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A LEADERSHIP
CHALLENGE

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Professor Dr.
Mohd. Majid Konting



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CHALLENGE**

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ABSTRACT

Many educational policies, strategies and action plans are developed based on the available theories and best practices. As learning is central to educational success, this lecture reexamines the field of education, particularly learning and teaching, and how research findings have informed policy development and practices in effecting teaching for quality learning – meaningful change in the knowledge, skills, attitude and behaviour of the learner. First, it explores the dynamic field of education, learning and teaching, zooming into the changing focus of teaching towards student-centred, self-determined, deep and meaningful learning in the wake of 21st century education. Second, teacher effectiveness will be scrutinised to understand how the notion, amid differences in its conception, could bring about impactful teaching on learning. Third, using four major studies undertaken over a span of three decades, teacher and lecturer beliefs and their classroom practices will be analysed to investigate their struggle in implementing the recommended student-centred pedagogies, culminating in the barometer of policy success in educational reforms, and arguing the case of improving teaching for quality learning. The first study highlights how ‘effective’ teachers grapple to understand the concept of student-centredness and teacher effectiveness, implying that continuous empirical investigations are necessary to embed their beliefs and practices that are characteristics of effective teaching for quality learning and, hence, to illuminate the progress of curriculum development and implementation in the uniquely Malaysian context. The second study, the recipient of the Washington Symphony’s International High Notes in Education Award for the year 2000 and has been emulated in the Korean Smart Education initiative, indicates the level of teachers’ and students’ knowledge about smart teaching and learning, confirming the widely held belief that issues

of information dilution are widespread in the top-down innovation process, thereby suggesting that a more engaging teacher training strategy should be employed in implementing successful innovation. The third study emphasises the necessity for high order thinking skills as well as a more effective model of teacher recruiting, training, and career development that have become the thrusts of the Malaysia Education Blueprint 2013-2025 (Preschool to Post-Secondary Education). The final study encapsulates the findings of 15 student-centredness inquiries in higher education institutions that express the demand for a more effective training programme on pedagogy and the need to develop leadership in the pursuit of teaching for quality learning.

Fourth, based on the research findings, teacher and academic training and development will be reexamined to facilitate teachers and lecturers. Finally, this lecture explores educational leadership, a contentious but promising academic field of research that has tremendous potential to facilitate the transformation agenda of teaching and learning being put forward in volumes of policies, strategies and action plans. Indeed, visionary, persistent, engaging, continuous and well-informed efforts to bring substantial and sustainable changes in teaching for quality learning, especially through teacher and lecture development and leadership, are pertinent for educational reform.

THE QUEST FOR QUALITY LEARNING

Education continuously attracts many researchers, parents and the public at large. As a process of facilitating learning, for a person to acquire and transform his or her knowledge, skills, values, beliefs and habits deemed fit for the society where the person belongs, education provides an opportunity for personal growth, development and well-being for the person to be functional and relevant in society, as coined by Plato in the *Republic* (circa 380BCE). In the case of Malaysia, the aims of education are succinctly stipulated in the National Philosophy of Education (MOE, 2015: 14):

“Education in Malaysia is an ongoing effort towards further developing the potential of individuals in a holistic and integrated manner, so as to produce individuals who are intellectually, spiritually, emotionally and physically balanced and harmonious, based on a firm belief in and devotion to God. Such an effort is designed to produce Malaysian citizens who are knowledgeable and competent, who possess high moral standards, and who are responsible and capable of achieving a high level of personal wellbeing as well as being able to contribute to the betterment of the society and the nation at large.”

The importance of education for personal and societal growth, development and well-being is evident. In every society and nation, planned efforts are designed and implemented to achieve these educational aims. In ensuring that education remains relevant in sustaining and enhancing its aims, these efforts are reviewed, modified and changed over time to cater for changing challenges. One such effort is the introduction of the Malaysia Education Blueprint 2013-2025 (Preschool to Post-Secondary Education),

better known by its acronym MEB (School), and the subsequent Malaysia Education Blueprint 2015-2025 (Higher Education), also known as MEB (HE). The MEB (School), which was officially launched on 6 September 2013, highlights 11 shifts that cater for the six (6) key attributes needed by every Malaysian child to be globally competitive. It claims to prepare future Malaysian generations with high order thinking skills in response to the rise in international education standards and the challenges of 21st century education as well as increased public and parental expectations of educational attainment and policy (MOE, 2013). Likewise, in an effort to equip Malaysians towards becoming a high-income nation by the year 2020, the MEB (HE), which was inaugurated on 7 April 2015, outlines 10 shifts that are believed will spur continuous excellence in the higher education system, with the aim to pursue a generation of holistic, entrepreneurial and balanced graduates (MOE, 2015).

Both blueprints claim that their aims are aligned with the National Philosophy of Education (NEP). Both aspire to the similar vision of producing holistic, entrepreneurial and balanced school leavers and graduates who are intellectually, spiritually, emotionally and physically balanced and harmonious, based on a firm belief in and devotion to God. In ensuring that the school leavers and graduates possess these attributes, and are competitive and successful in their career and life in the 21st century, both blueprints recommend that teaching and learning ought to be student-centred. In essence, both blueprints demand teaching for quality learning. Traditionally, teaching is for transferring knowledge and learning is to gain knowledge. Akin to the many educational policies and initiatives introduced earlier, these new educational blueprints are hailed as being the answer to the existing educational problems and as the bastion of future educational challenges for the nation.

In this lecture, teaching for quality learning refers to effective teaching that results in meaningful learning. This is within the context that students will understand better what they have learned if they are given the chance to construct their own meaning for each learning activity that they are involved in, as opined by Biggs (2003) and Biggs and Tang (2011a). Meaningful learning, Biggs (2003) further argues, involves self-reflection on the way students use their knowledge to solve problems, make decisions, as well as, understand and develop concepts. Moreover, meaningful learning encompasses inquiry and self-realisation processes, assumptions underlying a thing or an event, accuracy of assumptions, conclusions, belief as well as moral differences and ethics, from what they have learned (Biggs, 2003). The outcome of quality learning is meaningful change in knowledge, skills, attitude and behaviour of the learner as aspired by the curriculum and its respective teaching (Biggs, 2003; Biggs & Tang, 2011a).

Further, the words teacher, lecturer, academician and educator will be used interchangeably to refer to a person who has assumed teaching responsibilities in a school or higher education institution. Likewise, student, pupil and learner refers to a person who has assumed learning responsibilities; whereas school, higher education institution and education institution will be used to refer to an institution that offers education programmes that involve teaching and learning, and school leaver and graduate refers to a person who has completed their primary, secondary, or tertiary education respectively. In particular, Malaysian education institutions refer to preschool, primary and secondary schools as well as tertiary education institutions, including matriculation programmes, teacher training, colleges, polytechnics and universities. As of September 2016, it is estimated that there are 421,828 teachers with 4,873,928 students in 10,180 government primary and secondary schools (see

Table 1), and 79,016 lecturers with 1,253,501 students in 661 higher education institutions in Malaysia (see Table 2).

Table 1 Number of Schools, Student Enrollment and Teachers in Malaysia*

	No. of Schools (EMIS 31 July 2016)	Student Enrollment (APDM 31 May 2016)	No. of Teachers (e-operation 1 June 2016)
Primary	7,772	2,685,403	239,850
Secondary	2,408	2,188,525	181,978
Total	10,180	4,873,928	421,828

*Retrieved from *www.moe.gov.my* on 15 September 2016

Table 2 Number of Higher Education Institutions, Student Enrollment and Academics*

	No of Institutions	Student Enrollment	No. of Academics
Public Universities	20	618,180	33,199 ^a
Polytechnics	34	89,503	7,256 ^a
Community Colleges	94	21,553	2,816 ^a
Private Higher Education Institutions	513	524,265	24,476 ^a
Total	661	1,253,501	79,016

*MOHE (2016). *Soaring Upwards: Let's Talk About Higher Education*. Shah Alam. 24 September 2016

^aAbridged of Figure B-2, *Malaysia Education Blueprint 2015-2025 (Higher Education)* (MOE, 2015). Putrajaya: Kementerian Pendidikan, Malaysia.

THE FATE OF EDUCATIONAL INNOVATION

Evidence, however, shows that many educational policies and innovations, especially with respect to teaching and learning, seldom achieve their stated objectives - some even failed and were retracted (Abdul Rahman, Hussein, Sufean, Simin & Sani, 2014; Fullan, 2001; Hussein, 2008, 2012; Ibrahim, 2008; Mohd. Majid, 1995, 1997a, 1997b, 1998a, 1998b, 2003a, 2008a, 2008b, 2011a, 2013a; Mohd. Majid, Mokhtar, Mohamad Bilal, Normah & Muhamad Shahbani, 2003; Mohd. Majid, Mohamad Sahari, Raja Maznah, Rosna & Nafisah, 2012; Wan Mohd. Zahid, 2014). The introduction of the New Primary School Curriculum (KBSR) in 1982, and subsequently the Integrated Curriculum for Secondary Schools (KBSM) in 1988, that were specifically designed to transform teaching and learning to be student-centred from the previous teacher-centred approach school curriculum and tailored towards achieving the aims of the National Philosophy of Education, met with glitches and setbacks (Abdul Rahman, *et al.*, 2014; Mohd. Majid, 1993, 1995, 1997a, 1997b). The Smart School project, another top-down national initiative introduced in 1998, to spur the integration of information and communication technology in teaching and learning, also encountered impediments (Ibrahim, 2008; Mohd. Majid, *et al.*, 2003), although the Republic of South Korea and Japan learned from its predecessor, the Dengkil Smart School Project, to go on to launch their successful introduction of Smart Education in 1998 (Kim, 2014). Another policy, the teaching of Science and Mathematics in English, better known by its Malay acronym PPSMI, which was initially introduced in the January 2003 schooling session as a result of the Minister's Council Meeting held on 19 July 2002, amid the government's concerns about the nation's human capital development towards achieving the standard of a developed country and as early preparation to compete in the era

of globalization, is also slowly being phased out, beginning from the 2012 school session (Abdul Rahman, *et al.*, 2014).

Many more educational initiatives to improve the nature and conditions of teaching and learning in schools have been proposed and implemented under the Education Development Plan 2001-2010. The aim is to provide quality education of international standards, to develop highly competitive human capital with K-worker attributes so that they are ICT literate and skillful, able to compete in the local and global arena and possess high self-esteem (MOE, 2001). The Standard Primary School Curriculum (its acronym KSSR) and the Standard Secondary School Curriculum (its acronym KSSM), both purportedly based on learning outcomes and student-centred pedagogy, introduced in stages beginning in the year 2011, have met with glitches when their supposedly school based assessments were only implemented in the year 2014 after much public uproar. Further, a study on teaching and learning in the national education system (Mohd. Majid, *et al.*, 2012) that became the basis for the introduction of the MEB (School), shows that only 36.8 per cent of teaching and learning in the classroom is considered effective in promoting high order thinking skills, a *sine quo non* for 21st century education.

Similar to that in the schools, the teaching and learning policies and initiatives in higher education institutions (HEIs) have faced a similar fate. The Ministry of Higher Education established in 2004, with the vision to transform Malaysia into an excellent international higher education hub, has introduced many policies and initiatives (MOHE, 2007a, 2007b, 2009, 2011a, 2011b; Mohd. Majid, 2011a, 2011b). One of the seven thrusts of the National Higher Education Strategic Plan (NHESP) introduced in the year 2007 aspires to improve the quality of teaching and learning in HEIs so that the graduates produced are competitive and employable

human capital. In doing so, the NHESP advocated that effective learning demands students to be actively involved in student-centred teaching (MOHE, 2007a, 2007b; Mohd. Majid, 2011a, 2011b). Many relevant initiatives were thus introduced to support teaching and learning. This resulted in a review of the HEIs curriculums to be outcome-based in tandem with the implementation of the Malaysian Qualification Framework (MQF) introduced in 2007, e-learning policies and initiatives, programmes for mastery of the English language through on-line (MyLine) means, the development of a Malaysian Soft Skills Scale (My3S) as well as training of academic staff in teaching and learning based on student-centred pedagogies, being carried out enthusiastically at the national and institutional levels (Mohd. Majid, 2013a; Mohd. Majid, Norfaryanti & Nor Azirawani, 2009a; MOHE, 2007a, 2007b, 2011a, 2011b; MQA, 2008). Under the Higher Education Leadership Academy's (AKEPT) Higher Education Learning and Teaching Training Initiatives (HELTTI), 1,035 selected academicians from HEIs were nurtured and trained to be master trainers in at least 17 areas of student-centred teaching and learning pedagogies, with the aim to lead and spearhead the enhancement of teaching for quality learning especially in their respective HEIs (AKEPT, 2013; Konting, Singh, & Idris, 2009; Mohd. Majid, Khatijah & Sidek, 2008a; Mohd. Majid, Zulhazmi & Eminder, 2010; Mohd. Majid, 2013a).

Teaching and learning in HEIs, like in the schools, had previously been characterized by one-way spoon-feeding lectures and exam oriented rote learning (Biggs, 2003; Kennedy, 2016; Mohd. Majid, 1995, 2009a, 2009b). Even after a decade of promoting outcome-based education with the introduction of the MQF, the holistic '...individuals who are intellectually, spiritually, emotionally and physically balanced and harmonious as well as based on a firm belief in and devotion to God' coupled with '...knowledgeable

and competent, who possess high moral standards, and who are responsible and capable of achieving a high level of personal well being as well as being able to contribute to the betterment of the society and the nation at large' (Government of Malaysia, Act 550, 1996: 14), remains largely to be seen. In fact, many HEI graduates who got a maximum cumulative grade point average of 4.0 'fell flat even during the scholarship and job interviews' (Wan Mohd. Zahid, 2014). Many HEI lecturers and their counterparts, namely school teachers, are still struggling to grasp the differences between teacher-centred and student-centred pedagogies, what more of andragogy and heutogogy (Mohd. Majid, *et al.*, 2012; Mohd. Majid, 2013a). Many of them are confused between learning assessments that are supposed to promote individual student's learning and educational evaluations that facilitate improvement of educational inputs, processes and ecosystem, what more their understanding of assessment of learning, assessment for learning and assessment as learning. In fact, many HEI academicians whose core responsibility is to teach and promote student learning, struggle to understand the meaning of learning (Turiman, Kamariah, Zuria, Aminuddin, Ismi Arif, Maria, Fadzilah, Habibah, Mahani, Mohd Isa, Naffi & Soaib, 2012). In essence, little attention is given to deep and meaningful learning that is *sine quo non* for sustainable lifelong learning – the prerequisite that sustains future personal, institutional, national and global challenges. As the aim of teaching is to bring about change in students' behaviour, one wonders what learning and quality learning is all about. Understanding learning can facilitate the 'what' and 'how' of teaching effectively.

A RETROSPECTIVE OF EDUCATIONAL CHANGE

The success of both MEBs in producing holistic, entrepreneurial and balanced school leavers and graduates, like the many exogenous top-down educational innovations introduced previously, will depend on many factors, including factors related to the educational institutions, the institution's faculties and departments as well as the teachers and lecturers involved. In implementing an innovation in the classroom however, the teachers and lecturers are at the core of the teaching and can influence the success of the innovation. As agents of change, teachers and lecturers are responsible for changing the students' knowledge, skills, attitudes and behaviour, as spelt out in the respective school and higher education institution curricula. They are the ones who will implement the recommended student-centred teaching and learning strategies, the MEBs description for quality learning. With the increasing reality of educational innovation imposed in many countries in the past five decades, the part played by teachers and lecturers has, to some extent, been neglected and their participation in the development and dissemination of most planned educational change has been underestimated. Research over the past five decades indicate that attempts at development, dissemination and implementation of educational innovations frequently fail to result in actual changes in practice, partly because the teachers' and lecturers' factor had been overlooked (Fullan, 2001; Hussein, 2012; Mohd. Majid, 1993, 1995, 1997a, 1997b, 1998b, 2011a, 2011b, 2013a, 2013b; Mohd. Majid, *et al.*, 2003; Mohd. Majid, Sharifah, Wan Zah, Mokhtar, Habsah, Foo, Jamaliah & Suria, 2007; Mohd. Majid, Habsah, Wan Zah & Roshafiza, 2009b; Mohd. Majid, *et al.*, 2012; Mohd. Majid, 2013b).

While theory and practice can be used to guide the development and dissemination of such planned changes, it is also important to integrate it with general knowledge on change with detailed

knowledge of the history, cultures, traditions, politics and personalities peculiar to the local setting. It must be remembered that innovation takes place within a context (Abdul Rahman, *et al.* 2014; Hussein, 2008; Kennedy, 2016). For example, unlike in many Western cultures where the term ‘teacher’ can be applied easily to anybody who is formally responsible to carry out teaching, regardless of whether it is in schools or in higher education institutions, the term is only appropriate in reference to those teaching at schools in the Malaysian context. In Malaysian tertiary education institutions, the term ‘lecturer’ is widely used as it is believed to carry a more prestigious academic connotation compared to their school counterparts, though this is not always true. Likewise, the term ‘educational success’ in the Malaysian education system generally refers to successful academic performance in the national centralized examinations for schools and the final examination in the higher learning institutions, where mainly low cognitive level evaluation based on paper and pencil looms high. Other learning domains and their authentic assessment tools and strategies as well as high order thinking skills that have been constructively aligned with the aim of education in Malaysia are neglected (Mohd. Majid, 2013c). Though the term ‘assessment’ has been widely used in the Malaysian education system over the past decade, especially with the delayed introduction of the centralized school based assessment in 2011, many people, including teachers and lecturers are still having difficulty in differentiating the term that aims to improve each and every student’s learning that jells well with the student-centredness pedagogy, as compared to evaluation that aims to improve the overall educational programmes, resulting in both terms being used interchangeably as they are assumed to carry the same meaning. These two similar yet different pertinent educational terms are central to the quest for quality learning in

the transformation of teacher-centred teaching, where the teacher-centredness pedagogy looms high, into student-centred teaching where the student-centred strategy is central, as recommended by both MEBs.

Nevertheless, the lack of research findings relating to ‘developing’ countries, such as Malaysia, tends to increase reliance on foreign educational concepts, such as, the student-centredness pedagogy, in defining quality learning (Fatimah, 2012; Malakolunthu, 2007; Mohd. Majid, 2000, 2013d, 2014a). It follows that these Western findings will have limited value for such countries. As failure to take into account the career situations and cultures of the teachers and the lecturers affected will add ‘injury’ to the educational innovation (Fullan, 2001), there is a need to consider how teachers and lecturers perceive such innovations in teaching and learning as well as, how they implement these innovations in their classroom teaching, in their search for quality learning. These situations have been exemplified in several Malaysian studies, which include the study of the Integrated Secondary School Curriculum in 1995, Smart School Project in 2003, Teaching and Learning in the National Education System in 2012, Learning and Teaching Practices in Malaysian Higher Education Institutions in 2013 and Readiness to Implement MEB (HE) in 2015. Understanding quality learning helps researchers, professional and educational leaders to understand quality teaching that is pertinent to enhance teacher effectiveness in delivering, especially for 21st century education. Furthermore, there is also a need to consider how teachers’ and lecturers’ career development and leadership have been affected during the implementation of those innovations, in the quest for quality learning that is central for successful educational innovations.

UNDERSTANDING LEARNING

Central to the success of educational innovations in the classroom is quality learning. Knowing that learning produces changes in the learner's behaviour in terms of knowledge, skills and attitude, through the act of acquiring new or modifying and reinforcing existing knowledge, skills, values, preferences or behaviours, quality learning refers to the change in those attributes that fit the purpose of education (Biggs, 2003). As educational innovations take place in a context, the aspired students' attributes that need to be changed are embedded in the respective innovations. In the case of Malaysia, those attributes are well spelled out in both the MEBs, and like those in the preceding educational policy and initiative documents, both are aligned with the aim of the National Philosophy of Education in producing holistic, entrepreneurial and balanced graduates.

Many theories of learning have been established that describe how information related to students' attributes are developed, absorbed, processed, modified and retained. Schunk (2014) identifies six main paradigms that have dominated the theories of learning in the past decades; namely behaviourism, cognitivism, constructivism, design-based, humanism and 21st century skills. According to Schunk (2014), behaviourism, that dictated learning theories in the 1950s, believes that all human behaviours are caused by external stimuli. Operating under the principle of "stimulus-response", better known in the words of B.F. Skinner as "operant conditioning", the learner starts off with a clean slate or in the words of John Locke as "tabula rasa". Subsequently, the learner's behaviour is shaped mainly through positive and negative reinforcements. Both reinforcements increase the probability that the antecedent behaviour will happen again or recur. The unwanted behaviour will be dealt with and be decreased by punishment. Correspondingly, the learner's behaviour

can be explained without any need to consider their internal mental states or consciousness. Behaviourists like Pavlov, Thorndike and Bandura assume that a learner is essentially a passive being, only responding to environmental stimuli. Behaviourists look at learning as an aspect of conditioning and will advocate a system of rewards and targets. As much of early behaviourists' work were done on animals and the findings generalized to humans, behaviourism precedes the cognitivist perspective by rejecting structuralism and logical positivism. Learning from the perspective of behaviourism is therefore defined as a change in the behaviour of the learner. A didactic approach is widely used to promote behaviourist learning.

