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Design and Development of Fardhu Ain Module for Indigenous Communities in Pahang State Based on Fuzzy Delphi Analysis

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Abstract

The Muslim community in Malaysia consists of various ethnicities and races. Some have embraced Islam since birth, and it is a religion inherited from their forefathers, but some embrace Islam as a new brother, including the indigenous community in this country. Each new group of brothers needs a different approach and guidance regarding religious guidance due to cultural factors, language, and level of education. The comprehensive teaching module and an instrument for measuring the Indigenous community's mastery of the Fardhu Ain programs must be carried out. The question that arises from these issues is to what extent does the community have mastery over the Fardhu Ain aspect of their daily lives, especially the Asli people in the state of Pahang? Thus, this study was conducted to design and build the criteria and content of the "Fardhu Ain Mastery Module of the Indigenous People in the State of Pahang" based on the process of confirming the consensus of nine experts who were selected purposively using Fuzzy Delphi analysis which is Phase 2 of the previous research process which is the analysis needs. This quantitative study has updated four components of the latest topics that need to be taught in the Fardhu Ain module for the Pahang Indigenous community compared to the existing module. Based on the Fuzzy Delphi analysis, the experts have expressed a consensus of agreement to the four essential components of the module, namely a) Objectives of the Module, b) Content of the topics in the module, c) Teaching activities of the module, and d) Module assessment activities. For the details of the items in component e) Content of

the titles in the module, it was found that four new components need to be added to the Fardhu Ain module for the Orang Asli community in the state of Pahang which is currently seven modules, making eleven components of the latest topics that need to be taught in this Fardhu Ain module. Based on the expert agreement, the four latest title components that need to be added are basic reading skills of the Quran and Tajwid, interpretation of selected Quranic verses, selected hadiths, and stories of selected Prophets. The results of this study will be extended to the implementation stage of the Fardhu Ain strengthening program for the Pahang indigenous community shortly to review its effectiveness further.

Keywords

Fuzzy Delphi Analysis, Fardhu Ain Module, Indigenous People, ADDIE Model

1. Introduction

The *Orang Asli* (Indigenous people) are part of the entity that makes up the population of Malaysia and is considered a minority race. Sources from the *Orang A*sli Development Department record that the total number of Malaysian Indigenous people is 206,777 (JAKOA, 2022). It is estimated that 35,975 Indigenous Muslims in 2018, equivalent to 17.4% of the entire population of Indigenous people in Malaysia (Public Sector Open Data, 2022). Based on these figures, it is clear that a continuous and planned initiative needs to be carried out in the context of preaching to this community. The process and approach of Islamic preaching need to be seen as something important that can improve the quality of life of the Asli people (Razaleigh, 2015).

Orang Asli are early inhabitants often associated with indigenous people found in Peninsular Malaysia. The word "Orang Asli" is a term that refers to the indigenous people, who are now a minority race in Peninsular Malaysia. The Concise Oxford English Dictionary Eleventh Edition (2011) defines the vocabulary of "aboriginal," "aboriginal," and "indigenous" as follows: a) "aboriginal. adj. inhabiting or existing in a land from the earliest times or from before the arrival of colonists; b) indigenous.", c) "aboriginal: an aboriginal person, animal or plant.", d) "indigenous. adj. originating or occurring naturally in a particular place; native." (Soanes & Stevenson, 2011).

Based on Section 3 of the Aboriginal Peoples Act 1954 of Malaysia (Act 134), an *orangasli* is defined as a person whose father is a member of the *orang asli* ethnic group, who speaks an *orangasli* language and usually follows the *orang asli* way of life and *orang asli* beliefs. Includes a male descendant of any person of any race who was adopted as a child by a native and who has been brought up as a native. He usually speaks the natives' language, following their way of life and beliefs. Also included in the *orang asli* category is a child from any union

between an *orangasli* woman and a man from an *orangasli* tribe, provided that the child usually speaks *the orang asli* language and believes *orang asli* and is still a member of an *orangasli* community (JAKOA, 2022).

