Journal of Usuluddin 40 (July – December 2014): 199-218

Teaching Paradigms: An Analysis of Traditional and Student-Centred Approaches

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Abstract

In the past, Malaysian educational system depends on didactic approach in teaching and learning that based on teachers' instructions. However, in the era of globalization, educational system nowadays are progressing with regards to approach of teaching and learning at every level towards a more active and constructive education. This article examines traditional teaching approach paradigm which is teacher-centred and a new paradigm which is student-centred, in the context of Malaysian educational system, viewing from an Islamic educational perspective. It finds that this new paradigm could develop more active learners who have acquired the skills of problem-solving, independent thinking, and autonomous learning.

Keywords: education, teaching and learning approach, traditional method, student-centred method

Paradigma Pengajaran: Suatu Analisis terhadap Pendekatan Tradisional dan Berpusatkan Pelajar

Abstrak

Pada masa lalu, sistem pendidikan di Malaysia banyak bergantung kepada pendekatan pengajaran dan pembelajaran didaktik yang berasaskan kepada arahan guru. Walau bagaimanapun, seiring dengan era globalisasi, sistem pendidikan kini sedang menjalani peralihan dalam pendekatan pengajaran dan pembelajaran di semua peringkat pendidikan ke arah pembelajaran yang lebih aktif dan membina. Makalah ini mengkaji paradigma pendekatan pengajaran tradisional yang berpusatkan guru dan paradigma yang berpusatkan pelajar dalam konteks sistem pendidikan Malaysia dan dari perspektif pendidikan Islam. Ia mendapati paradigma baru mampu membentuk pelajar yang lebih aktif dalam pembinaan generasi yang mahir menyelesaikan masalah, berfikir luas dan berdikari dalam pengajian.

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Kata kunci: *pendidikan, pendekatan pengajaran dan pembelajaran, kaedah tradisional, kaedah berpusatkan pelajar*

Introduction

Over the past few decades, many universities, faculties, schools and departments of higher education in many parts of the world have been undergoing a significant pedagogical shift from the traditional teacher-centred approach to a student-centred approach to teaching and learning.[2] The traditional teacher-centred approach focuses on the teacher as the expert in transmitting knowledge to the student, who is the novice.[3] In contrast, the student-centred approach places the student at the centre of the learning process and is generally intended to provide students with the autonomy to actively seek out and construct meaning from information and previous experience.[4] This shift in teaching and learning from a teacher-centred approach to a student-centred approach is crucial; instead of concentrating on instruction (teacher-centred approach), the student-centred approach addresses the construction of learning from the student's own discoveries and focuses on student learning outcomes.

This global trend can also be seen in the educational changes occurring in teaching and learning in Malaysia's secondary schools and in its higher education system. The Malaysian government has acknowledged the importance of the application of student-centred learning approaches. Several reforms have been introduced to make education more efficient, attuned and responsive to the needs of the nation. For instance, the Malaysian government introduced the Integrated Secondary School Curriculum (ISSC) in 1988. It contains guidelines for teaching and learning approaches in the secondary school curriculum. The main principle of the ISSC is the integrated approach entailing the

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2 S. J. Lea, D. Stephenson, and J. Troy, "Higher Education Students Attitudes to Student-Centred Learning: Beyond Educational Bulimia?" *Studies in Higher Education* 28, no.3 (2003): 321-334.

3 D. Pratt, *Alternative Frames of Understanding. Five Perspectives on Teaching and Learning in Adult and Higher Education* (Malabar: Krieger Publishing Co., 1998).

4 G. Gibbs, *Assessing More Students* (England: Oxford Brookes University Press, 1992); M.Weimer, *Learner-Centered Teaching: Five Key Changes to Practice* (San Francisco: Jossey-Bass, 2002).

integration of knowledge, skills and values, the integration of theory and practice, and the integration of curriculum and co-curriculum.[5] The ISSC aimed to overcome the shortcomings in an old curriculum that was too content-centred and was overly focused on rote learning and examinations by the introduction of student-centred learning approaches.

