Teacher Professionalism, Development & Learning

Dr. TAN Liang See
Assistant Dean (School Partnerships), OER
Outline of the Presentation

• History of Singapore
• Overview of Singapore school system
• Teacher and teaching
  – Teacher recruitment
  – Teacher education- Pre-service
  – Professional learning and development
• Challenges
  – Lessons learned in research about teacher and teaching
  – Gaps
  – Moving forward
The Development of Singapore

Geographical Location of Singapore
Student Enrolment & Number of Teacher

185 Primary school
150 Secondary school
16 Mixed level
14 JC/CI

365 schools

3 high-stakes exams
Primary School Leaving Exams (PSLE)
GCE “O” Level Exam
GCE “A” Level Exam/IB

446,582 Students
33,378 Teachers
Multiple pathways for multiple peaks of excellence
ONG Pang-Boon (1968) Teacher Education Conference

“Teacher as a middleman handling down a static body of knowledge” to that of “an inspirer who could instill in his pupils an unquenchable thirst for knowledge and expose them to the art and technique of acquiring new knowledge”.

“the greatest challenge in teacher education today is to make our teachers understand and play their new role in education which, besides their commitments to knowledge, has a great deal to do with the all-round development of the individual including his responsibility in citizenship and leadership”.
A monthly salary while undergoing NIE training.

Tuition fee at NIE will be fully borne by MOE.

Upon successful completion of NIE training, teachers will be deployed to teach in schools to serve a 3-year teaching bond.

The gross starting salaries for GEO officers:

- **DipEd**: $1,600 - $2,100
- **PGDE**: $3,100 - $3,500

**CONNECT Plan**

recognises dedicated teachers for their commitment to the cause of education. Trained teachers under Permanent Establishment will receive payouts at various defined points in their career.
Teacher Education

National Institute of Education (NIE)

Institute of Education (IE)

Teacher Training College (TTC)

Dip Ed. PGDE (Pri/ Sec)

Higher Degree (MSc; MA- by coursework; by research Ph.D., Ed.D.)

Degree Programmes (BA, BSc)

Transformer teaching INSPIRING LEARNING
Pre-service
Degree- Teaching Scholar Programme
Educational Research

Dip Ed.
PGDE (Primary)
PGDE (Secondary)

Professional Development
Higher Degree programmes
Standalone courses
Customised career track courses: MLS, LEP, TLP
Historical Context

Centralised coordination (1965-1972)

Centralised innovation (1973-1981)

Decentralised innovations (1982-1990)

Leadership for innovations (after 1990)

Sim & Yip (1994)

(Tan, 2018)
The History of Teacher Professional Development

- **1974-1976**: Committee on In-Service Courses (CISC) was formed under the chairmanship of then Assistant Director for Planning.
- **1977**: The rolling plan concept as the in-service strategy where MOE closely followed up on high priority courses. The rolling plan included the annual review of the key initiatives of MOE. The In-service Course Prospectus provided specific details of courses offered.
- **1979**: Establish the Staff and Training Branch (STB) to provide in-service courses.
- **1996**: CDIS and the Curriculum Planning Division became Curriculum Planning and Development Division (CPDD) and Educational Technology Division (ETD). Training and Development Division (TDD) drove and provided in-service training, and initiate new schemes to promote the spirit of continuous learning among staff.
- **1997**: The Teachers’ Network complemented the work of TDD, to facilitate professional development and teacher-led learning.
- **2010**: Established the Academy of Singapore Teachers.
Career pathways and advancement in Singapore

MOE (2001)

Teaching Track
- Principal Master Teacher
  - Master Teacher
  - Lead Teacher
  - Senior Teacher

Leadership Track
- Director-General of Education
  - Divisional Director
  - Director
  - Cluster Superintendent
  - Principal
  - Vice Principal
  - Head of Department
  - Subject Head/Level Head

Senior Specialist Track
- Chief Specialist
- Principal Specialist
- Lead Specialist
- Senior Specialist 2
- Senior Specialist 1

