

Bringing Singapore's teacher education beyond its shores

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Received: 1 March 2011 / Accepted: 1 June 2011 / Published online: 3 November 2011
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Abstract In recent years, education systems around the world have been keeping a keen eye on rankings of student achievement as measured by internationally benchmarked tests. This has led to considerable attention being paid to teasing out success factors that may account for countries that have emerged top of the ranks or those that have shown the most rapid improvement from one test period to the next. Singapore's education system, which has consistently emerged as one of the higher ranking countries has garnered much international attention as a consequence. Even as other nations are learning more about Singapore, it is timely for Singapore to share our expertise and experience to benefit other systems. In this article, one such effort of internationalisation is focused on i.e., teacher education and professional development programmes. The underpinning philosophy of internationalisation is to serve the global educational community. Three models of internationalisation are expounded upon, namely; building the local capacity of our partner countries, training the trainers, and the offering of executive leadership training programmes to an international market. The past and future challenges of internationalisation are also discussed. The article ends with how it began, in terms of examining Singapore's internationalisation of its teacher education and professional development programmes in the light of whether we are indeed, paving the Fourth Way as espoused by [Hargreaves and Shirley \(2009\)](#).

Keywords Teacher education · Professional development · Internationalisation · Educational innovations

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1 The Fourth Way and internationalisation

Whilst this article will deliberately not be rehearsing the key tenets of the “Fourth Way” espoused by [Hargreaves and Shirley \(2009\)](#), it is important to delineate the aspects of the Fourth Way that makes the writing of this article relevant to the theme. To quote Hargreaves and Shirley’s own summary of their work (Personal Communication, 2011), “the fourth way draws on first-hand and rigorous research evidence of outstandingly successful practice from across the world to offer a vision and a plan for a more successful, challenging, and sustainable educational future. From top-performing Finland to the impressive achievements of community engagement in America; from the most turned-around school district in Britain to a dynamic network of 300 high schools that lifted achievement dramatically by helping each other rather than responding to heavy-handed interventions from the top; and from the conservative-controlled yet innovation-oriented province of Alberta to union-driven reform movements in California; this book shows what works well, why it does so, and what we can learn about forging new and better paths of educational change.” Following from the quote above, the essence of the Fourth Way which may be applied to the context of internationalisation is the assertion about learning from top-performing nations through research and evidence-informed studies and drawing upon first-hand and rigorous research evidence of outstandingly successful practice from across the world to offer a plan for a more successful, challenging, and sustainable educational future. Such learning from other education systems around the world is especially relevant today as internationally benchmarked tests of student achievement worldwide such as the Progress in International Student Achievement (PISA) and Trends in Mathematics and Science Study (TIMSS) have forced a ranking of different education systems based on test scores taken by students of the same grades across the world. The preoccupation with ranking and how to better one’s ranking has spawned many studies on topics such as the critical success factors that allow one system to sustain high performance or what moves another system up the ranking ladder from one period to the next. Two such studies are framed as reports produced by world renowned management consulting firm McKinsey and Co in 2007 and 2010, respectively. The 2007 report ([Barber and Mourshed 2007](#)) focused on “How the World’s Best-performing school systems come out on top” whilst the 2010 report ([Mourshed et al. 2010](#)) considers the important question of “How the World’s Most Improved School Systems Keep Getting Better.” Another report produced by the Organisation for Economic Corporation and Development ([OECD 2010](#)), looked specifically at what the United States, whose performance has been mediocre in these internationally benchmarked tests, can learn from the “Strong Performers and Successful Reformers in Education.” The study has case studies from countries who topped the rankings in PISA 2009 but also those countries who have shown rapid improvement in their rankings. The countries studied are: Ontario, Canada, Japan, Shanghai, Hong Kong, Singapore, Finland, Germany, Brazil, England, and Poland. In another study by Whelan on “How Good Policies Produce Better Schools” in 2009, he examined educational reforms in the Middle East, Africa, Singapore, Canada, China, Hong Kong, Finland, the United States, and other OECD countries totalling more than 40 countries on every continent. The book uses the cases cited to study how best to ensure that every child leaves school with the requisite values, skills, and knowledge to succeed and asserts that seven themes form the core of building successful school systems “having fewer but better teachers, getting the right people to become teachers, ensuring that every school has effective leadership, setting high standards and measuring whether they are achieved, creating structures which empower people, hold them accountable and encourage collaboration, investing in building teachers’ professional

knowledge and skills, and continuously challenging inequity in educational performance” (Whelan 2009, pp. 13–14).