In 1997, the Malaysian government introduced "Technology Supported Smart Schools." The Malaysian Smart School is defined as "…a learning institution that has been systematically reinvented in terms of teaching-learning practices and school management in order to prepare children for the Information Age."[6] The implementation of the Smart Schools project signified a dramatic change in the Malaysian education system. One of the pedagogical implications of Smart Schools is that teachers must be able to adopt elements of student-centred learning approaches in their teaching practices. The characteristics of student-centred learning are described as:[7] (1) an appropriate mix of learning strategies to ensure mastery of basic competencies and promotion of holistic development; (2) allowances for individual differences in learning styles to boost performance; and (3) a classroom atmosphere that is compatible with different teaching-learning strategies. The new pedagogy in Smart Schools moved away from the Malaysian conventional pedagogy. The Smart School Conceptual Blueprint emphasises the characteristics of students and teachers in a student-centred learning environment when it states that "students will learn to exercise courage in making decisions and assuming responsibility... students will learn to process and manipulate information..."[8] and "teachers will now play the role of 'a guide on the side' thus doing away with their

[5] Ministry of Education, *Education in Malaysia* (Kuala Lumpur: Malaysia: Ministry of Education, 1990).

[6] Smart School Project team, *Smart School Flagship Application: the Malaysian Smart School- a Conceptual Blueprint* (Kuala Lumpur: Ministry of Education, 1997), 10.

[7] Smart School Project team, *Smart School Flagship Application: the Malaysian Smart School- a Conceptual Blueprint,* 39.

[8] Smart School Project team, *Smart School Flagship Application: the Malaysian Smart School- a Conceptual Blueprint,* 130.

traditional role of 'the sage on the stage."[9] This new role of students and teachers reflects student-centred learning notions as summarized by Huba and Freed:[10]

> In student-centred learning, learners are actively involved and receive feedback; learners apply knowledge to enduring and emerging issues and problems; learners integrate discipline-based knowledge and general skills; learners understand the characteristics of excellent work; learners become increasingly sophisticated learners and knowers; professors coach and facilitate, intertwining teaching and assessing; professors reveal that they are learners too; and learning is interpersonal, and all learners-students and professors are respected and valued.

Moreover, the use of technology or computers in Smart Schools is the key enabler in teaching and learning. This is in line with the goals of the national philosophy of education, equipping Malaysians with technological skills necessary in a borderless world. The rapid growth of Information and Communication Technology (ICT) has brought about a revolution in learning. Technological innovation in education has led to the application of new methods and instruments in the teaching and learning process.[11] Thus, teachers are currently faced with the challenge of dealing with a new learning environment, which is borderless and resource rich. This emphasises the fact that teachers need to understand how an ICT-based learning environment, as intended by the Smart School education concept, affects their students' learning.

Analysis of the ISSC and Smart Schools curricula revisions suggests that the education environment in Malaysia is in the process of reform. Malaysia has taken the stand that student-centred learning approaches should be implemented in the teaching practices at all educational levels, in schools and in

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[9] Smart School Project team, *Smart School Flagship Application: the Malaysian Smart School- a Conceptual Blueprint*, 131.

[10] M. Huba and J. Freed, *Learner-centered Assessment on College Campuses* (Needham Heights: Allyn and Bacon, 2000), 33.

[11] W. S. Luan, K. A. Bakar, and T. S. Hong, "Using a Student-Centred Learning Approach to Teach a Discrete Information Technology Course: the Efects on Malaysian Pre-service Teachers Attitudes Toward Information Technology," *Technology, Pedagogy and Education* 15, no. 2 (2006): 223-238.

higher education. The national education system has determined that student-centred learning is beneficial and will lead to effective teaching and learning. These changes have made new and more pressing demands on teacher education and teachers.

Comparison of Educational Paradigms

Some researchers view teaching and learning changes in educational models as shifts in paradigm. These have been described as moving from the "instruction paradigm" toward the "learning paradigm."[12] Instead of concentrating on instruction, the learning paradigm addresses the production of learning by students' own discovery and focuses on student learning outcomes. The consequence of this is that the instructor constructs an experiential and active environment to empower learning. The instruction paradigm, on the other hand, builds learning atomistically and knowledge is created by experts and disseminated by instructors. Students are viewed as passive vessels, ingesting knowledge for recall in tests. The learning paradigm, however, constructs learning holistically and encourages student-involvement that promotes learner empowerment, and experiential activities that are learner-centred or learner-controlled. Thus, students must be active discoverers and constructors of their own knowledge. In other words, the new learning paradigm environment is challenging, and it supports cooperative and collaborative learning, while, the instruction paradigm leads to a competitive and individualistic classrooms. The learning paradigm requires students to jointly participate with faculty in the development of knowledge construction and thus to become actively engaged in constructing, discovering and ultimately transforming the knowledge for their own independent purposes. Table 1 below compares and contrasts the differences between the two paradigms.

