<table>
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<th>Title</th>
<th>Teacher education &amp; teaching profession in Singapore</th>
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<tr>
<td>Author(s)</td>
<td>Lim Kam Ming</td>
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<td>Source</td>
<td><em>International Conference on the Teaching Profession in ASEAN, Bangkok, Thailand, October 2014</em></td>
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Teacher Education & Teaching Profession in Singapore

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Education System in Singapore

A good and efficient education system has always been seen as a fundamental pillar to provide the basis for developing and sustaining strong economic growth and progress (e.g., Economic Review Committee, 1986). A well-funded and efficient public education system in Singapore has contributed to significant improvements in a number of aspects. For example, between 1970 and 2013 literacy rates has improved from 68.9% to 96.5% (Department of Statistics Singapore, 2014a). Between the same timeframe, the percentage of university graduates within the population has increased from 1.9% to 27.3% (Department of Statistics Singapore, 2014b). Singapore students have performed well in recent international standardized assessments (e.g., Organisation for Economic Co-operation and Development (OECD) Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS)) (e.g., Ministry of Education Singapore, 2012, 2014a).

As teachers are key to the quality of any education system (Harris, 2011; McKinsey, 2010), a constant challenge for Singapore is to ensure that its teacher education system is relevant, responsive and produces quality teachers able to cater to the needs of learners (National Institute of Education, 2007, 2012). The new paradigms for learning and teaching in a rapidly changing 21st century environment add to the challenges of teacher education.

Teacher Education System

As the main teacher education institute in Singapore, the National Institute of Education (NIE) provides all levels of teacher education, from initial teacher education programmes to professional development programmes for in-service teachers and executive leadership programmes for Principals, Departmental Heads and other school leaders.
Since its establishment as the Teacher Training College in 1950, NIE has since developed into one of the leading teacher education institutes in the world (Chen & Koay, 2010). NIE’s initial teacher education programmes prepare teachers for all government schools ranging from primary schools to Junior Colleges in Singapore. There are various pathways for qualified candidates to complete initial teacher education at NIE to complete their qualifications to be teachers in Singapore. NIE’s initial teacher education programmes include the Diploma in Education, Bachelor of Science (Education), Bachelor of Arts (Education) and the Postgraduate Diploma in Education (PGDE) (see Table 1). The Bachelor of Education programme is designed to help primary school teachers to achieve their goals of completing a degree.

On average, the total intake for NIE’s initial teacher education programmes is about 2000 student teachers per academic year (AY) (e.g., 1656 for AY2013-14, 2019 for AY2012-13, 2066 for AY2011-12, and 2320 for AY2010-11).

Table 1
Type and duration of NIE’s Initial Teacher Education Programmes

<table>
<thead>
<tr>
<th>Programme</th>
<th>Level for Teaching</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma in Education</td>
<td>Primary / Secondary</td>
<td>2 years</td>
</tr>
<tr>
<td>Bachelor of Arts (Education)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor of Science (Education)</td>
<td>Primary &amp; Secondary</td>
<td>4 years</td>
</tr>
<tr>
<td>Bachelor of Education</td>
<td>Primary</td>
<td>3 years Part-time + 0.5 year Full-time</td>
</tr>
<tr>
<td>PGDE (Primary)</td>
<td>Primary, Secondary</td>
<td>1 year (2 years for Physical Education)</td>
</tr>
<tr>
<td>PGDE (Secondary)</td>
<td>Secondary</td>
<td></td>
</tr>
<tr>
<td>PGDE (Junior College)</td>
<td>Junior College</td>
<td></td>
</tr>
<tr>
<td>Diploma in Special Education</td>
<td>Special Education/Allied Educators</td>
<td>1 year</td>
</tr>
</tbody>
</table>

NIE administers postgraduate programmes that lead to the award of higher degrees (i.e., Master of Arts, Master of Science, Master of Education, Master of Teaching, Ph.D. and Doctor in Education). In addition, NIE also provides the Management and Leadership in Schools (MLS) and Leaders in Education (International) (LEPI) for overseas education leaders, as well as the joint Master of Arts in Leadership and Educational Change programme between NIE and Teachers College, Columbia University.

Lim, K. M. (2014)
NIE also support the Singapore Ministry of Education through evidence-based advice gleaned through education research to inform education policies and school curriculum. Working in partnership with the Ministry of Education (MOE) and schools, NIE plays an integral role in the development and improvement of the education service in Singapore.