As a response to behaviourism, cognitivists like Burner, Gagne and Griggs posit that people are not "programmed animals", who merely respond to external environmental stimuli. For cognitivists, people are rational beings whose actions are a consequence of their thinking. Opening the "black box" of the human mind, the cognitivists' belief, is valuable and necessary to understand how people learn. Information comes in, is selected and processed, and leads to certain outcomes. Mental processes such as awareness, knowing, thinking, memorizing and problem solving is interesting, from the standpoint of cognitivists, to be explored. Knowledge, the product of thinking, can therefore be seen as a schema of symbolic mental constructions. Cognitivists focus their inquiry on the inner mental activities that require the active participation of the learners in order to learn. In essence, learning, from the perspective of cognitivists, is defined as change in a learner's schemata. Changes in behaviour are observed, but only as an indication of what is occurring in the learner's head. The cognitivist movement superseded behaviourism in the 1960s as the dominant paradigm of learning.

Constructivism, on the other hand, postulates that learning is an active, contextualized process of constructing knowledge rather than acquiring it. Constructivists believe that learning is an active, constructive process. Constructivists consider the learner as an information constructor, and not just an information processor nor a passive being. Constructivists like Bruner, Dewey, Piaget and Vygotsky believe that learners actively construct and create their own subjective mental representations of objective reality. The learner is not a *tabula rasa*, but brings past experiences and cultural factors to a situation. Knowledge is constructed based on personal experiences and their hypotheses of the environment. New information comes in and is linked to the learner's prior knowledge. Thus, each person, from the perspective of constructivism, has a different interpretation and construction of the knowledge process. Learners continuously test their interpretation and hypotheses through social negotiation. Vygotsky's social development theory is one of the foundations for constructivism. Unlike the didactic approaches widely used in behaviourism and its programmed instruction, constructivists consider learning as experience, activity, dialogical process, problem-based, inquiry, discovery and cognitive scaffolding.

The design-based research paradigm of learning conversely attempts to bridge theory and practice in education. As an analytical technique that balances the positivist and interpretative paradigms, design-based research blends empirical research with the theory so that one can understand why educational innovations work in practice. Its aim is to uncover the relationship between educational theory, empirical evidence and practice. It identifies the influence of contexts, the emergent factors, the complex nature of outcomes and the incompleteness of knowledge, among others, that affect educational practice. Researchers like Allan Collins, Ann Brown,

Charles Desforges and Robert Shavelson believe that design-based research is a pertinent paradigm for understanding how, when and why educational innovations work in practice. Consequently, as Darling-Hammond (2014) suggests, a more valid and sustainable theory that explains innovative, workable, contextual educational practice could be developed. Its reliance on an empirically quantitative research approach in closing the gap between theory and best practices made the design-based paradigm a resourceful perspective for understanding learning in the late 20st century.

Those who are concerned with human freedom, dignity and potentials believe that learning is a personal act to fulfill one's potential. According to the humanistic perspective, as the acts with intentionality add values, personal affective and cognitive needs are the keys to learning. Humanists like Knowles, Maslow and Rogers believe that learning is personalised and learner centred. Their goal is to develop self-actualized learners in a supportive and cooperative environment. Humanistic personalised views of learning are in contrast with the behaviourist's notion of operant conditioning, the cognitive belief of discovering knowledge, the constructivist's constructing meaning, or the design-based, closing the gap that is central to learning (Darling-Hammond, 2014; Schunk, 2014). From the humanistic point of view, the teacher's role is that of a facilitator.

Nevertheless, the fast changing world and the birth of digital native citizens at the end of the 20th century have triggered, especially educationists, to reexamine the conception of learning. One wonders whether the existing traditional paradigms of learning will be able to prepare generations of the 21st century to succeed in work and life, in a situation where the type of work, for example, cannot be easily ascertained, and the social, economic and environmental scenarios are globally shifting swiftly and volatile (Barber, Donnelley & Rizvi, 2013; Davidson & Golberg, 2010) Many futuristic education

proponents, such as, Thomas and Brown (2011), the Partnership for 21st Century Skills and the US Department of Education, believe that digital literacy, innovation, technology, and work-life skills readiness are the thrusts of 21st century education and learning. These learning outcomes, they believe, can be promoted through collaboration of interdisciplinary learning and problem-solving as well as embedding information and communication technology. In essence, there is a need to reassess teaching for quality learning in the context of 21st century education.

21st Century Education and Skills

The exponential development of information and communication technology sparks a debate on the kind of education that best works to prepare the generation of digital natives for the future. Many concerned parties consider the focus on 21st century education and skills necessary for students to master in order for them to experience school and life success in an increasingly digital and connected age, and that it should be promoted in defining learning. The Partnership for 21st Century Skills is a leading advocacy organization that is focused on infusing 21st century learning (www.p21.org) encompassing proposes knowledge, skills and expertise outcomes that a student has to master to succeed in work and life in the 21st century. The proposal of 21st century skills include content knowledge, learning and innovation skills, information, media and technology skills as well as life and career skills. To make learning a success, the Partnership for 21st Century Skills also suggests support system that includes standards, assessments, curriculum, instruction, professional development and learning environments that are aligned for a support system that produces 21st century outcomes for today's students.

In the 21st century education and skills paradigm of learning, students are expected to master the skills and understand the themes while learning core subject content in a meaningful and interdisciplinary way. Teachers and administrators in schools and higher education institutions are expected to use the guidelines, known as the P21 Framework, as a foundation for developing curriculum, assessments and standards that they deem appropriate for their students. While some organizations, like the Partnership for 21st Century Skills, provide tools and resources for educators to use in supporting their students' acquisition and mastery of the required skills, there are also model classrooms, schools and higher education institutions that serve as guides to others as they develop their alignment with the set education standards. In fact, in some countries, the central educational agencies are the prime movers of 21st century education and skills policies and initiatives, such as, the introduction of both MEBs by the Ministry of Education, and the development of Massive Open Online Courseware (MOOC) and the Integrated Cumulative Grade Point Average (iCGPA) by the Ministry of Higher Education, Malaysia. In other countries, such as, in Finland and Denmark, teachers are encouraged to create their own curriculum based on the standard and to enhance their careers through the community of practitioners which would work best for teachers in their own individual peculiar educational institutions and settings.

Learning Domain and Taxonomy

The quest to understand learning has created an inquiry into not only the breath and the depth but also the taxonomy and hierarchy of learning. Through the works of many, especially philosophers, psychologists, sociologists, and educationists, such as, Dewey, Piaget, Vygotsky, Bloom, Simpson, Krathwohl, Anderson and

their collaborators, three domains of learning, namely cognitive, psychomotor and affective, as well as their respective taxonomy, have been identified. The understanding of learning domains and their respective taxonomy have been widely used to guide curriculum development and its teaching and learning approaches, strategies, methods and techniques over the past six decades, even in the era of 21st century education and skills (Mohd. Majid & Zakaria, 2007).

Cognitive refers to the knowledge-based domain. It involves knowledge and the development of intellectual skills. This includes the recall or recognition of specific facts, concepts and procedural patterns that serve in the development of intellectual abilities and skills. The work of Bloom and colleagues identified six taxonomy of the cognitive domain, namely knowledge, comprehension, application, analysis, synthesis and evaluation, which are listed in order, starting from the simplest to the most complex thinking. The work of Bloom, Engelhart, Furst, Hill and Krathwohl (1956), on learning taxonomy, stands the test of time, and is a widely accepted model that continues to provoke new research, shapes best instructional and assessment practice, and provides a common language and framework for collaboration.

Nonetheless, Bloom's taxonomy of the knowledge domain from 1956 was revised in 2001 to cater for the much needed critical thinking and problem solving skills, from lower order thinking skills to higher order thinking skills, as a measure of the ability to remember, understand, apply, analyse, evaluate and create (Anderson & Krathwohl, 2001). The new version has two dimensions, knowledge and cognitive process, and the subcategories within each dimension are more extensive and specific. The new emphasis on cognitive processes remedies a weakness in the original taxonomy. In the 1956 version, the verbs associated with each

cognitive level describe behaviour. However, the same behaviour can sometimes be performed at different cognitive levels. Adding a second dimension in the revised version allows objective curriculum writers to differentiate between, say, retrieving a list or constructing one.

The developments in digital technology and its learning in the early 21st century created the need to take the revised Bloom's cognitive domain a step further. In 2007, people like Andrew Churches updated the revised Bloom's work when he introduced Bloom's Digital Taxonomy. Churches' intention, Thomas and Brown (2011) postulate, was to embed Bloom's cognitive levels into 21st century digital skills. Churches added ways to use Web 2.0 technologies to each cognitive level in the Bloom's revised taxonomy whereby, remember, understand and apply were categorized as lower order thinking skills (LOTS), and analyse, evaluate and create, as higher order thinking skills (HOTS).

The second domain of learning is affective. Affective refers to the attitude-based domain. It involves the manner in which a person deals with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations and attitudes. The affective domain measures the abilities of a person to receive, respond, value, organise and characterise a phenomenon. The work of Kratwohl, Bloom and Bertram (1973) identified five major categories of the affective domain, from the simplest to the most complex attitude and emotion, namely, receiving, responding, valuing, organizing and internalizing.

The third domain is psychomotor. Psychomotor refers to the physical skills-based domain that a person is able to perform based on the abilities to perceive, simulate, conform, produce and master. It includes physical movement, coordination, and the use of motor-skill capacities. The skills require practice and are measured

in terms of speed, precision, distance, procedure or technique. The work of Simpson (1972) identifies seven taxonomy of the psychomotor domain, from the simplest to the most complex skills, namely perception, set, guided response, mechanism, complex overt response and adaptation.

Other than these three main domains of learning, there was an attempt to develop the social domain. While skills related to the thinking process are housed within the cognitive domain, those related to attitude and emotional development are located in the affective domain, and those connected with body development and control under the psychomotor domain, skills related to interpersonal processes are listed under the social domain. The social domain involves communication-related skills in goal-oriented contexts. The work of Leise, Beyerlein and Apple (2004) identifies four major categories, listed in hierarchical order, from the simplest to the most complex interpersonal skills, namely communication, teamwork, management and leadership.

Although the three established domains of learning can explain and operationalize a person's personal learning development in tandem with the goals of education, such as, developing the potential of individuals in a holistic and integrated manner, so as to produce individuals who are intellectually, spiritually, emotionally and physically balanced and harmonious, as aspired by Malaysia, there is also a need to enhance a person's interpersonal skills for the person to live and function successfully and happily, especially in a multi-cultural society such as in Malaysia. The inclusion of soft and living skills elements in many educational curricula, such as, social skills and responsibilities: professionalism, values, attitudes and ethics; lifelong learning and information management; communication skills; critical thinking and scientific approach; and management and financial skills; which are six out of eight basic

MQF learning outcomes required by the Malaysian Qualification Framework (see Exhibit 1) attest to the importance of the social domain in educational development (Mohd. Majid, 2007, 2016a; Mohd. Majid & Zakaria, 2007; Mohd. Majid, Khatijah & Sidek, 2008; Mohd. Majid, *et al.*, 2009a).

No.	MQF Learning Outcome Domains	Demonstrated by
1.	Knowledge of Discipline Areas	<ul style="list-style-type: none"> • The knowing of major ideas • Mastery of the subject matter • Observing and recalling information • Recognising concepts
2.	Practical Skills	<ul style="list-style-type: none"> • Carrying out a professional task, e.g. running, dancing and diagnosis • Reading and understanding instructions • Perceiving and responding effectively • Applying learnt skills in a safe environment
3.	Social Skills & Responsibilities	<ul style="list-style-type: none"> • Meeting people and networking • Showing an interest in and concern for others • Being comfortable in talking with and accepting guidance and directions • Responding sympathetically and empathetically to others.
4.	Values, Attitudes & Professionalism	<ul style="list-style-type: none"> • Having feelings, perceptions, opinions and attitudes about oneself, towards others and the organisation • Having the capacity to show sympathy • Having empathy and the capacity for tolerance • Good time management

5. Communication, Leadership & Team Skills	<ul style="list-style-type: none">• Being able to write, speak and listen• Being responsible and dignified• Being a team player• Having multicultural and multiracial competencies
6. Problem Solving & Scientific Skills	<ul style="list-style-type: none">• Projecting critical and lateral thinking and logical reasoning• Being creative and explorative• Being inspired• Producing new ideas and technologies based on existing skills
7. Managerial & Entrepreneurial Skills	<ul style="list-style-type: none">• Planning and implementing effectively• Knowing what to do and how to do at the right time and place• Making judgments and decisions• Having good time management
8. Information Management & Lifelong Learning Skills	<ul style="list-style-type: none">• Using ICT in the location and evaluation of information• Using information management systems• Learning how to learn• Adopting a continuous professional development approach

EXHIBIT 1: Malaysian Qualification Framework: Eight Learning Outcome Domains*
*Abridged from Code of Practice for Program Accreditation (COPPA) (MQA, 2008)

Learning Approaches: Surface and Deep

Understanding learning, its domain and taxonomy, has to some extent influenced the way learning is approached. Understanding learning helps in identifying the approaches for the necessary changes in a person's knowledge, skills, attitude and behaviour. Researchers, such as, Biggs (2003), Biggs and Tang (2011a) as well as Prosser and Trigwell (1999), postulate that learning can happen

on the surface and in depth. Surface learning is when a person focuses on memorizing the parts of information they think they might need later. In surface learning, learners focus their attention on the details in the form they appear in a text, verbatim, class or to list the features of the situation concerned (Biggs & Tang, 2011a). No attempt, if any, is made to link or connect different parts of the learning domain and taxonomy, what more on the meaning underlying the situation. The concentration on lower-order cognitive skills by memorizing facts and figures, such as recall of facts, often includes rote learning of the subject content, filling an essay with part details rather than discussion of the topic and listing points rather than providing background or context to the work. Surface learning is necessary to lay a base terminology, information and knowledge about a situation that a person can grasp and build on for deeper learning. As the learners seek the necessary and relevant information and its detailed parts, the possible teaching approach could be using teacher-centred teaching and learning strategies where the teachers give and deliver the information sought.

Deep learning, on the other hand, seeks to understand and connect the concepts, relates the ideas to previous knowledge and experience, explores links between evidence and conclusion and critiques arguments and examines rationale. Learners focus their attention on the overall meaning or message in a text, class session or situation. They attempt to relate ideas together and construct their own meaning, possibly in relation to their own experiences. They explore the missing links and the lost parts to enrich their meaning. By using the deep approach, students make a real effort to connect with and understand what they are learning. This approach of learning requires students to have strong base knowledge, partly through surface learning, and to then build on seeking both detailed information and trying to understand the bigger picture in

developing its meaning (Biggs & Tang, 2011a). Deep approach of learning is encouraged by teaching methods that foster active and long-term engagement with learning tasks, such as, student-centred teaching and learning strategies. This approach stimulates subject matter teaching and learning activities that are meaningful and relevant to the students' future (Biggs & Tang, 2011a; Partnership 21st Skills, 2015). It also demonstrates the teacher's personal commitment to educate the students to have lifelong interest in learning for successful working and life careers. To succeed, the deep learning, student-centred teaching approach demands clearly stated academic expectations or learning outcomes. The approach is sustained by learning motivation and encouragement which is influenced by the learning environment, mainly the teachers.

Clearly, both surface and deep approaches of learning have their own respective strengths. Surface learning is necessary but not enough for meaningful learning. Further, deep learning cannot happen without knowing and recalling basic terminology. Therefore, teaching, depending on the expected learning outcomes, should leverage on employing both approaches. However, the demands for high order cognitive skills, especially to prepare the digital natives for a successful work and life career in the future, stress on the importance of deep and meaningful learning and the student-centred teaching and learning approach (Mohd. Majid, *et al.*, 2012; Mohd. Majid, 2013a, 2014b). As students perceive the learning environment to be encouraging a deep approach to learning, learning motivation – the burning desire to explore deep and meaningful learning, is an outcome of good effective teaching. As reminded by Biggs (2003), learning, especially deep and meaningful learning is what the students do, and not what the teacher does. Thus, student-centred teaching is believed to provide more opportunity for learning motivation as compared to teacher-centred teaching. In

essence, deep learning approaches are encouraged by good teaching that provides opportunities for students to engage meaningfully in the teaching learning activities that are constructively aligned with the educational outcomes as well as, authentic and appropriate learning assessments (Mohd. Majid, 2009a, 2009b, 2013b, 2016b). Subsequently, there is a need to define teaching for quality learning.

UNDERSTANDING TEACHING

As a classroom process in which individuals from diverse backgrounds engage in an activity with a particular purpose, various descriptions have been suggested to define the meaning of teaching (Biggs, 2003; Biggs & Tang, 2011a; Kennedy, 2016; Prosser & Trigwell, 1999; Shulman, 2004). Although many definitions seem simple, teaching is a complex process. It is composed of a number of interrelated and multi-faceted variables and activities which are not easily defined and measured in uncertain and diverse contexts (Kennedy, 2016). As a dynamic process, it involves exploration, choice, decision, creative thinking and the making of value judgments based on the moral purpose of the teachers (Kennedy, 2016; Shulman, 2004).

Not many people would argue about the surface feature of this definition of teaching and very few people would face difficulty in understanding the definition that has been suggested. What is really troublesome and currently being debated is the meaning of the definition. What are the meanings of the notions of ‘interpersonal’ and ‘interactive’ activity, ‘helping’ and ‘changing’ students, and the ‘expected’ student’s behaviour? What, indeed, is learning? Moreover, is the meaning of these notions the same across societies with different educational ideologies, cultures, traditions and resources?

There are factors that might contribute to disagreements regarding the meaning of teaching. These factors include the way teaching has been conceptualised, difficulty in distinguishing between the concepts of teaching and learning, the fact that teaching is context-specific, the complex cultures of teaching and the use of various different methods of inquiry.

Conceptualisation of Teaching

Researchers in teaching have conceptualised the notion in many different ways. Shulman (2004) identifies five different concepts of teaching in literature, namely, teaching as a descriptive account, teaching as a success, teaching as an intentional activity, teaching as a normative behaviour and teaching in terms of scientific and empirically confirmed statements. Each of the concepts, however, has its own strengths and weaknesses. Furthermore, the concepts are, as Shulman (2004) recognises, overlapping and not readily distinguishable from each other. Hence, the usefulness of the other concepts cannot be neglected when one chooses a particular concept to understand teaching.

The use of the various concepts rests on the underlying differences in ideology, such as different political commitments and different conceptions of education (Fatimah, 2012; Hussein, 2012; Kennedy, 2016; Shulman, 2004). The ideology of a state or of a researcher may not be the same as the ideology of others. Further, the conception of education may be different even within a particular ideology. In Malaysia, education is viewed as a means for cultural socialisation to unite its multi-ethnic people (Abdul Rahman, *et al.*, 2014; Hussein, 2008, 2012; Ibrahim, 2008; MOE, 2013, 2015). This conception is different from the conception of education of the United States, England or even, France. It is also not the sole view of education in Malaysia, for some see education mainly in terms of

certification through rather traditional examinations (Hussein, 2008, 2012; Ibrahim, 2008; Mohd. Majid, *et al.*, 2012; Weimer, 2013a). It is therefore likely that a curriculum that is not sensitive to the problematic nature of the concept of teaching will have significant built-in difficulties, and subsequently affect the way the curriculum is delivered.

Teaching and Learning

Attempts to relate to, what more to differentiate between, teaching and learning have not been entirely successful (Biggs & Tang, 2011a; Kennedy, 2016; Prossers & Trigwell, 1999; Shulman, 2004). Both concepts are interrelated. Though there is strong evidence that teaching has an effect on students' learning (Darling-Hammond, 2014; Darling-Hammond & Rothman, 2011), the effects are hard to identify. Research shows that the same teaching act can have various results. Moreover, learning can also occur without teaching. Furthermore, the way teaching affects the desirable learning of students is still being debated. Studies which try to match the style of teaching and student learning characteristics have not arrived at any substantive conclusion (Kennedy, 2016; Shulman, 2004). The meaning of claims that 'the student has learned' or that 'the student understands' a lesson, has not been generally agreed upon (Kennedy, 2016).

