

PATHWAY TO RIGOROUS TEACHER TRAINING AND EFFECTIVE TEACHING FOR BETTER STUDENT OUTCOMES

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ABSTRACT

Against the backdrop of changing environment and demands in the digital era, this article proposes a pathway to rigorous teacher training and effective teaching. To this end the following three essential subtopics are extensively and intensively discussed: Effective Teacher Training, Profile and Pedagogical Practices of High Performing Education Systems, and Education Reforms in ASEAN.

With the dawn of 21st century the convergence of globalization, Information Communication Technology and knowledge revolution has led to staggering social, cultural and economic changes which, in turn, have touched and transformed every aspect of our modern life-style. In today's globalized world it is just easy to create work teams composed of people from all different parts of the world working collectively, sharing knowledge as multi-national teams. National borders are becoming more permeable and transparent to huge international networks of mass communications. The capabilities of computers and relative technologies have expanded so much that computer and computer-driven machinery are replacing human labour in performing 'routine work' tasks. The core changes brought by ICT in society call for research on specific new forms of learning and epistemological issues regarding how learning

occurs and how knowledge emerges beyond the borders of traditional systems of education. "Knowing how we learn, how to turn information into knowledge and how to document and analyse life-long learning are essential in the 21st century. New skills are required at all levels" (Chubb, June 2015). Twenty first century requires knowledge generation, not information delivery and schools will need to create a *culture of inquiry* (Sediman, 2004). Workforce is needed with the ability to use a range of electronic technologies to access, synthesise and apply information; citizens who can think creatively and critically and with ability to communicate effectively and collaborate with others, particularly in diverse and multicultural settings. While pursuing sustainable development the main challenges range from increasing economic interdependence, technological development, growing pressure on natural resources, environmental degra-

dition, rapidly changing labour markets, and shifting geopolitics. “Growing proportion of the labour force is engaged in jobs that emphasize expert thinking or complex communication that computers cannot do” (Levy and Murnane, 2004, p. 54). People are increasingly called upon to perform more complex thinking tasks which require strong math reading skills. “A world of connected, networked, self-directed learning is upon us, all of which has huge implications for schools” (Crocket, cited in *Education Today*, 2015, p.2).

The right to (quality and equity) of education imposes an obligation upon countries to ensure that all children and citizens have opportunity to meet their basic learning needs. Addressing the joint session of Indian Parliament the then America’s President Barak Obama underlined the urgency of quality education for sustainable development in the developing countries. “Whether you live in a village in Punjab or by-lanes of Chandni Chawk or old sections of Kolkatta or new high rise in Bangalore, every person deserves the same chance to live in security and dignity, to get education to find work and to give their children a better future” (2014). In the developing countries education is considered as one of the most powerful instruments known for reducing poverty and inequality and for laying the basis for sustained economic growth. The Asian Development Bank (1989) maintained that an expansion of educational opportunities on equitable basis was one of the most powerful tools governments have to improve the living conditions of people. The bank found a

strong positive relationship between the average number of years of schooling and average annual change in GDP per capita over a period of 10 years in 13 Asian developing countries. Unfortunately, many of the developing countries have average levels of education in the 21st century that were achieved in many Western countries by the early decades of the 20th century (Schliecher, 2015). Poor quality of education leaves many developing countries in what amounts to permanent state of economic recession. Many developing countries, Indonesia included, are struggling to change their pedagogical practices, mainly because of politico-social beliefs and lack of resources. Also, meagre resources are inequitably distributed, leading to remote and disadvantaged areas deprived of the opportunities to improve. Consequently, too many children are leaving school without mastering a minimum set of cognitive and non-cognitive skills. Irrelevant curriculum and outdated teaching strategies contribute to the widening gap between what children learn at school and what the current demand in the job markets.

In fact, in recent years few educational issues have received more attention than the problem of ensuring that primary and secondary classrooms are staffed with quality teachers. Underscoring the importance of quality teachers Hargreaves asserts, “We live in a time when great vision is called for, when our prosperity and security depend on our capacity to develop pupils and teachers who can understand and be able to engage with the dramatic social changes today’s knowledge society represents”

(1998, p. 161). World-wide, it is accepted that teacher quality is a critical component of successful education system, but there is little agreement about how to provide all students with quality teachers. Sweeping changes have been made in teacher training programs because “identifying pedagogical elements and asking pedagogically meaningful questions in educational situations are among the most important skills a future teacher needs to deliver quality education” (Cochran-Smith, 2004). There is now a significant awareness in ASEAN countries and many other developing countries to prioritise the need to improve their education system at the foundation level: primary and secondary schools. This paper argues that calibrated primary and secondary education is the bedrock to prepare students for higher education and job market. Ensuing discussion focuses on (a) the importance of quality teacher training and (b) attributes of quality teachers and school leaders

