



INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN PROGRESSIVE EDUCATION & DEVELOPMENT



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ISSN: 2226-6348

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To Link this Article: <http://dx.doi.org/10.6007/IJARPED/v9-i2/8891>

DOI:10.6007/IJARPED/v9-i2/8891

Received: 18 May 2020, Revised: 20 June 2020, Accepted: 30 June 2020

Published Online: 26 July 2020

In-Text Citation: (Hamidon & Sihes, 2021)

To Cite this Article: Hamidon, M., & Sihes, A. J. (2021). Influence of Islamic Education Teachers Competency on Practice of Higher Order Thinking Skills. *International Journal of Academic Research in Progressive Education and Development*, 9(2), 815–830.

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Vol. 9(2) 2020, Pg. 815- 830

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Influence of Islamic Education Teachers Competency on Practice of Higher Order Thinking Skills

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Abstract

Higher Order Thinking Skill (HOTS) has become a demanded approach in education because it is one of the skills in the 21st century. This conceptual paper was motivated by the belief that teachers with high level of professional competency will be able to produce students who are competent and adaptable to changes in their surroundings. This concept paper aims to discuss the influence of Islamic Education teachers competency on HOTS teaching practices. The three domains of teacher competence namely knowledge, skills and personality of teachers seems to have significant impact on teaching practice of high level thinking skills. The concept paper reveals that teachers' ability in integrating and developing thinking skills in teaching their subjects is strongly related to teacher competency. Therefore, the objectives of teaching for developing HOTS in students would be difficult if the teachers are not fully competent to use it. Nevertheless, the discussion of this conceptual paper can be used as recommendations for practice change with regard to HOTS development.

Keywords: Teacher Competency, Teaching of Higher Order Thinking Skill, Islamic Education Teachers

Introduction

Higher order thinking skills (HOTS) have now becoming a major concept being practiced in the educational field. Most advanced countries have already integrated the concept in their curriculum as part of their learning objectives. This awareness has been driven by changes in education at international level. Higher order thinking skills (HOTS) is regarded as an important component of the 21st century skills list. Teaching HOTS has its own challenges and needs to be emphasized in pedagogy as it is one of the skills of the 21st century (Fahim & Masouleh 2012; Yang & Gamble, 2013) HOTS refer to thinking ability to apply knowledge, skills, and values in reasoning and reflection to solve problems, to make decisions, to innovate and to be able to create something (Malaysia Education Ministry, 2014). Education system plays an important role in imparting knowledge and skills to students, owing to the fact that strength and development of the country heavily depends on the level of knowledge and skills of its people. As a result,

Malaysia continues to experience changes in education over time. The Malaysian Education Development Plan (MEDP) 2013-2025 has outlined six key features needed by every student in meeting challenges at global level, in line with national education philosophy, namely: Knowledge, Thinking Skills, Leadership Skills, Bilingual Skills, Spiritual Ethics and national identity.

One of the aspects that were highlighted in MEDP is thinking skills. There has been increasing awareness on the importance of higher order thinking skills in society. With regard to HOTS as a teaching subject, it is obvious that teachers are proponent of forming a high-minded society thus requiring the teachers themselves to be fully competent in using HOTS (Aziz, Ahmad, Ismail, Ibrahim & Samat, 2017; Noh, Ajmain, Rahman & Zarihan, 2017; Othman & Kassim, 2017) teachers found to be the most important factor that determines the success of higher order thinking implementation compared to other factors. Some studies show that teachers are the key factor in improving the quality of education in many countries (Gil-flores & Rodríguez-Santero, 2017; Hu, Fan, Yang & Neitzel, 2017) therefore, the quality of teachers in executing the education policies will affect the quality of education. To explain further, teachers who implement pedagogical practices to develop higher order thinking skills of their students are more capable to directly improve their students' achievement (Lee & Lai, 2017; Ramos, Dolipas, & Villamor, 2013). The development in HOTS teaching can facilitate the transfer of knowledge and skills to responsible actions and their specific functions in society in the future (Ballakrishnan, & Mohamad, 2020; Sutarto, 2017) many efforts in the HOTS domain have pointed to the benefits and advantages of HOTS teaching (Canas, Reiska & Mollits, 2017). According to the *Profile of the Modern Teacher Mind Shift* (2014), the 21st century teachers are no longer focused on the technology but the skills of the mind.

