Teacher Education in post-pandemic times: The Singaporean Experience

Prof Low Ee Ling
Dean, Teacher Education
3 May 2021
Worldwide Disruptions
Fourth Industrial Revolution & Covid-19 Pandemic

Note: Numbers are accurate as of time of presentation
Worldwide Disruptions
What have they revealed about our education systems?

UNPREPARED
for the multiple disruptions

NOT
robust and resilient enough

INEQUALITY
exposed

Sources:
“In the midst of crisis, we are seizing opportunities to reshape our education system for the longer term, and to accelerate improvements in the way we teach and learn.”

Mr Lawrence Wong
Minister for Education
MOE Press Release
25 August 2020
Worldwide Disruptions
Seizing opportunities amid disruptions

1. Strengthen foundations and build upon them

2. Seize the chance to rethink systems and make them resilient, nimble and innovative

3. Rethinking must be contextual
### Top-10 Skills Employers Want (WEF, 2016, 2018, 2020)

<table>
<thead>
<tr>
<th>2015</th>
<th>2020</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. complex problem-solving</td>
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<td>1. analytical thinking and innovation</td>
</tr>
<tr>
<td>2. coordinating with others</td>
<td>2. critical thinking</td>
<td>2. active learning and learning strategies</td>
</tr>
<tr>
<td>3. people management</td>
<td>3. creativity</td>
<td>3. complex problem-solving</td>
</tr>
<tr>
<td>4. critical thinking</td>
<td>4. people management</td>
<td>4. critical thinking and analysis</td>
</tr>
<tr>
<td>5. negotiation</td>
<td>5. coordinating with others</td>
<td>5. creativity, originality and initiative</td>
</tr>
<tr>
<td>6. quality control</td>
<td>6. emotional intelligence</td>
<td>6. leadership and social influence</td>
</tr>
<tr>
<td>7. service orientation</td>
<td>7. judgment and decision-making</td>
<td>7. technology use, monitoring and control</td>
</tr>
<tr>
<td>8. judgment and decision-making</td>
<td>8. service orientation</td>
<td>8. technology design and programming</td>
</tr>
<tr>
<td>9. active listening</td>
<td>9. negotiation</td>
<td>9. resilience, stress tolerance and flexibility</td>
</tr>
<tr>
<td>10. creativity</td>
<td>10. cognitive flexibility</td>
<td>10. reasoning, problem-solving and ideation</td>
</tr>
</tbody>
</table>

### Source:
- [Rethinking Education Paradigms for the Future](http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf)
“The concept of competency implies more than just the acquisition of knowledge and skills; it involves the mobilisation of knowledge, skills, attitudes and values to meet complex demands. Future-ready students will need both broad and specialised knowledge.”

Rethinking Education Paradigms for the Future
OECD Education 2030 Framework: Transformative Competencies (OECD, 2019)

Transformative Competency 1: Creating New Value
- To achieve stronger, more inclusive and more sustainable development
- Creatively think and develop innovations to offer vital solutions to economic, social and cultural dilemmas

Transformative Competency 2: Reconciling Tensions and Dilemmas
- Need system thinkers who think and act
  - in a more integrated way
  - taking into account the interconnections and interrelations between contradictory or incompatible ideas, logics and positions
  - from both short- and long-term perspectives

Transformative Competency 3: Taking Responsibility
- Possesses a sense of responsibility, moral and intellectual maturity
- Accepting accountability for one’s actions
- Able to reflect and evaluate the consequence of the action

Rethinking Education Paradigms for the Future

What does “crisis” education look like? (Kidman & Chang, 2020)

1. 21st-century competencies
2. Education in times of crisis
3. Misinformation is an individual’s failure
4. Social learning is needed


National Institute of Education, Nanyang Technological University, Singapore
Rethinking Education Paradigms for the Future
3 ways the coronavirus pandemic could reshape education (Tam & El-Azar, 2020)

Source:
Rethinking Education Paradigms for the Future
7 Equity Considerations for Schools (Ali & Herrera, 2020)

1. Provide technology tools and Internet capabilities to students and families in need
2. Provide other forms of materials (e.g., printed) to keep learning going no matter the circumstance
3. Provide continued learning and digital support to children with special educational needs
4. Ensure wraparound services that are provided by partners continue
5. Ensure teachers are able to adopt appropriate digital teaching and learning practices
6. Monitor the mental and emotional health of students and teachers
7. Interact with parents and manage their expectations about distance learning

Rethinking Education Paradigms for the Future
Four enablers transforming teachers into agents of system change (OER, n.d.)

