

## INTEGRATION OF THE MULTIPLE INTELLIGENCE THEORY IN ISLAMIC EDUCATION CURRICULUM IN MATRICULATION PROGRAMME MINISTRY OF EDUCATION MALAYSIA

Abdul Rahim Hamdan<sup>1\*</sup>, Jaafar Jamian<sup>2</sup>

Prof. Madya Dr., Faculty of Education, Universiti Teknologi Malaysia, Johor Bahru  
[p-rahim@utm.my](mailto:p-rahim@utm.my)

<sup>2</sup>Faculty of Education, Universiti Teknologi Malaysia, Johor Bahru, [jaafar6@live.utm.my](mailto:jaafar6@live.utm.my)

\* Corresponding author

### Abstract

The Government, through the Ministry of Education Malaysia intends to provide human capital for national development and delivery of nation states. In line with the development of individual potential students at the Matriculation College through education should be conducted in a harmonious, balanced, comprehensive and integrated. It presents some of the findings related to the application of the theory of multiple intelligences in curriculum implementation in Malaysia Matriculation College for developing the potential of all the elements in students' multiple intelligences. The survey was conducted through observation of teaching and learning in a tutorial that integrates elements of multiple intelligences. Observations were made using Observation Checklist Scientific Attitudes and Values were modified from Practical Work Science Laboratory Manual Matriculation Programme. It is observed teaching and learning environment that integrates elements of multiple intelligences is conducive and successfully develop scientific attitudes and values, while at the same time expanding elements in students' multiple intelligences.

**Keywords:** curriculum implementation, the development potential of the students, multiple intelligence, scientific attitudes, values

### 1.0 BACKGROUND

In education, development of students brainpower are given full attention for students to adapt; achieve success in life; and willing to be in the future society (Reinhartz & Beach, 1998; Wiles and Bondi, 1998). Accordingly, the content and implementation of the curriculum in the education system should be given attention to the development of other than aspects such as students brainpower spiritually, emotionally and physically. According to Gardner (1983) intelligence is the ability to solve problems or create products that are valued in one or more cultural background. New concepts related to intelligence expanded on the theory of multiple intelligences (multiple intelligences) expressed by Gardner in 1983.

Based on this theory, every individual has at least eight intelligences namely the verbal-linguistic intelligence, logical-mathematical intelligence, visual-spatial intelligence, kinesthetic intelligence, musical intelligence, interpersonal intelligence, intrapersonal and naturalist intelligence (Armstrong, 1994; Campbell, Campbell & Dickinson, 1996; Jasmine, 1996). Multiple intelligences theory has been applied widely in countries such as United States, United Kingdom, Canada and Australia.

The findings by educators such as Berman (1998), Armstrong (2000), Campbell et al. (1996), Jasmine (1996) and Lazear (1991) shows the application of the theory of multiple intelligences in education can contribute to the success of student learning, especially in Matriculation College.

### 1.1 Integration of Multiple Intelligences in Teaching Elements

The education system in the west believe that the elements of multiple intelligences can be integrated into teaching and learning activities. According to Jasmine (1996), elements of multiple intelligences can be integrated into learning activities for a subject to achieve the learning objectives, besides expanding intelligence relevant to the topic. By integrating elements of multiple intelligences, Jasmine (1996) states that it is necessary to incorporate into lesson plans, types of intelligence to be integrated as appropriate to the topic being taught. Before that Armstrong (1994) recommends that, in designing a lesson that integrates

elements of multiple intelligences, lecturers teaching objectives set in advance followed by thinking of issues like the one in Figure 1.