Study Background

Ministry of Education, with reference to a report by its unit, Education Performance and Delivery Unit (PADU) stated that Malaysian Education Development Plan 2013-2025 is among the significant plan covered with a total of 386 pages. Among other aspects reported are Curriculum, Pedagogy and Co-Curriculum. Thus, in addressing the pedagogy aspect, the Ministry need to reform education system in Malaysia towards making it as one of the best in the world. One of the initiatives taken by the Ministry is the implementation of Integration of Higher Order Thinking Skills in 21st Century Learning in 2017. The initiative is a continuous effort to reinforce the quality of education in Malaysia, thus showing the Ministry is committed in providing quality education to Malaysian children. Following the HOTS implementation, efforts to improve HOTS among students are mainly focused on enhancing the competencies of teachers and school administrators through the i-THINK program, particularly on effective questioning techniques. The 21st Century Learning Information Kit has been developed to ensure that new teaching approaches are implemented effectively in schools.

Requirement on HOTS are clearly stated in the Learning Standards (SP) for Standard Curriculum for Primary Schools (SCPS) (Reviewed) 2017 and Standard Curriculum for Secondary Schools (SCSS). The allocation of time suggested in the Curriculum and Assessment Standard Documents (CASD) allows HOTS to be integrated during the teaching and learning process. Therefore, more than 70 percent of the curriculum implementation in the classroom will be based on HOTS. Teaching and learning approaches such as project-based, inquiry-based learning,

problem-based learning, STEM-based approaches which have been the basis and focus in SCPS and SCSS, will allow for HOTS to be integrated and practiced among students. This program is a platform to enhance the development of teachers and school administrators towards implementing HOTS among the students. Through the i-THINK program, teachers and administrators are trained to apply effective questioning techniques and use thinking maps to help students improve their thinking skills.

However, the main issue of this conceptual paper is directed on the issue of teachers' competency without giving much emphasis to HOTS teaching practices in schools. The above statement is supported by referring to a report from the School Daily Management Division (2018) HOTS self-assessment verification conducted for the period October to November 2018 involving a sample of 1,358 teachers showed 73.7 percent of teachers achieved good levels while 26.3 percent excelled. The results of the analysis found that the concept and practice of HOTS is still poorly applied. According to MOE 2012 as in Hamdan et.al., (2019) high level of thinking ability is still low among teachers and students in Malaysia. The study also observed that they are more inclined to perform passive teaching in lesson delivery, thus fail to gain interest of the students throughout the lesson. The teachers prefer that the students to understand the basic content of the subject matter for the purpose of summative assessment rather than applying high level thinking skills. It was also found that 70 percent of the teachers are more inclined to teach their students for fact memorization purpose, compared to 18 per cent for data analysis and interpretation while 12 per cent for synthesizing information (Malaysia Education Ministry, 2013). This statistic indicates discrepancy of teaching practice in schools especially in teaching practice that leads to higher level thinking. It is also consistent with the findings from Immigration and Quality Assurance (IQA) study from 2009 - 2011 that only 13 per cent of teaching and learning practices of teachers were creative and excellent.

The literature review shows that teaching of HOTS particularly among Islamic Education teachers (IET) is still lacking and needs to be enriched. In other words, there is discrepancy among IET in schools, whereas the Islamic Education curriculum emphasizes on HOTS concept in their teaching practice. Inadequacies of the teachers need to be handled effectively, otherwise, it will affect their students as well as their attitudes, thinking and performance, thus jeopardizing the development of nation-driven human capital. Studies on HOTS teaching practices which are related to teacher competence, have been extensively conducted by previous researchers. Most previous studies have focused on the effectiveness of HOTS (Ali, Lubis, & Noh, 2018; Anwar, Saregar, Hasanah, & Widayanti, (2018). Teacher readiness (Ismail, Muhammad, Kanesan & Ali, 2019; Ismail, Lubis, & Isa, 2016). HOTS implementation (Hashim, Hussien, & Imran, 2014; Mustafa, Salleh, Ahad & Razzaq, 2018; Othman & Kassim, 2017; Radzi & Muzammil, 2018) Many studies reveal that the (IET) implementation are still at average level.