EFFECTIVE TEACHER TRAINING

Learning to teach requires that new teachers come to think about and understand teaching in ways different from what they learned from their own experience as students. Lortie (1975) called it *the apprenticeship of observation* referring to the learning that takes place by virtue of being a student for twelve years of traditional classroom settings. During this *apprenticeship* phase students closely observe their teachers’ teaching styles. They learn to be critical and appreciative of different teachers’ approach to teaching. Therefore this pre-existing

knowledge acts like a filtering device and it can limit the appreciation of new ideas which they are exposed to during teacher training (e.g. training the uncertified teachers in Indonesia). It can block their professional development. Teachers who are influenced too much by pre-existing knowledge tend to stick to outdated teaching methods. If their initial understanding is not engaged, they may fail to grasp the new concepts and information, or they may learn them for the purpose of a test but revert to pre-conceptions outside the classroom. It is essential to successfully prepare effective teachers and teacher education should lay the foundation for life-long learning. Given short period available for preparing teachers and the fact that not everything can be taught, decisions must be made about content and teaching strategies necessary in effective teaching process.

Learning to teach is a process that occurs across the professional lifespan where beginning and experienced teachers and teacher educators need to engage in similar intellectual work over the lifespan. It implies that teacher learning is not simply about learning to do certain things in classrooms because those actions are assured to have uniform results for all students or because wise teacher educators advocate those actions. “Rather learning to teach is a matter of all participants in teacher education (beginning and experienced teachers alike, school and university-based educators alike) working together as teachers but also learners over the long haul and across the professional lifespan..... They work together as inquiry communities

to make their ongoing learning visible and accessible to others and thus offer their learning as grist for the learning of others” (Cochran-Smith, 2004, p. 131). In their influential book *Professional Capital: Transforming Teaching in Every School* (2015) Andy Hargreaves and Michael Fullan outline the type of training which makes a good teacher. Initial training for teaching should involve extensive practice in schools, guided by expert practicing teachers. It should also include study of theories of learning, research in psychology, cognitive sciences, some understanding of how education systems work in different countries. There should be continuous opportunities for Professional Development.

While it is important for pre-service teachers to have opportunities to develop effective classroom teaching skills to consolidate their knowledge of curriculum, it is equally important that there are opportunities to assimilate what they are learning from their experience. Teacher learning is now viewed as a continuum, beginning with pre-service and continuing throughout a teacher’s career. Ongoing professional learning is seen as very important if a teacher is to be an active participant in schools or learning communities. Schools are being developed as learning communities with a central focus on learning and the importance of educative dialogues as a basis for building school-community relationships (Smyth, Down and McInerney, 2008, p.50). Now professional experiences in effective education systems are structured to include an emphasis on the development of learning from experience.

In short, effective teaching educational programs balance the knowledge and skills pre-service teachers acquire through their coursework and the practical skills they rehearse and develop during school experiences (Allen and Wright, 2013). For this reason, a close relationship between schools and teacher education providers can greatly enhance quality of pre-service teacher training. Institutes of teaching should build professional communities to focus on student learning, collaboration, reflective dialogue, and derivatisation of practice. While pre-service teachers are undertaking school experiences, opportunities to practice teaching under the guidance of an experienced teacher can greatly improve outcomes. Levine (2006) suggests that such school experiences should begin early in pre-service teacher training. High quality school experiences rely on the quality of mentoring and support received from supervising teachers (Clarke, Triggs and Neilson, 2013).

COHERENCE: TEACHING STANDARDS AND THE DESIGN OF EFFECTIVE TEACHER EDUCATION PROGRAMS

An effective teacher education program ensures its graduates meet standards for what beginning teachers should know and be able to do. Coherent programs are built around a consistent vision of good teaching, one that pervades course selection and planning. Courses are carefully sequenced and built on each other and around a guiding theory of teacher development and what it takes to learn how to teach

and move from concerns about self to concerns about impact on students (Korthagen et al., 2006). Coherence is increasingly being acknowledged to be an important feature of best practice in teacher education programs (Levine, 2005; Darling-Hammond, 2005).

Darling-Hammond and Bransford (2005) identify three questions that developers of teaching standards typically aim to address.

- What kinds of knowledge do effective teachers need to have about their subject matter, about the learning process, and development of their students?
- What skills do teachers need in order to provide productive learning experiences for a diverse set of students, to offer informative feedback on students' ideas, and to critically evaluate their own teaching practices and improve them?
- What professional commitments do teachers need to help every child succeed and to continue to develop their own knowledge and skills both as individuals and as members of a collective profession?