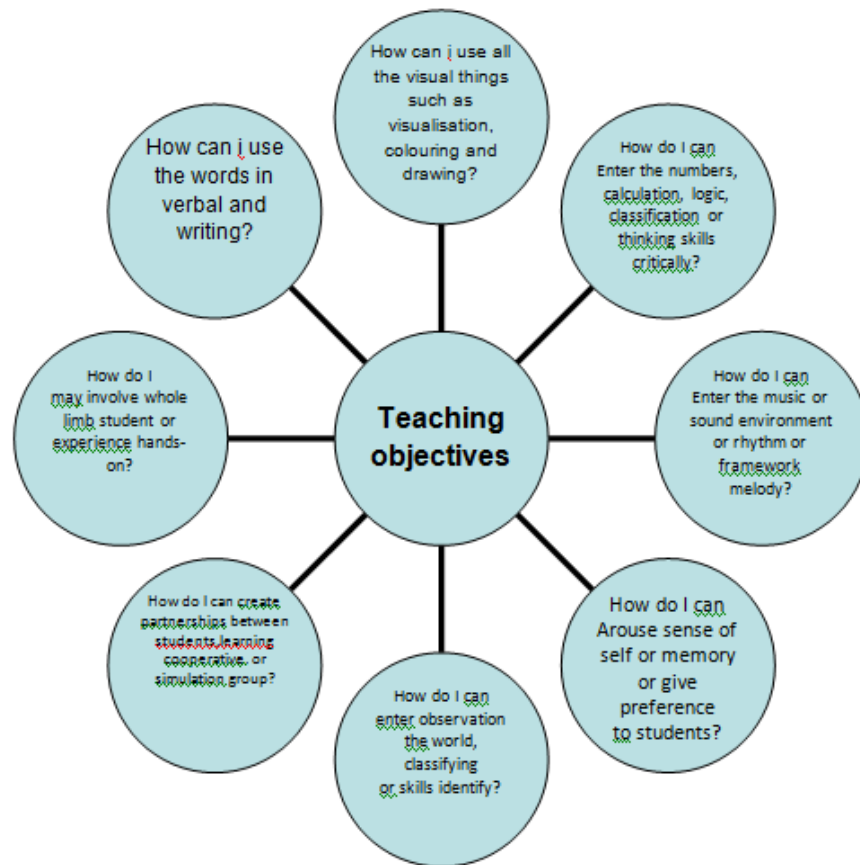


Figure 1 The question that arises when planning the absorption of the multiple intelligence elements in teaching (Armstrong, 1994)

## 1.2 Application of Multiple Intelligences Theory in Malaysian Education Field

Ministry of Education introduced the theory of multiple intelligences in the education system in 2001 through the Curriculum Development Centre, which is now known as Curriculum Development Division. Justifications are outlined as follows.

In addition to producing students who are balanced, the Model theory of multiple intelligences helps students to get what they need to survive in the next century. Model theory of multiple intelligences can help us shift the focus from content to generic learning outcomes which are more important and useful for students. (Curriculum Development Centre, 2001: 14)

Based on the above initiatives, it can be said that all the elements of multiple intelligences are one things that need to be integrated into the curriculum to complement efforts to develop human capital, which in turn can contribute to national development.

## 2.0 ISSUES AND PROBLEMS

All of the elements of multiple intelligence necessary to be developed students through the curriculum in line with the National Education Philosophy towards creating individuals who can contribute to the well-being of self, family, community and country. Development of all elements of multiple intelligences in the students is necessary in view of all elements of multiple intelligences is important for a more prosperous life. Issues such as haze, mudslides, flash floods and debris issues (related to the naturalist); the issue of bullying, thefts, robberies (associated with interpersonal); the issue of drugs, illegal racing, 'bohsia' (young prostitute) and suicide (related to intrapersonal); issue of unemployed graduates and loitering problems (ie graduates cannot use visual-spatial potential to interpret and utilize the space and opportunity around him. Graduates also will not be able to apply the skills they have learned are kinesthetic) are among some of the issues the more serious (Utusan Online, June 18, 2012). These issues are related and are reflective of multiple

intelligences owned by Malaysians generally still weak. Hence it is clear that all elements related to the potential of multiple intelligences could be expanded in the students through curriculum and instruction.

However in reality, the implementation of teaching and learning in matriculation college in Malaysia is more directed to academics and to perform well in tests or examinations (Hishammuddin, 2005; Murad, 2005). For this purpose, the lecturers will be mostly emphasize the mastery of facts and theories. According Rohizani and Norlida (2003), not all students can devote their full attention to the theoretical aspects that are considered 'dry' and pointless. This item is not in line with the wishes of the National Education Philosophy; ambitious provision of human capital; and the intention of creating a prosperous society.

This paper reveals some of the studies that found that the integration of all elements of multiple intelligences in teaching and learning process is actually a practical nature to be implemented in addition to achieving the goal to develop scientific attitudes and values. Thus the integration of these elements is reasonably practical by lecturers in accordance with the requirements of the Curriculum Development Centre (2003).