CLASSROOM TEACHER
Forging Teacher Leadership

Approx. 100 Master Teachers and Principal Master Teachers
The Learning Continuum

Philosophy

Principles

Practice

Confident Person
Self-directed Learner
Concerned Citizen
Active Contributor

The competent professional
The ethical educator
The community builder
The collaborative learner
The transformational leader
Teacher Learning & Professional Development

Situated Learning/ Job-embedded Professional Learning

Pre-Service
- Educational research
- 10-hour coursework
- Attachment with educational researchers

Higher Degree
- By research
- By coursework-critical inquiry

In-service
- Professional learning community (PLC)
- Networked learning community (NLC)

Reflective Practice
Expanded Teacher Role

• Strong subject knowledge and Pedagogical Content Knowledge
• Leading pedagogical and curriculum change/ innovation (curriculum/ pedagogical leadership)
• Mentoring, coaching and facilitation skills
• Knowing the latest in the education research that helps fellow teachers to do the work better
• Having a community working towards a common issue/ problem they encounter (reflective practitioner)
Aspirations for Singapore teaching force by focusing on 
teacher dispositions
CHALLENGES IN TEACHER PROFESSIONAL DEVELOPMENT
What are our concerns about the practice?

Teacher quality is increasingly placed as the key to bring about educational change that is suited for the future. Policymakers and researchers have vested interests in developing greater teacher professionalism.

Teacher professionalism placed values on practical knowhow, conceptual understandings of education, principles of teaching and learning, and more importantly the ability to interpret and form critical judgments on existing knowledge and its relevance to their particular situation. This has become an unprecedented call for thoughtful pedagogical practice to prepare future-ready students. Research suggests that professional judgment comprises a complementary and mutually-enriching relationship between different aspects of professional knowledge and practice. Besides good content knowledge, three aspects of teaching: (1) situated understanding, (2) technical knowledge and (3) critical reflection, are the keystones of teaching. Hence, there is a need to promote pedagogical inquiry. Pedagogy is about empowering teachers and schools to become agents of inquiry (and innovation) in the instructional core. While teachers are the agents of change, the drivers of change are on pedagogy. As such, teacher education and professional learning are being organised within communities such as the professional learning communities and networked learning communities. These communities are positioned as the mechanisms for Singapore’s self-improving education system. This presentation highlights how Singapore teachers learn and how teacher learning improves education through pedagogical inquiry. The presenter will discuss some key tenets of teacher learning in the Singapore context and draw lessons learned from the state of research in teacher learning and professional development in Singapore.
Why do we Teach?

Why teachers have to be future-ready?
How to teach?

What is the problem in our practice?
Study 1: Schools and Innovation Cultures - 5 Sociocultural Leverages that Foster Adaptive Culture for Change

Embracing possibility thinking

Conceptualising a curriculum vision

Using metalanguage

Activating teachers’ agentic behaviours

Building a culture for risk-taking & change

Study 1: Teacher Learning & Curriculum Innovation

CI provides deliberative spaces that allow for teacher dialogue and experimentation.

CI allows the re-thinking of curriculum as a process.

Teacher learning

CI allows for the development of a fluid curriculum.
Study 1: Conditions that enhance Teacher Learning and Professional Growth

**Curriculum Vision**

- Evidence of effectiveness
- Professional and personal relevance of CI to teacher
- Opportunities for transferability and sustainability

**Greater professionalism**

- Better classroom practices
- Critical and reflexive practitioners
- Professional sharing
- Quality instructional programmes
Beginning  Developing  Embedding  Leading

Adaptive Expertise

Partnerships
Professional Development
Collaborative Capital

Self-improving system: Learning to learn to improve practice, student outcomes and create a national culture of inquiring schools, e.g. PLC, NLC
Study 2: Teacher Leadership & Networked Learning Community

How does professional development, in particular the Teacher Leader programme, promote teacher learning to nurture teacher leadership and engender an emergent teacher-led culture?
Iterative Process of Learning, Agency and Capacity

Four Approaches of Teacher Learning: Retooling; Remodeling; Revitalizing; & Reimagining (Sachs, 2011)

- Learning spaces
- Expert-facilitated
- Building capacity

2-day workshop - Retooling

Classroom trial - Remodeling
- Exploration & experimentation
- Study student engagement - problematisation

Teacher Leader sharing - Revitalizing
- Pedagogical insights at sharing
- Making explicit connections to share best pedagogy

Cluster-sharing – Re-imagining
- Allows legitimisation
- Provides multiple modes of interpretation
- Developing intra and inter-networks
Elements of Teacher Learning

**Agency**

- One element of Inner dialogue is teacher personal dissonance at work that leads to questioning the quality of their practice.