BUILDING THE CAPACITIES OF BEGINNING TEACHERS

The pre-formal phase of learning to teach is the student life for 12000 hours spent in primary and secondary school. During this *apprenticeship phase* students closely observe their teacher's teaching styles. They learn to be critical and appreciative of different teachers' approach to teaching. Therefore,

this pre-existing knowledge acts like a filtering device and it can limit the appreciation of new ideas which they are exposed to during their teacher training. It can block their professional development. Teachers who are influenced too much by pre-existing knowledge tend to stick to outdated teaching methods. During teacher training courses they make adjustments to pre-existing knowledge which is essential to learn to be a teacher. If their initial understanding is not engaged, they may fail to grasp the new concepts and information or they may learn for the purpose of a test but revert to preconceptions outside the classroom. To develop competence in an area of inquiry that allows them to 'enact' what they know, teachers must have a deep foundation of factual and theoretical knowledge, understand facts and ideas in the context of conceptual framework, and organize knowledge in ways that facilitate retrieval and action. Thus, to successfully prepare effective teachers, teacher training should lay the foundation for life-long learning. Given short period for preparing teachers and the fact that not everything can be taught, decisions must be made about the content and strategies are most likely to prepare new entrants to be able to learn from their own practice, as well as the insights of other teachers and researchers.

Even in the developed countries research evidence is scarce for the amount and type of content knowledge, pedagogical knowledge and school experiences required by the beginning

teachers. There are consistent patterns in research findings about pre-service teacher education and an emerging consensus in the literature on the characteristics of teacher education programs known to produce effective teachers. Recent research on teaching and learning particular subject matters is building a firmer foundation for what beginning teachers should know and able to do. There is now a firmer research foundation identifying the pedagogical skills that teachers need in order to provide quality opportunities for teachers to learn. Research is also providing greater understanding of the processes that enable future teachers to learn how to teach and greater clarity about the professional *attributes* teachers need. Darling-Hammond and Bransford (2005) provide one of the most comprehensive reviews of the knowledge base for teaching and its implications for teacher education curricula and pedagogies. They recommend that every preparation program should provide opportunities to master knowledge, skills and disposition related to:

- Learners and their development within social contexts;
- Subject matter, including how pupils learn content-specific knowledge and which subject-specific pedagogies and curricula are appropriate to various educational purposes;
- Teaching, including how to create, use and interpret effective and appropriate instructional, assessment and management strategies.

Teacher education programs are being designed to provide materials and resources to support teachers to build skills and methods for assessing their achievement. Extensive research shows that a teacher's ability to use skills effectively depends on the depth of their understanding of the subject matter in question. Research shows that subject matter knowledge and pedagogy are intimately related. How students learn and what teachers need to know and enable to help them learn depend on what they are learning.

Current research has provided greater understanding of the processes that enable future teachers to learn how to teach and greater clarity about the professional attributes teachers need if they are to help every child succeed. (Hammerness and Darling-Hammond (2005) developed a framework which includes shared educational values; a guiding vision of good practice; deep knowledge of content, pedagogy, student and social contexts; conceptual tools (such as learning theories); a repertoire of teaching practices (such as designing unit plans); and dispositions (such as the disposition to reflect and learning from experience). Research suggests that teachers benefit from participating in the culture of teaching, working with the materials and tools at teaching practice, examining teaching plan and student learning with matter (Hammerness and Darling-Hammond, 2005, p.405).

The wide variation in school and classroom contexts in typical profes-

sional experiences means that it is difficult to reinforce consistent expectations about the kinds of skills that pre-service teachers must practice while in schools (Greenberg et al., 2011).

INDUCTING PRE-SERVICE TEACHERS

Purpose of teacher induction is to improve retention and performance to both enhance and prevent the loss of teachers' human capital, with the ultimate aim to improve growth and learning of students (Ingersoll and Strong, 2011, p. 225). In some countries new teacher graduates are required to pass additional tests of professional knowledge. In Chinese Taipei the process of achieving certification was found to be particularly demanding. Pre-service teacher training to be effective must take the following steps:

- Facilitate linkages between teacher education providers and schools;
- Provide more opportunities to spend time in classrooms where they can be mentored by effective teachers;
- Professional development should focus on what students are to learn and how to address problems students may have in learning;
- Involve teachers in identifying what they need to learn and developing their learning experiences;
- Be primarily school-based and built into day-to-day teaching;
- Provide opportunities to gain an understanding of the theory underlying the knowledge and skills being learned.

The most effective professional learning takes place at school level as teachers collaboratively engage in planning, assessing and evaluating students' progress and reflect on their experiences with students. Such school-based support depends heavily on school leaders, quality of mentoring during practicum and availability of conveniently located resources.

Professional experiences play a central role in teacher education by providing opportunities for pre-service teachers to practice and develop their teaching skills in a school environment. Beginning teachers experience stress and high rates of attrition, which in turn, may be attributable to insufficient time developing an understanding of the profession during initial teacher education (Nahal, 2010).