Contexts of Teaching

Teaching is context-specific (Kennedy, 2016; Shulman, 2004). Context refers to the socio-economic and educational conditions underlying the formal structure of the education system. These include the institution's guidelines and regulations; the physical environment (e.g., classroom and facilities); resources (e.g., subject

matter and teaching materials); participants (e.g., students, teachers, schools and community); organisational features (e.g., governance, occasion, time and arrangement); and the interrelationship among these contextual elements (Kennedy, 2016; Shulman, 2004). Context and setting influence what teaching strategy is best suited for a particular event in which teaching and learning is to take place. Context can limit teacher performance, although the position that context determines teacher performance is not acceptable.

The quality of context is, though, of paramount importance if the theory of teaching is to be ecologically validated. Student-centred teaching strategies require not only additional learning resources compared to teacher-centred strategies, but also need extra teachers if suitable attention is to be given to individual students. The teachers must also qualify to conduct student-centred teaching, which is generally beyond the lecture type pedagogy. Hence, an innovative curriculum reform including teaching and learning can only be carried out if provisions for the quality of the pedagogical context exist.

Cultures of Teaching

Validation of the meaning of ‘teaching’ is culturally-shaped (Fatimah, 2012; Kennedy, 2016). The established cultures and traditions of teaching may or may not be consistent with the conception of education that the state wants to promote. Existing teaching cultures in educational establishments may limit the success of innovations, such as, the Primary School Standard Curriculum (KSSR), Secondary School Standard Curriculum (KSSM) and HEIs MQF-based Curricula, that seek to impose a new definition of effectiveness (MOE, 2013, 2015).

Though the Malaysian educational objectives focus primarily on producing responsible citizens with strong moral and ethical

values, the ‘success’ of the teaching-learning process has always been associated with achieving good academic results in the national examinations. The emphasis on examinations over the years has resulted in the establishment of teaching strategies peculiar to the purpose of getting good results, although the strategies that emphasise rote learning and memorizing factual knowledge are in contradiction with the official demands of student-centred strategies. Additionally, quietness has always been associated with good behaviour which may be inconsistent with the idea of student-centredness.

It follows that various researchers might generate different concepts of effective teaching and that different societies and different stakeholders with distinct ideologies, cultures and resources will have varying perspectives on teaching, let alone on what constitutes effective teaching. Western understanding about teaching may or may not be the same as Eastern interpretations of the notions. Similarly, the teachers’ meaning of teaching may or may not be the same as the educational planner’s version. Hence, there is a need to explore the nature and power of the varied educational concepts in any one setting.

Methods of Inquiry

Various different methods of inquiry have been used to study teaching (Kennedy, 2016; Shulman, 2004). Shulman (2004) identified three paradigms of research in teaching: the process-product, the mediating process and classroom ecology. Kennedy (2016), however, concludes that the method used and subsequently, its findings, are determined by the conceptual and ideological orientation of the researcher.

The widely used process-product paradigm of research popular in 1970s and 1980s, is based mainly on the assumption that there

is a linear relationship between teacher behaviour and student's learning (Kennedy, 2016). It might be recalled, too, that learning may also take place in the presence of the teacher but without any obvious action by the teacher. In their review of criticisms of the process-product concept, Shulman (2004) emphasised on the need to consider not only the 'essence' but also the 'accidents' of teaching. Unsurprisingly, the validity of process-product approaches is contentious (Kennedy, 2016; Shulman, 2004).

There are also problems associated with instrumentation and statistical issues. Standard achievement tests are usually the main learning outcomes considered in detail, although these tests fail as a valid measure of teaching (Kennedy, 2016; Mohd. Majid, 2013c). Academic achievement is not the only result of teaching. Teaching involves not only the cognitive but also the psychomotor and the affective domains, where developments are difficult to quantify. Moreover, the tendency to focus on the correlates of the average gain across students, regardless of the distribution variation of their performance, hides important information about the differences in teaching (Weimer, 2013a).

In summary, teaching is a process of engaging individuals from diverse backgrounds in a learning activity with the particular purpose of changing students' knowledge, skills, attitudes and habits. Teaching, as discussed above, is a contentious concept in that its definition varies across different ideologies, different political commitments and different conceptions of education. Its relationship with learning is basically contingent, rather than a causal relation. Its quality is context-specific, culturally-shaped and depends on the paradigm used to study it. As student-centred teaching approaches, are once again, recommended, to promote high order thinking skills, in an effort to prepare holistic, entrepreneurial and balanced graduates who are intellectually, spiritually, emotionally

and physically balanced and harmonious, based on a firm belief in and devotion to God, as aspired by the National Philosophy of Education, so that the students could succeed in work and life in the 21st century, there is a need to view teaching and its curricula in context specific manner, such as that in Malaysia, in the quest for teaching for quality learning. Essentially, understanding outcome-based education and constructively aligning the curriculum, the delivery and its assessment facilitate teaching for quality learning.

OUTCOME-BASED EDUCATION

Good education demands a clear educational goal. The goal delineates the aim of education upon which a society aspires. Depending on the availability of knowledge and how the society prescribes it, the aim is operationalised and translated into learning outcomes. Learning outcome is an educational philosophy that states that education programmes ought to be aimed at producing specific educational outcomes, particularly, giving students specific, minimum level of knowledge and abilities. The curricula as well as its delivery methods and assessments in outcome-based education are then designed constructively and aligned in order to produce the stated learning outcomes upon which students gain mastery of such knowledge, abilities and attitudes (Biggs & Tang, 2011a). Learning outcome statements, in essence, are statements of what a student is expected to do as a result of the planned learning activities.

All educational programmes offered by schools and higher education institutions (HEIs), as well as their respective instructional efforts, are designed to produce specific, lasting results of learning in students by the time they leave the school or HEI. Such learning outcomes for HEIs in Malaysia are outlined in the Malaysian Qualification Framework (see Exhibit 1). Unlike the previous objective content-based school and HEI curricula that

emphasised on intended results or consequences of instruction, learning outcomes in outcome-based education are achieved results or consequences of what a student has learned – evidence that some learning, especially deep and meaningful learning, has taken place (Biggs & Tang, 2011a). While teaching objectives in objective content-based education specify what is expected of the students and then describe what they should be evaluated on, learning outcomes in outcome-based education are behaviours and products generated by the students themselves after their engagement in the respective teaching and learning activities that are constructively developed and aligned with the respective authentic assessments.

The transformation into outcome-based education (OBE) was initiated due to the failure of the many objective content-based educational systems to deliver real deep meaningful change in student's learning (Mohd. Majid, 2008b, 2011a; Mohd. Majid & Zakaria, 2007; Mohd. Majid, *et al.*, 2008). Sparked by its adoption in many educational systems around the world, the United States since 1994, the Europe especially with the introduction of the Bologna Process in 1999 and Hong Kong in 2005, it was adopted in Malaysia in 2008. The OBE system aims to move each student towards predetermined outcomes, rather than just attempting to transmit the content of information which cannot guarantee that learning has occurred (Biggs & Tang, 2011a). Feelings, attitudes, knowledge and skills, such as, learning to work together in groups are considered just as important as learning the relevant information, as discussed above. The mainly surface, low cognitive levels of information transmitted in the preceding objective content-based education is just as important as the deep and meaningful high levels of the cognitive domain. Where students of the objective content-based curricula are quite successful in collecting huge tracts of information that is hardly used and may not be relevant

for the digital natives' future, the OBE has been proven to produce students not only with the necessary knowledge, skills and attitudes, but who are also innovative and entrepreneurial in producing new knowledge, for them to be successful in their work and life careers (Biggs & Tang, 2011a). Whereas the traditional objective content-based curriculum focuses on the past, in contrast outcome-based methods prepare students for future knowledge, skills and attitudes pertinent for the continuous change which is inevitable in the society of digital natives. In essence, as discussed earlier, the OBE demands a constructive curricula with clear learning outcomes that are aligned with the student-centred learning activities and their respective authentic learning assessments.

CONSTRUCTIVE ALIGNMENT

One such student-centred teaching approach that promotes outcome-based education that fosters mastery of its learning outcomes, which mainly emphasises on deep meaningful learning, is through the use of constructive alignment. John Biggs (2003), for example, provides an understanding of how students learn which has been the basis for deciding which ways of teaching and assessing will be the most effective powerful theoretical underpinning on teaching that encourage students' learning. According to Biggs (2003), "constructive" refers to the idea that students construct meaning through relevant learning activities. "Alignment", as Biggs conceives, refers to the situation where teaching and learning activities and the related assessment tasks, are aligned to the Intended Learning Outcomes (ILOs). Alignment, Biggs posits, is best achieved by designing teaching and learning activities and assessment tasks that activate the same verbs that are stated in the ILOs. Biggs further argued that the logical, effective and more satisfying constructive alignment benefits students as well as

teachers in that, the ILOs tell them precisely what they are supposed to be learning as well as how to learn it and to what standard they should learn. For these reasons, constructive alignment has been widely used in designing especially HEIs curricula, its teaching and learning activities as well as the respective assessments for quality learning, teaching and assurance.

Biggs' work on the Structure of the Observed Learning Outcome (SOLO) taxonomy (Biggs, 2003) helps guide especially teachers on how high quality teaching can contribute to high quality learning. SOLO, according to Biggs (2003) is a taxonomy that refers to learning outcomes. It relates, according to Biggs, to the fact that when something is learned it grows in complexity, from a unistructural level, where one or a few aspects of the learning task are learned, to a multistructural level, where more and more aspects of the learning task are required but they are not interrelated or integrated, then to the relational level, where the hitherto unrelated aspects of the task become related to form an integrated whole, and finally to the extended abstract level where the integrated whole of the learning task is generalized to new, untaught and more abstract domains of learning. The SOLO framework (see Figure 1), Biggs (2003) suggests, can be used to guide teaching, moving from thinking about what a programme, topic, lesson or lecture should be about, to the execution of the teaching and reflection on the outcomes. According to Biggs, it is precise about the level of understanding an educational programme intends in the learning outcomes.

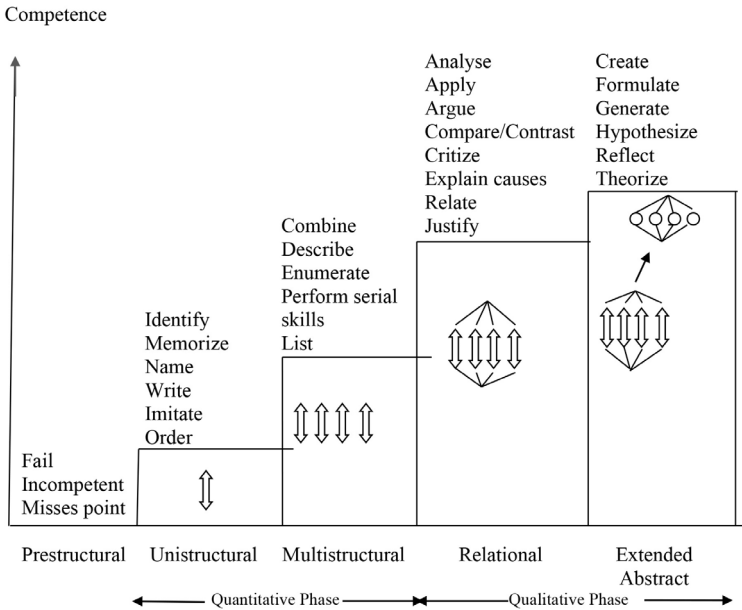


Figure 1 Structure of the Observed Learning Outcome (SOLO)
 (Biggs, 2003: Abridged of Figure 3.2, page 48)

The constructively aligned outcome-based education and its student-centred teaching and learning strategies need to be promoted in the effort to produce, as aspired by the MEBs, holistic, entrepreneurial and balanced school leavers and graduates who are intellectually, spiritually, emotionally and physically balanced and harmonious, based on a firm belief in and devotion to God. In traditional teaching approaches teaching is conceived as a process of transmitting content to the students, and so the methods tend to be expository. The related assessment focuses on checking how well the message has been received by the students - hence the common use pedagogy of mainly one-way lectures and demonstrations with tutorials for clarification and paper pencil examination that rely on reporting back with little interest in enhancing student learning

and thus their weaknesses will be cumulatively carried to the next level. Conversely, outcome-based teaching and learning, of which constructive alignment is one form, is based on the intended learning outcomes (ILOs), which is a statement of what the learner is supposed to be able to do and the standard. Traditional pedagogy teaching activities, Biggs and Tang (2011a) argue, focus on receiving information about a topic and taking notes, not learning how to deal with that information as set out in the ILOs. On the other hand, the teaching learning activities (TLAs) in outcome based teaching and learning, Biggs and Tang (2011a) explain, require students to apply, invent and generate new ideas, diagnose and solve problems that the ILO says they are intended to learn. Similarly, assessment tasks (ATs), Biggs and Tang (2011a) further explain, tell learners and teachers, not how well students have received information, but how well they can use it in academically and professionally appropriate ways, such as, in solving problems, designing experiments or communicating with clients, the knowledge, skills, and attitudes needed by 21st century digital natives to succeed in work and life.

Constructive alignment undeniably requires, as Biggs and Tang (2011a) concur, good cooperation and commitment between leaders, course coordinators as well as teachers and other supporting staff of the learning institution, especially in developing ILOs based curriculum. Changes also need to be made in the curricula and its respective teaching methods so that the students' learning activities are more likely to lead them to achieve the ILOs, Biggs and Wang postulate. Assessment tasks then need to be redefined as assessment of learning with authentic tools and strategies to promote deep and meaningful learning (Mohd. Majid, 2009b, 2009c; 2013c). Further, its grading criteria, such as rubrics, need to be worked out collaboratively with all colleagues that will be involved in the teaching. Constructive alignment requires, Biggs and

Tang (2011a) postulate, a change from a quantitative and analytic mindset that equates knowledge with marks, to one that uses and grades assessment tasks qualitatively and holistically, wherever possible. High level outcomes, Biggs and Tang (2011a) state, refer to whole acts, not to the independent components of those acts. Although assessing the components of a task is very helpful in providing feedback to students, ultimately students have to be assessed holistically, in a way that is authentic to their discipline. In fact, it is more impactful and meaningful if the learners themselves are aware and reflect loudly on their strengths and weaknesses, preferably with the help of their peers rather than just depending on their teachers, provided they understand the required standard of the learning outcomes. Essentially, as Biggs and Tang (2011a) summarise, there needs to be a change in mindset in the way teachers think about curriculum, teaching and assessment that should be constructively aligned.

TEACHER EFFECTIVENESS: THEORETICAL AND CONCEPTUAL NORMS REVISITED

It can be seen, as discussed above, that no matter how good an educational innovation is and how adequate and advanced its support system, it is the teachers and the lecturers who have the final say about what exactly is being taught and what students should learn, and ultimately determine the quality of learning. Research shows that the teacher's teaching is a contentious concept and so too is effective teaching and teacher effectiveness. Questions arise as to what extent the literature on teaching and learning has contributed to inform about educational innovations such as the MEBs. Questions are also raised concerning the suitability and appropriateness of the definitions used to describe the notions of teaching and learning such as student-centredness in the context

of the Malaysian education system. There is thus a need to explore the possibility of developing a culturally and contextually valid model of teaching and learning and teacher effectiveness within the Malaysian context (Kennedy, 2016). In developing what Kennedy (2016) calls ‘parsing the practice of teaching’ based on the earlier model of the ‘context-input-process-product’ approach, first coined by Dunkin and Biddle in 1974, then Prosser and Trigwell’s Presage-Process-Product (3P) (1996) and then Cognitive Apprenticeship (Thomas & Brown, 2011), the propositional knowledge about effective teaching as well as the teacher procedural knowledge exemplified by their good practices in a Malaysian context should be considered.

The Concept of Teacher Effectiveness

There is an important difference between teaching and effective teaching. Attempts to define teacher effectiveness over many years by researchers reveal that the concept is predictably contentious. Biggs and Tang (2011a) define the notions in terms of what students do, not what the teacher does or can do. Many, such as Weimer (2013b), on the other hand, defined the notions not only in terms of students’ success in the cognitive domain but also in the affective as well as in the personal development domains. In contrast, many Malaysians consider teacher effectiveness in terms of students’ performance on the standard achievement tests (Mohd. Majid, 1995, 1997c, 2008b, 2009b; Mohd. Majid, *et al.*, 2012a).

The failure to arrive at an agreed definition of the concept is due to the various problems inherent in defining teaching, as discussed above. The dominant positivist view in which teaching is posited ‘neutrally’ in particular, fails to consider that ‘effectiveness’ entails value judgment about the nature of teaching and what is educationally worthwhile (Fullan, 2001). The failure is significant

especially since it seldom recognizes the practitioners' point of view (Fullan, 2001; Mohd. Majid, 1993, 1995, 1997a, 1997b; Mohd. Majid, *et al.*, 2003, 2012; Schon, 1983; Shulman, 2004) and raises the issue of whose values are represented in any particular notion of teacher effectiveness. The following sections discuss some of the issues related to teacher effectiveness assumptions.

Perspective Views of Effective Good Teaching

Teacher effectiveness has always been associated with good teaching. There are, however, no agreed criteria of 'good teaching' (Shulman, 2004; Kennedy 2016). The difficulty in defining good teaching lies with the conceptualisation of teaching itself. For the past five decades, Western theories of teaching have been dominated by the 'progressive' view (Kennedy, 2016). The progressive view can best be represented by the Plowden Report. In her report published in 1967, Plowden described an approach of teaching based on child-centredness, which departed from the traditional teacher-centred teaching norms.

According to student-centred teaching and learning strategies, learning can best be achieved through students' own inquiries. It is a teaching strategy based on flexible, informal, individualised teaching methods. In essence, with a good teacher acting as their guide, students are responsible for their own learning. The teacher's responsibility is primarily in facilitating learning via appropriate classroom and curriculum organisation, and through individualised motivation.

The Plowden teaching strategy, however, has been treated with skepticism, especially in the past three decades (Kennedy, 2016). In particular, most teachers have difficulty in understanding and accommodating the recommended practices, especially when their meanings are unclear, as frequently is the case with general

prescriptions for practice (Mohd. Majid, 1995; Shulman, 2004). Moreover, prescriptive views of good practices are not necessarily compatible with the ‘root definition’ of effective teaching which is grounded on teachers’ espoused theories and good practices and in which a ‘practicality ethic’ (Shulman, 2004) looms large. A challenge for research is, therefore, to establish the meanings that teachers assign to any prescription of effective teaching, such as that explicit in the KSSR, KSSM and MQF-based curricula, and the interplay of those meanings with their own notions of good practice that are grounded in cultural norms and in the practicality ethic (Mohd. Majid, 1995, 1997a, 1997b, 1997d, 2013d, 2016b; Mohd. Majid & Mokhtar, 2009c; Shulman, 2004).

Technical-rational Models and Effective Teachers

Contemporary research findings on teacher effectiveness disagree on the characteristics and/or behaviours of effective teachers (Kennedy, 2016). Though it has been reported that effective teachers are, for example, those who maximize learning time within their overall teaching time, the relationship between learning and teaching time is a contentious concept. In general, there is little agreement on exactly what behaviour is most important for teacher effectiveness (Kennedy, 2016).

Most of the assumptions about effective teachers have been derived from the technical-rational approach (Shulman, 2004; Kennedy, 2016). This approach, which holds the positivist view that ‘practitioners are instrumental problem solvers who select technical means best suited to particular purposes’ (Schon, 1983, p. 3), has led to teaching being narrowly defined using terms such as, competence and performance. The notions of competence and performance, however, have their limitations (Shulman, 2004). A distinction has also to be made between the ‘competent’ and

the 'effective' teachers, since it does not necessarily follow that competent teachers are effective teachers (Shulman, 2004).

Furthermore, technical-rational models have also often neglected to look at how the teachers treat the hard-to-define but very important aspects of students' lives, that is, their affective development, beliefs and moral orientation. In other words, what is difficult to define and measure tends to go largely unnoticed (Mohd. Majid, 2013c; Weimer, 2013a). Although there are a number of propositions about effective teaching, their weakness is that they essentially ignore the context-specific character of most teaching (Kennedy, 2016). Kennedy (2016) further argues that the danger occurs when a general teaching principle is distorted into prescription, when maxim becomes mandate. Often, especially with technical-rational models, there is little space for independent minds and professional judgement. The complexity of teaching is artificially minimised. The alternative, underpinning this thesis, is that there are many ways of being an effective teacher. This is especially significant with respect to the normative tone of the KSSR, KSSM and MQF-based curricula.

Further, technical-rational models often neglect the moral and ethical aspects of teaching (Lewis, 2006). In a country where morality is an issue which is formally pursued in its national educational goals, the promotion of moral values is of high concern. The responsibility of transmitting values and codes of conduct, which was traditionally the function of the parents and their extended family, has shifted gradually to institutions of education. Hence, the teachers need in-depth knowledge and to possess acceptable moral values.