With reference to competence issue in Teaching of HOTS based on Islamic Education Teachers on their Knowledge of HOTS (Madziah, 2015; Seman, 2018) IET found to possess average knowledge base. There has been misunderstandings and misinterpretations of HOTS teaching. However, this finding is contrary to findings of the following studies (Othman & Kassim, 2017; Mahpuz, Hehsan & Noh, 2019). which found that teachers' knowledge level was at a high level. There are significant differences between studies using quantitative and qualitative

methodology based on HOTS concept. This is because teachers do understand and highly aware on the importance of HOTS teaching yet the level of their teaching practice is still low. It can be concluded that the biggest challenge that impede the HOTS implementation found to be the teachers themselves who fail to fully understand the HOTS concept (Ismail & Ismail, 2018; Setiawan & Jatmikowati, 2020) Teachers who do not have the right understanding on particular subject will eventually fail to teach such knowledge and skills to their students. It is not practical to teach something that we do not understand. As a result, the lack of proper understanding and knowledge of HOTS will result to inability to master higher thinking skills and the inability to design and implement effective instruction during teaching and learning sessions. Therefore, the objective of teaching to develop HOTS among students is impossible to achieve.

The next issue is focused on HOTS teaching competency with regard to IET skills. Philosophy of Islamic Education accords that the process of teaching and learning should apply elements of thinking skills and thinking strategies through the use of well-planned and effective teaching and learning methods in order to develop the mind and translate it into daily practice (Malaysia Education Ministry, 2014). A recent study of Islamic Education Teachers with Pedagogical Problems (Osman & Basar, 2015; Tarmizi, 2016) found that incompetent IET pedagogy leads to poor quality of teaching and learning practice. Problems of Islamic Education teachers with pedagogical aspects are usually related to questioning techniques (Zhaffar, Abdullah, Hamzah, Razak, & Lubis, 2018), upgrading high level questions (Hussin, Noh, & Tamuri, 2014) diversifying problem solving activities using thinking tools (Ripin, Muhammad, & Dawad, 2012).

The finding proves that IET are having critical pedagogical competency problem (Radzi & Muzammil, 2018) Failure to implement HOTS is also due to incompetent teaching methods. The use of teaching and learning in the classroom is still traditional. This is in line with a study conducted by (Seman, Yusoff, & Embong, 2017) that found IET teaching use 80 percent of lecturing method in the classroom causing boredom, lack of understanding, incapability to relate to current situations, drowsiness and loss of focus among students. Through the context of Islamic Education teaching skills, Islamic Education Teachers are still inclined to use lecture methods (Noh, Ajmain & Rahman, 2017). The IET prioritize more on memorization of fact rather than thinking about the fact that the students learnt meaning 'knowing what' while ignoring how to use or finding one's own information' which is knowing how to "analyze, synthesize, be creative and higher thinking tend to be overlooked and ignored". In a study carried out by Nawi (2012) argued it is wrong to perceive Islamic Education as a subject that focuses solely on memorizing method. The method causes students to become overly dependent on teachers and reluctant to give their opinions, hence students only recall what they have memorized. Another study by Hussin, Noh & Tamuri, (2014) observed that Islamic Education teachers are still at their average level in their use of inquiry method in the classroom. In fact, there are several methods of inquiry that are relevant to the contents of Islamic Education such as open inquiry, guided inquiry and structured inquiry.