The central components of an effective professional experience have been derived mostly from research assessing student perceptions of the most influential aspects of their school experiences. The most important element at the pre-service stage was access to a high quality clinical practicum (Berhstook-Sherratt et al., 2014, p.8).

Role of supervising teacher as a skilled mentor in promoting school is crucial. A good mentor is committed to the role of mentoring accepting the beginning teacher, skilled at providing instructional support, effective in different interpersonal contexts, model of continuous learning and communicates hope and optimism (Rowley, 1999). Literature on best practice of mentoring principles revolve around programs that

- are guided by professional standards;
- involve mentoring where mentors are carefully selected for their expertise and receive ongoing training;
- include classroom-based learning opportunities for new teachers; provide continuing professional development;
- are supported through the provision of resources.

Teacher training has been university-dominated. Many initial teacher education programs (e.g. in Australia and the USA) have been in excess of the minimum requirements. In England 2/3rd of graduate teacher training is allocated to professional experiences. This extended professional experience has a strong connection between theory and practical experience and schools and universities share an understanding of the purpose of professional experience with students. Levine (2006) advocates for professional experiences commencing at the beginning of teacher education and providing opportunities to immediately relate university learning to classroom experience where classroom experiences can be discussed at university shortly after the event. The field experience component of the curriculum begins early and provides immediate application of theory to real classroom situations (Levine, 2006, p. 81).

In the USA, Australia and the UK excellent examples of strong partnerships are emerging. “.....the most powerful programs require students to spend extensive time in the field throughout

the entire programs, examining and applying the concepts and strategies they are simultaneously learning about their courses. Candidates work alongside teachers who can show them how to teach in ways that are responsive to learners while they take interwoven coursework. Such programs typically require at least a full academic year of student teaching under the direct supervision of one or more teachers who model expert practice with students who have a wide arrange of learning needs” (Darling-Hammond, 2010, p. 10). Research evidence suggests that extended professional experience is a feature of educational programs that prepare high quality teachers for the classroom (Darling-Hammond, 2012; Ure, 2009).

Early timing of the first professional experience enables prospective teachers to preview the profession and determines early in their training whether they are committed to a teacher career (Gomez et al., 2009). The transition from pre-service teacher to professional teacher has been acknowledged to require targeted support (American Federation of Teachers, 2012). This transition involves the process of being socialised into a new school environment as well as growing and adjusting to the expectations of a new professional role (Ingersoll and Strong, 2011).

INDUCTION PERIOD

Induction is regarded as a process that commences from the time a student enters a pre-service program and continues for at least a year after s/he enters the profession (Caldwell and Sutton, 2011, p. 93). This period is filled with

new learning and challenges in addition to professional teaching expectations (AITSL, 2014). During induction period new teachers need additional opportunities to develop classroom management skills. Induction period also helps screening teachers for quality assurance or teacher quality using standards-based tools. Standard-based teacher performance assessments have the potential to inform personnel decisions, but also leverage improvements in preparation, mentoring and professional development (Darling-Hammond, 2010, p.1).

Induction programs are a way of formally supporting new teachers as they transition into the profession. In Australia 95% of Australian lower secondary teachers work in schools where their principals report the availability of formal induction programs for new teachers to the school (OECD, 2014). This rate is compared with 100% in Singapore and 53.5% in Finland. Research indicates that induction programs have positive influence on teacher retention (Kelly, 2004). In the USA, Headen (2014) found that within the first three years, a third of new teachers decide to leave the profession and a large proportion of these are likely to be those who show the most promise. An induction period for new teachers is considered to be one way of addressing these problems as it is designed to provide the support required to transition successfully into the profession and in doing so mitigate the poor morale that can lead to a desire to exit the career.

ASSESSING PRE-SERVICE TEACHERS' PERFORMANCE

Authentic assessment of the pre-service teachers' performance requires pre-service teachers to deploy combinations of knowledge skills and dispositions in their professional life. Authentic assessment makes the core aspects of teaching visible and measurable against a set of agreed standards. Authentic tasks engage pre-service teachers in processes that are necessary to act professionally in planning curriculum units for a specific group of students, designing episodes of teaching and evaluating the effectiveness of their teaching. Authentic assessment therefore requires the pre-service teachers to be explicit about their thinking and decision-making in designing teaching episodes to reference the sources and rationale for their ideas and reflect upon the actual teaching experience and plans for revising and redesigning the teaching episodes. This dissolves the division between theory and practice that adds to the professional knowledge of teaching.

