Application of Fuzzy Delphi Approach in Designing Homeschooling Education for Early Childhood Islamic Education

Mohd Nazri Abdul Rahman (PhD)
Department of Educational Psychology and Counseling, Faculty of Education
University of Malaya, Kuala Lumpur, Malaysia

Mariani Md Nor (PhD)
Department of Educational Psychology and Counseling, Faculty of Education
University of Malaya, Kuala Lumpur, Malaysia

Noraziah Ahmad Nadzim
Post Graduate Study, University Science Malaysia

Nor Mashitah Mohd Radzi
Department of Early Childhood Education, Faculty of Education, Sultan Idris Education University

Nurnadia Moktar
Department of Educational Psychology and Counseling, Faculty of Education
University of Malaya, Kuala Lumpur, Malaysia

Abstract

Islamic Education Curriculum has existed since early 1970s and has been adapted into education system formally worldwide. In Malaysia, Islamic education curriculum for primary and secondary level was started with the drafting of National Education Philosophy and Islamic Education Philosophy in 1987. So, there is a need to introduce homeschooling for early childhood Islamic education. Early childhood Islamic education is a process of introducing the children of Tamyiz age with the principles of faith and the Islamic way of life. This study aims to examine which homeschooling for early childhood Islamic education design is suitable to be developed as teaching and learning medium. The objective of the study is to gather expert views on the teaching and learning design of the homeschooling early childhood Islamic education. Fuzzy Delphi technique (FDM) was applied to obtain experts' consensus by

distributing instruments to fifteen experts chosen from various fields and backgrounds. The instrument consisted of five themes of teaching and learning: Al-Quran, Akidah, Ibadah, Sirah Nabi serta Akhlak and Adab Islamiah to get the experts' consensus. The findings showed that the experts' consensus that homeschooling curriculum of Islamic education is feasible for Early Childhood Education in strengthening Islamic manners and morals of future generations. Impacts resulting from experts' consensus show a new framework for designing a homeschool curriculum of Islamic education in Early Childhood. Thus, this study suggests the implementation of the new education policy to stakeholders especially to the Islamic Education and the Ministry of Education (MOE) to highlight homeschooling for early childhood Islamic education in the realization of the Malaysia Education Blueprint 2013-2025.
 Keywords: Islamic Education, Early Childhood Education, Homeschooling

1.   Introduction

Malaysia's education system is moving through the process of transformation both in terms of curriculum, assessment and evaluation as well as the structure of the school towards equality of educational opportunity for all. However, the efforts to transform the world-class quality education and employability of workers is not only faced with the question of academic development but now through the issue of identity formation, bereft of morals and eastern values and the loss of faith in the self-generation of today. Over three decades, mainstream schools continue to grapple with the issue of disciplinary problems involving bullying, juvenile delinquency, truancy and moral decadence among students (National Seminar on School Discipline, 1978; Samah, 2005; Zakaria, 2011, Report Parliament, 2011).

In fact, in addressing this issue, the education of children should turn to basic education, education for a man. Before the existence of formal education institutions such as schools, family and home is the cradle of basic education and teachers are mother, father, grandfather, grandmother, sister, brother or other family members (Siraj, 2003, Al-Ghazali, 1988, Rahman, 2014). Studies of related factors such as family background, ethnicity, socio-economic (Smith, 2002; Bornstien, Hahn, Suwalsky, & Haynes, 2003; Hill & Craft, 2003; Hill & Tylor, 2004; Jeynes, 2005; Hill & Tyson, 2009) found that there is a positive relationship between parental involvement with academic achievement and student motivation (Jeynes, 2002; Lawson, 2003).

Recognizing this, alternative homeschooling education is a new dimension in the development of current children replacing the formal education system. In Malaysia, it is estimated that 5,000 children attended homeschooling (Bajunid, 2002) far exceeding the official figure of 30 families issued by the Ministry of Education. These figures represent 0.1% of the total number of students enrolled in formal schooling. This begs the question of what forms of homeschooling alternative education curriculum practiced by parents in Malaysia? So, this study was undertaken to design the homeschooling curriculum of early childhood education especially Islamic education.

2.   The purpose of study

The aim of this study is to obtain the approval of experts on the teaching and learning design of early childhood Islamic education. The objective of the study was to identify appropriate teaching and learning strategies to carry out children learning activities by their parents. To meet these objectives outlined, the study was conducted with the following research questions:

"What is the focus for the teaching and learning of Islamic education appropriate for Early Childhood Education according to the expert?"