### **3.0 RESEARCH**

All the elements of multiple intelligences namely the verbal-linguistic, logical-mathematical, visual-spatial, kinesthetic, musical, interpersonal, intrapersonal and naturalist is between elements that are expected to be developed in the process of teaching and learning in Islamic education as well as elements of scientific attitudes and values purely in accordance with the requirements of National Philosophy of Education (curriculum Development Centre, 2003, 2003). Scientific attitudes and values in this study refer to the checklist Scientific Attitudes and Values for Islamic Studies in Johore Technical Matriculation College as outlined by the Curriculum Development Centre (2003).

This study was limited to integrating elements of multiple intelligences is in the process of teaching and learning program for one year in JTMC, initial survey researchers found lecturers of Islamic Education in JTMC (Johore Technical Matriculation College) still unsure of the effectiveness of the process of teaching and learning that integrates the elements multiple intelligences.

#### **3.1 Objectives and Research Questions**

This study was carried out to get an idea of continuity and implementation process of teaching and learning that integrates all the elements of multiple intelligences. In particular the objectives of this study were to identify the state of development of scientific attitudes and values of students in the learning process identification whether all the elements of multiple intelligences also be integrated into the teaching and learning in the curriculum of Islamic education. Research question is; how is the development of scientific attitudes and values for students if the elements of multiple intelligences is also integrated into the teaching and learning of Islamic education?

#### **3.2 Method**

The study was conducted using a survey method through observation. Observations were made during the process of teaching and learning that integrates elements of multiple intelligences in progress to identify the state of development of scientific attitudes and values of students.

Teaching and learning that integrate elements of multiple intelligences implemented for ten weeks. Teaching and learning process conducted from time to time by some researchers monitored to ensure that it takes place in accordance with the requirements and objectives of the study.

During this period, two examiners of J1 and J2 have observed separately. J1 and J2 are the lecturers who were selected in this study based on more than five years of teaching experience in the subject of Islamic Education in Johore Technical Matriculation College. Methods and techniques of observations in Practical Test at the Johore Technical Matriculation College were used in this study random of the number of students who show scientific attitudes and noble values specified during tutorial sessions (Practical) was done by observation.

#### **3.3 Integration of Multiple Intelligences Elements in the Process of Teaching and Learning**

In this study, the method of integrating elements of multiple intelligences in teaching and learning process is model by Armstrong (1994) as shown in Figure 1, ie lecturers teaching objectives set in advance, followed by thinking of questions to identify and incorporate activities to integrate the elements of multiple intelligences. All the elements of multiple intelligences as in Figure 1 are integrated in the teaching and learning process in line with the National Philosophy of Education to develop all students' potential in harmony, balanced comprehensive and integrated in addition to achieving the goals of Islamic education which is to develop scientific attitudes and values.

Researchers in collaboration with lecturer at the Technical College Johor Matriculation involved with the study, first select the lesson title and subtitle as contained in the draft of the semester (Rames). (Curriculum

Development Centre, 2003) and syllabus (Curriculum Development Centre, 2003). A variety of subjects in the Islamic Education, the title 'Philosophy of Science' and 'Ulum Sharia' was selected by convenience sampling concepts (convenience sampling) because at the time the study was conducted topics are topics that will be taught at the Technical Johor Matriculation College.

Teaching objectives to be achieved are set and identified the elements that are relevant to multiple intelligence integrated into teaching and learning activities. The whole thing is written in the lesson plan; which means that explicit teaching is the teaching which aims to integrate elements of multiple intelligences. Implementation of teaching and learning that integrates elements of multiple intelligences implemented in collaboration with lecturer at the College Matriculation concerned. In the process of teaching and learning, thus integrating elements of lecturers multiple intelligence relevant to the activities undertaken.