Researchers such as Cecil Beeby and Keith Lewin have, since 1965 reminded us of the perils of generalising Western models and research on teaching (Mohd. Majid, 1995). Where Western research

would argue that teacher characteristics and disposition are not significant variables for the high academic performance of students, this is not the case in developing countries. Hence, effective teachers should not be considered only in terms of technical pedagogical proficiency (Habsah, Mohd. Majid, Wan Zah & Roshafizah, 2012; Kennedy, 2016; Mohd. Majid, 1995, 2009b, 2009c; Mohd. Majid, *et al.*, 2007).

Effective Teaching, Teaching Methods and Styles

There have also been attempts to define teacher effectiveness in terms of teaching methods and styles (Shulman, 2004, Kennedy, 2016). Studies which try to match pupil learning characteristics with a particular method or style of teaching have not arrived at any concensual conclusions (Kennedy, 2016). As noted above, there are arguments on exactly which teaching methods are most important for effective teaching. The major problem with using teaching methods and styles to define teacher effectiveness is that the methods and styles themselves are composed of various groups of teacher behaviours and actions. Shulman (2004) argues that it is impossible to ascertain the impact of any one teacher behaviour on students' achievements. Hence, no one teaching method and style is necessarily better than another.

In conclusion, the notions of teacher effectiveness are, like teaching, contentious. Many researchers on the subject are not prepared to answer the question of teacher effectiveness, but prefer rather to study the question of teachers' effects, which is in itself a highly problematic study. Prescriptive definitions of teacher effectiveness, which find favour in some, often political circles, give insufficient weight to the context, cultures, traditions and professionalism of the teachers.

Current research findings suggest that teachers are at the core of teaching and could influence the success of educational innovations in the classroom; that there are many ways of defining ‘good teaching’ and ‘effective teachers’; and that there are various acceptable teaching methods and styles. Such phenomena was best explained a long time ago by Biggs (2003), who concludes that the excellent, good or effective teachers vary not only within different levels of task demands but also within different contexts and that they behave differently and are inclined towards different ‘styles’.

Does this then mean that effectiveness is a redundant concept? Since the concept is applied to judge practices and has links with cultural and specific meaning, it cannot be a redundant concept. Therefore, in the context of the KSSR, KSSM and MQF-based curricula innovations, the study of teacher practice, especially ‘effective teachers’, as identified by those in authority in a hierarchical education system, has considerable promise. Not only does it offer a strong test of the practicality of the KSSR, KSSM and MQF-based curricula, but also any mismatches identified in such a study will clearly show the points where the KSSR, KSSM and MQF-based curricula are most problematic and where remedial attention is most urgently needed (Mohd. Majid, 2014a).

TOWARDS A MODEL OF TEACHER EFFECTIVENESS

Despite the difficulty in agreeing on a precise meaning of teaching and teacher effectiveness, there is a need for at least a working theory of effective teaching to inform, guide and improve research, teaching and teacher education. Naturally, it will be modified – perhaps even rejected – by other researchers. It has value, though, as a heuristic.

In generating knowledge on teacher effectiveness, Kennedy (2016) proposes the ‘parsing the practice of teaching’. She argues that this model focuses not only on the presage, process and product of teaching and learning, but also gives due emphasis to the context upon which much of teaching-learning interface takes place. The context of education in which its characteristics are delineated under the formal structure of a national education system, such as, the KSSR, KSSM and MQF-based curricula guidelines for effective teaching (MOE, 2013, 2015; MQA, 2008), is authoritative and can be influential in effecting effective teaching. This model is favoured since it builds upon the earlier model, incorporates significant points and has the power to cope with the complexities embedded in the notion of teaching and effective teaching.

In accordance with the presage, process, and product (3P) model (see Figure 2), the notions associated with teacher effectiveness can be classified into four domains of teaching variables. Biggs (2003) explains that the student factor variables refer to the presage domain of student’s prior knowledge, interest, ability and motivation preceding the process of teaching and learning. The teaching context variables refer to the presage domain of teaching objective, assessment, teacher expertise as well as classroom and institutional procedures, climate and ethos. Basically, the context domain is concerned with the status and quality of the physical environment, teaching and learning resources, stakeholders’ involvement, organisational features and the interrelationship among these elements. It includes the nature of education in the country generally, and specifically to the KSSR, KSSM and MQF-based curricula guidelines of teaching and learning strategies, which are essentially based on pupil-centredness, cross-subject integration and inculcation of noble values. Underpinning the teaching context are input variables which are related to teachers’ characteristics and

understanding of knowledge bases for effective teaching. In the process stage, those two domains of presage factors interact with the learning-focused activities. The appropriateness of the learning activities and approaches with the presage factors will be tested. A student with little prior knowledge of a topic will be most likely to use surface approach of learning, however those who already have the knowledge and interested in the topic might opt for a deep approach of learning (Biggs, 2003). While the process variables describe what goes on in their classrooms, including the teacher-student classroom interaction, the product directs attention to their students' learning outcomes that the teachers intend to promote.

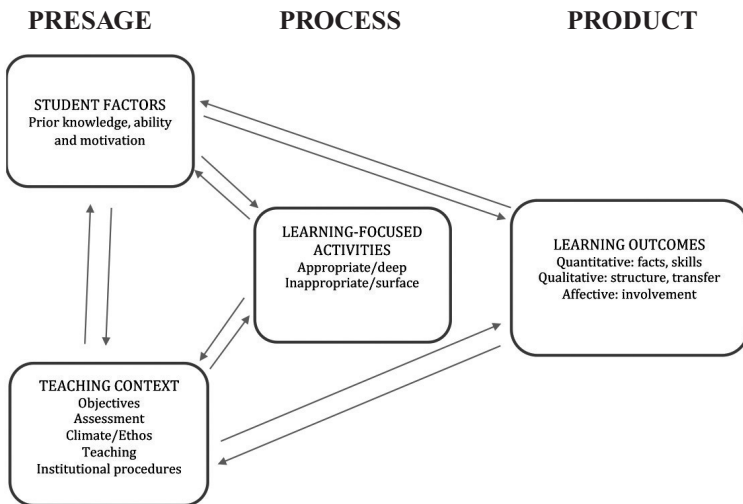


Figure 2 The Presage, Process, and Product (3P) model of teaching and learning (Biggs, 2003: Figure 2.1, page 19).

One of the important ingredients for teacher effectiveness is the understanding of propositional knowledge for effective teaching. There are various strands of propositional knowledge that teachers

need to acquire to be effective (Mohd. Majid, 2003b; Shulman, 2004). Based on his previous work in 1987, Shulman (2004) identifies seven knowledge bases for effective teaching.

The first of Shulman's categories is content knowledge which deals with the essence and structure of the subject discipline. The second is general pedagogical knowledge which specifically refers to the broad principles and strategies of classroom management and organisation that appear to transcend subject matter. The third is curriculum knowledge which focuses on the materials and programmes that serve as tools of the trade for teachers. The fourth is pedagogical content knowledge which is an amalgam of subject matter content and pedagogy. The fifth of Shulman's categories is knowledge of learners and their characteristics. The sixth is knowledge of educational contexts which ranges from the workings of the group or classroom, the governance and financing of schools, to the character of communities and cultures. The seventh is knowledge of educational ends which refers to the educational purposes and values as well as, the philosophical and historical ideals which the education is intended to promote.

Among these categories of knowledge, Shulman (2004) singles out the pedagogical content knowledge as being of special interest. Its understanding, Shulman argues, identifies the distinctive bodies of knowledge for teaching. Shulman claims that the pedagogical content knowledge is uniquely the province of teachers and their own special form of professional understanding. Hence different subject disciplines have different knowledge bases of teaching.

Nevertheless, the propositional knowledge identified by such an analysis mainly originated from Western research. The findings have seldom been tested in other cultural settings. Moreover, competencies alone are not sufficient for effective teaching. Kennedy (2016) points out that understanding effective

teaching is necessary but not sufficient to address problems related to propositional knowledge. Instead, to offer solutions to these problems, Kennedy (2016) suggests that teachers should continuously learn to analyse these problems and to evaluate alternative courses of action on how well they can address these problems. Therefore, it is necessary to validate, contextually and ecologically, claims about the propositional knowledge necessary for effective teaching before it can be used in a particular location, such as in Malaysia (Mohd. Majid, 1993, 1995, 1996, 1997a, 1997b, 1997c, 2013a; Mohd. Majid, *et al.*, 2003, 2012).

A conclusion from the literature on teaching and effective teaching is that any innovation, such as the KSSR, KSSM and MQF-based curricula, ought to be grounded in an understanding of the concept, that is based on plausible analysis and suitable research. Where the 'official' concept of teaching, such as that embodied in the KSSR, KSSM and MQF-based curricula entails a substantial mismatch with teachers' views and the contexts and cultures of their work, then substantial problems may be predicted. It appears then, that the consequence of this conceptual looseness is that empirical work needs to be done to establish the nature of the activity of teaching, especially effective teaching, for quality learning in Malaysia, during the implementation of the KSSR, KSSM and MQF-based curricula. However, it has already been suggested that the best way to identify any serious problems with the KSSR, KSSM and MQF-based curricula is to focus upon the beliefs and practices of effective teachers or lecturers in particular.

Consequently, one line of research into the development of the notions of teacher effectiveness would be to examine the propositional knowledge base in any one setting. In Malaysia, there are two main sources of such propositional knowledge. There are the State's views, embodied in the KSSR, KSSM and MQF-based

curricula, and then there are the beliefs of the teachers working within the KSSR, KSSM and MQF-based curricula. While the State's views have been sketched, nothing is known about the propositional knowledge of teaching – let alone of effective teaching – held by the teachers. Yet, if the KSSR, KSSM and MQF-based curricula are to succeed within the fidelity of the implementation paradigm, some congruence between the two sources is necessary. It is an important empirical issue to determine the degree of congruence in propositional knowledge of teaching for quality learning (Darling-Hammond, 2014; Fatimah, 2012; Fullan, 2001; Kennedy, 2016; Mohd. Majid, 1995, 1997a, 1997b, 1997c, 1998b; Mohd. Majid, *et al.*, 2007; Shulman, 2004).

While the significant role of teachers' beliefs in generating knowledge on quality learning is acknowledged, the work of Schon (1983), among others, alerts us to the problematic relationship between teachers' propositional thinking and procedural thinking. Beliefs can inform, but cannot determine practices. Teaching is an activity full of not only the 'essence' but also the 'accident' and 'surprise' in the 'undetermined zone of practice' (Schon, 1983). Therefore, other than teachers' espoused theories, the practice of the teachers is another source of professional knowledge of teacher effectiveness. The epistemology of practice would stand, as echoed by Schon (1983), 'the question of professional knowledge by taking as its point of departure the competence and artistry already embedded in skillful practice' (p. 61).

An understanding of logic-in-use and its associated practices is also of significance for an innovation. Just as it is important to determine the congruence between the State's and teachers' propositional knowledge, it is also important to identify the similarities between teachers' practices, their beliefs and the State's prescriptions. Mismatches indicate precisely where innovations,

such as the KSSR, KSSM and MQF-based curricula, need attention and also identify areas that need to be carefully addressed in initial and in-service teacher education.

Though it is recognized that there is no simple solution to how best to deal with conceptions of beliefs and practices, one of the approaches, as suggested by Fullan (2001), is to address them on a continuous basis during implementation. Fullan argues that beliefs can be most effectively discussed after people have had at least some behavioural experience in attempting new practices. The implication of this approach suggests that research on teachers' beliefs and practices has to be carried out during the implementation of an educational innovation, such as, the KSSR, KSSM and MQF-based curricula, and that a continuing and extensive programme of in-service education ought to accompany the innovation.

In conclusion, the literature revisited argues that teaching is a problematic concept. Though there are many claims about the notions of effective teaching and effective teachers, contemporary research findings on teacher effectiveness are still unable to agree on the key criteria, if any, and still disagree about what constitutes an effective teacher. There is little agreement on exactly what personality, knowledge base for teaching, behaviour, strategies and methods are most important for the teachers to be effective. No one definition of effective teachers has been found to be satisfactory, and no one profile of an effective teacher has emerged from the research findings. It appears that there are many ways of being an effective teacher and effective teaching is contextually and culturally bound, as in the case of teaching for quality learning in the Malaysian education system.

TEACHING FOR QUALITY LEARNING: CASES IN THE MALAYSIAN EDUCATION SYSTEM

Effective teaching, it has been suggested in this paper, entails using methods that are fit for the learning purpose. Since different subjects, different operations within a subject and different contexts all affect the learning purpose, it is argued that effective teaching involves the strategic use of multiple methods of teaching. Despite the persistent belief in the student-centredness pedagogies in realising teaching for quality learning in the Malaysian education system, first documented officially with the introduction of the New Primary School Curriculum, better known then by its Malay acronym KBSR in 1982, followed by the Integrated Curriculum for Secondary Schools (KBSM) in 1988, the Smart Schools in 1998, the MQF outcome-based curricula for higher education institutions in 2007, the Primary School Standard Curriculum (KSSR) in 2011 and subsequently the Secondary School Standard Curriculum (KSSM) in 2017, as well as the teaching and learning agenda in both the Malaysia Education Blueprint 2013-2025 (School) and the Malaysia Education Blueprint 2015-2025 (Higher Education), the pedagogies could not be easily understood, what more be implemented effectively, as evident from some of the major studies discussed below. This culminated in the failure of these innovative educational changes planned, in preparing holistic, entrepreneurial and balanced graduates who are intellectually, spiritually, emotionally and physically balanced and harmonious, based on a firm belief in and devotion to God, as aspired by the National Philosophy of Education.

This reflects general ambiguity about the nature of teaching and student-centredness itself and implies that continuous empirical investigation is necessary, both to describe embedded beliefs and practices that are characteristic of effective teaching

for quality learning and to illuminate the progress of curriculum development and implementation specifically in Malaysia. The following are four major studies undertaken in the past three decades, as examples of how teachers in Malaysian schools and higher education institutions struggle to implement exogenous educational innovations, particularly the recommended student-centred pedagogy, in their quest of teaching for quality learning. The findings from these studies, namely the study of the integrated curriculum for secondary schools, the evaluation of the Smart Schools project, the study of teaching and learning in the Malaysian education system and the study of teaching and learning in higher education institutions have, to some extent, affected many policy developments in education, such as, the MEB (School), the MEB (HE), and the educational technology initiatives. In fact, the Dengkil Project and the Smart School initiatives inspired the development and successful implementation of the Smart Education initiative in South Korea and Japan in 1998.

a. Teaching and Learning in the Integrated Curriculum for Secondary Schools

One example of educational innovation to bring forth the student-centredness pedagogy is the introduction of the Integrated Curriculum for Secondary Schools, with its Malay acronym KBSM, in 1988. As the second major, exogenous top-down student-centred pedagogy innovation imposed on schools by the government after the New Curriculum for Primary Schools (KBSR) in 1982, the introduction of the KBSM has not escaped difficulties in its development, dissemination and implementation, particularly problems associated with the existing beliefs and practices in the educational cultures and traditions. It is argued that these constitute major limitations on the degree to which the KBSM can

be effectively implemented. Teachers already have their own beliefs about educational concepts and have already developed their own sustainable approaches towards good practice for quality learning in their classroom teaching. It will be shown that these beliefs and practices affect their success in implementing the KBSM.

In its quest for teaching for quality learning, the KBSM brings with it a view of teacher effectiveness. It is essentially concerned with effective teaching that is, the extent to which the teacher brings about development in students' learning through educational activities (Biggs & Tang, 2011a). It is limited to those outcomes associated with the teachers' actions that reflect the desired educational objectives. It is a contentious concept, as discussed earlier. 'Effectiveness' in itself is neither an objective nor an international concept. In the top-down 'delivery' system of education, the effectiveness of teachers is central in bringing about real change in practice. Accordingly, the KBSM contains prescriptions for pedagogy as well as for curriculum content.

In essence, the KBSM module suggests that teachers should use more pupil-centred rather than teacher-centred teaching and learning strategies. It emphasises that the recommended teaching and learning styles in the KBSM are essentially founded upon pupil-centredness strategies which will propagate the interaction of students, not only with their teachers, but also with their fellow students. This effort, the module states, 'will generate and produce intellectual students who are able to present their ideas clearly, objectively, creatively and rationally' (MOE, 1990a, p. 58). As failure to take into account the career situations and cultures of the teachers affected will add 'injury' to the innovation (Fullan, 2001), there is a need to consider how teachers perceive such innovations and how they implement the innovations in their classroom teaching in such a situation. Furthermore, there is also a need to consider how

teacher development has taken place during the implementation of the innovation.

The study on teacher effectiveness in Malaysian secondary schools (Mohd. Majid, 1995) started with the assumption that educational innovations are changed at the implementation stage. It is predicted that there may be a gap between the beliefs of the innovators about teacher effectiveness and the beliefs and practices of the practitioners themselves, especially when the KBSM's exogenous and imposed prescription of 'teacher effectiveness' was derived from foreign-based contentious concepts of pupil-centredness, enquiry-based learning and curriculum integration. A research question, then, is what does teacher effectiveness look like as constructed by the Malaysian 'effective' teachers? Moreover, researchers such as Shulman (2004) see many advantages in studying 'expert' teachers. Thus, the study of 'effective teachers', as identified by those in authority in a hierarchical education system, has considerable promise.

Thus, forty-one nominated effective teachers teaching at the Form One level, whose students were between 12 to 13 year old, and who taught the subjects Bahasa Malaysia (12 teachers), English Language (13 teachers) and Mathematics (16 teachers), were studied. Their beliefs were solicited using the Semi-structured Questionnaire and Interview Schedule and the teachers' and their target students practices were examined through classroom observations. The data on teachers' perceptions were analysed using descriptive statistics, Spearman Rho, Kendall W , percentages, chi-square, generalised liner model with log link and Poisson error structure statistical tests. This encompassed a total of 9,028 episodes of data yielded from 62.7 hours of observing 148 lessons, involving 28 classrooms and 888 'target students'.

The results showed that while the effective teachers of the three subjects agreed with most of the KBSM prescribed noble values they did not seem to have managed to incorporate them into their teaching; that they did not give as high priority to ‘education theory’ as the KBSM would have liked; that they were inclined to use traditional whole-class teaching strategies and to dominate classroom interaction (see Table 3); that they seldom practised cross-curricular integration; and that they differed somewhat in their beliefs and practices according to the subjects they were teaching. In essence, there is a gap between the beliefs of the innovators and the beliefs and practices of the practitioners about teacher effectiveness, even among those who have been officially identified as effective teachers.

It is evident that the KBSM is complex and demanding, and insufficiently sensitive to the teachers’ practicality ethics. Some of the gaps are rooted in the Malaysian school culture which is less receptive to the KBSM’s advanced, progressive ideas of education and teaching. The implications suggest that curriculum development ought to take into consideration teachers’ professional cultures embedded in their beliefs and good practices; that lifelong learning grounded on reflection ought to be the aim of teacher education; and that educational research which is valid in one setting need not be so in another.