[12] R. B. Barr, and J. Tagg, "From Teaching to Learning - a New Paradigm for Undergraduate Education," *Change* 27, no. 6 (1995): 13-25.

Table 1: Teaching paradigms[13]

Aspects	Old paradigm	New paradigm
Knowledge	Transferred from faculty to students	Jointly constructed by students and faculty
Student	Passive vessel to be filled by faculty's knowledge	Active constructor, discoverer, transformer of knowledge
Mode of learning	Memorizing	Relating
Faculty purpose	Classify and sort students	Develop students' competencies and talents
Student growth, goals	Students strive to complete requirements, achieve certification within a discipline	Students strive to focus on continual lifelong learning within a broader system
Relationship	Interpersonal relationship among students and between faculty and students	Personal relationship among students and between faculty and students
Context	Competitive, individualistic	Cooperative learning in classroom and cooperative Teams among faculty
Climate	Conformity, cultural uniformity	Diversity and personal esteem, cultural diversity and commonality
Power	Faculty holds and exercises power, authority, and control	Students are empowered; power is shared among students and between students and faculty

[13] D. L. Fink, *Creating Significant Learning Experiences: an Integrated Approach to Designing College Courses* (San Francisco: Jossey-Bass, 2003), 19.

Assessment	Norm-references (that is, grading on the curve); typically uses multiple-choice items; student rating of instruction at the end of course	Criterion-referenced (that is, grading to predefined standards); typically uses performances and portfolios; continual assessment of instruction
Ways of knowing	Logical-scientific	Narrative
Epistemology	Reductionist; facts and memorization	Constructivist; inquiry and invention
Technology use	Drill and practice, textbook substitute, chalk-and-talk substitute	Problem solving, communication, collaboration, information access-expression
Teaching assumption	Any expert can teach	Teaching is complex and requires considerable training

The Teacher-Centred Approach

The underlying principle of the teacher-centred approach is rooted in the psychology of behaviourism.[14] Behaviourism is based on the idea that learning is change in behaviour and that changes in behaviour occur as a response to a stimulus. Learning, according to behaviourists, can be defined as "a relatively enduring change in observable behaviour that occurs as a result of experience."[15] Behaviourism regards learning as a system of behavioural responses to physical stimuli, driven by reinforcement, practice and external motivation.

According to behaviourism, teachers devote their time and resources to deconstructing subject matter into its constituent parts and to developing a sequenced, well-structured curriculum. The dominant role of the teacher means that learners are viewed as

[14] B. F. Skinner, *Science and Human Behaviour* (New York: Free Press, 1953).

[15] P. Eggen, and D. Kauchak, *Educational Psychology: Windows on Classrooms* (Upper Saddle River, NJ: Prentice Hall, 2001), 5:214.

relatively passive, and their behaviour needs to be shaped by external reinforcements controlled by teachers.[16] Skinner (1953) argues that behaviour is based around the central notion of a reaction being made to a particular stimulus (stimulus-response relationship) and that desired behaviour is shaped by reinforcement, either positive reinforcement (rewards) or negative reinforcement (punishment). Behaviourists believe that if teachers provide positive reinforcements (rewards) whenever students perform a desired behaviour, they will learn to perform the behaviour on their own. The same concept applies to punishment.[17] Educational research suggests that reinforcing appropriate classroom behaviour, such as paying attention and treating others well, decreases misbehaviour and leads to a conducive learning atmosphere[18].

In a teacher-centred classroom, the teacher employs a traditional approach to teaching, employing methods such as formal lectures, seminars and examinations, and designing assignments, tests, and grading. In such a classroom, the main decisions about teaching aims and objectives, content, and methodology are finalised even before there is any encounter between teacher and learner. The approach focuses on the teacher, as the expert, transmitting knowledge to the student as the novice or empty vessel to be filled with knowledge.[19] The teacher-centred approach "consists of transmitting knowledge, that is, rules and algorithms that are required for solving problems."[20] The teacher is entirely responsible for selecting what information and skills the students are expected to learn, how and in what sequence they are to be learned, and at what pace they are to be delivered.[21]

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[16] B. F. Skinner, *Science and Human Behaviour*.