Based on the *Orang Asli* (OA) population census issued by JAKOA, there are 78,636 *Orang Asli* household members throughout Pahang, Malaysia. Through the census, it was also identified that there are 262 *Orang Asli* Villages (KOA) around Pahang; Lipis District is the district that has the most number of KOAs, with 69 villages and has the most significant number of households, which is 14,310. On the other hand, Kuantan District has several KOAs; the fewest households are six KOAs, with only 465 total households (JAKOA, 2019).

However, the religious data of the Indigenous community, updated in 2018, shows that only 7483 of the Indigenous community are Muslims (JAKOA, 2019). This number represents only 9.5% of the indigenous people in Pahang.

Meanwhile, FardhuAin is an obligation that must be fulfilled by every *mukallaf* (Islamically accountable). The obligation is not exempted even if it has been done by others, such as performing obligatory prayers five times daily and at night. It must be known by every Muslim to free him from sin, such as knowing the things that must be known in the science of monotheism, jurisprudence, and Sufism (Joll, 2023).

2. Statement of Problem

The life of the da'wah target is influenced by many factors, which hinder and delay the process of da'wah to the native people. These factors include inherited beliefs and customs, their way of life or living environment, their attitude towards preachers, and misconceptions or acceptance of the teachings of Islam (Syed et al., 2010). Rahman & Mustapha (2020) identify twelve themes of challenges in implementing and succeeding in preaching efforts in Pahang: challenges related to the location of the indigenous community, not mastering the indigenous language, threats from the indigenous people, lack of preachers, characteristics and attitudes not suitable for residents, rival Christian missionaries, financial resources, internal problems of preachers, the attitude of the natives, attitude of the Malay race, not keeping promises, and no overlap between NGOs.

The laziness of the Orang Asli community in learning Islam is a significant reason why they fail to understand Islam, leading to their inability to meet the demands of Islamic teachings. Despite embracing Islam, many are still unable to perform required practices or abandon prohibited ones due to illiteracy. Consequently, some do not know how to pronounce the shahadah, pray, or uphold Islamic principles (Razaleigh, 2015). Additionally, a lack of motivation within the indigenous community to learn Islam prevents them from fully understanding and fulfilling Islamic teachings, resulting in them being Muslims in name only, without practice (Razaleigh et al., 2012; Razaleigh, 2015). This issue is compounded by their preference for activities that can increase their income, as

many come from low-income backgrounds.

New converts, including the Orang Asli, require protection and guidance from authorities through appropriate education modules. Education on the fundamentals of fardhuain is crucial to ensure they clearly understand Islam. Nurayuni et al. (2019) and Siti Fathimatul and A'thirohMasyaa'il (2015) emphasize the importance of specific education programs for new converts as a platform for social education support. These programs help increase their understanding of Islam and enable them to practice the Islamic way of life. The curriculum for these study programs must be carefully planned to achieve optimal learning outcomes (Siti Afifah et al., 2022).

Nazatul Akmar (2023) identifies the challenges teachers and students face in mastering the Al-Quran and Fardhu Ain among the native people in Pahang. Teachers face challenges in teaching methods, dealing with specific groups, and managing student attitudes while students encounter their own problems.

A study by Halim et al. (2023) on the Fardhu Ain module used by the Council of Islamic Religion and Malay Customs of Pahang (MUIP, 2023) reveals that practices like ablution, recitation of prayer intentions and recitation while *iktidal* are well-mastered by the Asli people. However, recitations of the *qunut* prayer, *iftitah* prayer, and *tahiyat* are less mastered. The study concludes that while the Orang Asli community has a basic understanding of Fardhu Ain, continuous efforts are needed to improve teaching methods to enhance learning accessibility and effectiveness.

In conclusion, various external and internal problems exist in the appreciation of Islam among the Indigenous people in Pahang that must be addressed. A comprehensive teaching module and an instrument for measuring the Indigenous community's mastery of Fardhu Ain programs are required. Therefore, a mastery module on Fardhu Ain for the Indigenous community in Pahang needs to be developed and regularly updated.