Teacher Competency

Rylatt and Lohan (1995) in their work has described competencies as generic skills, basic skills, key skills, and personal skills that refer to knowledge, skills and attitudes that are the basis of a task or job performance given across all fields. Rao (2010) in his study defines competence as traits of individuals which include knowledge, skills and attitudes that enable them to perform in every task, role or situation. Competence is an individual's mastery of knowledge, skills and values that are reflected in daily routine. It is a set of thinking and acting practices. Sanghi (2004) argues that competence is a component of work that is reflected in behaviors observed in the workplace which consists of elements such as knowledge, skills, abilities, talents, behaviors, personal aptitude that are evident in job performance. Spencer & Spencer (1993) accords that efficiency is a fundamental characteristic of an individual in relation to criteria that refers to effective and superior performance in a job or situation. From the above definition, competence can be generally understood as a variety of characteristics that are inherent in a person that influence the effectiveness of an individual's work.

Teacher Competency Profile by Koster et al. (2005) in determining the elements of teacher competency, this profile suggests that task competencies are divided into four categories namely content competency, communication, organization and pedagogy. The model of educators according to al-Ghazali (1939) can be referred and analyzed in his book "Ihya Ulum al-Din" (Al-Ghazali, 1939). The al-Ghazali model of educators states that a competent educator should have the mastery of three main components, namely the knowledge component, skills components and personalities components. The first model component, knowledge refers to educators who have sufficient religious knowledge and practice. In addition to religious knowledge, competent educators must also be competent and knowledgeable in the subject content. The second component refers to the skills that a competent educator possesses: A competent educator must be competent and skilled in pedagogical and communication aspects. The third component should be personality. A competent educator should have compassion for the students and is always wise in every action taken. Competent educators need to integrate the three components in order for students to learn and educators to be successful and effective in their teachings.

Hay McBer's Iceberg Competency Model (1996) explains that there are three main components of competency which are knowledge, skills and personality. Knowledge competency means the ability of individuals to continuously develop knowledge to improve their self-efficacy. Skill competency refers to individual capability to make full use of knowledge and skills that are available to perform well. While Personal Competency is the personal values and behaviors that individuals should embrace and practice. Another model is "Triangle of Success Model" introduced by Van Hooser (1998) who accords that there are three elements that determine success: Knowledge, Skill and Behavior: This model is used by Teachers' Education Division in designing teacher training program in IPG.

The Conceptual Model of Teacher Education (2003) was formulated based on the National Education Philosophy and Teacher Education Philosophy which emphasized the importance of three basic aspects: knowledge, skills, and values integrated across all disciplines of subjects and programs planned. This model is also used as a guide and basis for teaching training programs at IPG throughout Malaysia. The Conceptual Model of Teacher Education emphasizes teacher

accountability in three main dimensions namely, self, community, and divinity (TED, 2006). The SGM model outlines the professional competencies that teachers or educators need to achieve and the requirements that must be provided by institutions involved directly in the teacher training program to produce teachers who meet the competency level set by the ministry TED, 2009. According to the SGM 2009 Model), demonstrates the intention of the MOE to produce relevant and consistent quality teachers. The SGM model states that teachers should have the basic defining standards and requirement of a teacher. The standard of requirements is that teachers need to possess strong teaching and learning skills, practice high values of professionalism, and have good mastery of knowledge and understanding (Abdullah, 2017; Siraj & Ibrahim, 2012).

There has been dispute in the number of competencies required by teachers. Kunandar (2007) has detailed out ten elements of competence. While Long, Kassim and Zaini Mahbar (2013) listed only five competencies as in Jamil (2017). Such controversy clearly indicates that there is no standard set on the number of teachers' competencies. Based on the various elements of competency, it is clear that improvement of teachers' professional standards over time should be made through the HOTS teaching. A literature review on competencies used in determining competency elements in Malaysia include the Teacher Competency Profile by Koster et al. (2005); Educators Model by al-Ghazali (1939), Iceberg Spencer and Spencer (1993) Competence Model, Hay McBer (1996); Van Hooser (1998), and Conceptual Model of Teacher Education (2003). It is clear that all models of teacher competency emphasize the areas of knowledge, skills, personality, values and organization. Competency is a tool by which individuals carry out their tasks. According to Haron (2006); Ali (2014), there are three main components of competency:

(a) Knowledge

Ability of individuals to continuously enrich their knowledge and improve their personal performance

(b) Skills

Ability to employ and utilize knowledge and skills acquired to perform well in achieving organizational objectives

(c) Personal characteristics

Personal values and behaviors that public service needs to recognize and practice.