Teachers understand and assume their roles as professionals and experts in pedagogical content knowledge

Teachers develop a capacity to design for positive outcomes in teaching and learning

Teachers share and collaborate with their peers in an active learning culture in schools

Teachers design and make use of resources provided within a strong curriculum framework

Source: https://www.nie.edu.sg/docs/default-source/oer/oer_rcr_final_for_web_v2.pdf?sfvrsn=0

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Rethinking Education Paradigms for the Future
Educators get new roles (Tan, 2020)


Source: Healthcare worker
Social Worker
IT Support
Other necessary roles

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Rethinking Education Paradigms for the Future
Weathering Educational Changes (Johannis & Hung, 2020)

5Cs of schooling

- Character and Citizenship Education
- Creative Thinking
- Critical thinking
- Compassion
- Connectedness

Source: https://singteach.nie.edu.sg/issue75-weathering-educational-changes
Rethinking Education Paradigms for the Future
Weathering Educational Changes (Johannis & Hung, 2020)

5Cs of schooling

Every teacher is a CCE teacher, and every teacher role models and teaches critical and creative thinking. Likewise, the teacher exemplifies connectedness and compassion towards all students.

Source: https://singteach.nie.edu.sg/issue75-weathering-educational-changes
Rethinking Education Paradigms for the Future
Toward Universal Quality Education (Bhula & Floretta, 2020)

1. **Support caregivers**
at home to help children learn
while schools are closed

2. As schools reopen, educators should use
low-stakes assessments
to **identify**
learning gaps

3. Tailor children's instruction
to help them **master**
foundational skills
once learning gaps are identified

Source: [https://ssir.org/articles/entry/a_better_education_for_all_during_and_after_the_covid_19_pandemic#bio-footer](https://ssir.org/articles/entry/a_better_education_for_all_during_and_after_the_covid_19_pandemic#bio-footer)
Rethinking Education Paradigms for the Future
Reimagining the future of skills: What do young people think? (Fore & Moritz, 2020)

1. Modern skills, not old fashioned curricula
2. Soft skills are key
3. Digital connectivity and digital learning
4. Reach vulnerable communities

Source: https://www.weforum.org/agenda/2020/07/reimagining-future-skills-what-we-learned-young-people?
Rethinking Education Paradigms for the Future
Preparing educators for the time of COVID … and beyond (Darling-Hammond & Hyler, 2021)

MORE COGNITIVE AND METACOGNITIVE STRATEGIES FOCUSED ON DEEPER LEARNING

1. Invest in high-quality educator preparation
2. Transform educator learning opportunities to match current needs
3. Support mentoring and new teacher roles
4. Create collaboration time

Source: https://www.tandfonline.com/doi/full/10.1080/02619768.2020.1816961
“For finally, just as a country is as good as its citizens, so its citizens are, really, only as good as their teachers.”

Mr Lee Kuan Yew
Former Prime Minister
Opening Speech at the Seminar on “Education and Nation-building”
27 December 1966
Three Anchors of Teacher Education

VALUES-DRIVEN  EVIDENCE-INFORMED  FUTURE-FOCUSED
VALUES-DRIVEN

Setting up of CCE Centre

New CCE course

Expanding Environment Framework

V³SK

https://repository.nie.edu.sg/bitstream/10497/15504/1/TE21%20online%20version%20updated.pdf
The Singapore Vision for TE
NIE’s Learning “4” Life

Multiple pathways across the continuum of teachers’ career-long growth and development (pre-service, beginning to professional teacher)

Building professional ethos and values via strengthening values-based components, strong personalised mentorship

Deepening of professional expertise (PPI, STP for all programmes)

Multiple perspectives, global and local, digital and multimodal literacies
The Singapore Vision for TE
NIE’s Values-based Education: Expanding Environment Framework

- True North
  - MYSELF
    - E.g., The Meranti Project
  - MY COMMUNITY
    - E.g., Group Endeavours in Service Learning (GESL)
  - MY NATION
    - E.g., Singapore Kaleidoscope
  - MY WORLD
    - E.g., International Practicum, Semester Exchange, SALT

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Strengthening of CCE
CCE coverage within ITP

Main Spine: New CCE Course

Values-based Education (Meranti, GESL, SgK)

Teaching Practicum

Educational Studies Courses (Pedagogical Principles, Professional Practice & Inquiry, Ed Psych, TSR, Teaching & Managing Learners, Engaging Parents)

Curriculum Studies Courses

MTL CCE Courses

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EVIDENCE-INFORMED
Suite of research projects on Building an Evidence base for Teacher Education has been led by Dean, TE since 2009 to provide evidence-informed design and delivery of our programmes.
**Evidence-informed Initial Teacher Preparation**

Policy and Teacher Education Programmes

Suite of 7 studies from 2009–2022 focusing on Teacher Education, Initial Teacher Preparation and Teacher Development

**Findings:**

- Need to strengthen Theory–Practice Nexus
- More opportunities for authentic learning for pre-service TE
- Contract teaching experiences make a difference on pre-service teacher learning
- More support for beginning teachers needed
- Structured mentoring programmes are important for Beginning Teachers
- Status update: Studying impact of 16-month PGDE programmes