3. Research Objective

This study was conducted to design and develop the criteria and content of the 'Fardhu Ain Mastery Module of the Indigenous People in Pahang State' based on the expert verification process using Fuzzy Delphi analysis (Chang, Huang, & Lin, 2000; Mustapha & Darussalam, 2018). This is Phase 2 of the previous research process, which, as a whole, used the ADDIE instructional model (Dick et al., 2014) and the DDR (design and development research) method (Richey & Klein, 2007; Saedah et al., 2013).

4. Research Methodology

This study is a quantitative study that uses the Fuzzy Delphi Method (FDM) application. The use of FDM is to obtain expert consensus on the items from the elements of the teaching process that make up the Differentiated Pedagogy Model. The researcher chose the FDM method because it allows the researcher

to process the ambiguity with predictive and non-predictive items, and the attributes of the participants can be explained (Chang et al., 2000). Researchers also chose FDM as a method of analyzing data because FDM can overcome the weaknesses of the Traditional Delphi Method, among which 1) the traditional Delphi Method has the potential to get answers at a low rate and 2) the Traditional Delphi also involves a long time (Mustapha & Darussalam, 2018).

a) Study Implementation Steps

Step 1: Selection of experts. Step 2 in the data collection process shows the researcher selecting experts to answer the constructed questionnaire. The researcher selected nine experts according to the researcher's field of study, which is the field of al-Quran recitation and pedagogy, as well as experts in the fuzzy Delphi method (FDM). The researcher chose nine experts because, according to Twiss and Harry (1978). The expert information collected by the researcher in this study is related to the position and place of duty, experience, and area of expertise. Expert experience is more than five years of experience. This coincides with Akbari and Yazdanmehr (2014), who stated that experts have more than five years of experience in a specific field.

Step 2: Distribution of questionnaires to experts After the researcher identified relevant experts in the field, the researcher contacted the experts via email. After receiving the experts' feedback, the researcher emailed the questionnaire. Before that, the researcher informed the researcher of the information related to the study to facilitate the experts' answering of the questionnaire.

Step 3: Analyzing the data after the expert sent the questionnaire, the researcher analyzed the questionnaire using Fudelo software. FDM data analysis must meet the three main conditions of FDM, namely 1) the threshold value, (d) does not exceed or equal to 0.2 (Chen, 2000), 2) the percentage of expert agreement must be greater than or equal to 75% (Murry & Hammons, 1995) and 3) the defuzzification value (alpha cut) should be greater than or equal to 0.5 (Bodjanova, 2006).

Step 4: Determination of items by experts Through the Fuzzy Delphi Method, the results of data analysis are through expert consensus. Expert consensus will determine the ranking of the most essential items. The results of the expert consensus will be discussed in the study findings.

b) Delphi Fuzzy Analysis Process

1) Selection of experts: This study used nine experts. Several experts were invited to determine the importance of the evaluation criteria for the variables that will be measured using linguistic variables. The researcher met face-to-face with the selected and identified experts to facilitate the discussion and explanation of issues in items, etc.

2) Step 2: Determination of linguistic variables (determining linguistic scale). This process involves converting all linguistic variables into triangular fuzzy numbering (triangular fuzzy numbers). This step also involves converting linguistic variables by adding fuzzy numbers (Hsieh et al., 2004). Triangular Fuzzy Number represents the values of m_1, m_2, and m_3, and it is written like this (m_1,

m_2, m_3). The m_1 value represents the minimum value, the m_2 value represents the reasonable value, and the m_3 value represents the maximum value. Triangular Fuzzy Number produces a Fuzzy scale to translate linguistic variables into fuzzy numbers. The number of levels for the fuzzy scale is odd.

This study collected and analyzed data using the Fuzzy Delphi technique after experts were given a questionnaire, a Likert scale, and a space for expert comments and suggestions for each instrument. The Likert scale data obtained was analyzed using the Microsoft Excel program. All data is converted into Triangular Fuzzy Number form. A fuzzy scale (7) of seven points is used in this study.

Step 3: After the researcher obtains a response from the selected expert, the researcher needs to convert all Likert scales to Fuzzy scales. This process is also known as identifying the average response of each fuzzy number (Benítez et al., 2007). It takes place based on the formula $M = \frac{\sum_{i=1}^{n} m_i}{n}$ as illustrated in **Figure 1**.

$$M = \frac{\sum_{i=1}^{n} m_i}{n}$$

Figure 1. Identifying the average response of fuzzy numbers (Benítez et al., 2007).