3.   Study Limitation and Scope

The focus of this study is Islamic education for early childhood education. A total of 15 experts have been chosen purposively to be a panel of experts in this study based on the provision of election of Fuzzy Delphi expert's panel between 10-20 (Adler & Ziglio, 1996). Experts consisting of lecturers and teachers in the field of Islamic education, officials from the Ministry of Education (MOE) from the Curriculum Development Division and the Planning and Policy Research Division, Associate Professor in Early Childhood Education in University of Malaya and parents.

4.   Methodology

This study used a Delphi Fuzzy approach introduced by Murray, Pipino, and Gigch (1985) and reviewed by Kaufman and Gupta (1988). FDM is a combination of fuzzy set numbering or fuzzy set theory applied in traditional Delphi technique. This technique is not new technique introduced in future studies but the same technique that has been innovated in effective measurements of futuristic studies to quickly get consensus of experts without going through many rounds as the traditional Delphi technique (Alias, Siraj, Rahman, & Dewitt, 2013).

The data collection involves two phases, semi-structured interviews and fuzzy deplhi approach. Phase I involves the construction of fuzzy Delphi questionnaire. The instrument for this fuzzy Delphi analysis is a set of questionnaire developed by the researchers based on interviews and a literature review. Semi-structured interviews involving five experts in the field of curriculum, Islamic education and early childhood education was carried out to develop fuzzy Delphi questionnaire. Next the fuzzy Delphi questionnaire went through a process of examining the item reliability and validity by a panel of experts appointed. Construction of questionnaire items were analyzed to their item construct validity and content validity index (CVI) according to the item by 3 experts. The Content Validity Index (CVI) is 85%.

5.   Data Analysis and Discussion

Analysis of the data is in accordance with Delphi Fuzzy approach to answer the research questions stated earlier.

To analyze the degree of agreement among the experts, the findings of all the items have been analyzed by determining the distance between two fuzzy numbers to determine the threshold value, d as follows;

$$d\left(\tilde{m}, \tilde{n}\right) = \sqrt{\frac{1}{3}\left[(m_1 - n_1)^2 + (m_2 - n_2)^2 + (m_3 - n_3)^2\right]}.$$

Analysis of the findings is reported based on the highest degree of agreement for each construct items such as the following:

5.1   *Early Childhood Islamic Education Teaching and Learning Focus*

Experts feedbacks to focus on teaching and learning of early childhood Islamic education is based on the following research questions:

"What is the focus for the teaching and learning of Islamic education appropriate for Early Childhood Education according to the expert?"

To get feedback of the experts agreement for the focus on teaching and learning of early childhood Islamic education, defuzzification value for each item is given a priority score. Item analysis showed that the group of experts reached an agreement based on conditions set which is the threshold value (d) is more than 0.2 or equal to 75%.

Table 1

Early Childhood Islamic Education Teaching and Learning Focus

Item	Average Response			Defuzzification Value	Score
1.0 Al-Quran	0.59	0.79	0.99	0.79	1
2.0 Aqidah	0.59	0.79	0.99	0.79	1
3.0 Ibadah	0.59	0.79	0.99	0.79	1
4.0 Sirah Nabi	0.44	0.64	0.84	0.64	2
5.0 Adab dan Akhlak Islamiah	0.59	0.79	0.99	0.79	1

Analysis shows that the defuzzification value for focus in tecahing and learning early childhood Islamic education is between 0.64 to 0.79 which exceeds 0.6 (the expert consensus that is acceptable). This value indicates that the experts reached a consensus that the focus of the teaching and learning of early childhood Islamic education should cover aspects of the Al-Quran. Aspects of Al-Qur'an, Aqidah, Ibadah, manners and morals has the highest score of 0.79 and the Sirah nabi has the lowest score of 0.64.

Based on these findings, the teaching and learning of early childhood Islamic education should emphasize on the aspect of Ibadah followed by manners and morals, Al-Quran, *Aqidah* and *Sirah Nabi*. It was also highlighted by Jasmi and Tamuri (2007) that the religious aspects of teaching and learning has important impact in the development of the identity of a child. Thus, the teaching and learning of early childhood Islamic education should start with Ibadah, manners and morals.

Next, Delphi fuzzy data analysis was conducted to determine the suitability of teaching and learning focus of early childhood Islamic education by sub-topic according to the views of experts. Following is the analysis and discussion of the findings of the teaching and learning focus of early childhood Islamic education according to sub topics based on expert consensus.