PROFILE AND PEDAGOGICAL PRACTICES OF HIGH PERFORMING EDUCATION SYSTEMS

World-wide, it is an acknowledged confession that promoting teacher quality is a key element in improving primary and secondary education. In the USA *'No Child will be Left Behind Act'* (2001) was passed to provide quality education by quality teachers. In fact, Global Ed-

Education Reforms Movement (GERM) originated from England's Educational Reform Act (1988) and the process accelerated with No Child Left Behind Act and the Race to the Top reforms in the USA. No Child Left Behind means every child will get good education measured by standardized tests in math and science from grade 3 to 8. If a child fails the test, s/he is judged not to have received good education from the school, and the teacher and school need an improvement. Nations around the world are now standardizing their curricula to fit to international student tests and students study learning materials from global providers. These reforms are being advocated by World Bank, OECD, governments and private corporations. Benchmarking for the successful school system are the PISA standardized tests which give a strong indication whether schools and teachers are doing a good job. A school system is successful if it performs above the OECD average in mathematics, reading literacy and science and if students' socioeconomic status has a weaker than average impact on students' learning outcomes.

Almost every country in the world is subject to the grip of educational reforms. As high quality teachers and high quality teaching are emerging keys to improved national performance, high performing countries place high priority on recruiting, developing and retaining high quality teachers. More than two-thirds of OECD countries have increased school choice opportunities for families with the perceptions that market mechanisms in education would allow equal access to high quality schooling for all.

Increase of Charter Schools in the USA, Secondary School Academies in the UK, free schools in Sweden and private schools in Australia are some of the examples of expanding school choice policies.

World's most successful education systems based on international standardized tests (PISA Ranking, OECD, May 13, 2015) are Singapore(1), Hong Kong(2), South Korea(3), Taiwan(4), Japan(4), Finland(6), Estonia(7), Switzerland(8), Netherlands(9), Canada(10), Poland(11), Vietnam(12), Germany(13), Australia(14), Ireland(15), Belgium(16), New Zealand(17), Slovenia(18), Austria(19), and the UK(20). As a region Southeast Asian countries top the list of five most successful educational systems. They are Singapore, Hong Kong, South Korea, Chinese Taipei (Taiwan) and Japan. These countries attract most talented teachers in the most challenging classrooms, so that every student has access to excellent teachers (Schleicher, BBC, May 13, 2015). Most developed countries invest heavily in improving the quality of human capital because they realize that it is critical for their economic competitiveness and growth. Their focus is on producing 'knowledge workers' whose operationalized skills enable them to work productively.

The most common ground among these high performing education systems is the importance of keeping excellent teachers in the classroom, continually building teachers' pedagogical knowledge and skills, and recognizing and rewarding expert practice. These education systems engage teachers to set their own teaching and learning targets

and teachers crafting productive learning environments. A major aim in these leading educational systems is to develop teachers as professionals and expert in their area of teaching. Curriculum is not text book driven or fragmented, but it is thematic, project-based and integrated.

Globally, the most successful national school systems (as measured by national and international tests of student achievement) have identified six broad policy lessons for the establishment of effective policy in the area of teacher development. They are to:

- ensure that talented people are attracted to a career of teaching;
- require all teachers to have tertiary level formal academic and teacher education qualifications;
- identify procedures to recruit and select trainee teachers from the top-third of graduating secondary students;
- address issues of teacher supply and demand to ensure the continuing high quality of teacher pre-service and continuing professional learning programs;
- high quality control mechanisms are in place to ensure present and future demands are met;
- establish measures to build the capacity of school leaders and classroom teachers to deliver high quality teaching and learning (Darling-Hammond, 2006).

Students who are taught by such transformative teachers exhibit an understanding of the concepts targeted in

instruction that are integrated, more coherent, and higher level of abstraction than the understanding achieved by other students (Hattie, 2003).

The countries which have demonstrated excellence (e.g., Finland, South Korea, Singapore, Japan, Hong Kong) in teaching and learning have ensured to raise the status of teaching as a career and concerted efforts are made to attract quality graduates for teaching training. Barber and Mourshead (2007) studied some of the top performing school systems of different countries. They found that (i) increase in salary, (ii) rigorous process to select entrants to teacher education, and (iii) control over the numbers of students undertaking teacher education courses can make huge impact on improving the teaching-learning process at primary and secondary level. In Singapore, the Ministry of Education selects and employs prospective teachers before they commence teaching (Masters, 2012). In top performing countries students who are enrolled for teacher training have five main attributes: strong academic achievement, high levels of literacy and numeracy, strong interpersonal and communication skills, openness to ongoing learning, and passion for teaching (Masters, *ibid*). These countries control entry to teacher education to match the balance between demand and supply of teachers. High performing education systems place high priority on ensuring that all teachers receive excellent preparation to teach. Teachers with a passion to teach develop high level knowledge of their subjects they teach and use high level pedagogical teaching learning prac-

tices. School environment is deliberately designed to be attractive and friendly to staff and students.