- Having a voice and identity in the dialogic space to co-opt peers into the deliberation of instructional practice.

**Learning**

- Making pedagogical connections by reflecting on classroom practices.

- Deepening of pedagogical knowledge takes place within and beyond the designed and emerging networks.

**Pedagogical Leadership**

- Taking a participative role to contribute in sharing pedagogical insights increases professional spaces for agentic behaviour.

- The institutional supra-structure advocates for a collaborative networked learning space where teachers become the catalysts both within and beyond the schools.
Teacher Leadership As A Process

Intensive multi-approach teacher learning processes that include:
• Learning from experts
• Trialing of pedagogical ideas
• Dialogue and sharing of best practices amongst small network of Teacher Leaders

Stewards of Art Form 1 & 2 teaching who:
• Advocate for teacher learning and changed practices
• Plan and implement PD for others
• Gather the community of practice for further dialogue
• Create a fraternity of Art Form 1 & 2 teachers

Triangulation
Teacher Leaders reported higher levels on teacher leadership variables than teacher participants!

Teacher learning: Structural Equation Modeling

Reflection

Participative Decision Making

Changed Practice

Collaboration

Leading Change

Agency

Commitment/Persistence

Differences by Group (Teacher leaders vs Teachers [in parentheses])
A Continuum on Teacher Learning and Expertise

Prescriptive ↔ Autonomy
Dissemination ↔ Critical Voice
Learning ↔ Leading
Leading Within ↔ Leading Beyond
Key Ideas

• Greater teacher professionalism
• Reflective practitioner
• [Pedagogical] Inquiry as stance on teaching (not as weapon, report card, warranty, foundation) (Cochran-Smith & Demers, 2010)
• Socio-cultural leverages to promote teacher agentic behaviours
• Self-improving teachers; self-improving schools
Key findings on teacher change and learning: Initial Teacher Education (OER 1413, 1511, 0410)

Andragogy (Principles of Adult Learning)

Critical Aspects of the ITE Programmes
- Lecturers who embody and model good professional values
- Courses covering the critical competencies:
  - Subject knowledge
  - Pedagogical Skills
  - Classroom Management
  - “Modelling” and “Learning through doing”
- Cultivating a sharing and cooperative culture
- Key elements of BT’s professional development
- A sharing and cooperative school environment
- Strong and structured mentoring
- BTs’ positive attitudes and strong learning orientations

Regardless of these factors, if beginning teachers are not adequately prepared for the issues and challenges of teaching in real life, it results in a significant drop in teaching enjoyment and intention to stay for them.
Key Findings on teacher Learning and Change

- Prefer workshops and courses over Higher Degrees (OER 2412)
- Receptive to incremental change (OER 3212)
- Struggle to find the time to reflect (OER6512)
- SLs are agents of pedagogical change (OER 2412)
- **Unfamiliar with the change** that is necessary when responding to educational mandate (OER4412)
- Metalanguages and mandate in the curriculum lead to curriculum innovation and pedagogical change (OER4412)
- Teachers shape the culture of interactions in the classroom (OER 0412)
- **Different awareness of the language demands of the topic resulted in qualitative differences** between teachers implementing the same activities (OER 6512)
- Teachers unfamiliar with teaching to cater for individual differences (OER5412)
- Teachers uncertain about how to execute tasks **if they do not understand the rationale** or interpreted them **differently** from their instructors (OER 6512)
- Beliefs’ about students’ learning potential critical in promoting adaptivity (OER 4412)
- Years of teaching experience **not associated** with their influence of other teachers (AFR0114)
key findings on teacher change and learning in the Singapore context