Table 3 Comparison between the KBSM effective teachers' classroom activities (in percentage of observations of each respective subject)

Activity	Subjects of Teaching			
	Bahasa Malaysia	English Language	Mathematics	All Subjects
A. Making statements				
<i>Task:</i>				
1. Of facts	6.9	3.0	6.8	5.6
2. Of ideas, problems	10.2	5.3	3.4	6.0
<i>Task supervision:</i>				
3. Telling pupil what to do	7.7	8.7	6.6	7.6
4. Praising work or effort	9.0	10.3	6.8	8.5
5. Feedback on work or effort	4.1	10.2	11.8	9.0
<i>Routine:</i>				
6. Routine information	1.5	1.0	1.9	1.5
7. Routine feedback	0.3	0.2	0.8	0.4
8. Critical control	0.5	1.2	0.6	0.8
9. Off small talk	2.1	0.3	0.2	0.8
Sub-total	42.3	40.2	38.9	40.2
B. Questioning				
<i>Task:</i>				
1. Of facts	1.2	2.6	2.0	2.0
2. Closed questions	2.1	6.3	6.3	5.0
3. Open questions	7.9	10.0	8.2	8.7
4. Referring to task supervision	8.5	8.0	11.4	9.5
5. Referring to routine	1.0	0.2	0.7	0.6
Sub-total	20.7	27.1	28.6	25.8

C. Silent interactions				
1. Gesturing	8.5	5.3	8.6	6.9
2. Demonstrating	2.7	3.5	7.9	5.0
3. Marking	6.0	0.7	4.8	3.9
4. Waiting	3.2	6.1	4.2	5.1
5. Reading	6.8	7.6	0.2	4.5
Sub-total	27.2	23.2	25.7	25.4
No interaction				
1. Visiting students	0.2	0.1	0.6	0.3
2. Totally distracted	8.8	9.1	5.5	7.6
3. Out of room	0.6	0.5	0.8	0.6
Sub-total	9.6	9.7	6.9	8.5
Total	100.0	100.0	100.0	100.0

Abridged from Table 12.1, The Study of Teacher Effectiveness in the Malaysian Secondary Schools (Mohd. Majid, 1995: p. 303)

Some pertinent problems associated with the implementation of educational innovation and the existing teachers or lecturers are concerned primarily with the mismatch between the beliefs of the innovators about teacher effectiveness and the beliefs and practices of the practitioners (Darling-Hammond, 2014; Mohd. Majid, 1995, 1997a, 1997b, 1998b; Mohd. Majid, *et al.*, 2007, 2009c). It is also of concern whether there exist differences between the beliefs and practices of the practitioners in the context of innovation (Mohd. Majid & Mokhtar, 2009c; Mohd. Majid, *et al.*, 2007). The mismatches, however, set teacher effectiveness in the context of teacher education and development programmes (Darling-Hammond, 2014; Kennedy, 2016; Mohd. Majid, 1997d, 2011c, 2012a, 2012c, 2013a, 2013b, 2013d, 2013e, 2014a, 2014b, 2014c, 2014d, 2014e, 2015a). In essence, teacher and lecturer professional career development in teaching for quality learning ought to consider their beliefs as well as their good practices.

b. Teaching and Learning in Malaysia's Smart Schools

The Malaysian Smart School is a learning institution that has been transformed comprehensively and systemically, in terms of teaching, learning and management practices, to prepare students for the era of information and communication technology (MDC, 2000; Ibrahim, 2008; Mohd. Majid, 1997d, 1999; Mohd. Majid, *et al.*, 2000). According to Multimedia Development Corporation (MDC, 2000), the developer of Cyberjaya, Malaysia, the Smart School is a school that promotes students to be self-reliant in acquiring knowledge. Its aim is to provide a conducive teaching and learning environment for the development of individuals who are creative and critical thinkers, innovative, reflective, socially responsible and technologically competent, to contribute towards the attainment of Vision 2020. Students are provided with the opportunity to learn according to their own self-paced learning and to explore new knowledge of their interest so as to maximise their potential.

The Malaysian Smart School was officially launched in August 1997, as one of the seven prime applications of the Multimedia Super Corridor (MSC). Through the Concept Request for Proposal (CRFP), a number of consortiums were invited to supply Smart School Integrated Solutions (SSIS) and eventually Telekom Smart School Sdn. Bhd. (TSS) was selected. The Smart School Pilot Project agreement was signed between the Government of Malaysia and TSS on 28th July 1999. The SSIS was then established in line with the appropriate technological infrastructure (Mohd. Majid, Mokhtar, Mohamad Bilal, Normah, and Muhamad Shahbani, 2003). Two major components of SSIS are the Teaching and Learning Materials (TLM) and the Smart School Management System (SSMS). All in all, 31 modules were developed involving four main school subjects, namely, Bahasa Melayu, English

Language, Mathematics and Science. All these changes needed the implementers' and stakeholders' understanding and acceptance as these changes required a change in their mindset via effective change management programmes (Mohd. Majid, 1996).

Prior to the implementation of the Malaysian Smart School Project, a Dengkil Adopt Smart School Project 1999-2003, initially established in 1997 by the Dengkil Schools Parent-Teacher Association, was officially launched in November 1998 as the experimental test bed of stakeholders' involvement. A special "MDC Good Neighbour Policy" project initiated by the Multimedia Development Corporation (MDC), in conjunction with the opening of Cyberjaya City in July 1999, highlighted the stakeholders' collaboration in all areas towards the conversion of two rural schools, Dengkil Primary and Dengkil Secondary, into smart schools, with the aim to adequately prepare students and the community for the information age (Mohd. Majid, 1999; Mohd Majid, *et al.*, 2000). The aim was to get students and communities more interested in multimedia and prepare them for the onset of the Digital Age. Other than the Ministry of Education, government agencies and Parent Teacher Associations, 30 private companies, among them British Aerospace, Sapura, Microsoft, EDUTREND, British Telecoms, Fujitsu System, Telekom Malaysia, Hewlett Packard and 59 other corporations were involved.

The Dengkil Project, the recipient of the Washington Symphony's International High Notes in Education Award for the year 2000, consisted of six main programmes, namely IT Literacy and Multimedia Skills, Applications of IT in Subjects, Computer Club, the Global Schools Network, Design and Technology, the Cambridge ICT Certification Schemes and ICT Technical Skills (Mohd. Majid, *et al.*, 2000). The Global Schools Network (GSN), for example, links participating schools worldwide to

enable effective development and enhancement of educational collaboration between participating schools, using IT enabling tools and the internet. The Dengkil schools were connected with their counterparts in Canada, Hawaii, Japan, Norway, South Africa, South Korea, New Zealand, United Kingdom and USA. Among the worldwide partners were Hamilton Senior High School, Australia; Broughton in Amounderness CE Primary School and Kirkham Grammar School, Lancashire, England; Banded Peak School, Rocky View, Calgary Canada; UH Lab School University of Hawaii, Hawaii; Ogaki Higashi Elementary and Secondary Schools, Gifu, Japan; St. Martin Primary School and Riccarton High School, New Zealand; Jorpeland Secondary School, Stavanger, Norway; and Campbell Middle School, Forest Hills School and Conestoga High School, Berwyn, Pennsylvania, USA (Mohd Majid, *et al.*, 2000).

Other activities also took place, among them was the linking of incubators to Schools (MDC, 2000) whereby three students from each school were each given a personal computer equipped with a cubicle to immerse the students in an office environment. The students were taught information technology and communication skills including e-mailing, home-page creation, web-surfing and graphics design. Besides generating the students' interest in multimedia and increasing their exposure to the internet, the objective of the programme was to provide the older children with the opportunity to produce something using their own ideas, creativity and hard work (MDC, 2000). The objective was to allow students to express themselves better through interaction with the MDC-Incubator tenants and staff. The students were mainly involved in cultural exchanges with their counterparts in the hospitals, universities, businesses and schools project (HUBS) in the US, via e-mail and internet (MDC, 2000). The HUBS project for example – which spreads across the mid-Atlantic states of

Pennsylvania, New Jersey, Maryland and Delaware – is aimed at transforming the four US states into one smart region that will promote business growth, create more jobs, provide enhanced educational capabilities and deliver improved medical services (MDC, 2000). The students of the Dengkil schools adopted by MDC have now established links with elementary schools in the Tredyffrin and Easttow School District (TESD) and Morrisville School district in the US, and five high schools in the city of Tainan in Taiwan (MDC, 2000). Collaboration with Devon Elementary School in the United Kingdom has made this a project that spans two oceans and three continents. Clearly, the Dengkil Project has spearheaded the development, not only of the Smart Schools in Malaysia, but also similar Smart Education projects that were launched in South Korea and Japan in 1998 (Kim, 2014).

In essence, the implementation of Smart Schools is a new concept in the Malaysian education system (Ibrahim, 2008; Mohd. Majid, 1997d, 1999; Mohd. Majid, *et al.*, 2000). From 1999 to 2002, a total of 87 schools were involved in the Smart School Pilot Project: four primary schools and 83 secondary schools. Out of the 83 secondary schools, 33 were boarding schools and 50 were normal schools. These schools were supplied with the SSIS that includes the TLM and SSMS. The period from 1999 to 2002 saw progress in the development of the SSIS with the overall final package installation completed and FSA final test on 31st December 2002. With the completion of the installation, public expectation on the success of educational change was high. This expectation and development created an effect on the use of the SSIS, particularly amongst school teachers. A comprehensive study was therefore needed to determine the users' perception on the appropriateness and effectiveness of the software, hardware and smart school system supplied before it was rolled out to other schools in the country.

The main objective of the Malaysian Smart School evaluation study, commissioned by the Ministry of Education, was to study how the SSIS has achieved the objective of the Smart School, and consequently to identify the appropriate strategy, approach and alternatives to roll out the project (Mohd. Majid, *et al.* 2003). Based on the main components of TLM and SSMS, the objectives of the evaluation were to determine the appropriateness and effectiveness of the TLM supplied to the schools; the appropriateness and effectiveness of the SSMS application in helping the school administration and management; the appropriateness of Smart School technology infrastructure in facilitating teaching and learning management; appropriateness and effectiveness of the training given; and the effectiveness of the implemented change management programme. Back then, there was no such thing as a wireless internet connection, so all smart teaching and learning had to be done in the special Smart Laboratory established in the respective schools.

The SSMS evaluation study used a mix of quantitative and qualitative methods of descriptive survey. Data were collected using eight questionnaires based on eight user groups, classroom observations and focus group and personal interviews. A total of 8,241 responses were analysed comprising 67 Secondary School Principals, 4 Head Masters, 210 Senior Teachers, 79 Smart Coordinator Teachers, 1,850 Smart subject teachers, 1,881 non-subject teachers, 378 staff, 2,313 students and 1,459 parents (Mohd. Majid, *et al.*, 2003).

The results indicated that the level of knowledge about smart teaching and learning concepts amongst the teachers and the students of smart subjects was average and varied. Their perceptions of smart teaching and learning were also positively average. The usage of TLM courseware amongst the teachers and the students

was low compared to their usage of other learning materials such as textbooks, spreadsheets and teacher-developed materials. The subject teachers' believe about the appropriateness of the 11 smart teaching and learning materials and facilities and the supply of the TLM courseware were positively average, but these perception scores were lower compared to their perception scores for traditional teaching and learning materials; and on average they used the Smart Lab for the smart teaching and learning sessions four times a month. Although the smart teachers believed that their skills in teaching the subjects were on average high, only about half of the teachers used the recommended electronic Lesson Plan module. The main reasons given were that the electronic lesson plans were impractical, too brief and that there was no directive and no monitoring from the school administrators. They voiced out that the main constraint in implementing smart teaching and learning was that the system did not work smoothly.

Furthermore, the ability of school principals and head masters, the only users, to maintain the SSMS 16 modules was average. Many considered the maintenance as being too easy. They however, found difficulty in using the other modules especially finance, staff management, facility maintenance and facility usage. For the senior teachers their knowledge of maintaining the SSMS's 16 modules was low, as many of the modules such as the time table and finance modules were not user friendly. Failure to generate any module properly, for example the time table, has caused glitches in using the other SSMS modules, such as, Teaching Planning.

User perceptions of principal knowledge on the Smart School technological infrastructure were low, and in fact, the smart subject teachers and their students were not satisfied with the infrastructure. For the Smart coordinators, the computer facilities were not enough, and they face difficulty in basic data entry and there being not enough computer labs. In fact, SSMS, computers and TLM were on

the top of the lists being reported to the centralised Smart School Help Desk. Though the help from the Help Desk was satisfactory, the help from the State Department and District Education Office was unsatisfactory, according to the coordinators.

In terms of staff development, the Smart School training was normally conducted in the schools. The appropriateness of the training conducted was satisfactory for the Principals and Head Masters, but unsatisfactory for the other users. Except for the subject teachers, all of the users were not satisfied with the training received. In fact, about half of the subject teachers said the training was not enough. Surprisingly, some subject teachers (13.3%) said that no training was given to new teachers.

The school principals and head masters perceived that the attainment of the Smart School objective was average, although the Coordinators considered it as low. The main reasons given were that the SSMS was not fully utilised, redundancy of works, unstable and incomplete software, and time needed to overcome implementation constraints. Students' and parents' knowledge about Smart Schools was also low though 90.5 per cent knew that their children attended Smart Schools.

Overall, all of the users were satisfied with the management of the Smart Schools. They were also satisfied with the Coordinators and the subject teachers. However they considered the following as deterring factors for successful Smart Schools implementation: frequent SSIS glitches, inappropriateness of TLM in terms of content and materials; inappropriateness and glitches of SSMS; inadequate and inappropriateness of technology infrastructure, such as, computers; insufficient and inappropriateness of training in terms of content and time; and inefficiency of change management, such as, redundancy of work, teacher mindset, time constraints, understanding of the concept and commitment amongst school administrators. The users believed that among the success factors

were commitment of school leadership and implementers, adequate technology infrastructure, SSMS readiness, appropriate teaching and learning materials, training, management, coordination and monitoring.

In essence, the teaching and learning materials in Smart Schools must be appropriate with the level of the students' knowledge and easy to launch using a computer platform; the management system must be user friendly, the infrastructure, such as, computers and networking must be adequately available; training must be given continuously according to the users' needs with appropriate, adequate, materials and time till the users can use them without interruption; and last but not least, there must be commitment from all parties especially, the school administrators. Clearly, teachers and their superiors find it difficult to implement educational innovations even in the case of teaching and learning in the new Smart Schools. These empirical findings, to some extent confirmed the widely held beliefs that issues of information dilution are widespread in the top-down innovation process, whereby the expected innovation champions, such as, principals and leaders of educational institutions, who are trusted and attended the respective training, are not able to share and disseminate the pertinent knowledge, skills and attitudes required for its successful implementation, to the implementers.

c. Teaching and Learning in the Malaysian Education System

Despite some constraints in implementing the recommended student-centeredness teaching and learning initiatives, the quest of teaching for quality learning, nevertheless continues. Continuous evaluation is necessary for the improvement and attainment of effective, deep and meaningful teaching and learning in the national education system. In preparation for 21st century education, the

evaluation of teaching and learning in the National Education System (Mohd. Majid, Mohamad Sahari, Raja Maznah, Rosna & Nafisah, 2012) is a systematic effort to identify the effectiveness, strengths and weaknesses in teaching and learning as well as its potential to foresee future and current global educational challenges, in an effort to develop innovative and entrepreneurial human beings. Commissioned by the Ministry of Education, the findings of the evaluation have been used as a basis for the emphasis on the importance of high order thinking skills (HOTS) as well as the need for more effective models of teacher recruiting, training and career development, in the formulation of the Malaysia Education Blueprint 2013-2025 (Preschool to Post-Secondary Education).

The objectives of the evaluation study on teaching and learning in the national educational system (Mohd. Majid, *et al.*, 2012) were to evaluate effective, deep and meaningful teaching and learning, teachers' professional development and the ability and potency of the teaching and learning system in developing innovative, entrepreneurial humans who can stand up to global and future challenges. In this evaluation, effective, deep and meaningful learning refers to the learning theory that prescribes that students will understand and comprehend what has been learned when they are given the opportunity to develop their own meaning for performing each learning activity (Biggs, 2003; Biggs & Tang, 2011a). Meaningful learning involves self-reflection on the way of using the acquired knowledge to solve problems, make decisions, understand and develop concepts, inquiry process and self-realisation, assumptions underlying a thing or an event, accuracy of assumption, conclusion, belief as well as moral differences and ethics, from what has been learned (Biggs & Tang, 2011a).

The study employed effective, deep and meaningful teaching and learning concepts based on the 10 principals of effective

teaching and learning identified through the Teaching and Learning Research Project (ESRC, 2006), meaningful learning employing Constructive Alignment based on SOLO (Biggs, 2003) (see Figure 1) as well as meaningful teaching and learning model of presage, process, and product (3P) (Prosser & Trigwell, 1996) (see Figure 2). Eight constructs and 63 indicators of effective, deep and meaningful learning were used to develop the Teaching and Learning Observation Instrument (UWV, 2011) which has a reliability index of 0.796. An interview schedule was also used to collect information about the dynamics of classroom teaching and learning, supervision and professional development of teachers as well as the potential of the teaching and learning system in facing global challenges.

Descriptive evaluation that integrates quantitative and qualitative approaches was employed in analysing the data. Observations by six teaching and learning experts with a total of 169 years of experience for a duration of 5,690 minutes of classroom teaching and learning sessions in a selected sample of 125 sessions in 118 classes in seven types of schools at 39 class levels and in a total of 41 educational institutions in the National Educational System in Kuala Lumpur; Petaling Jaya and Sepang in Selangor; Nilai in Negeri Sembilan; Alor Star, Jitra, Yan, Sitok and Sungai Petani in Kedah; Kangar in Perlis; and Pontian and Johor Baharu in Johor, with 18 primary schools inclusive of National Type Schools, Preschool, Remedial, Special Schools as well as Cluster and High Performance Schools, 20 secondary schools of various types, Matriculation College and Malaysian Teacher Education Institutes (IPGM) located in urban (43.9%) and rural (56.1%) areas with a morning session (87.9%) and afternoon session (12.3%) with a total of 3,038 students (with an average mean (mean) of 44.12 students, and a standard deviation (SD) of 16.23 students), involving 21 subjects with 126 teachers comprising both males (27.2%) and females (72.8%) with a total

experience of 1,450 years (mean=12.72, SD=7.02), were studied and analysed.

The quantitative results indicate that out of the effective, deep and meaningful teaching and learning constructs, classroom facilities score the highest (62.7%), followed by teaching strategies (44.2%), classroom management (40.8%), learning opportunity (38.9%), teacher behaviour (38.7%), student involvement (36.3%), student attitudes (35.0%) and high order thinking skills development (24.7%). After removing student attitudes due to the low level of student involvement in teaching and learning (36.3%), it was seen that overall the effective, deep and meaningful teaching and learning performance in the national education system is low (38.6%) (mean = 29.86/54 points, SD = 6.046) (see Table 4). The study also found that the levels of effective, deep and meaningful teaching and learning performance were significantly different between types of schools ($F = 6.803, p < 0.01$); between Chinese and Tamil National Type Schools (mean = 24.38, SD = 6.38) as compared to National Primary Schools (mean = 18.12, SD = 6.28) and Religious Secondary Schools (mean = 17.90, SD = 4.84), between National Primary Schools (mean = 18.12, SD = 6.28) and National/Technical Secondary Schools (mean = 21.37, SD = 8.33), and between National/Technical Secondary Schools (mean = 21.37, SD = 8.33) and National/Religious Secondary Schools (mean = 17.90, SD = 4.84). The differences were, however, not significant in relation to the school location, school session and teachers' gender. Significant correlations were detected between effective, deep and meaningful teaching and learning performance and class size ($r = -.327, p < 0.01$) and between effective, deep and meaningful teaching and learning performance and teaching and learning duration ($r = .187, p < 0.05$). No significant correlation, however was detected between effective, deep and meaningful teaching and learning performance and teachers' work experience ($r = -.073, p = .442$).

Table 4 Mean, Standard Deviation and Percentage of Effectiveness of Teaching and Learning in the Malaysian Classrooms based on Main Constructs of Meaningful Learning*

Constructs of Meaningful Learning	No. Item	Highest Score	Mean	S.D.	Percentage
Classroom Facility (<i>CF</i>)	5	7	4.39	1.66	62.7
Teaching Strategy (<i>IS</i>)	6	6	2.65	1.07	44.2
Classroom Management (<i>CM</i>)	5	5	2.04	.84	40.8
Learning Opportunity (<i>LO</i>)	10	10	3.89	1.90	38.9
Teacher Behaviour (<i>TB</i>)	7	7	2.71	1.39	38.7
Student Involvement (<i>SI</i>)	4	4	1.45	.55	36.3
Student Attitude (<i>SAD</i>)	11	11	3.85	2.17	35.0
Higher Order Thinking Skills (<i>HOTS</i>)	15	15	3.70	2.34	24.7
Indicator Meaningful T&L (inclu. SAD)	63	65	20.29	7.37	31.2
Indicator Meaningful T&L (exclude SAD)	52	54	20.86	6.05	38.6

*Mohd. Majid Konting (Leader), Mohamad Sahari Nordin, Raja Maznah Raja Hussain, Rosna Awang Hashim & Nafisah Mahmood (2012). Evaluation of Teaching and Learning in the Malaysian Educational System, Putrajaya: Ministry of Education, page 79.

The qualitative findings from 125 classroom observations, interviews and document analysis showed that teaching and learning activities in the Malaysian education system focuses on the attainment of academic results in public examinations, in tandem with the teachers' teaching objectives, as targeted by the schools and educational institutions. Learning outcomes were not stated accurately and clearly in the programmes and subjects offered, were not shared with the students and were not effectively implemented, resulting in difficulty in evaluating effective teaching and learning in the classroom.

In particular, the focus of effective teaching and learning in the national education system was geared towards achieving excellent results in the public examinations that are dominated by the low level of the cognitive domain. Surface learning and teaching practice was widely used in the classroom through memorizing and drilling activities as well as summative evaluation based on paper and pencil. The teaching and learning approaches and methods used focus on teacher-centredness. Teachers were found to have in-depth knowledge in the subject they were teaching and were skillful in teacher-centred teaching and learning pedagogy. Overall, the students were passive learners. The classrooms were a bit crowded and facilities that support student-centred activities were inadequate.