In terms of organizational structure, NIE is an autonomous institute of the Nanyang Technological University (NTU). NTU is a comprehensive university with colleges of Engineering, Business, Science, Humanities, Arts, & Social Sciences, an Interdisciplinary Graduate School, a medical school (set up jointly with Imperial College London), and autonomous institutes such as S Rajaratnam School of International Studies, Earth Observatory of Singapore, Singapore Centre on Environmental Life Sciences Engineering and of course, NIE.

**NIE’s Model of Teacher Education for the 21st Century (TE^{21})**

NIE’s Model of Teacher Education for the 21st century (TE^{21}) revolves around the Values, Skill and Knowledge (V^{3}SK) model which focus on three value paradigms (NIE, 2009, 2012):

“Learner-centredness puts the learner at the centre of teachers’ work and the teacher must be aware of learner development and diversity, believe that all youths can learn, care for one another, strive for scholarship in content teaching, know how people can learn best, and learn to design the best learning environment possible.

*Developing a strong sense of teacher identity* refers to upholding the highest standards in teaching and being a teacher and possessing a strong drive to learn in view of rapid changes in the education milieu and to being responsive to students’ needs.

*Service to the profession and community* focuses on teachers’ commitment to growing beginning teachers within their profession through active collaborations and striving to become better practitioners in order to benefit the teaching fraternity as a whole” (Lim, 2013, pp. 2-3).

The TE21 V^{3}SK Model also stressed that it is important for good teachers to have skills such as reflective skills and thinking dispositions, pedagogical skills, people- and self-management skills, administrative and management skills, communication and facilitative skills, technological skills, innovation and entrepreneurship skills, as well as social and emotional intelligence. At the same time, teachers capable of nurturing the learning needs of 21st century learners should possess knowledge related self, pupil, community, subject
content, curriculum and pedagogy, educational foundation and policies, global and environment awareness as well as multicultural literacy (NIE, 2009, 2012). NIE’s values-driven teacher education programmes help student teachers to reinforce their beliefs in the learner, take pride in being a teacher and remain committed to the teaching profession (Tan, 2012).

The Values, Skills and Knowledge components of NIE TE21 Model are closely aligned with MOE’s desired outcomes of preparing students to be collaborative learners, confident persons, active contributors and concerned citizens (Masagos, 2011). In addition to the V³SK model, NIE’s Graduand Teacher Competency (GTC) framework articulated the types of competencies at the beginning teachers’ level. Based on the three performance dimensions (professional practice, leadership and management) and personal effectiveness stated in MOE competencies framework for beginning teachers, NIE’s GTC and V³SK Model provide the framework for a teacher education curriculum that is relevant for Singapore’s needs.

As values are the key characteristics of a true teacher, NIE has worked hard to incorporate both formal curriculum and experiential learning such as service learning in its teacher education programmes to promote the essentials of values. All student teachers at NIE take part in two core mandatory programmes: the Group Endeavours in Service Learning (GESL) and the Meranti Project (a personal and professional development 2-day non-residential workshop).

“GESL provides hands-on opportunities for student teachers to engage with a community partner of their choice and to contribute towards furthering the cause of that community and in so doing, helps student teachers to hone values such as teamwork, resilience, empathy, service to the community to name a few. Service learning has been used as a pedagogical tool at NIE since 2004 to develop teachers who will be able to lead, care, and inspire the young people and forge trusting partnerships with the community.” (Lim, 2013, p.3).

“The Meranti Project facilitates student teachers to develop better self-awareness; clarify their role in nurturing National Education; understand how to better work with diversity in the classroom; develop strategies for coping; and affirm their choice of teaching as a career.” (Lim, 2013, p.4).

As is true for most teacher education programmes around the world, the teaching practicum is one of the key components for preparing new teachers. This is student teachers put into practice in a real life classroom the skills and knowledge they have acquired from the
teacher education courses. NIE has implemented several key enhancements to its practicum structure to build a stronger theory-practice link. One key change is the introduction of the “introduction of Focused Conversations (FC) which allows student teachers to share with their school mentors about their learning in NIE, issues encountered during the practicum on classroom management and motivating pupils, and about their learning in school towards developing teaching competencies” (Lim, 2013, p.4). The use of a Reflective Practice framework has proven effective in facilitating the development of the reflective teacher.

