional and global impact; and to deepen its disciplinary strengths while nurturing greater interdisciplinary collaborations (NTU, 2022), while the LfL initiative positions lifelong learning as a main focus for all citizens, being "a value, an attitude and a skill that our students need to possess, and it is fundamental in ensuring that education remains an uplifting force in society" (Ong, 2018a, para. 17). As a principal consideration, it will help students to be "resilient, adaptable and global in their outlook", who "must leave the education system still feeling curious and eager to learn, for the rest of their lives" (Ong, 2018, para. 22). On both fronts, teacher education also has to focus on a future where its programmes have both a local and global impact, have depth and breadth and exhibit interdisciplinary and flexible modalities of learning in order for teachers to be future-ready.

To achieve such a goal, teacher education needs to be reimagined to be prepared for the future. This reimagining can take several different dimensions. First, there is an urgent need to articulate the Archetype of a Future-ready Teacher. We are currently in the process of enhancing our V³SK Model to ensure that pre-service teachers are readied for any eventual or unforeseen future through an Enhanced V³SK Model that guides the designs of all pre-service programmes and courses.

Second, complementing this must be a shift towards greater learner agency and flexibility while making programmes more interdisciplinary. Rather than keeping to subject silos, faculty from different disciplines need to together to provide pre-service teachers a cohesive learning experience through the articulation of a common core for pre-service education. Through this, pre-service teachers will be enabled to make stronger and deeper connections between courses and programmes, helping them to not only be open to diverse perspectives but also providing them with a richer and more meaningful learning experience. If our teachers become system thinkers who think in a more integrated way and see the interconnections between harmonious and contradictory perspectives (OECD, n.d.), they will find greater purpose in what they do from pre-service and career-long.

Third, restructuring and streamlining teacher education includes the need to focus less on frontloading pre-service teachers with knowledge and skills as these can be gained and developed throughout one's career, and encouraging them to develop a lifelong learning mindset where they are continually developing throughout their career stages. Professional development throughout an individual's career has been a focus of the Singapore government since 2015 through the SkillsFuture Singapore initiative and since 2018 through MOE's LfL movement. "Teachers should, on the one hand, experience systematic support in their own LLL [lifelong learning] paths" (Fensterwald et al., 2013, p. 144), and this is the case in Singapore where teachers are supported by the SkillsFuture for Educators (SFEd) initiative and school-supported professional development structures so that "they should also be prepared to promote LLL competences among their pupils" (p. 144). At this point, there are six SFEd priority areas—CCE, Special Educational Needs, Inquiry-based Learning, Differentiated Instruction, Assessment Literacy and e-Pedagogy—though these will likely change as new needs arise. Four levels of practice (LOPs) are articulated to help teachers map their professional learning milestones in these six priority areas, viz. Emergent, Proficient, Accomplished and Leading levels. When graduating from teacher education programmes, beginning teachers are expected to be at the Emergent level and as they engage in professional

development while in-service, they can move on to become Proficient, where the teacher broadens and deepens an area(s) to the Accomplished level, where the teacher is skilful and adaptive in an area(s), and finally to a Leading level of practice, where the teacher is able to lead others effectively in an area(s). These latter three levels require teachers to be committed to career-long professional development and to be supported with appropriate courses and programmes along their career-long learning continuum.

3 Conclusion

The disruptions brought about by the 4IR and crisis brought about by the pandemic have changed the landscape of teaching, learning, working and living overnight and forever. In short, these crises and disruptions have upset our equilibrium. To be prepared for an uncertain future ahead, teachers need to possess a mindset to look for the opportunities that exist within the challenges faced and to seize them wisely. Amidst a future that is uncertain, unpredictable and unknown, teacher education must continuously adapt in order to prepare learners for an uncertain future ahead. Teacher education in Singapore formulated an overarching philosophy to include lifelong, lifewise, lifedeeep and lifewise learning, aptly called the “4” Life Framework (NIE, n.d. a). Each “Life” looks to developing teachers in specific ways to provide holistic development (Low, in press). Lifelong learning refers to the multiple pathways across the continuum of teachers’ career-long growth and development (pre-service, beginning to professional teacher); lifewise learning refers to building professional ethos and values via strengthening values-based components, strong personalised mentorship; lifedeeep learning refers to the deepening of professional expertise by incorporating the Professional Practice and Inquiry course and the Singapore Teaching Practice into all programmes (see Liu, 2021); and lifewise learning refers to the multiple perspectives that are cultivated through global and local, digital and multimodal literacies.

In sum, the Teacher education for “4” Life Framework seeks to develop teachers into future-ready teachers for future-ready learners who will exhibit the following attributes that can help them to be prepared for an uncertain future (Low, in press):

- *Creators of Knowledge, not merely consumers.* Future-ready teachers should be active knowledge creators of content and pedagogy, adding new value to the professional teaching fraternity.
- *Facilitators of Learning, not merely transmitters.* Future-ready teachers should be facilitators of learning. In the new LfL education phase, teachers must help their students embrace lifelong learning.
- *Architects of Learning Environments, not merely implementers.* Future-ready teachers should be active agents of all aspects of learning, creating physical and non-physical environments that best suit learners.
- *Shapers of Characters, not merely participants.* Future-ready teachers should possess values so that they may cultivate good moral values and develop character in their learners.
- *Leaders of Educational Change, not merely followers.* Future-ready teachers should be able to lead educational change from classrooms to schools to the national education

system, being in a special position to interact with learners daily and feedback to policymakers and teacher educators.

The role of all educators in pandemic times and beyond is to keep learning going no matter when, no matter what and no matter how. This requires deep commitment on the part of educators to propel themselves to constantly reimagine teacher education in order to help their learners to not just survive but thrive in an unpredictable and complex future.

Declarations

Conflict of interest Not applicable.

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