Whilst Singapore has in recent years garnered international attention for its consistently high rankings in student achievement as measured by the TIMSS and PISA internationally benchmarked studies, at the heart of Singapore's success in education is the belief about constantly learning from the lessons that other systems have to offer, and practicing a culture of continuous self-improvement and not being content to rest on the sweet laurels of success as it were. Indeed, whilst Singapore's education system is anchored on local thinking, it also bears the stamp of globalisation through embracing many elements of lessons learned from other internationally successful systems and have further contextualised these elements to suit the locally unique situation. The phrase “locally rooted but globally minded” best encapsulates the philosophy underpinning Singapore's education system. A case in point is the recent initiative to strengthen Physical Education, Art, and Music. Singapore's deep commitment to this endeavour saw senior educators including the Education Minister visiting successful systems such as New Zealand (for Physical Education), Australia (for Art education), Japan (for Music education), and China (for cultural settings) to explore, understand, analyse, and learn about how the curriculum was implemented successfully in these systems, and to then propose an implementation framework that is suited to the Singapore context. In this regard, several teacher academies have been set up in Singapore in the past two years, 2010 and 2011, namely the Physical Education & Sports Teacher Academy (PESTA) and Singapore Teachers' Academy for the Arts (STAR) all of which are in response to the need to strengthen the teaching of Physical Education, Art, and Music in Singapore through a “teacher-led culture of professional excellence” as expressed in their vision statement.

Even as Singapore continues to learn from other top-performing or rapidly improving systems worldwide, it is also timely and important to share our expertise and experience to benefit countries around us. There is no contradiction in the co-existence of competition and collaboration if we embrace the concept of synergistic partnerships. Autonomous institutes like Singapore's National Institute of Education (NIE), which prepares all pre-service teachers for the nation's 360 schools, conduct professional development, and higher degree courses for an average of 16,000–18,000 teachers annually are well placed to be ambassadors to fly the flag of Singapore's education success story internationally. Singapore's geographical location (crossroads of the East and West) and its multi-ethnic, multilingual, and multi-cultural aspects of its society makes it suited to link both the global and local aspects of education. Other enablers to internationalization are Singapore's safe and clean environment and stable, corrupt-free government, and high living standards.

2 Terminological definitions and the underpinning philosophy of internationalisation

In the research literature on internationalisation, at least two other terms appear to be closely associated which need to be carefully defined. These are “globalisation” and “multinationalisation”. Globalisation may be defined according to Altbach (2008, p. 25) to be, “economic, technological, and scientific trends that directly affect higher education”. Goh and Lee (2008) assert that globalisation impacts education from all perspectives: how we teach, what we teach, where we teach, whom we teach, and whether we should teach (Goh and Lee 2008). The main elements of globalization in the 21st century are a knowledge economy, the dominance of English as a global economy, the increasingly borderless world, and the rapid exchange of information brought about by the many technological affordances in the digital media age. In terms of higher education, globalization has meant the “marketization”

of tertiary education, new learning paradigms such as distance learning modes, flexible institutional settings, and delivery. The term “multinationalisation” refers more to academic programmes or institutions offering degrees, courses, certificates, and other qualifications in another country apart from the home country of the institute. Such multinationalisation efforts typically lead to the offering of joint degrees or twinning programmes between the home and partner institute. According to Altbach (2008, pp. 26–27), internationalization refers to specific policies and programmes undertaken by governments, academic systems and institutions for cross-cultural exchanges. In this article, both multinationalisation and internationalisation will be discussed together as initiatives in response to the process of globalisation.