<table>
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<th>Impact on TE Programmes</th>
<th>Impact on Policy</th>
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<td>- Findings informed the enhancements of the Teaching Scholars Programmes (Enhanced BA/BSc (Ed)) and Enhanced 16-month PGDE Programme</td>
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<td>- Teacher Leaders Programme to help mentor junior and beginning teachers</td>
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<td>- Compulsory teaching stint (via contract teaching or enhanced school experience) is compulsory for PGDE students</td>
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<td>- More schools assign protected time for mentoring and lesson observations to support Beginning Teachers</td>
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Evidence-informed Initial Teacher Preparation
Translating Research into Practice

Teacher Professionalism and Learning (TPAL)–Teacher Education (TE) Steering Committee

- NIE Research–Practice Nexus on TPAL from NIE research in 2021
- TPAL–TE Ideation Session
  - Brought together MOE, AST and NIE partners
- NIE Perspectives Webinar Series
  - Aimed at working with NIE faculty to translate TPAL research into ITP programmes
- Accepted co-edited book on TE–TPAL by Springer
  - Book title: Teacher Professional Learning for Pedagogical Leaders
  - Co-Editors: Lee Shu-shing, Chua Bee Leng, Alexius Chia, Monica Ong, Pamela Costes-onishi
FUTURE-FOCUSED
Pandemic is more than a medical issue: it has ramifications on our society, politics, economy and local and global environment

<table>
<thead>
<tr>
<th>The past:</th>
<th>Specialisation and depth of knowledge</th>
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<tbody>
<tr>
<td>The future:</td>
<td>Interdisciplinarity, flexibility, lifelong learning</td>
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<tr>
<td>Type of faculty we need:</td>
<td>depth and breadth of knowledge, agile, solvers of “wicked problems” that are ill-defined, mutating and transcend disciplinary boundaries and established bodies of knowledge</td>
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Changing Education Landscape
Key Drivers of Education Change

Changing Operating Context
Rapid technological change and disruption, including the pandemic
Higher public expectations and aspirations
Ageing population and falling cohort sizes
Economic weight shifts to Asia
Inequality and mobility a growing concern
More diverse society, with more diverse needs (e.g., SEN)

NTU Education 2025
MOE “Learn for Life: Remaking Pathways” initiative
Other opportunities and challenges

What does it mean for TE?

Adapted from: NSR 2020 report
The Singapore Approach for TE
Future-ready Teachers for Future-ready Learners

- Strong theory–practice nexus
- Deep understanding of learners & learning
- Strong content & pedagogical mastery
- Inquiry & research skills
- Multidisciplinary focus

- Inquiry-based
- Authentic & experiential
- Self-directed
- Technology-enhanced

FUTURE-READY TEACHERS

- Professional Practice & Inquiry (Digital Portfolio)
  - Clinical practice
  - Pedagogical Practice
  - Singapore Teaching Practice

- Multiple Perspectives

- Teacher Professionalism

- Rigorous Programmes

- Innovative Pedagogies

- Character & Citizenship Education
  - Group Endeavours in Service Learning (GESL)
  - Building University Interns for Leadership Development (BUILD)
  - Service & Leadership Training (SALT)
  - International Practicum (IP)
  - Semester Exchange

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The Singapore Approach for TE
Responding to Covid-19

1. 100% online and virtual platforms were designed for the Circuit Breaker period
2. Revamping teaching practicum to ensure the enactment of virtual lessons
3. Mixed Modality Practicum (55% of face-to-face & 45% HBL)
4. Use of virtual platforms to engage partner organisations for service learning
5. Virtual International Exchanges
6. Envisage collaborative and virtually open classroom of the future
The Singapore Approach for TE
Reimagining Teacher Education

Articulate the archetype of the future-ready teacher

Greater learner agency and flexibility

Interdisciplinary programmes

Reimagining, restructuring, streamlining teacher education programmes?
LEARN FOR LIFE Initiative

01 BASIC PURPOSE: Ensure Education Is an Uplifting Force
The ground represents our mission, which is making sure every child has opportunities. No child is left behind because of their family background.

02 HOLD ONTO OUR ROOTS: Learn Languages for Life
The roots represent the cornerstone of our education: bilingualism and learning languages for life.

03 STRUCTURAL CHANGE: Ignite Joy of Learning
The first structural change is to nurture joy of learning, by making changes to the PSLE scoring system and reducing exam load.

04 STRUCTURAL CHANGE: One Secondary Education, Many Pathways
The second structural change is to phase out streaming and replace it with full Subject-based Banding.

05 STAY FUTURE-READY: Refresh Our Curriculum
The leaves and fruits represent what we are populating the classroom with, which is refreshing our curriculum to prepare our students to be future-ready.

06 SUPPORT OUR EDUCATORS: SkillsFuture for Educators
The sun represents what is critical for the system to work well: our teachers. Through SFEd, we are upgrading their skills and professionalism.

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For the Learn for Life Initiative, visit
“The role of all educators in pandemic times is to keep learning going no matter when, no matter what and no matter how.”

Low Ee Ling, 2020
We Salute You | Happy Teachers' Day 2020

[YouTube video]
https://www.youtube.com/watch?v=oBmKketHPJA&feature=youtu.be
Thank you for listening