5.2 Teaching and Learning of Al-Quran

Teaching and learning of Islamic education in the aspect of Al-Quran that are appropriate for Early Childhood Education in accordance with the views of experts are shown in Table 2.

Table 2

Teaching and Learning of Al-Quran

Sub-Item	Average Response			Defuzzification Value	Score
1.0 Al-Quran					
1.1 Identify letters, sounds and pronouncing Hijaiyah letters	0.59	0.79	0.99	0.79	1

1.2 Identify and pronounce some words in Al-Quran correctly	0.55	0.75	0.95	0.75	2
1.3 Memorize some short surah from juzu' Amma	0.59	0.79	0.99	0.79	1

Based on Table 2, Item 1.1 memorizing a few short chapters of juzu' Amma, is ranked first in the priority list of experts based on an agreement approved by the defuzzification value 0.79. This is followed by identifying letters, recognizing sounds and pronouncing Hijaiyah letters (Sub-item 1.1) and sub-item 1.2 [recognize and pronounce some words in Al-Quran with correct pronunciation] is ranked lowest in the deal approved by expert with defuzzification value of 0.75. This means the fundamental part of the teaching and learning of early childhood Islamic education is by memorizing a few short chapters of juzu' Amma. This finding is consistent with studies by Tamuri, Yusopp, Osman, Awaluddin, Rahim, and Razak (2004) which shows that the process of teaching and learning Al-Quran effectively is by memorizing through drills and reading tohetehr. Children are trained to repeat certain verses so eloquently without the need to understand the purpose or meaning of these verses.

5.3   *Teaching and Learning of Aqidah*

Teaching and learning of Islamic education in the aspect of Aqidah suitable for Early Childhood Education by expert opinion is the process of educating children to learn Rukun Iman. The results of the analysis are shown in Table 3.

Table 3
Teaching and Learning of Aqidah

Sub-Item	Average Response			Defuzzification Value	Score
2.0 Aqidah : Knowing Rukun Iman					
2.1 Faith to Allah swt	0.58	0.79	0.99	0.79	1
2.2 Faith to Malaikat	0.53	0.73	0.93	0.73	2
2.3 Faith to Kitab	0.53	0.73	0.93	0.73	2
2.4 Faith to Rasul	0.53	0.73	0.93	0.73	2
2.5 Faith to Hari Akhirat	0.53	0.73	0.93	0.73	2
2.6 Faith to Qada dan Qadar	0.53	0.73	0.93	0.73	2

Based on Table 3, Item 2.1 Faith to Allah swt is ranked first in the priority list of experts based on an agreement approved by the defuzzification value 0.79. This is so because the aqidah is the belief or a holding firm conviction of truth. This argument was expressed by Abu Salam, (2003) that the belief in human life acts as a shield and guard, and the basis of Islam (Abdul Salam, 2003). Therefore, in the early stages of child development, Islamic education must directly provide basic education to the Rukun Iman. In Islam, a Muslim character building needs to begin with educating them about Aqidah. Islam instructs parents to instill the beliefs of Islam within their children from a young age.

5.4   Teaching and Learning of Ibadah

Teaching and learning of Islamic education in the aspect of Ibadah that isappropriate for Early Childhood Education by expert opinion is the process of educating children to learn Rukun Islam. The results of the analysis are shown in Table 4.

Table 4
Teaching and Learning of Ibadah

Sub-Item	Average Response			Defuzzification Value	Score
3.0 Ibadah : Knowing Rukun Islam					
3.1 Saying Kalimah syahadah	0.58	0.79	0.99	0.79	1
3.2 Performing solat	0.53	0.73	0.93	0.73	2
3.3 Knowing and practicing Puasa	0.38	0.58	0.78	0.59	3
3.4 Knowing zakat fitrah	0.30	0.51	0.71	0.51	4
3.5 Knowing to perform Hajj	0.30	0.51	0.71	0.51	4

Based on Table 4, Item 3.1 recite Shahadah, is ranked first in the priority list of experts based on an agreement approved by the defuzzification value 0.79. This finding is consistent with previous studies which stated that religious education in Islamic education, among others, aims to embody all religious practices in the form of practical and direct the whole body to worship Allah (Jasmi & Tamuri, 2007). So, in keeping with these findings, early childhood education, Islamic education should emphasize the basic knowledge related to Rukun Islam.

5.5   *Teaching and Learning of Sirah Nabi*

Teaching and learning of Islamic education in the aspect of Sirah Nabi appropriate for Early Childhood Education in accordance with the views of experts. The results of the analysis are shown in Table 5.