High performing countries recognize that quality teachers are the key to quality teaching and they pay them high salary, good working conditions, and secure and rewarding career path which are incentives for able graduates to join the teaching profession. Research indicates a clear relationship between the academic qualities of applicants for teacher training and levels of teachers' salaries relative to other professions (Chevalier et al., 2007). In some countries (e.g. Finland, Shanghai-China) teachers spend 10-12 hours per week. This creates more time in professional collaboration, planning and monitoring student achievement (Barber and Mourshed, 2007; Morris and Patterson, 2013). These countries recruit teachers from the top third of each cohort graduating from their school systems: the top 5% in South Korea, top 10% in Finland, top 30% in Singapore and Hong Kong (Barber and Mourshed, 2007, p.16). "The recruitment and selection of highly qualified students for teacher education is the most common strategy used by educational systems with high quality assurance" (Tatto et al., 2013, p. 34). In Japan, teachers must successfully complete rigorous induction programs before teachers are given permanent status. In Canada, admission requirements are decided by individual training institutions but they all select trainees from the top 30% of cohorts and prospective pre-service teachers must have high Grade Point Average to gain entry to teacher training (Morris and Patter-

son, 2013). In Chinese Taipei students must enrol to master/doctoral program and pass the national university entrance examination which has mathematics as a required test subject (Ingvarson, et al., 2010, p.175). In Finland entry to teacher education is highly selective. Singapore has implemented a single, state wide selection process for pre-service teachers that is managed jointly by Human Resources Department of Ministry of Education and National Institute of Education (Barber and Mourshed, 2007).

Teacher training institutes in these countries place high priority on building teachers' capacities to implement high priority on building teachers' capacities to implement effective teaching methods. Research highlights the essential importance of teachers' mastery of the subject they teach (content knowledge) and their mastery of effective strategies for teaching that content (pedagogical content knowledge).

EDUCATION REFORMS IN ASEAN

ASEAN region represents a mosaic of different cultures, religions and diversity in technological and economic development between high-end (e.g. Singapore) and low-end nations (e.g. Laos, Cambodia and Myanmar). With 650 million people and \$2.5 trillion economy ASEAN is the 8th largest economy in the world. In most countries of the region (Singapore being an exception) about 45% of the population is below the age of 35 years of age. Even though literacy rate has improved appreciably, the provision of quality education to all is still a distant goal. In 2009, ASEAN signed a roadmap to achieve the goal

One Vision, One Identity, One Community but diverse cultures, languages, national identities and different visions of the educational policy makers make it hard to have common approach to transform education systems. However, in recent years teacher training in a number of ASEAN countries has become the focus of educational reforms in order to improve the quality of education.

The Office of the National Education Commission of Thailand with the collaboration of many international organisations organized International Forum on Educational Reform (2009). The purpose of the Forum was to (a) review major trends and processes of reform implementation initiated at national and local levels; (b) identify key success factors of reform implementation in learner-centred approach, school-designed curriculum and performance based management; (c) demonstrate empirical techniques and changes resulted from implementation at central, community, school as well as classroom levels; and (d) create an international network of institutions, policy makers, researchers engaged in education reforms. But quality of teaching still remains poor. "It is questionable if our students get quality time from their teachers to enable them excel academically" (*Bangkok Post Editorial*, 25 March, 2015). A recent survey (2016) of 1800 principals in Thailand revealed that only 1/3rd of the teachers in Thailand implemented child-centred teaching. In fact, it is also very typical of most ASEAN countries. Lack of accountability on the part of the principals, school directors, inadequate funds, big class sizes, poor teacher training,

teacher-centred teaching are some of the identified problems. Now, Thailand has embarked on an ambitious program to seek help from the OECD countries.

In Malaysia, there is a disparity in the quality of education provided in English medium private schools (mostly attended by the high socio-economic status students) and government schools with Bahasa Malay as the medium of instruction. Currently, Malaysia has made appreciable changes in curricula with a focus on skills, knowledge, creative thinking and group problem solving. Teachers' performance is subject to demonstration of improvement in class and up-skilling through professional development.

In Vietnam, education has had always a central role in society. For a Vietnamese youth a university degree is the entry ticket to the middle class and promise to professional job. Enrolment in higher education has grown from 162, 2000 in 1992 to two million in 2013. Like most ASEAN countries class sizes are large and most teachers generally use teacher-centred pedagogy and curriculum is old-fashioned and teachers are low-paid. Current priorities of the Ministry of Education and Training are to produce quality books written by quality authors, selected from teacher training schools and edited by the most qualified people. There is a big move to reform teaching and testing programs. Such initiative are reflected in an improved performance of Vietnamese students in PISA international standardised tests. Vietnamese students performed better than their peers in the UK and USA (PISA, 2012). Of the 76 countries

ranked on PISA score Vietnam ranked 12/76 compared to the UK (18/76), USA (20/76), Singapore (2/76), Indonesia 69/76. World Bank attributes this Vietnamese success to high investment in teacher training, committed school leadership and focused curriculum. "Vietnam is fast learning from the practices of best education systems and ready to commit financial support that is needed. Curriculum is designed to focus on pupils gaining deep understanding of core concepts and mastery of core skills. Twenty one percent of government expenditure is on education" (BBC, 17 June 2015).