The qualitative findings also indicate that teaching and learning in Chinese and Tamil National Type Schools and National/Technical Secondary Schools paid more attention to excellent achievement in the public examinations, especially in the compulsory pass subjects, compared to National Primary Schools and National/Religious Secondary Schools, as these schools also gave emphasis to the religious-based subjects. The qualitative findings also indicate that the leadership focus of the National Type Primary Schools

and National/Technical Secondary Schools placed more emphasis on attainment of academic excellence compared to the leadership and teachers in the National Primary Schools and National/Religious Secondary Schools that gave emphasis to holistic student development, especially in aspects related to religion.

In essence, the quantitative and qualitative evidences of this evaluation study could not detect any significant teaching and learning practice that was based on outcome, deep and meaningful learning, student-centredness as well as authentic assessment for learning, what more, assessment as learning, the pillar of effective, deep and meaningful teaching and learning. Although the development of the 21st century students, as well as, enhancement of innovation and entrepreneurship need effective, deep and meaningful teaching and learning, the study shows that meaningful teaching and learning performance in Malaysian schools and institutions is mediocre (38.6%). Although the information given by the teachers via surface teaching and learning is pertinent and necessary for the students, as shown in this study, this approach cannot adequately produce innovative and entrepreneurial school leavers. There is a need to improve meaningful teaching, enhance effectiveness of student-centredness teaching and learning and promote assessment as an agenda for meaningful learning. There is also a need to examine policies and implementation of meaningful teaching and learning in the national education system.

The results of this study also show that supervision, guidance, training and professional development of teachers in teaching and learning need to be improved. Many teachers get their information about educational initiatives and reformation, such as, the introduction of the Primary School Standard Curriculum, through their limited attendance and involvement in the face to face briefing sessions. There was no clear indication that effective

effort had been taken to ensure that teachers were knowledgeable, skillful and able to implement the introduced teaching and learning innovations. In many schools and institutions, many teachers employ trial and error coping strategy approaches, struggling to understand, what more to immerse in the innovation, without any proper and effective supervision and guidance to ensure the success of its implementation. These weaknesses in the supervisory system of teaching and learning could have caused the teachers to fall back to their old beliefs of good practices centered around teachers that have captivated and been proven effective as the best approach in dealing with achievements in public examinations. There is a need, therefore, to enhance the supervisory and monitoring system in teaching and learning as well as the teachers' professional development towards deep and meaningful learning.

In conclusion, the study emphasised on the importance of teachers attaining mastery of the stated educational learning outcomes in improving effective, deep and meaningful learning if the educational aim is to produce innovative and entrepreneurial school leavers. Efforts via policy and programmes have to be effective to promote deep and meaningful learning as the core of academic excellence. Strategic and impactful stakeholders' involvement is pertinent to improve their understanding about meaningful learning. To facilitate and help, especially existing teachers and institution leaders to migrate from the century old exam-centred academic excellence system, utmost commitment of various levels of educational leaderships in the national education system need to be secured. Enhancement of supervision, guidance and training and development in teaching and learning could be made through effective in-service courses that ensure that each and every teacher is able to deliver the expected innovation outcomes throughout their lifelong career meaningfully, ensuring that the goal

of effective, deep and meaningful teaching and learning, as aspired by the National Philosophy of Education, be owned by especially the main stakeholders of education, that is teachers and students.

d. Teaching and Learning in Malaysian Higher Education Institutions

The quest for teaching for quality learning is ongoing in higher education institutions (HEIs). A flexible, adaptive and innovative education system to facilitate student learning is necessary in order to foster creative, innovative, holistic, entrepreneurial and balanced graduates. To prepare for 21st century education, students of HEIs must be given ample opportunity to explore, develop and enhance their knowledge, skills and attitudes constructively, deeply and meaningfully, so that they can continuously explore, manage and enhance their lifelong learning. Being change agents, any educational reform, such as, the MEB (HE) transformation of higher education learning and teaching and the Malaysian Qualification Framework (MQF) standards, needs not only academics with the necessary knowledge, skills and attitude but also capable effective leaders who can provide effective transformative leadership. It is imperative therefore that leadership in higher education learning and teaching be explored, developed and enhanced.

Even after eight years from the launch of the National Higher Education Strategic Plan (NHESP) transformation, the prelude of the MEB (HE) that was launched in 2007 and the MQF standards initiative that was also launched in 2008, little is known about the dynamics of Malaysian higher education learning and teaching. While there are still many contestable research findings in the literature to guide higher education classroom practices, very few, if any, come from the Malaysian classrooms. Little is known on the status of learning and teaching initiatives, its issues and challenges

as well as its future direction and improvements in the Malaysian context. Such scholarly research-based findings will certainly help not only to guide the academics in their practices, but will also be informative in the formulation of a sustainable higher education leadership development programme (Mohd. Majid, 2013a, 2013d, 2013e, 2014a).

In 2012, the Centre for Leadership in Learning and Teaching (ACELLT) of the Higher Education Leadership Academy (AKEPT) Ministry of Higher Education, embarked on a scenario study to assess the status, issues and challenges as well as the direction of learning and teaching in Malaysia (Mohd. Majid, 2013a). The aim was to help improve and enhance academics and HEIs leaders through the development of scholarly leadership programmes in higher education learning and teaching. Based on the ACELLT Professional Leadership Development Model in Higher Education Learning and Teaching (Konting, Singh & Idris, 2009; Mohd. Majid, 2013a, 2013e, 2014a; Mohd. Majid, Zuhazmi & Singh, 2010), the initial 15 areas of higher education learning and teaching which had been identified in the earlier ACELLT Higher Education Learning and Teaching Training Initiatives (HELTTI) were scrutinised in this study. The areas are learning and teaching in higher education; scholarship of teaching and learning; understanding learning; learner diversity; learning engagement and motivation; curriculum design, management and development; learning assessment; interactive lectures; e-learning; problem-based learning; project-oriented problem-based learning; case teaching; modular approach; student supervision; and industrial training/practicum.

The following research summary encapsulates the overall findings of the study on the 15 respective areas of student-centredness in higher education institutions' teaching and learning (Mohd. Majid, 2013a). While efforts have been taken to highlight the

main issues and findings of each research project that can represent the learning and teaching practices in Malaysian HEIs, the exact issues and findings are contained in the respective research reports.

Research Objectives

The overall study aimed to identify the status and future of teaching and learning in Malaysian HEIs, including universities, polytechnics and community colleges, with respect to the 15 areas of learning and teaching identified (Mohd. Majid, 2013a). The general objectives of the study were as follows:

- a. To identify the current status of the 15 areas of learning and teaching in terms of knowledge, skills and implementation among academics at the HEIs in Malaysia;
- b. To identify issues, problems, and challenges relating to the implementation of the 15 areas of learning and teaching at the HEIs; and
- c. To identify future directions and improvements towards consolidating the 15 areas of learning and teaching at the HEIs.

Methodology

The study adopted mainly the survey research design, with a mix of quantitative and qualitative methods (Mohd. Majid, 2013a). Self-developed, adapted and established questionnaires, such as, the Teaching Perspective Inventory (TPI), Approaches to Learning Inventory (ATI), Diversity Climate Survey, Global Mindedness Scale, R-SPQ-2F Study Approaches Questionnaire, Learning Engagement Questionnaire, Teacher Motivational Strategies and Assessment Practice Inventory (API), as well as, interview schedules through focus groups and direct discussions, were used to collect the respective data, some via online techniques such

as *Survey Monkey* and *Google Docs*. A total of 4,414 responses comprising academics, 2,337 students, and 280 deans, heads of departments and head of programmes, of at least 50 public and 76 private Malaysian HEIs, were analysed descriptively, inferentially and qualitatively, some employing advanced statistical techniques such as structural equation modelling (SEM).

Findings and Implications

1. The study on learning and teaching in higher education (LTHE) (Ibrahim, *et al.*, 2012) indicates that an academic at a higher education institution (HEI) needs to know the vision, mission and the objectives of the HEI, particularly in the creation of human capital and functional graduates who are able to contribute under any circumstances. Academics also need to know their roles in performing their tasks ethically and with integrity. They also need to enhance their competency and capability through innovative and creative approaches. It is also important for academics to know and predict what the future will be for them. Similarly, they will need to understand the whole concept of leadership and governance because this aspect is one of the most important critical success factors for a HEI. To ensure that the HEI's objectives can be achieved, the development of the academic curriculum, delivery systems and assessment and evaluation are extremely important aspects that should be strongly considered by academic. Academic programmes should not only be confined to the practices at the national level but must also incorporate comparative studies with the best practices at the international level. The quality of the academic programmes in local HEIs will then be equally good as that offered by international HEIs.

2. The study highlights the current status of scholarship of teaching and learning (SoTL), knowledge and practice as well as, the SoTL culture in Malaysian HEIs (Raja Maznah, *et al.*, 2012). Overall, there is general consensus on the need to enhance HEIs teaching practices through SoTL. However many academics are unfamiliar with the SoTL literature and are generally exposed to it informally. While SoTL is an established field of research, it seems that many institutions view it as something which is more intuitive as opposed to academic, i.e. something the lecturer should already know or learn through his or her own experience. This study reveals the importance of and need for SoTL training. The majority of academics indicate that there is a need to develop a comprehensive SoTL training framework and that any such training programme must be accredited. Support by the institution seems to be important, but whether such support has an actual impact upon SoTL practices is yet to be proven. Future research should deal with the synthesis of the important elements of SoTL training and the development of a comprehensive training framework that will help develop the required skills among HEI academics to research on their teaching effectively.
3. The study on understanding learning (UL) (Turiman, *et al.*, 2012) indicates that many academics in Malaysian HEIs do not fully understand about learning and they cannot provide an exact picture about learning. Most of them have limited understanding on learning. The different perceptions and understanding of academics on students' learning will result in diverse ways of planning, implementing, assessing and evaluating students' learning activities. Therefore, the authorities and academics at the HEIs should take some

initiatives to understand learning better. Among others, (a) academics should always update themselves with information about learning, (b) academics should attend regular seminars and workshops about understanding learning in HEIs, and (c) reading materials and resources providing basic knowledge on learning should be made available to academics. Last but not least, further research is needed to explore the factors that can enhance understanding on learning within HEIs.

4. The study on learner diversity (LD) (Rosna, *et al.*, 2012a) draws from the range of diversity work, both diversity-general and diversity-specific. Diversity-general issues are attributed to the institutional climate and policy, while diversity-specific issues are centred on instruction and human interactions, featuring global-mindedness and various mixtures of similarities and differences. The findings clearly indicate that students perceived the diversity climate for all dimensions as high, while academics perceived the dimension of institutional policy as moderate. In relation to global mindedness, both lecturers' and students' perception levels were found to be low. The findings clearly show that there is still a lack of awareness among academics and students alike on global mindedness. The findings reveal that the academics need to equip themselves with greater knowledge on learner diversity, which has been expanded to include other aspects, such as, learning styles, learning approaches, motivation and expectations, social context of education and individual life styles beyond ethnicity, gender, religion, disability, culture and community. Since diversity has been recognised as a leap towards competitiveness, a comprehensive outlook to sustain its viability from the institutional to the instructional level remains crucial. Hence, this study envisages

well-defined steps, both at the institutional and instructional levels, in addressing the issues of learner diversity among higher institutions.

5. In order for academics to produce students who learn in a meaningful way, academics must think carefully about how to motivate and engage the students in learning. Using Biggs' 3P model of teaching and learning, which highlights how teachers can influence the process, the research on learning engagement and motivation (LEM) (Rosna, *et al.*, 2012b) indicates that student engagement is a significant mediator between academics' motivational strategies and students' adoption of the deep learning approach. Therefore, academics at HEIs need to know how to effectively engage and motivate their students in the learning process. Future research can consider other mediating factors which are related to either the lecturer's factor or student's factor. In addition, using multi-group analysis can further corroborate the findings of model testing via structural equation modelling (SEM), as these additional approaches would help to enhance the robustness of the proposed learning engagement and motivation model.
6. Curriculum is a dynamic process. Over time the focus of the curriculum is bound to change. New emerging demands will require changes and new inputs need to be given consideration. The findings of the curriculum design, management and development (CDMD) research (Nagendralingan, *et al.*, 2012) seem to indicate that the academics have an inclination towards the process model of curriculum over the product model. They seem to subscribe to the view of curriculum as what the learners experience in a teaching-learning environment. This

suggests academics have a more empowering and dynamic view of curriculum given that what the learners experience in the classroom is much more within the bounds of their control, and more amenable to change by changing their practices. They also hold the view that academics can develop professionally and become better teachers by engaging in curriculum, and that the academics' development is critical to curriculum development. Although academics seem confident that they possess adequate knowledge to assess their own knowledge, with respect to designing a curriculum, academics seem less confident when it comes to considering: (a) the sociological dimension; (b) the comprehensiveness of the learning domains dimension; (c) the social skills dimension; and (d) the feasibility dimension. They also seem to be less aware of the need to consider: (a) the psychological dimension; (b) the historical dimension; (c) the vertical integration dimension; and (d) the horizontal integration dimension. These shortcomings need to be addressed in preparing the ACELLT Leadership Development Training Modules in CDMD. Emphasis should be given to curriculum design, management and evaluation. The historical, psychological and sociological foundations, learning domains dimension as well as the vertical and horizontal integration of the curriculum should also be given due attention.

7. The findings of the learning assessment (LA) study (Mohamad Sahari, *et al.*, 2012) indicate that, unlike the previous works, the academic's assessment practice is a multidimensional construct. Four credible underlying dimensions of assessment practice, similar to the standards of assessment competency, have been found, namely: (a) using methods of assessment for learning; (b) recognising unethical, illegal and inappropriate assessment

methods; (c) communicating of assessment results and feedback; and (d) grading procedures and using assessment results. The findings show “communicating results and feedback” to be the most frequently practiced assessment standard, while “grading and use of assessment results” was the least frequently practiced. The findings also show that academics’ confidence in evaluating oral questions from students, assessing group participation, assessing student learning through observation and assessing individual student’s class participation and hands-on activities had a positive impact on practice. It also suggests the need for instructional intervention to strengthen the academics’ competence in assessment for learning. The information would be very useful for the ongoing efforts in designing and implementing intervention programmes. It is also acknowledged that there is widespread evidence that fundamental changes in education can be achieved only slowly - through programmes of professional development that build on existing good practices.

8. Generally, the findings of the interactive lecture (IL) study (Mohamed Amin, *et al.*, 2012a) support the need to develop a leadership training module for academics in Malaysian HEIs with the following considerations. The suggestion is that the training modules should include the contemporary conceptualisation of teaching and interactive lectures that includes active learning, students’ engagement and integration of Web 2.0; exposure to various learning theories including behaviourism, constructivism, cognitivist, learning style, andragogy and principles of instructional design; exposure to interactive lecture techniques including, Think-Pair-Share, One Minute Paper and Muddiest Point; and that trainees

should be given specialised coaching on how to integrate various interactive Web 2.0 tools in teaching and learning. The modules should also include topics on interactive lecture strategies, tools for learning, active learning, collecting feedback on understanding learning, andragogy and learning theories. In encouraging the application of andragogy theories, activities, tasks and projects in the modules need to be related to the trainees' work and institution. The training needs to encourage collaborative efforts among the trainees across the HEIs, in line with the concepts of interactive and collaborative learning espoused in the modules. As the modules incorporate work-based activities and projects during the training sessions, all participating HEIs need to have at least minimum standard infrastructure and facilities (especially good internet connection) to encourage the application of the modules in the trainees' workplaces.

9. The findings of the e-Learning study (Mohamed Amin, *et al.*, 2012b) indicate that the following considerations can support the development of e-Learning for Malaysian HEI academics. That training should include the current conceptualisation of e-Learning that includes social media and the use of Web 2.0 in teaching and learning; exposure to various learning theories including behaviourism, constructivism, cognitivism, learning style, andragogy and instructional design; and exposure to open resource initiatives (ORIs) and open educational resources (OER). Topics for e-Learning training should also include e-Assessment, Mobile Learning, Blended Learning and Learning Preferences. Trainees should be introduced to authoring tools available in the market for developing e-Learning materials and packages including, Raptivity,

Captivate, Articulate, Camtasia Studio and LectureMaker. Trainees should be trained on how to use the main Web 2.0 tools in teaching and learning. In encouraging the application of andragogy theories, activities, tasks and projects in the e-Learning modules need to be related to the trainees' work and institutions. The training needs to encourage collaborative efforts among the trainees across the HEIs in line with the concepts of interactive and collaborative learning espoused in the e-Learning modules. As the e-Learning training modules incorporate work-based activities and projects during the training sessions, all participating HEIs need to have at least minimum standard infrastructure and facilities (especially good internet connection) to encourage the application of e-Learning modules in the trainees' workplaces.

10. Even though problem-based learning (PBL) has long been introduced in the medical field in many HEIs in Malaysia, this student-centred learning approach is still considered new in other disciplines. The PBL research findings (Wahid, *et al.*, 2012) show that there are still many academics who have not had extensive exposure to the basic concepts of PBL, let alone its effective implementation. Even those who claimed to know the basic concepts of PBL, were not able to show that they are skilful in implementing PBL. The findings suggest that there is an urgent need to improve the quality of HEI academics in the field of PBL in order to prepare them to lead, promote and champion PBL in the HEIs. In addition, there is still room for research to be tapped in relation to PBL implementation in Malaysia, in order to formulate a feasible PBL policy and guidelines.

11. Based on the findings from the project-oriented problem-based learning (POPBL) survey (Mohd Salleh, *et al.*, 2012), it is apparent that academics in Malaysian HEIs should actively participate in professional leadership development training programmes, workshops and seminars to enhance their knowledge and skills to facilitate POPBL implementation and initiatives. Furthermore, HEI academics should constantly reflect and evaluate the process and outcomes of their POPBL teaching practices and engage in scholarly research on teaching and learning. In order to maximize their students' learning, the way HEI courses and programmes are designed should take into account the appropriate class sizes in their respective institutions. The curriculum should be designed in such a way that students can be engaged in working in groups from their very first year and throughout their programme until graduation. The students should also be able to exercise their personal responsibility for their own learning as individuals and within learning communities.

12. Except perhaps for the medical and law programmes, the practise of using cases in teaching is still very low in terms of the total contact hours with the trainees, as shown by the findings of the case teaching (CT) study (Zainal, 2012). Even if the management schools declare that their usage of cases is relatively much higher than in the other disciplines, the need for formal and proper training for their teaching staff in this area is highly needed. The ultimate outcome is still dependent on the availability of local cases in numbers such that a choice can be made when selecting cases for class use. To have a sufficient number of local cases requires a large pool of qualified case writers. To be able to write cases, academics and case writers

need to have the relevant data and information about a case. On a different dimension, case writing and publications have never been given fair recognition, except for the very few, and is not even a rung below publication in journals, in terms of marks scored. Malaysia needs to have an inventory of local cases that in terms of numbers, cover all the necessary sectors, with new ones added constantly to keep up with current developments. A Malaysian case clearing house, with all the required services, is urgently required to start the momentum. The MOHE's intervention might be needed in this matter. Thus, structured case training modules for the Training of Trainers for Case Teaching as proposed by AKEPT is badly needed and is long overdue. The trainers also need to be supported by their respective institutions so that they can continue training others, by giving them recognition for their training activities and time spent, supporting their need to do case research by providing funds and finally rewarding them for producing quality case materials for training purposes, publications and making them available to the public.

13. The findings of the modular approach (MA) study (Hanafi, *et al.*, 2012) indicate that there is a need for formal training among HEI academics on how to teach using student-centred learning strategies such as the modular approach as the majority of academics modelled their teaching techniques on those used by their own lecturers, following their observations of the delivery of lectures/classes when they were students. The study also indicates that almost three out of four academics require formal training in the modular approach. In fact, the majority of academics are not clear about the concept of the modular approach. The study provides evidence of the need

for systematic training by AKEPT on teaching and learning utilising the modular approach.