Table 5
Teaching and Learning of Sirah Nabi

Sub-Item	Average Response			Defuzzification Value	Score
4.0 Sirah Nabi					
4.1 Tell the birth of Rasulullah saw	0.48	0.68	0.88	0.68	1
4.2 List and say the closest family members of Rasulullah	0.45	0.65	0.85	0.65	3
4.3 Tell a few important events in the life of Rasulullah saw and lesson learnt	0.47	0.67	0.87	0.67	2

Based on Table 5, Item 4.1 recounts the birth of Rasulullah swt, is ranked first in the priority list of experts based on an agreement approved by the defuzzification value 0.68. In the context of education of Sirah Nabi, the appreciation of the teachings of Islam is easier to be lived and learned when children are taught to know and recognize the life history of the Prophet s.a.w. it fits with the findings of the study by Ab Halim Tamuri (2000) which explains that human nature much impressed with the people who venerated. Then, early childhood Islamic education should emphasize the education of Sirah nabi so that it affects the upbringing of children to try to imitate the way of life, how to dress, how to walk and stature of Mohammad S.A.W.

5.6 Teaching and Learning of Manners and Morals
Teaching and learning of Islamic education in the aspects of manners and morals appropriate for Early Childhood Education in accordance with the views of experts. The results of the analysis are shown in Table 6.

Table 6
Teaching and Learning of Manners and Morals

Sub-Item	Average Response			Defuzzification Value	Score
5.0 Manner and Moral					
5.1 Emulate Rasulullah manner	0.59	0.79	0.99	0.79	1
5.2 Practice manner in everyday life	0.57	0.77	0.97	0.77	2
5.3 Respect parents, teachers, peer and members of community	0.59	0.79	0.99	0.79	1
5.4 Respect leader and love the country	0.48	0.68	0.88	0.68	3
5.5 Obey the rules and law	0.45	0.65	0.85	0.65	4
5.6 Take care and love the environment	0.48	0.68	0.88	0.68	3

Based on Table 6, Item 5.1 emulate the character of Rasulullah saw and item 5.3 of respect for parents, teachers, peers and community members, ranks first in the priority list of experts based on an agreement approved by the defuzzification value 0.79. The findings show, aspects of Islamic manners and morals that should be emphasized in early childhood Islamic is to emulate the character of the Prophet Muhammad as well as respect for parents, teachers, peers and community members. Manners and Islamic morals forms the basis of Islamic morality and discipline, and have the highest position in Islam. This coincided with Al-Ghazali (t.t) which states that man is like a tree with its root is faith, its trunk is religious obligation, the leaves are the practices, while the flowers and the fruit is said to be the moral. Thus, in guiding and educating children as early as early childhood, parents instilling manners and Islamic morality is very important because the good manners and character reflect the successful development of education and religious beliefs in the children themselves.

6.   Conclusions

Early childhood Islamic education early childhood is a process to introduce children of Tamyiz age with the principles of faith and teaches them Islamic way of life. In the context of Islamic education, parental involvement is crucial to ensure that children are raised with religious values. Nurturing of religious values is a key element in identity formation of children at an early age. According to Al-Ghazali (1992), self-development of children lies in the power of Aqidah, Ibadah, and Morality.

In summary, the findings of this study managed to answer the research question "What is the focus for the teaching and learning of Islamic education appropriate for Early Childhood Education according to the expert"?

The data findings of the study show that a group of experts reached to an agreement that the focus of the teaching and learning of early childhood Islamic education that need to be developed and expanded are:

a) Al-Quran that emphasizes the memorizing aspects of short surah from juzu' Amma.
b) Children Ibadah should be nurtured by knowing Rukun Islam by heart.
c) Aqidah should emphasizes on knowing Rukun Iman.
d) Islamic manners and morality should reflects Islamic identity and caharcters by emulating Rasulullah saw manners.
e) The education of Sirah Nabi starts with the birth of Rasulullah SAW.

Early childhood Islamic education should emphasize on Aqidah. The importance of Aqidah education in early childhood education is demonstrated through the instruction of Rasulullah saw who ordered the parents to celebrate the birth of a child with azan and Iqama. Ironically, the incoming sound of azan to the boy's ear will penetrate the conscience with words of faith and glorifying the word of Allah SWT (Salam, 2003).

Corresponding Author
Mohd Nazri Abdul Rahman (Ph.D), Department of Educational Psychology and Counseling, Faculty of Education, University of Malaya, 60503, Kuala Lumpur, Malaysia, mohdnazri_ar@um.edu.my

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