Research has shown that the courses such as Educational Psychology and Social Context of Teaching and Learning have a positive influence of the development of strong and positive teacher identity. Teacher identities that reflected notions of “teaching with heart” and “being reflective” have been demonstrated by NIE student teachers. The use of the e-portfolio that help student teachers integrate and reflect on their learning across various courses such as Educational Psychology and Social Context of Teaching and Learning has been found to be useful in helping student teachers strengthen their positive teacher identity (Zhou, Chye, Koh & Liu, 2013).

Changes in the curriculum may not be sufficient to support the effective enhancement of a teacher education programme. For this reason, NIE has transformed the physical infrastructure in NIE, such as the collaborative tutorial rooms, the model Primary English Language classrooms and Teachers’ Language Development Centre, to support the new pedagogical approaches designed to achieve the desired teaching and learning outcomes. The collaborative tutorial rooms are equipped with technology-driven learning tools and designed with learning spaces that allows student teachers to conduct collaborative activities.

Teacher Licensing

As the national teacher education institute in Singapore, NIE is the accreditation agency for teachers in Singapore. There is no separate accreditation agency for the licensing of teachers in Singapore.

Recruitment of Teachers

Recruitment of new student teachers is limited to the top one-third of each graduating cohort (Ministry of Education Singapore, 2010). Stringent selection of qualified candidates is ensured through a two-stage recruitment and admission process of student teachers. MOE
and/or NIE complete the first step by short-listing candidates based on NIE’s university admission criteria. MOE will then interview the short-listed candidates individually as part of the selection process. NIE faculty members are also involved as members of the interview panels for the degree programmes. Criteria used by the interview panels to assess the candidates include communication skills, interest in teaching, goals and aspirations, and willingness to learn. All successful candidates are then required to successfully complete a teaching stint in schools as untrained teachers before they enrolled at NIE for their initial teacher education training. The purpose of the teaching stint is to further assess the suitability of the candidates to be teachers and also to allow the candidates to have a better understanding of what is involved to be teachers. Candidates who do not successfully complete their teaching stint are either asked to withdraw from their teacher education programmes or to extend their teaching stint for further assessments. MOE provides all student teachers enrolled at NIE with tuition waivers and a monthly salaries or stipends.

While effort is taken to carefully select and train new teachers in Singapore, equal effort is also taken to enhance the retention of good trained teachers in the education system. Some of the strategies used include mentoring system, provision of professional development and continuing higher education for teachers, different career tracks for teachers, good reward system and a more balanced work-life structure.

Responsibilities of Teachers

Teachers in Singapore have the same type of responsibilities as teachers in most other countries in terms of three broad work categories: 1) actual teaching and learning, 2) keeping order in the classroom, and 3) administrative tasks (OECD, 2014). Teachers in Singapore spent 71% of their working hours per week on actual teaching and learning, 18% on keeping order in the classroom, and 11% on administrative tasks (OECD, 2014). This is contrasted with the average of 79%, 13% and 8% for teachers elsewhere on the tasks respectively (OECD, 2014).

Lee and Poon (2014) further classified teachers’ responsibilities into sub-clusters as shown in Table 2. Teachers in Singapore reported spending between 54 to 65 hours per week on these tasks (Lee & Poon, 2014).
Table 2
Teachers’ Responsibilities

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Tasks</th>
</tr>
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<tbody>
<tr>
<td>Teaching and Learning</td>
<td>Lesson preparation</td>
</tr>
<tr>
<td></td>
<td>Classroom instruction</td>
</tr>
<tr>
<td></td>
<td>Field trips</td>
</tr>
<tr>
<td></td>
<td>Co-teaching, relief teaching</td>
</tr>
<tr>
<td></td>
<td>Remedial instruction</td>
</tr>
<tr>
<td></td>
<td>Examination/test related tasks</td>
</tr>
<tr>
<td></td>
<td>Marking/grading &amp; providing feedback to students</td>
</tr>
<tr>
<td>Work to get work done</td>
<td>Email communication</td>
</tr>
<tr>
<td></td>
<td>Routine work (e.g., filling forms)</td>
</tr>
<tr>
<td></td>
<td>Meetings</td>
</tr>
<tr>
<td>School / Administrative Duties</td>
<td>School assemblies</td>
</tr>
<tr>
<td></td>
<td>Taking charge of student Co-curricular activities</td>
</tr>
<tr>
<td></td>
<td>Mentoring responsibilities (e.g., mentoring student teachers, new teachers)</td>
</tr>
<tr>
<td></td>
<td>School committee work</td>
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<tr>
<td></td>
<td>School events</td>
</tr>
<tr>
<td>Communication</td>
<td>Interacting / working with parents</td>
</tr>
<tr>
<td></td>
<td>Working with colleagues</td>
</tr>
<tr>
<td></td>
<td>Counselling students</td>
</tr>
<tr>
<td>Professional Development</td>
<td>Professional development</td>
</tr>
<tr>
<td></td>
<td>Attending courses</td>
</tr>
</tbody>
</table>