Hatakenaka (2007) cites examples of Singapore’s internationalization efforts in higher education which are already in practice. At the heart of Singapore’s internationalization endeavours is the aim to be Asia’s education and research hub. In this regard, international research and/or joint degree partnerships have been established with world-renowned universities like Yale, Massachusetts Institute of Technology (MIT), Stanford, Berkeley, Duke, and Wharton to name a few. Foreign campuses have also set up branch campuses in Singapore such as INSEAD (from French for Institut Européen d’Administration des Affaires), the University of Chicago Business School, Japan’s top private university-Waseda, and the establishment of the Biomedical Science Park, the Biopolis.

The impetus for Singapore’s internationalization efforts is to help policymakers, organisations, and individuals keep apace in a borderless knowledge-based economy. There is therefore an urgent need to equip our students the skills, competences, and drive to succeed in competitive global workplace. NIE, Singapore, with the onerous responsibility of preparing all pre-service teachers with the values, skills, and knowledge for all schools in Singapore in the 21st century, needs to be a vibrant, multicultural, and internationally relevant tertiary institute of higher education. As expressed by NIE’s (2007) 3:3:3 Roadmap 2007–2012, “Radical changes in our educational paradigms, pedagogies and delivery are needed to sustain a culture of continuing national competitiveness and full participation in a globalised marketplace.”

NIE’s key guiding philosophy in internationalizing teacher education is to serve the global educational community. To do so, NIE must first have internationally reputable teaching, research, and consultancies that are considered to be attractive and viable for serving the global educational community. Singapore’s educational repute as seen in its top ranking performances in the TIMSS, PISA, and Performance in International Reading Literacy Study (PIRLS) and high achievements in international olympiads for mathematics, physics, chemistry, and biology has attracted worldwide attention, and has been cited as one of the top 10 performing education systems in the world by McKinsey & Co (2007). The reports lists three key success factors for any top-performing education system, namely; getting the right people to become teachers, developing them into effective instructors, and ensuring the system is able to deliver the best possible instruction for every child. NIE is a key node in ensuring the preparation and developing of high quality teachers to become effective educators that can ultimately hope to positively impact pupils’ learning outcomes.

Singapore’s concept of “Internationalisation” is through the sharing of our experiences and expertise through providing consultancy and customized programmes, student exchange programmes, faculty exchange programmes, short attachment programmes, through increasing the enrolment of overseas students, and consciously building partnerships with global centres of excellence. To signal the importance of internationalization within the NIE philosophy, impacting the educational fraternity internationally is one of the three pillars of the 3:3:3 strategic roadmap for the institute for 2007–2012 (NIE 2007).

There were structural changes that needed to take place in preparation for the internationalization of our teacher education programmes. The international outfit evolved from humble beginnings functioning under the aegis of the Graduate Programmes and Research Office within NIE, known as Knowledge Horizon, which was established as a full cost recovery unit in July 2003. Its role was to “seek, coordinate and manage the consultancy projects on behalf of NIE” (Goh 2010, p. 195). On 1 October 2005, Knowledge Horizon was reorganized as one of the programme offices known as the External Programmes Office (EPO) under NIE's matrix organizational structure (Goh 2010, p. 195). On 1 April 2009, having grown from strength to strength, NIE International Private Limited was established with NIE Director serving concurrently as its first Managing Director. The fact that the internationalization effort is led by senior management of NIE is a critical success factor in the institute's internationalization efforts.

NIE has 60 years of experience in being the national institute preparing all pre-service teachers for Singapore's schools. Its success in turning out a quality teaching workforce is borne out in various studies that have credited the high achievements of the Singapore students to the quality of our teachers. NIE is known for its pre-service programmes, professional development programmes for in-service teachers, postgraduate degree programmes, school leadership programmes, and a very active school-based educational research agenda. This has made NIE a magnet for educators, administrators, policy makers, and school leaders since 2000. There have also been numerous requests for consultancy work from institutions and educational agencies within and beyond Singapore.

NIE's underpinning philosophy for internationalisation is to share our experiences so that others do not have to reinvent the wheel, to share knowledge and insight that enables, empowers, and reforms are recommended with the ultimate aim of achieving better student learning outcomes. But there is also a mindfulness in not merely replicating or teleporting the “Singapore model” elsewhere, but rather finding ways to contextualise our experiences so that the changes that are eventually adopted do not destabilise the societal and cultural modes, or derail the pace of progress in the respective countries in which they are applied.