14. The study on student supervision (SSV) (Raja Maznah, *et al.*, 2012b) shows that academics in general perceive the importance of and need for student supervision training. It was found that most of the HEIs do not have such training programmes available and the majority of supervisors have limited exposure in student supervision training. The findings reveal that many academics still lack understanding in student supervision and view student supervision as a means to generate publications and research work, and as a means of introducing the students to research and grooming them to be researchers. It seems that the majority of academics do not recognise intellectual property management and dispute resolution as important elements in the student supervision process. Considering that many academic feuds have been started by allegations of plagiarism and intellectual disputes, such areas should have been ranked as being more important if indeed thesis construction and research publications are deemed to be important. Perhaps more attention must be given to these areas in future research on supervision training, even though they have received low priority rankings from lecturers.
15. The industrial training / practicum study (ITP) (Khairiyah, *et al.*, 2012) indicates that supervisors and coordinators of industrial training / practicum programmes at HEIs are in need of training in performing their tasks in managing, assessing and evaluating students undergoing industrial training / practicum. The supervisors do not only need to deal with students but also the industry, and this involves communication with

various parties. Thus, this research suggests that the training scope should involve many aspects of the industrial training / practicum programme with highlights on assessment and soft skills, such as, communication skills. Providing clear objectives and an operational framework are essential to ensure that both industrial and academic supervisors, as well as students, have the overall picture of how the industrial training is managed and their respective roles. Clear and proper guidelines are essential for both parties, the HEI and industry. Other than guidelines, academic supervisors can be given further information, especially regarding the latest regulations such as policy changes, through e-mails, sending notices, providing clear documentation and holding annual briefing sessions.

Conclusion

The results of the 15 research projects may not be fully representative of the views of the academics, students and leaders on the status, issues, challenges and the future of teaching and learning in Malaysian HEIs, including public universities, private universities and colleges, polytechnics and community colleges (Mohd. Majid, 2013a). However, the above studies are useful in gaining adequate understanding of the issues and implementation of the NHESP's transformation and MQF's standards initiatives in learning and teaching. Academics have expressed their need for more training on pedagogy and andragogy approaches as well as methods based on student-centred teaching and learning. The findings also indicate that a standard learning module and recognition for leadership development in higher education learning and teaching are required. The findings have given better insight into the outcomes and topics that need to be addressed in preparing the ACELLT Leadership Development Training Modules in the 15

respective areas. The steps taken on a transformative path to raise the quality of higher education learning and teaching by AKEPT and HEIs are nevertheless commendable (Biggs & Tang, 2011b).

LESSONS LEARNED: REFLECTIONS FROM THE FIELD

The success of both MEBs, like the many other educational innovations being introduced as discussed earlier, will depend on many factors, including the educational institution, its departments and the teachers and the lecturers. As any innovation is changed in the process of implementation, when power moves from the planners to the teachers, considerable changes can be predicted at the implementation stage of such ambitious top-down educational innovations. In implementing an innovation in the classroom, the teacher and the lecturer, as evident in the cases discussed above, are at the core of teaching and learning and could influence the success of the innovation. With the increasing reality of imposed educational innovation in many countries over the past five decades, the part played by teachers and lecturers has, to some extent, been neglected and their participation in the development and dissemination of most planned educational changes has been underestimated. Research over the past five decades, such as those discussed above, indicates that attempts at the development, dissemination and implementation of educational innovation, including teaching for quality learning, frequently failed to result in actual change in practice, partly because the teachers' factors had been overlooked (Biggs & Tang, 2011a; Fullan, 2001; Kennedy, 2016).

Whereas theory and practice could be used to guide the development and dissemination of planned change, it is important to also integrate the general knowledge of change with detailed

knowledge of history, cultures, traditions, politics and personalities peculiar to the local setting, as evident in the above research cases. This is due to the fact that innovation takes place in a context. However, the lack of research findings relating to ‘developing’ countries, such as, Malaysia, tends to increase reliance on foreign educational concepts such as the student-centredness pedagogy. It follows that these foreign findings will have limited value for such countries in their quest for teaching for quality learning.

A Misguided Concept?

What matters is whether the student-centred approach is a desirable and practical strategy of teaching for quality learning especially when copious evidence shows that it is a problematic concept (Mohd. Majid, 1995). Plowden’s student-centredness pedagogy, from which the KBSR, the KBSM and the subsequent teaching and learning initiatives are derived (MOE, 2001, 2013, 2015; MOHE, 2007a, 2007b, 2011a, 2011b), was intended for primary school students in England in 1967, where its schools and teachers had, for example, autonomy and sufficient resources. Its appropriateness, more than two decades later, in the Malaysian primary and secondary schools, as well as tertiary education institutions, is thus questionable. Malaysian culture, politics, resources and educational goals in the 1980s, what more in the 21st century, are different from those of England in the 1960s. The basis of the claims that the student-centredness pedagogy is the best teaching approach for quality learning is not clear, but it is fair to suppose that they are not grounded in the best research practices as, in the United Kingdom, many questions were raised about the application of the Plowden philosophy right after its introduction (Mohd. Majid, 1993, 1995).

Furthermore, teachers and lecturers already have their own beliefs and have developed their own sustainable approaches

towards good practices in their classroom teaching, approaches which are mainly based on traditional teacher-centred and whole class teaching, as the above evidences suggest. These teachers and lecturers have already developed new comprehension through acts of teaching that are reasoned and reasonable (Shulman, 2004). They have already established their own cultures of teaching to accommodate, for example, the expectations of the society towards the national or final examinations. These beliefs and practices might therefore hinder the teachers' understanding and consequently, their delivery of the new untested curriculum initiatives.

Failure of Innovation

The literature on innovation and implementation has claimed that most educational reforms have failed even before being implemented, as discussed above. Successful innovations, such as, student-centredness teaching and learning pedagogy, depend partly on the quality of the innovations themselves. At the planning stage, an innovation might fail because of the planners' faulty assumptions and wrong models of thinking about innovation and because the problems that they want to solve may not be solvable in the first place (Fullan, 2001). In particular, the planning is often closed to the realities of other stakeholders, as Fullan (2001) postulates, especially the practitioners who might have ideas that can lead to alterations for the better in the direction of change, and sometimes because the others' realities will expose the inherent problems of implementation that must be addressed and, at the very least, will indicate where one should start.

At the implementation stage, an innovation fails mainly because the implementers themselves do not understand its meaning (Fullan, 2001; Mohd. Majid, 1995, 2013a; Mohd. Majid, *et al.*, 2000, 2003, 2012, 2013a). Innovation involves understanding the new meanings

which are quite often different from the existing meanings that the practitioners' believe and practise. The difficulty in understanding the new meanings is further underestimated especially when the innovation is exogenous and being imposed on the practitioners. In essence, the difficulty in understanding the meaning is because the innovation either ignored teachers or oversimplified what teaching is all about (Fullan, 2001). Again, parallels may be seen with the KBSM, the Smart School and the MQF-based curricula, as discussed above. Furthermore, change in a key area, such as teaching strategies, is not a fully predictable process, so it is to be expected that the implemented curriculum will not be entirely faithful to the planned curriculum. Of course, with this in mind, it might be advisable not to judge the success of an innovation by the fidelity of implementation (since all innovations are changed by implementation), but instead to appraise the quality of what emerges from the implementation process. Failure is then defined in terms of the quality – not the fidelity – of the implemented change.

Quality of Dissemination

The issue of understanding the meaning of teaching for quality learning is exacerbated when there is a lack of professional support in disseminating the curriculum, as shown in the above cases. Though no major empirical research project has been carried out on the dissemination and implementation of the many teaching and learning initiatives, there are many reports of general public outcry, particularly regarding the increased burden on teachers and lecturers as well as their students with the introduction of such initiatives as the Smart Schools, the KSSR, the KSSM and the MQF-based curricula.

Furthermore, although it has been claimed that the current MEBs' dissemination strategy is better than that of previous

initiatives, notably by being school-based or institutional-based (MOE, 2013, 2015), there is still a shortage of expertise needed to manage, promote and sustain these more decentralized practices (Mohd. Majid, 1996, 2013a, 2014e). Interviews with educational authorities and school principals during the evaluation of the teaching and learning in the Malaysian education system revealed several acute problems in relation to dilution of information, lack of skills among training ‘facilitators’ and inadequate, if any, follow-up and follow-through supervision (Mohd. Majid, *et al.*, 2012). The school principals, who have been claimed to be the leaders of innovation in their own schools, and have the responsibility to organize their own staff training sessions, seldom provide the necessary leadership, information, skills and resources, due mainly to their many commitments to other school matters and responsibilities (Mohd. Majid, *et al.*, 2012).

Quality of Teachers’ Professional Development

The problem of understanding the meaning of teaching and learning, student-centredness pedagogy and effective teaching is compounded by a lack of continuous professional development and the declining status of teachers. In an effort to improve teachers’ professionalism, with the implementation of MEB (School), the Ministry required that only top school candidates be recruited for teacher training and subsequently the teaching profession. However, this policy, with its bold assumptions has yet to realise that those candidates are the products of surface learning, exam-oriented, academic criterion, whose quality of being a teacher or a lecturer candidate is questioned by many (Mohd. Majid, 2014f, 2016a, 2016b; Wan Mohd. Zahid, 2014). Furthermore, the assumption that exam-oriented surface learning graduate teachers can master the recommended student-centred teaching and learning strategies is questionable. Although

it was reported that the MEB (School) has achieved its targeted outcomes in the first wave of implementation (MOE, 2014), it seems that problems with the policy and initiatives have been seen as problems with the teachers. Teachers often resent the way this thinking blames them for the perceived failures of the initiatives.

Malaysian Research on Teacher Effectiveness

There is a lack of major research on education, particularly on policy development and implementation (Abdul Rahman, *et al.*, 2014; Hussein, 2008, 2012; Mohd. Majid, 1997c, 2000, 2013d, 2013h). Few attempts have been made to study the notions of teacher effectiveness in the past three decades (Mohd. Majid, 1993, 1995, 2013d). Mohd. Majid and colleagues (2012) concluded that research in the area is not extensive. Little is known through empirical research of what happens in the Malaysian classrooms. Furthermore, no research has attempted to understand the curriculum process from the standpoint of the cultures of effective teaching – the ‘shock-troops’ of teaching and learning initiatives – in theory, at least (Shulman, 2004; Kennedy, 2016). As a result of the top-down approaches to change, only the implementation of the teaching and learning initiatives involves teachers. The introduction of new concepts of education under the teaching and learning initiatives demands, as the above evidences proved, that the teachers should change their old beliefs and routines about good practices to the new beliefs and practices. In essence, this curriculum change requires the teachers, not only to understand its meaning, but also to be able to differentiate the new meaning from the old meaning. In the process, they have to ‘de-skill’ and then ‘re-skill’ themselves.

It is also noted that the top-down approach to change in teaching and learning exemplifies the rather discredited Rational Curriculum Planning model (Kennedy, 2016; Shulman, 2004). The

work of Fullan (2001), Biggs (2003), Biggs and Tang (2011a), and Darling-Hammond (2014) predicts that there will be a gap between the teaching and learning planning and implementation. Both from a theoretical and later, from an empirical position, as this paper describes, it is argued that there is a mismatch between the teachers' and official views on teacher effectiveness. Where innovation is not sensitive to the practitioner, and demands too much effort, especially from the students, teachers and lecturers, while at the same time unrealistically assuming good levels of resourcing and teacher education, it is especially likely to be considerably changed in the implementation process.

It may be postulated that the development of many teaching and learning initiatives have not been well advised. This is especially where the initiative's prescriptive view of teaching for quality learning has been derived from uncritical application of Western educational concepts which may not be appropriate for Malaysian educational culture and traditions. Furthermore, teachers' perspectives have been ignored while successful curriculum implementation depends on the work of teachers. Many factors affect teachers' ability to create quality learning successfully in their classrooms (Mohd. Majid, 2013a; Mohd. Majid, *et al.*, 2012). It is argued that teachers' beliefs and practices need to be altered if the teaching for quality learning initiatives is to be implemented in classrooms in a form close to that envisaged by its planners.

What is needed, accordingly, is continuous empirical work to examine how teacher beliefs are related to their practices and how both relate to the philosophy of quality learning as envisaged by the Malaysian education philosophy. It is suggested that if research concentrates on the beliefs and practices of teachers, to be especially effective in the core subjects of teaching, then any problem areas that are identified will need very serious consideration. A study of

teachers' beliefs and practices within a subject area would be of particular value since it would address a fundamental issue in the initial and in-service education of teachers and lecturers, that of how good practice in a given subject is to be promoted, and subsequently their professional career development.

A question which still lingers is what teaching for quality learning looks like as constructed by Malaysian teachers, lecturers and their students? It is an especially significant question because it has yet to be answered precisely, ever since 1965, when Cecil Beeby reminded us not to neglect the culture of a country and the contributions it can make to education (Mohd. Majid, 1995, 2013b, 2016b). Hence there is a need to continuously generate knowledge of teaching for quality learning, grounded in a hitherto neglected national context.

THE QUEST FOR QUALITY TEACHERS: TEACHER TRAINING AND DEVELOPMENT

Growing evidence demonstrates that among all educational resources, teachers' and lecturers' abilities are especially crucial contributors to students' learning. If we still believe that effective, deep and meaningful students' learning can be enhanced through the student-centred pedagogy, as the above theories say, what we need is to enhance the competency, commitment and the contributions of the teaching talents - the teachers and the lecturers (Mohd. Majid, 2014b, 2016a, 2016b). Though not all seem to agree with the definition of the student-centredness pedagogy, as the above evidences indicate, their arguments centre on whose definition is to be promoted – the policy makers or the implementers. If the policy makers' definition is superior to those of the implementers, it is only right that it be the responsibility of the policy makers to disseminate, share, engage, guide, reward and continuously secure the implementers' commitment and contribution in their journey

to understand, what more to implement, the innovation effectively and meaningfully. In essence, teachers and lecturers have to be effectively, deeply and meaningfully engaged in the student-centredness pedagogy themselves to enable them to sustainably search for teaching for quality learning along with their professional career journey.

The importance of preparing teachers and lecturers is increasingly imperative especially in the contemporary digital society (Mohd. Majid, 1999, 2011c, 2014b, 2015a, 2016a). Teachers and lecturers are now expected to prepare virtually all students for higher-order thinking and performance skills. Not only do teachers and lecturers need to learn, unlearn and relearn, but they are also required to provide and share useful futuristic information with their students, be able to engage diverse groups of students to learn even more complex materials, and develop a wider range of 21st century skills, besides having to keep their students in order. Teachers and lecturers also need to embrace, adapt and apply new emerging technologies in their traditional classrooms. It seems that the standards for learning and teaching are now higher than they have ever been before. Education in the digital era demands a paradigm shift in teaching and learning. Recognising that teachers' and lecturers' abilities are crucial contributors to students' learning, the preparation of teachers for execution of both the MEBs is of paramount importance. Following Thomas and Brown (2011), firstly, what kinds of knowledge do teachers and lecturers of the digital era need to have? Secondly, what skills do these teachers and lecturers need in order to provide productive meaningful learning experiences for a diverse set of students? Thirdly, what professional commitments do these teachers and lecturers need to make to help every child succeed and to continue to develop their own meaningful knowledge and skills for their own successful working and life careers?

The literature indicates that there are many indistinguishable ways in which teachers and lecturers are trained, developed and enhanced in their knowledge, skills and attitudes, in the area of teaching and learning (Kennedy, 2016; Mohd. Majid, 2013a, 2016a, 2016b). However, little attention if any is given to the quality of pre-service and in-service training and development of the teachers and lecturers (Mohd. Majid, 2013a, 2016a; Thomas & Brown, 2011). Even among those teachers and academics trained in teaching and learning, many still teach according to the way their teachers taught them during their school days, and not in the way they were trained in the higher learning institutions (Mohd Majid, 2014f, 2016a). Though structured pre-service teacher and academic training seems to exist, the training curriculum and its delivery has been characterised as being outdated for 21st century education of the millennium generation, as it is based on the defective behavioural model (Kennedy, 2016; Mohd. Majid, 2016a). The in-service teachers and academic training provided mainly focuses on the ongoing top-bottom programmes and initiatives through the in school and tertiary institution in-service training, with little attention if any given to the comprehensive and structured career pathways development and enhancement framework (Mohd. Majid, 2011a, 2013h; Mohd. Majid, *et al.*, 2010, 2012; MOHE, 2016, Mohd. Majid, 2013d, 2013e, 2013h, 2014a, 2014f, 2015b, 2016a).

Given the pace of innovation and the changing structure of communities and workplaces spurred by the advancement of communication technology, it is rightly suggested that the education, training and development of teachers should shift in focus to depictions of practice rather than the focus on the body of teaching knowledge, whereby the learner should be at the centre of his or her own learning (Kennedy, 2016; Mohd. Majid, 2013g, 2014f, 2016a; Shulman, 2004). Focus should be on developing heutagogy, a term

coined by Hase and Kenyon in 2000, as a form of self-determined learning to promote knowledge sharing, rather than knowledge collection (Chapnick & Meloy, 2005). In particular, there is a need to pay more attention to the ultimate purpose that is served by those teaching behaviours rather than focusing on the visible behaviours of teaching (Kennedy, 2016; Kotter, 2012; Lewis, 2006; Macfarlane, 2011).

It is evident that teachers of the digital age ought to possess different kinds of knowledge, skills, professional work habits and character traits so that they can teach the 21st century students effectively. Many nations and accrediting organizations, such as, the Malaysian Qualifications Agency (MQA), have outlines the kind of students they intend to produce, the learning standards that explicitly describe cross-disciplinary skills learning outcomes and the integration of curriculum and learning assessments. It is thus expected that teachers or lecturers should be more intentional about teaching cross-disciplinary skills in subject areas or courses, as the 21st century skills are relevant to all areas of schooling and academic study. Teachers should also embrace new digital technologies in their teaching to propel students' learning. Teachers are expected to use educational approaches and technologies that inherently encourage and facilitate the acquisition of cross-disciplinary skills, such as, project-based, problem-based and case-based teaching and learning.

Teachers and lecturers should also master skills that may be taught in a wide variety of in-school and outside-of-school settings. This 'real classroom' of 21st century schooling will provide real learning opportunities necessary for the students to optimise meaningful learning growth and potential (Mohd. Majid, 2014b). For example, in a social science course, students might be required to learn research methods that can also be applied in other

disciplines; articulate technical scientific concepts in verbal, written, and graphic forms; present on the site field lab results to a panel of working social scientists; or use sophisticated technologies, software programmes and multimedia applications as an extension of an assigned social science project, all done in a team. Furthermore, allowing students to pursue alternative learning pathways offered by different institutions, organisations and agencies, in which they can earn academic credit and satisfy graduation requirements by completing an internship, apprenticeship or volunteer experience, will enhance and enrich not only the students, but also their teachers and lecturers in effective teaching of the digital era generation.

There is also a need for teachers and lecturers to teach and engage their students meaningfully. Teachers, lecturers and their students must meaningfully learn how to develop, enhance and appreciate values in their teaching and learning activities, be it cultural, universal or religious values. These values are important for them to make trustworthy judgments in their professional undertakings. A meaningful learning space has to be created to engage each and every student to master the expected learning outcomes. Teachers and lecturers are not only required to cover the curriculum they are supposed to teach but have to engage each and every student under their tutelage with meaningful learning activities. Teachers and lecturers are also expected to use relevant and authentic assessment strategies, methods and instruments as part and parcel of the effective learning process. Using relevant and authentic learning assessments, teachers and lecturers can motivate each student towards achieving multi-faceted learning outcomes. Further, teachers and lecturers must reflect, evaluate and sustainably improve their teaching practices and their effect on student learning. Not only can a reflective exercise shape the teachers' and lecturers' best practices in teaching and learning, it can also help them to

meaningfully move forward the learning and teaching agenda to the next level.

An effective structured Continuous Professional Development (CPD) initiative for teachers and lecturers of the digital age is therefore pertinent. The CPD should be put in place to help teachers continuously develop and enhance their challenging careers in teaching. An effective CPD is necessary not only to prepare teachers to move up their career ladders, but it is also necessary to help, especially existing long service teachers and lecturers, in acquiring and mastering new kinds of knowledge, skills, professional work habits and character traits that are pertinent to teachers of the digital era. Existing serving teachers and lecturers, who comprise the main bulk of the current teaching force, must be exposed to, impressed and convinced of the new educational policy, strategy, approach and techniques, as they are the change agents that determine the success of these educational initiatives.

A better strategy and approach to preparing teachers and lecturers needs to be explored as the results of the Teaching and Learning International Survey (TALIS) released by the Organization for Economic Cooperation and Development (OECD, 2014) show that Malaysian teachers, like some other teachers today, receive less feedback, less helpful professional development and have less time to collaborate to improve their work, although they work harder under much more challenging conditions than teachers elsewhere in the industrialised world. In fact, two-thirds of the teachers studied in TALIS feel that their profession is not valued by society. Among the recommendations suggested, as proposed by Darling-Hammond (2014), are to address inequities that undermine learning, such as, universal health, income support for families, value teaching and teacher learning as well as, redesign of schools to create time for collaboration and create meaningful teacher evaluations that foster improvement. Darling-Hammond (2014) opined that investing more

in high-quality professional learning by paying the full freight for initial preparation and ongoing professional development can enhance teacher capability, and subsequently improve their students' achievements. Other than to recruit and retain top talent and enable teachers to help all children learn, efforts have to be taken to make teaching an attractive profession that advances knowledge and skills, such as by promoting scholarship of teaching and learning and lesson study among teachers.