Teacher Salaries

The Ministry of Education Singapore regularly reviews the salaries for teachers to ensure that they are competitive in relation to other professional salaries (Center on International Education Benchmarking, 2014). If we look at the starting gross annual salaries for graduates with a Bachelor’s degree, the median starting gross annual salary for teachers is S$41,976. Teacher salaries for teachers in Singapore are comparable to those of other professions requiring similar level of training and qualifications. For example, this is comparable to the median starting gross annual salary of S$42,000 for aerospace engineers, S$40,200 for accountants (Ministry of Education Singapore, 2014c).
Welfare and Benefits

Teachers received benefits provided to all civil service employees (Ministry of Education Singapore, 2014d). These include annual bonus, performance bonus, contribution toward retirement funds (CPF), medical benefits and annual leave entitlement. In addition, teachers are also rewarded for their commitment and long service through a scheme known as “CONNECT Plan”. Teachers could receive up to a maximum of S$168,800 of additional payout if they served for at least 30 years. Different quantum of payouts is set for long service of different durations (minimum 4 years) (Ministry of Education Singapore, 2014d).

Career Path

The Ministry of Education Singapore has three career tracks or fields of excellence for teachers (Ministry of Education Singapore, 2014e) as follows:

1) Teaching Track: Teachers who wish to serve as classroom teachers are provided with professional development and advancement opportunities. This track for teachers supports teachers who want to continue to develop their pedagogical capability. The pinnacle position for this track is the Principal Master Teacher.

2) Leadership Track: Teachers who wish to serve in leadership roles to support the education system are given opportunities to take on leadership positions in schools and the Ministry’s headquarters.

3) Senior Specialist Track: Teachers who want to work on the development of specialised curriculum areas could join this track.

There is flexibility for lateral movements across the different tracks as long as teachers satisfy the standards and criteria of the post or career track they want to move to (Ministry of Education Singapore, 2014e).

Teacher Status

Teacher status is reasonably high in Singapore. An indicator of the social status of teachers in Singapore is reflected in the results of a survey by Adecco (2012) that revealed that children held being a teacher to be their top career choice, followed by becoming a doctor, pilot or flight attendant. A significant majority (88%) of teachers in Singapore are satisfied with their career as teachers while almost 70% of teachers believe that the teaching profession is valued in Singapore (OECD, 2014).
Challenges for NIE

Although the teaching profession in Singapore is respected and has received positive evaluations, NIE is aware that its teacher education programmes needs to be constantly reviewed and revised to ensure that they remain relevant in preparing teachers to work effectively in meeting the learning needs of 21st century learners.

NIE works closely with relevant stakeholders, mainly the Ministry of Education and schools to address these issues. For example, NIE has worked with the Ministry of Education and other agencies to incorporate a systematic series of key events within the initial teacher education programmes to enhance student teachers' sense of professional ethos. These events include dialogue sessions with key leaders, workshops, and a reflective teacher model during the teaching practicum in schools.

Challenges and opportunities for Teacher Education and the Teaching Profession

The challenges and opportunities for teacher education and the teaching profession are likely to be common across different countries. A number of factors that may be of concern for teacher education and the teaching profession include:

1) Processes to improve recruitment of candidates
2) Curriculum within teacher education programmes to enhance professional values and ethos among student teachers and beginning teachers
3) Improving the mutual understanding of teacher education among relevant stakeholders such as teacher educators, policy-makers and teachers
4) Alignment of teacher education with education system
5) Coherence within teacher education programme (course and practicum)
6) Strengthening the theory-practice nexus through evidence-based teacher education programmes
7) Ensuring the relevancy of professional development for in-service teachers
8) Processes to retain good teachers in education system
9) Enhancing trust and support among parents and community for education system

By working together, it is possible to find common strategies to address the challenges and problems. Platforms such as this conference is a good example of how we can work together to improve teacher education and the teaching profession.