[17] R. Mayer, *Learning and Instruction* (Upper Saddle River, NJ: Pearson Education, 2003).

[18] S. Elliot, and R. Busse, "Social Skills Assessment and Intervention with Children and Adolescents," *School Psychology International* 12, no.12 (1991): 63-83.

[19] D. S. Moore, "New Pedagogy and New Content: the Case of Statistics," *International Statistical Review* 65, no. 2 (1997): 123-165.

[20] A. Zohar, "Elements of Teachers Pedagogical Knowledge Regarding Instruction of Higher Order Thinking," *Journal of Science Teacher Education* 15, no. 4 (2004): 306.

[21] N. A. Glasgow, *New Curriculum for New Times: a Guide To Student-Centred, Problem-Based Learning* (Thousand Oaks, CA: Corwin Press, Inc, 1997).

Knowledge is defined as an entity that can be given or transmitted and absorbed by students.

Historically, Malaysian school students were exposed to traditional teacher-centred learning such as rote learning styles and an examination-oriented system in their formative school years (6 years of Primary School and 7 years of Secondary School). In such classrooms, the traditional teacher-centred approach did not encourage Malaysian students to develop skills; in fact, students resorted to memorizing facts to excel in their examinations and tests which were carried out on a monthly, semester, and annual basis. The over-emphasis on examination results has led to the adoption of certain teaching and learning strategies such as rote learning and spoon feeding rather than the acquiring of generic skills.[22] Malaysian school students are further pressured by their parents, peers, and schools to excel academically as a result of the examination-based education system. In the process, they fail to develop elements of soft skills (which incorporate all aspects of generic skills that include the cognitive elements associated with non-academic skills) such as critical and analytical thinking as most of their time is spent attending tuition classes, extra classes, and examination workshops to better prepare themselves for the many upcoming examinations. The above factors contribute toward the attitude and learning styles of university students who maintain the same study patterns.

The literature shows that the lack of soft skills amongst Malaysian undergraduates is partly attributable to the traditional teacher-centred learning approaches adopted during their school education. For example, a study conducted by Md Yunus et al.[23] revealed that undergraduate students' soft skills were inadequate because of their previous teacher-centred learning experiences. The study showed that undergraduate students lacked problem solving skills such as decision making, and implementing and verifying solutions. The over emphasis on examinations, especially in secondary level education, has impeded the

[22] M. N. N. Lee, "Education in Malaysia: towards Vision 2020," *School Effectiveness and School Improvement* 10, no. 1 (1999): 86-98.

[23] A.S. Md Yunus et al., "Problem Solving Abilities of Malaysian University students," *International Journal of Teaching and Learning in Higher Education* 17, no. 2 (2006): 86-96.

development of problem solving skills among students. This indicates that teacher-centred learning approaches in school, with their emphasis on memorisation and examination, have impeded the development of soft skills among undergraduate students. Moreover, many employers have expressed dissatisfaction with their hired graduates' lack of soft skills.[24] Malaysian employers revealed that there was a significant gap between what Malaysian universities currently offer and what industries demand. They commented that university programmes focus too intensely on scientific theories and technical knowledge in most subjects, which lead to a lack of soft skills. Such criticism has contributed to the inclusion of soft skills into programmes at higher education institutions. Since 2006, the Ministry of Higher Education Malaysia (MOHE) has developed a framework suggesting the teaching approach that should be employed by teachers/lecturers for developing students' soft skills.[25] Seven soft skill elements were identified and chosen for implementation namely: i) communicative skills; ii) thinking skills and problem solving skills iii) Team work iv) life-long learning and information management; v) entrepreneurial skills vi) ethics, morals and professionalism vii) leadership skills. These seven soft skills were identified by MOHE because they are the most critical skills in the current global job market especially in today's era of fast moving technology. In line with this, a holistic approach is used to plan and implement the imparting of soft skills to undergraduate students of higher education. This approach is based on a combination of several programmes and activities: (1) formal teaching and learning activities (including all curricula and co-curricular elements) (2) support programmes (having both an academic and a non-academic focus) and (3) student campus life (student residences and the campus surroundings).