- Teachers are more receptive to incremental change that are not high stake in nature
- Teacher pedagogical change takes time
- Teachers are used to teaching to the majority and they are unfamiliar with teaching to cater for individual differences, such as the slow progressing students and the high ability students
- Teachers need to be familiar with the change that is necessary when responding to educational mandate, e.g. Integrated Programme
- Years of teaching experience is not associated with pedagogical change
- School leaders are important agent for promoting pedagogical change
- The use leverages such as metalanguages and mandate in the curriculum lead to curriculum innovation and pedagogical change
Gaps and the direction of future research on teacher change and learning in the Singapore context

<table>
<thead>
<tr>
<th>Establishing a robust theory-practice link in teacher learning and in school</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing the quality of teacher learning as a community (PLC, NLC, etc.)</td>
</tr>
<tr>
<td>Finding out the sustainable PDs and how/if they have been adopted by the fraternity</td>
</tr>
<tr>
<td>Building on epistemic change &amp; knowledge in design rather than implementing learning tasks/lessons only</td>
</tr>
<tr>
<td>Mapping the dichotomy between agentic/autonomy vs hierarchical structure and power distance</td>
</tr>
<tr>
<td>Unpacking of what it means for teachers to be self-driven and self-reflective in PD</td>
</tr>
</tbody>
</table>
Teacher as Designer

• As fundamental points of departure, we view and promote teachers as the designers of curriculum innovations and learning environments. This work crucially involves the use of research evidence and other data in making pedagogical judgments in response to local educational policies and initiatives.

  – Subject-based curriculum innovation
  – Use of evidence adapted to local needs
  – Ability and rationale for making pedagogical judgments
Professional wisdom

- Professional wisdom relates to the kinds of expertise that reside *in* and *between* teachers and schools. We understand the development and growth of wisdom as being mediated by multiple factors, including teachers’ motivation, readiness, and adaptivity. The growth and development of wisdom is an evolving journey with its attendant challenges, struggles, and successes.

  - The location of formal and informal expertise within and beyond schools
  - Teachers’ motivation to learn, develop and grow their expertise
  - The growth and development of teacher expertise
  - The development of pedagogical agility
  - Teachers’ readiness for wise action
  - Teacher struggles, challenges, and successes
Nexus of Practice

• Nexus of practice relates to the study of the spatio-temporal influences and relationships that exist between the multiple events, actions and decisions that mediate teachers’ work. These include teachers’ mental models, their reflexivity and reflections. Our research explores and explains these implicit and explicit dimensions that are nuanced and responsive to contexts and units of analyses at the classroom, school, and system levels.

  – Professional judgment and reflection
  – Teacher engagement in reflective and reflexive thinking
  – Teachers’ mental model – consciousness of thinking
  – Teachers’ learning about their own teaching through students’ responses and feedback
  – Teachers’ motivation to get students’ feedback on their teaching and for use in their learning
  – Teachers’ perceptions of their work
Macro

Pedagogical inquiry; Platforms to support collaborative learning such as NLCs, PLCs; Self-improving teachers (and thus self-improving schools) as the ultimate goal.

Teacher as Designer

Early Career Teachers

Micro

Teacher change in terms of subject matter and pedagogical knowledge; Change in understanding of how students learn and how teachers teach; Teacher becoming

Teacher Leaders

Experienced Teachers

Master Teachers

Professional Wisdom

Nexus of Practice

Teacher becoming
Working Towards A Future-Ready Learners’ Agenda:
Preparing for Life through Purposeful Learning (and not just for Performance)

LIFE LONG (LL)
Knowledge & Dispositions over Time;
Process & Design Skill Retention;
Metacognition

LIFE DEEP (LD)
Deep Disciplinary Content
Adaptive Expertise
Efficiency & Innovation

LIFE WIDE (LWd)
Adaptability & Transferability Across Contexts
Multiple Perspectives
Interdisciplinary Understandings

LIFE WISE (LWs)
Values, Morals & Character
Practical Wisdom
Historical Empathy

Social Emotional Regulation & Well-being

Joy of Learning: Life-long learning dispositions, Life-deep learning expertise, Life-wide interests
Entrepreneurial Dare: Life-deep expertise and mastery, Life-wide boundary crossing
Social Cohesion: Life-wise virtues, Life-long character dispositions, Life-wide cultural appreciation
Thank you