Finally, the fundamental *modus operandi* is internationalisation through collaborating with our partners. There are three different models which NIE has applied successfully in its internationalisation efforts which will be elaborated upon in turn.

3 Models of internationalisation

To shed light on the efforts that NIE has adopted, this section will present the three models of internationalisation that NIE has adopted to reach out to the global teaching fraternity.

3.1 Model 1: establishment of teacher education institutes—building local capacity

The first model emphasizes capacity building through local empowerment. It calls for working with partners to understand their needs, current situation, and the desired deliverables. The key *modus operandi* here is to consider the institute approaching us for educational consultancy as equal partners. After conducting a thorough needs analysis, often via site visits followed by a meta-analysis of the situational context, recommendations are offered on how to bridge gaps and enhance key areas of educational development.

Using this approach, NIE helped Abu Dhabi and Bahrain to set up their own teacher education colleges. In Abu Dhabi, NIE helped to set up a new teacher training college known

as the Emirates College for Advanced Education (ECAE) in 2007 and NIE's commitment included seconding two of its senior appointment holders to assist in its administrative operations during its first few years of development (see [Goh 2010](#) for more details). In terms of building the teacher education pre-service programmes in Abu Dhabi, we helped design a new academic curriculum, including providing content specialists to write the full curriculum contextualised within the culture, aligned with the aspirations of our partners (complete with powerpoint slides, explanatory notes, tutorial worksheets, keys to the worksheets, and module assessment details), and provided expertise to train and build up local capacity to manage the administration and operations of the teacher training colleges. In the process, our partners were empowered to take ownership of their own development. In Bahrain, over a six-month period in 2009, professional development courses were provided for 2,400 teachers and principals, and more importantly, a Performance Management System for 13,000 teachers was "designed from scratch and fully contextualised to Bahrain's education system" ([Goh 2010:198](#)).

3.2 Model 2: training the trainers

The second model focuses on building local capacity through the "train-the-trainers" approach. When Vietnam's Education Minister visited NIE to find out how Singapore prepared its school leaders, he was impressed with the leadership programme as it focused not only on management skills but also on transforming the mindset of the candidates and the understanding of leadership through a transformational leadership philosophy in the design and delivery of our educational leadership programmes. The Vietnamese's request to NIE was to train 30,000 school leaders within 1–2 years! The magnitude of such an endeavour could only be accomplished using a "train-the-trainers" approach. The aim was to have a "multiplier" effect so that all the school leaders could be trained in the shortest possible time.

Based on the needs analysis conducted with senior policy makers in Vietnam, a customised Educational Leadership Programme for Vietnam (ELPV) was developed. The first task we did was to appoint a reliable and trusted national partner within Vietnam that could work in tandem in this ambitious undertaking. Upon consulting Vietnam's Education Minister, it was decided that the National Institute of Education and Management (NIEM) in Vietnam, which was the Vietnamese equivalent of a national institute of education for preparing school leaders like the NIE (Singapore) was appointed as our main working partner. The first step was to conduct a needs analysis where top management from NIE and NIEM met up both in Hanoi and in Singapore to come up with the proposal and the presentation on framework of operations was made to both country's Education Ministers. It was established that there was a need for educational reform in Vietnam which could only be established through building the capacity of the educational leadership in Vietnam. Funding was a real issue. NIE, Singapore wrote a detailed 30-page funding proposal to Temasek Foundation, with full projected costing, impact, deliverables, and implementation timelines. Careful follow-up procedures were also detailed to ensure not just numbers are trained but deliverables of the Educational Leadership programme are met. Six-monthly progress reports are also prepared and submitted to the funding body. To assure quality in the programme being developed, there are provisions for curriculum team to meet three times a year and for management review meetings to be held three times a year.