[24] H. Idrus, H. Mohd Dahan, and N. Abdullah, "Challenges in the Integration of Soft Skills in Teaching Technical Courses: Lecturers Perspectives," *Asian Journal of University Education* 5, no. 2 (2009): 67-81.

[25] Ministry of Higher Education, *Development of Soft Skills Module for Institutions of Higher Learning* (Kuala Lumpur: Ministry of Education, 2006).

The Student-centred Approach

Student-centred paradigms are rooted in constructivist epistemology, where "knowledge and context are inextricably connected, meaning is uniquely determined by individuals and is experiential in nature, and the solving of authentic problems provides evidence of understanding."[26] Constructivist learning theories emphasise human learning as active and that learners build new knowledge upon the foundation of previous learning.[27]

The constructivist learning mode describes a learning process whereby students work individually or in small groups to explore, investigate and solve authentic problems and become actively engaged in seeking knowledge and information, rather than being passive recipients. In this process, the learners must play an active part in their learning process and be autonomous learners who are actively engaged in constructing new meaning within the context of their current knowledge, experiences, and social environments. Learners become successful in constructing knowledge through solving problems that are realistic, and usually work in collaboration with others. This constructivist learning approach has its foundations in cognitive learning psychology, and its roots in theories by Dewey, Piaget Bruner and Vygotsky.[28] Generally, constructivist learning places emphasis on the learners and proposes that learning is affected by their context, their beliefs and their attitudes. Learners are encouraged to find their own solutions and to build upon their prior knowledge and experiences. Moreover, in a constructivist learning environment, students learn by fitting new information together with what they already know and actively construct their own understanding. In doing so, they gain a deeper understanding of an event and thereby construct their own knowledge and solutions to problems.

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[26] M. J. Hannafin, J. R. Hill, and S. M. Land, "Student-Centred Learning and Interactive Multimedia: Status, Issues and Implications," *Contemporary Education* 68, no. 2 (1997): 94-97.

[27] J. Brooks, and M. Brooks, *In Search of Understanding: the Case for Constructivist Classroom* (Alexandria: Association for Supervision and Curriculum Development, 1999).

[28] Y. Karpov, "Vygotsky's Doctrine of Scientific Concepts: Its Role for Contemporary Education," in *Vygotsky's Educational Theory in Cultural Context,* eds. A. Kozulin et al. (Cambridge, England: Cambridge University Press, 2003), 138-155.

Western literature has shown that the student-centred approach promotes learning in various ways. For example, some researchers found that teaching that is guided by student-centred approaches can enhance student motivation.[29] Several attempts have been made to show the success of the student-centred teaching approach on student learning performance, particularly the positive effects on students' cognitive and affective outcomes. In student-centred learning, students are expected to gradually take more responsibility for their own learning. According to Glasgow,[30] with the necessary experience and guided practice, students will gain full independence, with the teacher becoming more of a co-worker. The focus is on active student acquisition of information and skills suitable for their ability, level of experience, and educational needs. Student-centred learning recognises individual student differences and their unique learning styles.[31] Many researchers support this definition by describing this approach as involving the reversal of traditional teacher-centred learning, placing the student at the centre of the learning process.

Islamic Education and the Student-Centred Learning Paradigm

Islam recognises learning as an active process and therefore, teachers should encourage and support learners to be active in knowledge construction. While knowledge (*'Ilm*) is regarded as a sacred concept derived from God in Islam,[32] there is also earthly knowledge, such as '*ulūm 'aqliyyah* (rational science) that has to be actively discovered by human beings.[33]

Theoretically, this seems to be compatible with the central principles of constructivist learning theories, i.e., active

[29] S. J. Lea, D. Stephenson, and J. Troy, "Higher Education Students Attitudes to Student-Centred Learning: Beyond 'Educational Bulimia?," *Studies in Higher Education* 28, no.3 (2003): 321-334.

[30] N. A. Glasgow, *New Curriculum for New Times: a Guide to Student-Centred, Problem-Based Learning*.

[31] M. N. Lambert, and B. L. McCombs, *How Pupils Learn: Reforming Schools Through Learner-Centred Education* (Washington: American Psychological Association, 1998).