Influence of Islamic Education Teachers on The Teaching of Higher Order Thinking Skills

HOTS is applicable across disciplines. HOTS should have been seen in a different perspective with regard to teachers' knowledge, skills and attitude. Brookhart (2010) in her study addresses three main characteristics of HOTS; transfer, critical thinking and problem solving. Learning is not all about remembering or understanding but transferring new knowledge into different area, which is cognitive dimension of the revised Bloom's taxonomy. She also argues that assessing students' critical thinking can increase their academic performance. Students should be guided to develop their critical thinking and curiosity for learning new information. Finally, the ultimate skill that every students should have is their ability to identify problems in their daily life and work out for solution to the problem.

HOTS implementation are not merely creating or stimulating higher order question rather how the students integrated it through learning-by -doing, problem solving and collaboration,

authentic task and authentic assessment or any teaching models that could serve as guidance in HOTS pedagogy. Thinking skills have long been introduced in the teaching and learning of Islamic education. However, its implementation is still ineffective and less emphasis is given in teaching particularly the teaching objectives being practiced in Islamic education subjects. Therefore, continuous and systematic exposure is required for all Islamic education teachers to widen the scope of the higher order thinking skill implementation in the teaching and learning of Islamic education in order to produce creative and critical thinking students. (Aziz & Noh, 2016) The study findings show that HOTS teaching in Islamic Education subject has yet to perform satisfactorily. The teaching practices are still teacher-centered, traditional and procedural in nature. Teacher competency level is a very important issue due to its major impact on learning. Alhassora, Abu & Abdullah (2017). There is always misconception on Islamic Education as a subject since it is often considered as a tedious subject, full of facts and regulations and only concerns on reward and sin to daily problems. Such misconception has led to importance of HOTS teaching in Islamic Education being taken less seriously compared to other subjects such as math, science and language. Thus, with reference to definition of competency, three domains of Islamic education teachers' competency that influence HOTS teaching practices are divided into three domains: (i) teachers' knowledge, (ii) teachers' skills and (iii) teachers' personality.

Knowledge

Teachers' knowledge from the aspects of curriculum, pedagogy and assessment contribute to change of teachers' approaches in the classroom, teachers' professional development and achievement in HOTS (Surif et al., 2016). The knowledge domain is the competency domain of Islamic Education teachers who have the strongest influence on HOTS teaching practice Islamic Education teachers need to master the knowledge of Islamic Education content in order to be creative and effective teachers (Retnawati, Djidu, Kartianom, Apino & Anazifa, 2018) Teachers of Islamic Education who do not master the content of Islamic Education will face problems in teaching and what's more in developing students' thinking skills.

According to Shulman (1987) some of the knowledge that teachers need to master are the aspects of knowledge in teaching and learning namely pedagogical knowledge, subject content knowledge, pedagogical content, knowledge on students, knowledge on Malaysian Education, its philosophy and purpose. Knowledge is the cognitive ability to recall or identify specific elements contained in the content of a subject (Malaysian Examination Board, 2013). While Bloom's Taxonomy of Thinking Skills (Bloom, 1956) aims to move students from low to higher order thinking from knowledge (information gathering), to understand (confirming), to application (using knowledge), to analyse (retrieving information other than), to evaluate (evaluate results), to synthesize (put information together).

To integrate HOTS in teaching, Rajendran (2017) states that a teacher must acquire knowledge on the framework, model, taxonomy and thinking skills. In-depth knowledge of teachers in curriculum, pedagogy and assessment can stimulate students' thinking. Knowledge can be profound when it involves the ability to identify key ideas of a topic and the ability to make

complex connections around these important ideas. It is obvious that knowledge is very important for Islamic Education Teachers in teaching Higher Order Thinking Skills.