With 50 million students, 2.6 million teachers and 250, 000 schools Indonesian school system is the third largest in Asia, only behind China and India. With 84% of Indonesian schools administered by the Ministry of Education and 16% by the Ministry of Religious Affairs, certified and uncertified teachers as well as permanent teachers (civil servants) and teachers on contract make Indonesia a very complex education system, a battleship to steer so to speak. Seventeen percent students attend college/university, only quarter of them come from the rural areas. In 2001, Indonesian government granted regional autonomy, allowing each district to manage facilities and employ teachers. One unintended outcome of this administrative decentralization was that better teachers were employed in richer districts because they paid them higher remunerations. Consequently, educational disparities can be seen across geographical areas, Inner and Outer Islands, and among groups of people with

varying income (Muhamin, 2001). Even though according to Act 14/2005 all teachers in Indonesia should be certified and must hold S1 degree, a large number of primary and secondary school teachers in Indonesia are not only poorly trained but they are uncertified with D2 diploma. There is an uneven distribution of quality teachers as well as mismatch of teachers where they have to teach subject for which they are not qualified. Pre-and in-service teacher training is largely theoretical, lacking practical elements and fails to prepare teachers effectively. As teacher salaries are low, high rate of teacher absenteeism is also a big problem as many teachers do a second job to supplement their income. Problem of low student performance is more common in Madrasahs and pesantrens where many teachers are still not well qualified. Problem of poor quality of teachers is further compounded as different teacher training institutes in Indonesia have different standards of in-take of graduates for teacher training. Many freshly graduated teachers lack adequate pedagogical skills and content materials.

Lagging behind in terms of addressing the issues of equity and quality of education to all parts of Indonesia and to all sections of the society means that those who are already advantaged are getting better educational opportunities compared to those who are already disadvantaged. Such a scenario is detrimental for sustainable development of human resources on equitable basis. By extension it may be argued that if this issue is not addressed appropriately it has the potential for social unrest. To maintain peace and harmony all citizens

do have the right to equal opportunity to enhance their life chances. A comprehensive review of the way teachers are prepared, the mechanism by which they are posted to primary and secondary schools and the approach they adopt to deliver education is overdue. Great vision is called for an improvement of community access to high quality of education for all and development of curriculum laced with 21st century skills for the workforce. Teachers need a new kind of preparation—one that enables them to go beyond covering the curriculum and teaching to instil passion for student learning.

During the past decade bold steps have been undertaken to certify all teachers, and making S1 degree the minimum bench mark for a teaching degree and New Curriculum has been designed. In 2005, Indonesian government passed a law that aimed to establish ‘*certification*’ mechanism to ensure teacher quality and introduce ‘*New Curriculum*’. The law required a teacher to have college/university degree, credits from post graduate teacher professional training and a minimum of 24 hours teaching per week to become ‘*certified*’. Attached to certification was an attractive salary incentive which attracted large number of students in teacher training programs. In passing the Teacher Education Law the government intended that by 2015 only ‘*certified*’ teachers would be allowed to teach (World Bank, 2010, p.8). The number of students enrolled in teaching education program increased from 20,000 in 2005 to more than 100,000 in 2010 (Chang et al., 2013). Even though the new policy has not made any signif-

icant impact in international PISA ranking of Indonesia, the quality of training of teachers is improving and some gains are noticeable in the learning of students. Some modifications have been made in the implementation of New Curricula but the progress is uneven. Sustained effort in teacher training and rigorous selection procedure to recruit new graduates for teacher training will reduce the glut of graduates rushing to become teachers and quality of teacher training will improve.

More teacher educators are given the opportunity to visit the educational institutions of the successful education systems and overseas educators are invited by the teacher training institutes in Indonesia. Nevertheless, It is important to consider contextual factors when assessing whether good practice as identified in the international literature is transferable across Indonesian educational institutions. American research indicates that over the 20th century there have been many excellent examples of well-proven teaching practices but even the best of them was rarely adopted by more 20% of teachers (Cochran-Smith, 2004). Large number of teacher development programs developed in the USA and the UK are hard to operationalize in the developing countries where teaching is often seen as second-class occupation for people whose academic results are not good enough to allow them entry to more prestigious careers like medicine, engineering and law (UNESCO, 2014). Quality of teacher graduation from a teacher education program, and their eventual effectiveness in the classroom, depend upon the quality of