[32] S. M. Al-Attas, *The Concept of Education in Islam* (Kuala Lumpur: International Institute of Islamic Thought and Civilization (ISTAC), 1990).

[33] S. H. Nasr, *Islamic Life and Thought* (Albany: State University of New York Press, 1981).

knowledge construction, where students are active learners who do not passively acquire or absorb new knowledge.[34] Moreover, some relevant literature from Islamic countries indicates that constructivist learning theories and student-centred principles have been accepted by many Muslim teachers and students. For example, Lubis et al.[35] conducted a quantitative study on 83 African teachers to study their perception of effective strategy and technique in teaching and learning in Islamic Education. The findings show that the teachers endorsed the principles of student-centred learning, such as student engagement in classroom discussions and student responsibility for their learning. The teachers also agreed with their suggested role to advise and motivate students in their learning. Similarly, another study by Salimi and Ghonoodi[36] in Iran also found that Muslim teachers agreed with constructivist student-centred approaches. The study was conducted with the purpose of integrating the curriculum with ICT and emphasized constructivist notions of learning in Smart Schools and its advantages in comparison with traditional schools. The findings showed that using ICT in Smart Schools has resulted in advantages such as making the curriculum content more flexible, promoting learner interest, and enhancing curriculum usefulness. In another study, Zarei and Esfandiari[37] conducted a study in Iran to investigate university students' learning outcomes in a general English course. They were randomly assigned to two classes: one constructivist and the other conventional. Results showed that student learning best occurs within the constructivist student-centred learning environment.

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[34] E. Von Glaserfeld, *An Introduction to Radical Constructivism* In *The Invented Reality,* ed. P. Watzlawick (New York, NY: W. W. Norton & Company, 1984), 17-40.

[35] M. A. Lubis et al., "The Perception and Method in Teaching and Learning Islamic Education," *International Journal of Education and Information Technologies* 1, no.5 (2011): 69-78.

[36] L. Salimi, and A. Ghonoodi, "The Study and Comparison of Curriculum in Smart and Traditional Schools," *Procedia Social and Behavioral Sciences* 15 (2011), 3059-3062; G. R. Zarei, and M. A. Esfandiari, "The Effect of Constructivist vs. Conventional Teaching on Reading Comprehension," *The Social Sciences* 3, no. 8 (2008): 606-610.

[37] G. R. Zarei, and M. A. Esfandiari, "The Effect of Constructivist vs. Conventional Teaching on Reading Comprehension," 606-610.

Islamic educational traditions may be interpreted to suggest that student-centred learning principles are consistent with those propagated by Muslim scholars and that have been practiced in the Islamic context since medieval times. The student-centred methods of teaching found in the Islamic education tradition, namely observation and experimentation, reason and reflection, problem solving, dialogue, discussion, application, independent learning, and project based learning have been used by several Islamic scholars such as al-Birūnī, Abū Ḥanīfah, Imām Malik, Abū Ḥasan al-Baṣrī, and Waṣil Ibn ʿAtāʾ as teaching tools for their students.[38]

Beliefs about Teaching and Learning

One major contributing factor which has an impact on educational paradigm shifts is the belief structure of teachers. The teacher is the crucial key change agent in educational reforms. Palmer (1998)[39] stresses that:

> "In our rush to reform education, we have forgotten a simple truth: reform will never be achieved by renewing appropriations; restructuring schools, rewriting curricula, and revising texts if we continue to demean and dishearten the human resource called the teacher on whom so much depends…But none of that will transform education if we fail to cherish -and challenge- the human heart that is the source of good teaching."

In implementing goals for an educational change, such as is happening in Malaysia, teachers are central agents and play a key role in changing schools and classrooms. Educational change can be referred to as change in knowledge, belief, attitudes, understanding, self-awareness, and also teaching practices.[40] A review of the literature pertaining to educational change reveals that educational theorists relate educational shifts to changes in

[38] A. Q. Mansoor, *Some Aspects of Muslim Education* (Lahore: Universal Books, 1983); D. Ghazali, *Pedagogy of Islamic Education* (Kuala Lumpur: Utusan Publications & Distributors Sdn. Bhd, 2001).