Skills

The skills of Islamic Education teachers also influence the HOTS teaching. Planning and preparation of teachers before teaching and learning process will influence HOTS teaching practice. With reference to the first measurement or indicator that can be used to assess HOTS standard in teaching and learning of Islamic Education teachers is to refer to an instrument developed by JNJK. JNJK of MOE has provided HOTS instrument in teaching and learning (JNJK /K/268/14) for the purpose of measuring the quality of HOTS in teaching and learning of IET. This instrument is based on the SKPMg2 standard 4. The teacher acts as a facilitator in effective teaching and learning process to enhance the overall potential of pupils and to continuously improve students' achievement at optimum level. HOTS teaching can be analysed through aspect 4.3 (Teacher as Guide) and 4.4 (Teacher as Motivator)

HOTS teaching can be studied through aspect 4.3 (Teacher as a Guide). Teachers will professionally guide their students, master the content and skills of guiding students in decision-making and problem solving, use educational resources, and integrate content with other skills and subjects to meet the needs and abilities of the students properly, prudently and diligently. In other words, the IET needs such skill to master the content through Standard Document of Curriculum Assessment which comprised of seven main areas namely Al-Quran, Hadith, Tawheed, Ibadah, Sirah, Adab, and Jawi that are modularly implemented to meet the needs of students. All the seven areas that comprised of knowledge, skills and values must be effectively communicated through a variety of approaches, methods and techniques that are more interesting and appropriate to meet skills of the 21st Century (KPM 2013). Teachers' skills are not merely delivering content but they are committed to ensure that pupils practice in their daily lives. Islamic Education is expected to develop students in becoming a knowledgeable, religious, virtuous, skilled, responsible, righteous, and pious individual.

Skilled Islamic Education teachers should be wise in planning and making preparation in all of their actions (Osman & Embong, 2020; Ajmain, Hehsan & Mohamad, 2019). Meaning that, careful preparation and planning before class is very important to ensure effective teaching. The skills in managing the classroom during teaching also influence the HOTS teaching practice. Efficient and successful teachers who manage the classroom effectively will be able to develop higher level of thinking ability. Tyler's (2013) model proposes teaching skills that include pedagogical skills which is setting appropriate objectives, IET mastery of topics by communicating facts, conceptual processes and subject procedures, arranging learning units in sequence, selecting appropriate methods and techniques of teaching that suit students' abilities, assisted by teaching aids and making assessments.

Islamic Education teachers who are constantly using various methods in teaching will be easily accepted by students (Jasmi, 2013). Students involvement is also an important aspect that influence HOTS teaching practices. Hence, teachers should be wise and competent in determining teaching strategies that can engage students during lessons. A study by (Fukuzawa,

Boyd, & Cahn, 2017) found that HOTS teaching activities such as problem-based learning can enhance student engagement in teaching and learning. To make up for the shortcomings, Islamic Education teachers need to have the skills to constantly reflect (self-reflective) and be prepared to develop their professionalism on a regular basis. The use of technology also plays a key role in helping teachers to implement HOTS teaching. Competent Islamic Education teachers should be able to integrate educational technology into their teaching practices (Hussin, 2017).

Personality

Attitude and personality of Islamic Education Teachers also influence HOTS teaching practice, Islamic Education teachers need to have good attitude and personality. Personality in Islamic context refers to character Al Ghazali (1993). Teacher Competence Personality refers to the end goal of Islamic education which is Muslim personality. Muslim personality refers to a personality that has all aspects of it and reflects the teachings of Islam. Al-Ghazali uses the term educator with words such as, al-mualim (teacher), al-mudarris (teacher), al-muaddib (educator), and al-walid (parent). al-Ghazali reveals that the deeds, behaviors, morals and personalities of an educator are more important than the knowledge they possess.