students entering for teacher training (Feuer, Floden, Chudowsky and Ahn, 2013; National Research Council, 2010). Certainly, there is a great deal of merit in undertaking such steps to improve teacher quality. However, large percentage of the current teaching force still lacks innovative pedagogical skills, necessitating the need for sustained efforts to change the mind set of teachers to leave behind the twenty century teacher-centred approach. A big ask! But necessary as students of today learn differently than the ways their teachers learnt. This author spent considerable amount of time (four years) teaching at a premier teacher training university in Java Barat and presented papers and workshops in many universities across Indonesia. Personal observations, formal and informal discussions with academics, pre-service and in-service teachers and uncertified teachers revealed that teacher preparation in Indonesia still needs to be far more effective. One single-most reason for the ineffectiveness of New Curricula is the defective process of its implementation and lack of appropriate resources for teachers. Role of institutions of higher education and teacher educators is crucial in preparing pre-service teachers with evidence-based pedagogy. Focus of teaching must be for deep learning, problem solving, working individually as well as in groups integrating ICT skills. Well prepared teachers with a passion for teaching have the capacity to ignite intrinsic desire for learning. New Curriculum introduced in Indonesian schools will succeed if teachers are well trained in contemporary pedagogical skills and they take it their mission to

do their job as professionals. For teacher training courses motivated graduates with a passion for teaching profession should be selected and prepared with an approach discussed earlier in this paper. Strong, effective policies and strategies that are aligned with the international evidence for attracting, recruiting, developing and retaining sufficient numbers of quality teachers are still lacking. Poorly educated school students become poorly educated teachers, incapable of improving the learning of their students perpetuating the status quo.

Nation-wide uniform policy for teacher preparation will ensure quality teachers to all schools. Those teachers who are already in service need intensive professional development sessions led by expert leaders in education. Time is ticking away. Ignoring the role of well-trained teaching force will cost any nation dearly. A developing country like Indonesia need to redouble its efforts to train effective teaching force and children in all parts of the country deserve to be taught by well qualified teachers.

SUMMARY

In general, research on the type and effectiveness of pre-service teacher education in developing countries is scarce. Available evidence suggests that pre-service teacher education in ASEAN region tends to rely on out-of-date, disjointed, incoherent curricula with little integration of pedagogical content skills in initial training, with distinct emphasis on content knowledge and pedagogy, but little integration between fields of study (Levine and Stuart, 2003; Ka-

goro, Chirure and Simiyu, 2013). Teacher educators lack relevant experience, have little autonomy and lack adequate teaching resources and teaching in poor conditions lack motivation. Meaningful gains will take place only when teachers are internally motivated. Such internal motivation will take place if teachers are fully trained about the value of the new curriculum, resources are provided and support system (particularly in isolated schools) is adequately made available.

To sum up, as high quality teaching is now widely acknowledged to be the most important school-level factor influencing student outcomes, global focus is on training quality teachers at all levels: pre-service training, induction for beginning teachers and ongoing professional development for in-service teachers. Global consensus is emerging in favour of the argument that contents in teacher training, informing the design and structure of teacher education programs, equipping teachers and teacher educators with research skills, encouraging teachers and teacher educators to conduct their own research are the main areas which must be strengthened through research-based practices and action research. Best practice teacher education programs require best practice systems for selecting, preparing and inducting teachers into profession. In successful education systems teachers are given rigorous training not only in teachers' particular discipline but also in connecting with students, mentoring, managing a classroom and assessing aptitudes. Their focus is on improving the

quality of teachers, innovative school leaders and delivery of high-calibrated curricula with best pedagogical skills through ongoing quality training.

Discussed earlier, challenges of the 21st century are manifold. Digital era demands workforce with skills to handle fast changing technology and cope with changing political, social and economic environments. A meaningful and transformative education is the one which nurtures a human flourishing, building on both the desirable features of the past that has provided us with a rich legacy, and an openness to the future in which young people can be active and imaginative agents (Ponte, 2007). Educators have a professional responsibility to forge best practices to educate the citizens of tomorrow. "If professional groups wish to retain the privileges of teacher prerogative and choice that we value so dearly then the price we must pay is constant attention to new knowledge as a vehicle for fine-tuning our individual and collective views of the best practice (in education). This is the path other professions, such as medicine, have taken in order to maintain their professional prerogative and we must take it too" (Pearson, 1999, p. 245). A true learning society is socially inclusive, regardless of race, religion, gender and geographical location. It provides life chances for all people to develop to their fullest potential. A fast developing country like Indonesia has got immense human and natural resources. Value-added (with quality education) human resources have the capacity to make a wise deci-

sion to use natural resources for sustainable development. Indonesian athletes at a recently held (August, 2018) Asian Games brought honour to the nation by winning 98 medals (31 gold, 24 silver, 43 bronze). To make a century we need one from teacher educators to produce quality teachers and one from teachers to prepare students to face the challenges of 21st century. Goal is achievable

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