[39] P. J. Palmer, *The Courage to Teach* (San Francisco: Jossey-Bass, 1998), 3.

[40] L. Darling-Hammond, "Instructional Policy into Practice: the Power of the Bottom Over the Top," *Educational Evaluation and Policy Analysis* 12, no. 3 (1990): 339-347.

teachers' beliefs, knowledge, attitudes, and perceptions.[41] Moreover, it has been widely acknowledged in the field of teacher education that changes in practice by teachers in the classroom are an expression of their beliefs and educational philosophies, and that beliefs play an important role in their conceptualisation of instructional tasks and activities.[42]

Eisenhart, Cuthbert, Shrum and Harding[43] conducted a study to explore the effects of policy changes on teachers' work. Their findings revealed that educational policies that are implemented without attention to teachers' beliefs are seldom implemented the way the policy makers intended. Fenstermacher[44] argued convincingly that if policy makers want teachers to change their practice, it is necessary that teachers' existing beliefs be examined and perhaps changed. Furthermore, Prawat[45] mentioned that most of the problems associated with implementing new approaches relate to teachers' existing beliefs. Beliefs are among the most important indicators of the decisions people make throughout their lives.

Pillay[46] has argued that students' individual beliefs and values can strongly influence how they understand the concept of student-centredness. He argued that the student's perception of what is useful learning is very much influenced by both formal and informal conceptions of the nature of knowledge and the learning process. Therefore, if students come from backgrounds where their epistemological beliefs are not compatible with a

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[41] S. Borg, "Language Teacher Cognition," in *The Cambridge Guide to Second Language Teacher Education,* ed. A. Burns and J. C. Richards (New York: Cambridge University Press, 2009), 162-172.

[42] M. F. Pajares, "Teachers Beliefs and Educational Research: Cleaning up a Messy Construct," *Review of Educational Research* 62, no. 3 (1992): 307-332.

[43] M. Eisenhart et al., "Teacher Beliefs about Their Work Activities: Policy implications," *Theory into Practice* 27, no. 2 (1988): 137-144.

[44] G. Fenstermacher, "A Philosophical Consideration of Recent Research on Teacher Effectiveness" in *Review of Research in Education,* ed. L. S. Shulman (Itasca, IL: F. E. Peacock Publishers, 1979), 6:157-185.

[45] R. S. Prawat, "Teacher's Belief About Teaching and Learning: a Constructivist perspective," *American Journal of Education* 100, no. 3 (1992): 354-395.

[46] H. Pillay, "Understanding Learner Centredness: Does it Consider the Diverse Needs of Individuals?," *Studies in Continuing Education* 24, no. 1 (2002): 93-102.

student-centred approach, they may not be successful in their studies in a student-centred environment. As Schommer[47] argues, personal epistemological beliefs include an individual's deeply held convictions about the certainty of knowledge, about how knowledge is organised, and about the ability of individuals to control their learning. This means that if students perceive learning as knowledge acquisition, they are more likely to favour a teacher–centred approach, compared to those who view learning as knowledge construction, and who most probably tend to prefer a student-centred learning approach.

Teachers are considered to be significant actors of change and they play a key role in changing schools and teaching approaches. Therefore, understanding the belief structure of teachers is essential to improving their teaching practice, as well as in enhancing the professional teaching preparation of student teachers. As Pratt[48] suggested, "Beliefs and values are not minor, they are fundamental, these beliefs and values provide the submerged 'bulk of the iceberg' upon which any particular teaching technique rests."

Conclusion

In order to meet Vision 2020, Malaysia needs active learners who have acquired the skills of problem-solving, independent thinking, and autonomous learning, as well as the ability to work co-operatively. Therefore, teaching methods and educational goals have to be directed at producing individuals who have faith in their abilities and who will work at developing their capabilities throughout their lives. Education should prepare individuals to cope with changes rather than become dependent on habits. In other words, education for the future should place emphasis on developing creative and thinking minds.

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[47] M. Schommer, "Effects of Beliefs About the Nature of Knowledge and Comprehension," *Journal of Educational Psychology* 82 no. 3 (1990): 498-504.

[48] D. Pratt, *Alternative Frames of Understanding. Five Perspectives on Teaching and Learning in Adult and Higher Education* (Malabar: Krieger Publishing Co., 1998).

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