Realizing that personality of an educator will be embraced and imitated by his or her students, either intentionally or unintentionally and directly or indirectly, thus al-Ghazali strongly recommends that an educator should be able to carry out his / her actions, actions, personality according to the teachings and knowledge given to his or her students. The most important factor for a teacher is his/her personality; it is his/her personality that determines him/her to be a good educator and builder for his/her students (Ahmad & Kassim, 2017). Their true personality is abstract, intangible and tangible, recognizable in all aspects of life. Particularly in behavior, speech, ways of interacting, dressing, and dealing with every issue or problem. Teachers' personalities in teaching should be given more attention from other aspects. A teacher will pass on all the behaviors in front of his/her students during the learning process. This will influence the attitude and behavior of his/her students in future. An educator must have a positive personality. Elements of personality that are essential are Love, *zuhud*, giving advice, teaching in a gentle way and preventing wrongdoings, respecting knowledge that is not under study, knowing capability of students, wise in communicating knowledge, practicing their knowledge and setting good example.

From the discussion of the above literature, it can be concluded that knowledge, skills and personalities of Islamic Education Teachers exert great influence on the practice of teaching higher order thinking skills. Table 1 below summarizes the influence of Islamic Education teachers' competency on the practice of teaching higher-order thinking skills.

COMPETENCY DOMAIN	COMPETENCY ELEMENT
Teachers' Knowledge	a) pedagogical knowledge, b) knowledge of the subject matter, c) the content of pedagogy, d) knowledge of students, e) knowledge of Malaysian Education, its purpose and philosophy
Teachers' Skills	(a) Skill in planning lesson preparation (b) Classroom management skills (c) Skill in diversifying teaching strategies (d) Skills in engaging students (e) Communication skills (f) Skills in assessing students' learning (g) Skills in reflecting teaching (h) Skills to increase level of professionalism (i) Technology Skills
Teachers' Personality	a) Love b) <i>Zuhud</i> c) Giving advice d) Teach in a subtle way and prevent wrongdoings e) Respect for knowledge that is not under study f) Know capability of students g) Wise in communicating knowledge h) Practice their knowledge and setting good example

Table 1: Domains and Elements of Teacher Competency

Conclusion

HOTS development among learners will become an obstacle if it is handled by less competent teachers in both pedagogical and academic skills. The practice of teaching and learning by teachers requires close relation with knowledge with regard to curriculum. According to Wilkins (2008) there is a significant association between knowledge and proficiency of teachers in a syllabus and their classroom teaching. He also affirmed that low proficiency on educational content among teachers may cause loss of confidence to teach their students. Therefore, acceptance by teachers on introducing HOTS in Islamic Education should be considered to determine the level of HOTS programme to be practised in classroom teaching and learning.

On the contrary (Cao, 2018) argued that in order for higher order thinking skills in class are effectively taking place, teachers should have mastery of skills in related knowledge, and possess in-depth understanding of the subject content. The knowledge of pedagogy on HOTS implementation in teaching and learning processes should be understood and practiced by all teachers because they are the ones who will use different teaching methods or strategies to develop HOTS skills to their students. (Ramdiah, Royani, Malang, & Kleij, 2019) explained that critical thinking is a high-order thinking activity that should be practiced with persistence for

students to gradually build their intellectual skills under observation and evaluation of their teachers. Critical thinking ability is necessary for students to be able to determine and select various kinds of information from different sources, to process information in creative and logical behavior, to reject it, analyze it and draw conclusions as well as to be able to manage information. Furthermore, (Firoozi, Razavipour & Ahmadi, 2019) interviews with head teachers indicated that teachers need training both in the subject matter knowledge and in the pedagogy of assessment.

No one think perfectly or weak at all times. Memorizing something is not the same as thinking about it. Memorizing something can be done without understanding it. While thinking can be done in the form of words, pictures, reflections. Someone who memorizes and regurgitate that information without thinking is similar to robots. They only do things that has been programmed on them. HOTS requires that we do something with information, facts or ideas that we receive by giving different meanings and implications that are different from our norms. Students need to integrate and relate, categorize and manipulate each elements for them to discover new meanings and understandings. These are the key elements that students must master whether in teaching and learning process or outside the classroom. Teachers should inculcate and incorporate HOTS in their students through appropriate teaching methods. The knowledge, skills and personalities of the Islamic Education teachers greatly influence how HOTS can be applied in the teaching and learning process.

Acknowledgement

The authors would like to thank University Technology Malaysia and Ministry of Education for their support.

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