### 3.4 Instruments of Research

The instrument used for observation is the Check-list Observations Scientific Attitudes and Values. Scientific attitudes and values in this study refer to the components Scientific Attitudes and Values for the subject of Islamic Education in Technical Johor Matriculation College as outlined by the Curriculum Development Centre (2003). However aspect of scientific attitudes and values in this study was restricted to only ten aspects, namely:

- i) interest and curiosity about the environment;
- ii) honest and accurate in recording and validating data;
- iii) diligence and perseverance in carrying out or venture into something;
- iv) responsible for the safety of themselves and others, and the environment;
- v) respecting and practicing clean and healthy life;
- vi) high integrity and respect,
- vii) a systematic way of learning;
- viii) co-operation;
- ix) dare to try;
- x) confident and independent.

Observations were made using a Check-list Observations Scientific Attitudes and Values were modified from Practical Work Assessment Science subject in JTMC. Researchers have used the method to calculate the index of external criticism. The content validity based on the average cumulative score derived from evaluators who are experts in the field (Mohamad Najib, 1999). Service seven evaluators who specialize in the teaching of Islam in JTMC, are used to assess the validity of the content and content validity index value obtained was .85.

### 3.5 Sampling and Location

Selection of JTMC (Johore Technical Matriculation College) and the sample is carried out in accordance with the requirements for the design and purpose of the study. This study requires monitoring by researchers to keep the internal validity of the study and observation by two observers for data collection purposes. Hence the selection of JTMC and the sample is based on the concept of convenience sampling.

Three of the five tutorial classes students majoring in Civil Engineering is involved from an JTMC determined in accordance with the concept of intact-group and based on the results of management's discussion and consent of the relevant Matriculation College. Three classes of students who are the subject of these studies have criteria lowers in terms of achievement, attitudes toward discipline studies and identified not interfere with the implementation procedures of the study. The number of subjects in this study were a total of 115 respondents (male = 65, female = 50).

### 3.6 Data Analysis and Findings

During the study, a total of eight random observations made by each observer on classes that run the integration of elements of multiple intelligences in teaching and learning process. Data were analyzed using mean scores calculated the percentage of students who show scientific attitudes and values during the process of teaching and learning take place. Mean scores of the data set by J1 is calculated, as well as the mean scores of the data set by J2. From the analysis of data sets mean score balanced by J1 and J2 min set by the data, the mean percentage of the overall score is shown in Table 1.

Table 1 Mean scores indicate the percentage of total scientific attitudes and values

Num.	Scientific Attitudes and Values	Mean Score/ Percentage		
		J1	J2	Total
1	Interest and curiosity such as questioning,investigate, focusing, making observations	98.38	96.93	97.66
2	Be honest and accurate in recording and verifying data such as facts or data write correctly as in read or seen	95.25	95.33	95.29
3	Diligent and persevere in doing something like inertia, completely focused,earnest	98.48	95.33	96.91
4	Responsible for the safety of themselves and partners such as avoiding accidents and causes, do not act dangerous	98.42	100	99.21
5	Valuing and practicing clean and healthy as maintaining cleanliness,maintain an uncluttered desk, order books and teaching and learning materials	96.77	99.14	97.95
6	high Prudence and respect as not to disturb a friend who was give an opinion or an answer, along with results lecturer	98.42	100	99.21
7	Systematic as clever to manage time, substance-T&L materials or assignments	95.25	94.91	95.08
8	Collaborate such as paying attention, engaged in discussions, help a friend or lecturer, jointly manage L&T materials	96.90	94.91	95.91
9	Dare to try to answer questions such as bold, dare to question, dare to experiment	91.52	92.14	91.83
10	confident and independent as not awkward with what which do not rely on friends, able to act alone, answering questions with	94.75	94.91	94.83

Referring to Table 1 above, it can be identified that the mean percentage of students who show scientific attitudes and values are in the range of 91.52 to 100 percent. Therefore it can be said that in the process of teaching and learning that integrate elements of multiple intelligences, the percentage of students who show scientific attitudes and noble values when the process of teaching and learning is high. This means that the process of teaching and learning that integrate elements of multiple intelligences is conducive. In other words, the process of teaching and learning of Islamic Education that integrates elements of multiple intelligences does not cause negative effects on development of scientific attitudes, and values for the student.

Inferential statistical analysis using Pearson Product Moment performed on two sets of observational data (Data from J1 and J2). The value of  $r = .88$  level of significance at  $p = .001$ . The result of this analysis shows that there is a high correlation between the scores given by J1 and J2 scores given by; which means that this assessment has reliability between raters (interater reliability) high.