The programme's mission was to equip and prepare educational leadership for the 21st century for Vietnam. There were two major objectives:

- (i) Build up educational leadership in Vietnam that will embrace the philosophy of educational leadership

- (ii) Equip a core group of trainers that will conduct educational leadership programmes to prepare trainers and educational leaders at the provincial and district levels

In 2008, the target was to train a total of 2,400 educational leaders. This comprised 150 trainers at the national level, 330 trainers at the district level, and 1,920 trainers from the provincial level. By 2009, this core group of trainers were able to train 14,000 principals from 64 provinces and by 2010, another 14,000 principals were trained. Thus, the target of training 30,000 principals was reached in December 2010 by leveraging on the national, district, and provincial trainers trained in the first year of the programme. This model is indeed effective when there is a need to cascade a programme for delivery to huge numbers. Since then, this successful cascading model has been replicated in Indonesia in 2009 with the possibility of going to Laos in the near future.

3.3 Model 3: executive programmes—Leaders in Education Programme (International)

The third model involves sharing of NIE's experiences in a wider international arena. Through the Leaders in Education Programme International (LEPI), NIE has within 5 years graduated more than 450 alumni from over 30 countries. The executive programme's success is in the clear articulation of the philosophy of the programme which is to inspire educational leaders to embrace a transformational leadership mindset. This philosophy is realised through activities participants undergo which help them to internalise the essence of such a philosophy. The ultimate aim of the programme is to empower participants to put what they have learnt into practice in their respective home situations. The Singapore Education Ministry has also used this as a platform to reach out to developing countries like Myanmar, Laos and Cambodia, by sponsoring training places for school leaders to attend the programme. The aim is to build capacity and to empower participants to lead in education change and development in their respective home countries.

4 Challenges to internationalisation

Yet, the glowing picture we portrayed above will not be complete if we do not devote a section to talk about some of the real challenges that we face in the internationalisation efforts undertaken. There is a need to delicately balance between the internal and external demands of the institute with respect to manpower deployment. As faculty are paid for providing external consultancy services, there is a need to ensure that the taking up of additional teaching, programme development hours does not compromise on the faculty member's ability to take on their normal workload within the institute. This requires careful negotiation between the Heads of Academic Groups and the individual faculty members concerned.

On a similar note, as documented by [Goh \(2010\)](#), the initial phases of internationalisation did meet with some scepticism as educational consultancy was deemed by some to be outside the core business of the institute. There was therefore a need to bring about mindset changes in faculty members to demonstrate the longer term benefits of internationalisation to prepare both our faculty and students to be ready for the global marketplace of the 21st century. Once faculty came on board, however, they began to deeply appreciate the many lessons gleaned from their external educational consultancy experiences and to be sensitised to the need for multicultural awareness and the need to embrace multicultural diversity.

From a more pragmatic perspective, there is also a need to ensure economic viability in the projects undertaken, specifically between profit-making and altruistic international

ventures, there is a need to carefully plan and balance between the two. Careful financial projection is necessary to determine the number of projects that can be taken on for altruistic purposes.

Some key challenges in internationalization remain in the road ahead. For example, there is a need to create an international curriculum that is flexible enough to achieve and sustain global relevance. The issue of quality assurance is also very real as there is a need to identify and comply strictly with international benchmarks of best practices for sustained brand name. To bring about successful teaching and learning outcomes, enhancing the multicultural awareness and understanding between both faculty and students on campus is essential and is an endeavour that we cannot afford to be lax about in this increasingly globalised society in which we live. Finally, continually seeking and securing funding for international students and programmes especially for participants from the less developed countries in the region, not to mention the heavy administrative burden of accounting to the funding and accounting policies of funding agencies will remain a challenge as long as we uphold our underpinning philosophy of serving the global educational fraternity.

5 Singapore: a Fourth Way in action?

We end this article by revisiting our first proposition, that Singapore's internationalisation efforts in teacher education is indeed an exemplar of the Fourth Way in action. Suffice it to say that as an exemplar of the Fourth Way in action, the Singapore education success story is finding resonance through NIE's internationalisation efforts which span the Middle East and Asia, including China, and more recently venturing into Russia, Europe, South America, and Australasia. More than just offering Singapore's brand of teacher education to these countries, the underpinning philosophy of collaboration, equal partnership, and contextualising all recommendations to the needs of the local partners whilst upholding our institute's articulated strategic success factors of always being relevant, responsive, and ensuring quality and excellence is the true flagship of Singapore's internationalisation efforts in teacher education beyond our shores.

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