It is expected that many, if not all education matters, including the kind of future society, the students' characteristics and development as well as the teachers' preparations, are well documented in the local and national policies. Although these education policies might be applicable only in the local context, there is a possibility that it shares many international perspectives and best practices such as the best practices in the Asian higher learning institutions (Mohd. Majid, 2013i). Thus, with the advancement of technology, it may well be applicable elsewhere, as in the case of preparing smart education teachers and lecturers in both the Malaysian Education Blueprints.

THE QUEST FOR QUALITY TEACHERS FOR QUALITY LEARNING: A LEADERSHIP CHALLENGE

Continuous development and enhancement of quality teachers and lecturers are pertinent in sustaining quality learning in 21st century education. Education and training play a pivotal role in the career development of a teacher in school and an academic in higher education institution. They prepare, induct and enhance the necessary knowledge, skills and attitudes of the teachers and academics in their continuous efforts to profess, educate and engage others in their fields of interest. They help the teachers and

academics to swim through the thick and thin of many challenges in their effort to be their discipline's vanguard – relevant, referred and respected, throughout the years of their professional and academic career. The effective training and continuous professional development are pertinent as the first wave report on the implementation of the Malaysia Education Blueprint 2013-2025 (Preschool to Post-Secondary Education) indicates that all the targeted Key Performance Indicators have been achieved (MOE, 2014). Similarly, the results of a national survey carried out prior to the launching of the Malaysia Education Blueprint 2015-2025 (Higher Education) in April 2015 with a response of 530 academics show that they have a positive perspective and ready to implement what has been recommended in the Blueprint (Mohd. Majid, 2015b).

In facilitating teachers and lecturers, it is leadership that makes a difference in their sustainable quest of teaching for quality learning. A leadership culture creates and nurtures the environment where innovation and creativity of the teachers and lecturers can grow (Darling-Hammond & Rothman, 2011; Konting, Singh & Idris, 2010; Kotter, 2012; Mcfarlane, 2011; Mohd. Majid, 1999, 2008b, 2011c, 2013a, 2013d, 2013e, 2013f, 2013g, 2013h, 2014a, 2014b, 2014c, 2014d, 2014e, 2014f, 2015a, 2016a; Mohd. Majid, *et al.*, 2012; Roberts, 2012; Wan Mohd. Zahid, 2014). Teaching and learning initiatives such as blended learning, flipped classrooms, MOOCs, TVET, 21st century education, knowledge and skills, and in fact, the development of holistic, entrepreneurial and balanced school leavers and graduates, to some extent depends on the quality of leadership in education and training rendered to the respective academic talents (Mohd. Majid, 2013f, 2015a; MOHE, 2016).

The notion of leadership has generated much interest recently, at least in the Malaysian education sector. As this country, with its own unique socio-economic culture, prepares itself to be a developed

and high-income society by 2020, education has been singled out as the pillar and driver of its innovative human development. National education growth has thus been crafted, developed and carried out by the respective ministries and agencies. Official documents outlining policies and strategies designed to produce Malaysian citizens who are not only knowledgeable and competent, but also possess high moral standards, are responsible and capable of achieving a high level of personal well-being as well as being able to contribute to the harmony and betterment of the family, the society and the nation at large, as envisioned in the Vision 2020, are charted from time to time. The challenge, however, is how to lead and implement an ambitious top-down national planned change, such as in the case of the MEBs? How would a massive and diverse educational institution system, comprising the various types and nature of primary schools, secondary and tertiary education institutions, responsible for implementing such changes, understand, let alone manage, impactfully and effectively, the tasks at hand? What kind of leadership does it take to successfully implement such a planned change in order that the national vision can be achieved effectively?

There is a need to devolve issues of leadership, both academic and institutional, in implementing and managing planned change, in the quest for teaching for quality learning in the respective educational institutions. This is of paramount importance as evidence from the field, as discussed above, shows that teachers and lecturers are slow to understand, what more to adopt, or better still to adapt to changes in teaching and learning, especially if the changes originated from outside and is exogenous to their firmly held beliefs and best practices that have been tested and survived throughout their career. If not led and managed effectively, the new innovations and recommendations will be at risk and succumb to

existing practices, and that will signal the failure of the innovations, as many past evidences have proved. In the top down approach of educational innovation culture being practiced in the country, schools and university leaders, both academic and institutional, are under tremendous pressure to institute change in their institutions in order to keep pace with rapidly evolving conditions, with rewards and punishments attached. Change leaders at all levels of the schools and universities, need to grapple with both the content and the process of change.

Essentially, the many ongoing educational transformations demand strong leadership, both academic and institutional, especially in managing the change involved. Questions have been raised on what kind of leadership is needed in the transformation of education in Malaysia. How can leadership effectively play a role in the transformation? Rather than adopting and borrowing the so-called universally accepted leadership theories, this paper argues that a contextually rooted conception of leadership and learning is more applicable, at least in the transformation of learning and teaching in higher education in Malaysia (Mohd. Majid, 2013e, 2013h, 2014a, 2014b, 2014c).

For purposes of this discussion, leadership simply refers to the ability to influence a group of the education population and its stakeholders towards the achievement of educational goals. Many studies on leadership have identified mainly three different kinds of leadership styles, namely transformational, transactional and laissez-faire (Robert, 2012). The most popular is transformational leadership, which causes changes in individuals and the social systems involved, motivating followers to move beyond their own self-interests for the benefit of the group and the organization. Kotter (2012) argues that a transformational leader acts as a change agent who is skilled in managing unpredictable situations. Furthermore,

the transformational leader also demonstrates some other key leadership behaviours, such as, being role models by creating a vision and making the norms and values clear to all (Kotter, 2012). In essence, leaders and followers of transformational leadership raise each other to higher levels of motivation and morality (Lewis, 2006; Macfarlane, 2011).

Motivation and morality are domains of the academic world. In a world where teachers and academics are expected to generate noble knowledge and subsequently share the knowledge with others, motivation and morality are of paramount importance. A university, in particular, in Latin "universitas magistrorum et scholarium", meaning a community of scholars and teachers, has moral, ethical and civilization responsibilities (Lewis, 2006; Macfarlane, 2011; Wan Mohd. Zahid, 2014). Using the society and universe as the platform, these responsibilities are executed through carefully self-developed ethics and moral paradigms which allow them to explore various branches of knowledge for the benefit of society and mankind. As a result, the university, as an academic institution, has autonomy and freedom to serve the society which in lieu becomes the motivator for academics to explore future knowledge continuously. Therefore, the development of academic leadership, be it in schools or universities, must, to some extent, take into account the society upon which the knowledge is being served.

As both institutional and academic leadership are central for educational changes to happen in educational institutions (AKEPT, 2009, 2013; Macfarlane, 2011; MOHE, 2016), both the Ministry of Education and the Ministry of Higher Education, which have been mandated to oversee the schools and tertiary education, respectively, have set up, among others, the Institute Aminuddin Baki (better known by its Malay acronym, IAB) and the Higher Education Leadership Academy (AKEPT), respectively. The major

objective of these initiatives was to facilitate the transformation of educational innovation, such as, both the MEBs. In particular, AKEPT has been singled out as the anchor for development of institutional and academic leaders in higher education institutions as stipulated in the Orange Book on Strengthening Academic Career Pathways and Leadership Development, the framework for achieving the MEB (HE) Shift 2 on Talent Excellence (MOHE, 2016). The heart of AKEPT's academic and institutional leadership model encompasses values and ethics which are culturally bound, emotional and spiritual intelligences as well as communication and interpersonal skills. The Qalb-based leadership model has been proposed to guide the development of the institutional and academic leaders of higher education institutions (MOHE, 2016; Wan Mohd. Zahid, 2014). The framework (AKEPT, 2009, 2013; Mohd. Majid, 2012b, 2013f, 2013h, 2014d) divides leadership competencies into five domains, namely, Leading Change, Leading People, Driving Results, Business Sagacity and Moral Compass. The skills and attributes pertaining to each domain are elaborated as indicators. While these indicators are not exhaustive they do describe key behavioural traits associated with each competency of effective academic and institutional leaders in the effort to promote teaching for quality learning.

a. Leading Change

Leading change (AKEPT, 2009) encompasses a set of core competencies needed to drive the organisation onto the cutting edge of embracing transformation and change, which involves the ability of academic leaders to initiate strategic change, both within and outside the organisation, to meet challenges and the organizational goal. Inherent in leading change is the ability to establish an organisational vision and to implement it in a continuously changing

environment. Academic leaders must be aware of the local, national and international policies and trends affecting the organisation and shaping stakeholders' views. Academic leaders must deal effectively with pressure (resilience), be open to change, adapt swiftly to changing conditions (flexibility), capitalize on opportunities, manage risks (strategic thinking) and encourage new ideas and innovations (AKEPT, 2009).

b. Driving Results

Driving results is a set of competencies involving the ability of academic leaders to be alert to novel, untested opportunities, manage ambiguity comfortably, take and manage risks (entrepreneurship) and meet clients and stakeholders' expectations (AKEPT, 2009). This domain includes the ability to make decisions that produce high-quality results and hold themselves and others accountable for measurable high-quality, timely and cost-effective results. In addition, academic leaders need to understand and appropriately apply principles, procedures and policies related to specialised expertise. In driving for excellence, academic leaders should be able to demonstrate drive, urgency and assertiveness in their relentless pursuit of results (AKEPT, 2009).

c. Leading People

The domain of leading people (AKEPT, 2009) is a skill that involves the ability of academic leaders to lead people towards meeting the organisation's vision, mission and goals. Inherent in this domain is the ability to provide an environment which supports superior performance and opportunities for others to maximise their long-term potential, foster development, facilitate cooperation and teamwork, and manage and resolve conflicts and disagreements in a constructive manner. Academic leaders must mobilise teams

by building the momentum necessary to get things done by communicating clearly and consistently, and investing time and energy to engage the whole organisation. Academic leaders must build, nurture and value relationships with others in order to foster a cooperative climate (AKEPT, 2009).

d. Business Sagacity

Business sagacity focuses on skills involving the ability of academic leaders to deliver results by maximising organisational effectiveness and sustainability, and creating excellence by setting the highest standards through benchmarking against the best in the class in managing human, financial and information resources (AKEPT, 2009). Academic leaders are able to lay the groundwork by building coalitions with key players, developing networks and alliances, engaging in cross-functional activities, collaborating across boundaries and finding a common ground among a diverse range of stakeholders, within the framework of a shared agenda and strategy (AKEPT, 2009).

e. Moral Compass

The moral compass, which lies at the heart of the academic leadership competency framework, encompasses values of personal accountability and ethics and the ability to utilise emotional intelligence in sensing and understanding the needs, feelings and concerns of others (AKEPT, 2009). Based on the AKEPT's Qalb-guided leadership model, academic leaders should treat others with courtesy, sensitivity and respect; consider and respond appropriately to the needs and feelings of different people in different situations; espouse clear and convincing communications; recognise and assess their own strengths and weaknesses; vigorously pursue self-development; engage with others in an honest, fair, and

ethical manner; model high standards of ethics; and ensure that management of information and knowledge is conducted with integrity, where decisions and transactions are transparent and fair. Academic leaders need to ensure that everyone, at all levels in the organisation, plays a key role and is held responsible for the success of the organization (AKEPT, 2009).

CONCLUDING REMARKS

As education is a process of facilitating learning for a person to acquire knowledge, skills, values, beliefs and habits deemed fit for the society in which the person belongs, the many cases and issues of societal moral degradation that the nation is facing today are to some extent being attributable to the failure of education, especially teaching and learning. Some members of the public believe that the introduction of new educational initiatives and policies are just a rehash of the old ones, especially when there is a leadership change in the organisation. As education and its policies and initiatives are part of the journey for soaring upwards, competent, committed and contributing teachers and lecturers with a Qalb-guided moral purpose of education are needed to sustain the journey meaningfully. Other than celebrating the diverse and yet innovative rich definitions, strategies, approaches and programmes to promote teaching for quality learning, there is a need for effective and sustainable teacher and lecturer development and leadership in teaching and learning.

Nevertheless, as a teacher, scholar and educator, one still wonders, what is the ultimate purpose of education, learning and teaching? If society still believes in teachers and lecturers, are the teachers and lecturers able to express and inculcate their meaningful noble beliefs and understanding in their classroom teaching and learning? Do teachers and lecturers have the sustainable disposition and skills throughout their long careers to promote teaching for

quality learning? Are there Qalb-guided transformative leaders who are able to bring about educational changes and engage these teachers and lecturers throughout their noble educational journeys? What are the current best effective practices of preparing talents in teaching and learning? Is the current model of teacher and lecturer preparation sustainable in developing teaching talents in the quest for quality learning and leadership in 21st century education and skills? Being a passionate scholar interested in educational policy and innovations, teaching and learning as well as teacher development, researching and exploring teaching for quality learning is pertinent and close to my heart and soul. In particular, how the past three decades of scholarship could inform institutional and academic leadership in promoting the sustainable noble endeavours of teacher and lecture preparation and development that is *sine qua non* in ensuring that future educational initiatives, such as that outlined in both the Malaysian Education Blueprints, will not have the same fate of glitches and failure as has been seen with earlier initiatives.

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BIOGRAPHY

Dr. Mohd. Majid Konting is a Professor in the Department of Foundations of Education, Faculty of Educational Studies, Universiti Putra Malaysia (UPM). Currently, he is the Director of the Centre for Academic Development (CADE), UPM. He was born in Pontian, Johor in 1957. He completed his primary and secondary education at Sekolah Seri Sekawan Desa, Sekolah Menengah Kebangsaan Air Baloi and Sekolah Menengah Kebangsaan Dato Penggawa Barat, Pontian. After having completed his Diploma in Agriculture (UPM, 1978), Bachelor of Vocational Agriculture Education (1980) and Master in Applied Statistics (1982), the latter two at the Louisiana State University, USA, he joined UPM as a lecturer on 1st September 1982. He then obtained his Ph.D in Education from University of Lancaster, England, in 1995. He was appointed to an Associate Professor on 1st September 1999 and a Professor of Education on 1st April 2013.

Dr. Mohd. Majid's interests, research, teaching and expertise lie in the field of educational policy, research and evaluation, learning and teaching, assessment, leadership as well as teacher education. He has graduated 18 doctoral and 36 Master of Science students by research. He has conducted 75 research projects related to the field of education - 38 of them as principal researcher. He has won one gold and four silver research awards. Apart from being used to register two intellectual patents and copyrights, His research findings have also been used as a basis for the formulation of educational policies and initiatives such as the Malaysian Smart School Project and Malaysia Education Blueprint 2013-2025 (Preschool to Post-Secondary Education). His major findings on the need to enhance students' high order thinking skills (HOTS) through deep and meaningful learning and to train, engage and facilitate teachers in HOTS teaching and learning processes

have been adopted as the core of the Blueprint. His research and leadership in developing the MSC-Dengkil Smart School Project and Global School Network in 1996 resulted in the development of the Malaysian Smart Schools Project in 1998 and has been emulated in the SMART Education policy that was launched in Korea and Japan in 1998. He was entrusted by the Ministry to lead a project to evaluate the effectiveness of the Malaysian Smart School in 2003, which resulted in new policy recommendations for the enhancement of technology in teaching and learning.

He was also among the pioneers involved in the development of soft skills initiatives in Malaysian higher education institutions, and subsequently a co-researcher in the development of the Malaysian Soft Skills Scale (My3S). He has developed a research-based Leadership Development in Higher Education Learning and Teaching Model and Framework whereby he has led and coordinated 15 research projects and 45 training modules related to higher education learning and teaching.

Dr. Mohd. Majid has authored and co-authored 39 ISI/Thomson/Scopus journal articles, 28 books and book chapters, 55 teaching modules, six monographs and 45 proceeding academic articles. Among the higher education text books authored by him is “Kaedah Penyelidikan Pendidikan” (DBP, 1990) which has been reprinted 9 times. He has presented 372 papers, mainly as keynotes and invited papers. He was one of the two invited keynote speakers at the 9th East Asia International Symposium on Teacher Education, on November 4-5, 2014, at Deajeun, Republic of Korea, with a paper entitled, *Preparing Teachers for Smart Education in a Digital Era*. He has conducted 152 training sessions related to his fields of interest. He is the national master trainer of higher education learning outcomes and soft skills initiatives which are the strategic programmes being pursued by the Ministry of Education,

Malaysia. He has edited many journal and proceeding articles as well as text books and book chapters. He is currently on the board of editors, Malaysian Journal of Learning and Instruction. He has attended 238 national and international workshops, seminars and conferences related to his fields.

Dr. Mohd. Majid is involved in and has held official positions in many committees, board and professional associations. He was Chairman, Critical Agenda Project on Leadership in Higher Education, a member of the Ministerial Committee on the Malaysia Education Blueprint (Higher Education), the e-Learning Policy Committee, the National Academic Awards Steering Committee, Global Forum on Executive Development and Business Driven Action Learning, Member, Board of Governance, Universiti Sains Malaysia and Advisor at the Malaysia-Indonesia Higher Education Forum. He is a council member of the National Professor Council (Education and Human Capital Development Cluster), Malaysia Association of Education (MAE) and Malaysia Education Research Association (MERA) as well as, member of the Management Science/Operations Research Society of Malaysia and Association of Vocational and Technical Education of Malaysia (AVTEM).

Prior to being seconded to the Higher Education Leadership Academy (AKEPT) in March 2009 as its first Deputy Director (Teaching and Learning) and its 3rd Director in September 2013, Dr. Mohd. Majid has been the Director and Deputy Director (Policy and Quality) of the Centre for Academic Development, the Deputy Dean (Academic and International), the Head, Department of Foundations of Education and Director, Centre for Policy Research in Education, UPM. He was awarded Excellent Service Awards by UPM 1997, 1998, 2000 and 2004.

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Many individuals and organizations have inspired my meaningful and successful education, career and life. My utmost gratitude goes to all the people who have educated, facilitated, groomed and helped me grow and become the person that I am today, a Professor at Universiti Putra Malaysia. My sincere appreciation and thanks also goes to all students, teachers, lecturers, educators, individuals, and organizations on whom my research and scholarship career has been based, it would not have flourished without them.

My special thanks to Professor Datin Paduka Dr. Aini Ideris, Vice Chancellor, for her continuous trust, inspiration and support, throughout my professional journey as an academic at Universiti Putra Malaysia (UPM). My sincere gratitude also to Professor Datuk Dr. Mad Nasir Shamsudin, Deputy Vice Chancellor (Academic and International), a close, friendly classmate since our Diploma days and Professor Dr. Aida Suraya Md. Yunus, Dean of the Faculty of Educational Studies, UPM, for encouraging and supporting me, especially in giving this inaugural lecture. My sincere thanks also goes to former deans of the Faculty, Prof. Dr. Atan Long, Prof. Dato' Dr. Kamaruddin Kachar, Prof. Dr. Nazaruddin Md. Jali, Prof. Dr. Abdul Rahman Md Aroff, Prof. Dr. Kamariah Abu Bakar, Prof. Dato' Dr. Zakaria Kasa, and Prof. Dr. Ab Rahim Bakar, for your untiring inspiration and support throughout my career.

I would also like to express my sincere gratitude and profound appreciation to the Minister of Higher Education, the esteemed Board of Advisors of AKEPT, educational leaders, mentors and educators for their impactful and meaningful leadership and untiring professional engagement, support and kindness throughout my career and lifelong education.

My heartfelt thanks also goes to all colleagues, students, superiors, friends and individuals for the professional and friendly

experiences that I have enjoyed meaningfully throughout numerous research, teaching, and leadership endeavours, especially my colleagues and staff at the Faculty of Educational Studies, Center for Academic Development (CADE), Higher Education Leadership Academy (AKEPT) and Ministry of Higher Education, Malaysia. I would also like to express my sincere gratitude and outmost appreciation to Professor Dr. Aida Suraya Md. Yunos, Professor Emeritus Dr. Abd Rahman Md Aroff, Dr. Normee Che Sab and the editors for giving this academic piece an attractive and appealing title and content.

I would also like to express my sincere gratitude to the staff of the Faculty, CADE and CoScomm for assisting me with this inaugural lecture and organizing the event and many thanks to UPM Press for their assistance with the publication.

Last but not least, this lecture is dedicated to my beloved and untiring parents, Haji Konting bin Hj Kasran and Hajah Mariah bte Haji Sukaran, my family, siblings and parents-in-law, specifically also my wife and children, Suraya, Shahirah, Syafiq and Hasby, as well as, my grandchildren Irfan and Ulfah. Thank you all!

Mohd. Majid Konting

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