#### 4.0 DISCUSSION AND RECOMMENDATIONS

Based on the findings of this study found that integration of the multiple intelligences in teaching of do not restrict the development of scientific attitudes and values of students from happening. Scientific attitudes and values is one aspect that must be developed in students through the Islamic Studies at the Matriculation College. Scientific attitudes and values in students can still be expanded while at the same time develop all elements of multiple intelligences. Progress of all potential students in a comprehensive, balanced and harmonious is in line with the National Education Philosophy and the concept of integrated curriculum. This finding is also consistent with the findings of studies conducted in the West.

This finding also implies that the process of teaching and learning that integrates elements of multiple intelligences able to create an atmosphere conducive to teaching and learning happening. Teaching and learning processes that integrate elements of diversity is consistent with the concept of brain-based learning and integrated curriculum. Integrating elements of multiple intelligences in teaching and learning process will create an environment that stimulates various brain synapses students toward enactment. Synapse is a process that occurs in the human brain during learning occurs when neuronal cells in the brain to connect with one another in the dendrites (Schunk, 2004). Based on the concept of brain-based learning, the learning process will be more effective if often occurs synapses in the human brain.

Accordingly, the lecturers should not have doubt to the effect of integrating elements of multiple intelligences in teaching and learning activities. Instead lecturers reasonable to try a variation of their teaching methods or techniques to help prevent students from experiencing boredom when the process of teaching and learning can take place in addition to developing the potential of multiple intelligences. Integration of multiple intelligences element in the curriculum should also be on the agenda of education under the concept of integrated curriculum towards creating a generation that has emerged in line with the provision of human capital and a more prosperous life.

## REFERENCES

- Armstrong, T. (1994). *Multiple intelligences in the classroom*. Alexandria: Association for Supervision and Curriculum Development.
- Berman, M. (1998). *A multiple intelligence: Road to an ELT classroom*. Wales: Crownhouse Publishing Limited.
- Campbell, L., Campbell, B. and Dickinson, D. (1996). *Teaching and learning through multiple intelligences*. London: Allyn & Bacon.
- Gardner, H. (1983). *Frames of mind: Theory of multiple intelligences*. New York: Basic Books Inc.
- Hergenhahn, B. R. and Olson, M. H. (1997). *An introduction to theory of learning (5th ed.)*. New Jersey: Prentice Hall.
- Hishammuddin Hussein. (2005). *Menyemai generasi hari esok: Cabaran yang dihadapi*
- Kolej Matrikulasi Malaysia. *Ucap Utama Perasmian Sidang Kemuncak Pendidikan Malaysia Kesembilan, Institut Strategi dan Kepimpinan Asia (ASLI)*.
- Jasmine, J. (1996). *Teaching with multiple intelligence*. Westminster: Teacher Created Materials.
- Lazear, D. (1991). *Seven ways of teaching: The artistry of teaching with multiple intelligences*. Palatin, IL: Skylight Publishing.
- Mohamad Najib Abdul Ghafar. (1999). *Penyelidikan pendidikan*. Skudai: Penerbit Universiti Teknologi Malaysia.
- Murad Mohamad Noor. (2005). *Revolusi pendidikan. Syarahan Khas, Universiti Pendidikan Sultan Idris*.
- Pusat Perkembangan Kurikulum. (2001). *Aplikasi teori kecerdasan pelbagai dalam pengajaran dan pembelajaran*. Kuala Lumpur: Kementerian Pendidikan Malaysia.
- Reinhartz, J. and Beach, D. M. (1998). *Teaching and learning in the elementary school: Focus on curriculum*. New Jersey: Merrill.
- Rohizani Yaakub and Norlida Ahmad. (2003). *Teknik alternatif menilai dalam bilik darjah*. Paper presented at the 2nd International Conference on Measurement and Evaluation in Education, Universiti Sains Malaysia.
- Schunk, D. H. (2004). *Learning theories: An educational perspective (4th ed.)*. New Jersey: Merrill / Pearson / Prentice Hall.
- Teele, S. (2000). *Rainbows of intelligence: Exploring how students learn*. California: Corwin Press.
- Wiles, J. and Bondi, J. (1998). *Curriculum development: A guide to practice (5th ed.)*. New Jersey: Merrill.