Step 4: Identifying the value of Threshold "d". The threshold value is significant in identifying the level of agreement between experts (Thomaidis et al., 2006). The distance for each fuzzy number $m = (m_1, m_2, m_3)$ and $n = (m_1, m_2, m_3)$ is calculated using the formula explained in **Figure 2**.

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

Figure 2. Experts' agreement level (Thomaidis et al., 2006).

The threshold value is significant in determining agreement between experts. According to Cheng & Lin (2002), expert agreement has been reached if the threshold value is less than or equal to 0.2. The overall agreement (group consensus) must exceed 75% agreement for each item; otherwise, the second round must be implemented.

Step 5: Identifying the aggregate alpha level of the fuzzy evaluation. After the expert agreement is obtained, fuzzy numbers for each item are added (Mohd Ridhuan et al., 2013), explained in **Figure 3**. The fuzzy value is calculated using $A_{\max} = 1/4(m_1 + 2m_2 + m_3)$.

Step 6: The next step is the diffusion process phase. This process uses the formula $A_{\max} = 1/4(a_1 + 2a_m + a_3)$. If the researcher uses Average Fuzzy Numbers or average response, the score is 0 to 1 (Mohd Ridhuan et al., 2013). In this process, there are three formulas, namely: 1) $A = 1/3^*(m_1 + m_2 + m_3)$, or; 2) $A = 1/4^*(m_1 + 2m_2 + m_3)$, or; 3) $A = 1/6^*(m_1 + 4m_2 + m_3)$. α-cut value = median

$$\tilde{A} = \begin{bmatrix} \tilde{A}_1 \\ \tilde{A}_2 \\ \vdots \\ \vdots \\ \tilde{A}_M \end{bmatrix} \text{ where } \tilde{A} = r_{i1} \times w_1 + r_{i2} \times w_1 \cdots\cdots\cdots r_{in} \times w_n$$

$$i = 1, 2 \cdots\cdots\cdots\cdots m$$

Figure 3. The aggregate alpha level of the fuzzy evaluation (Mohd Ridhuan et al., 2013).

value of "0" and "1", where α-cut = (0 + 1)/2 = 0.5. If the resulting A value is less than the α-cut value = 0.5, the item will be rejected because it does not show expert agreement. According to Bodjanova (2006), the alpha cut value should exceed 0.5. It is supported by Tang & Wu (2010), who stated that the α-cut value should exceed 0.5.

Step 7: Ranking process. The ranking process involves selecting elements based on defuzzification values based on expert agreement, in which the element with the highest value is the most important (Hierro et al., 2021; Fortemps & Roubens, 1996). The ranking process follows the Ai formula (Cheng et al., 2011), as shown in **Figure 4**.

$$\text{Ai} = \left(\text{ai1}, \text{ai2}, \text{ai3}\right) \text{defuzzifed by}$$

$$\text{ai} = 1/4\left(\text{ai1} + \text{ai2} + \text{ai3}\right)$$

Figure 4. Ranking process (Cheng et al., 2011).

c) Research Respondents

This study uses purposive sampling. This method is the most appropriate since the researcher wants to get a consensus view and consensus on a matter. According to Hasson, Keeney, and McKenna (2000), purposive sampling is the most appropriate method in FDM. Meanwhile, a total of nine experts were involved in this study. These experts are selected based on their experience and expertise in their respective fields. In this study, the number of experts used by the researcher is based on the recommendations of Clayton (1997), who states that if the experts involved are homogeneous, then the number of experts required is 5 - 10. Adler & Ziglio (1996), the appropriate number of experts in the Delphi method is between 10 to 15 people if there is uniformity (homogenous). Cavalli et al. (1984) stated that the sample for FDM is between 8 and 12 if the sample is homogeneous and sufficient, and the opinion of Philip (2000) stated that the expert sample is between 7 and 12. Therefore, the researcher used a total of nine experts.

d) Module Components Analyzed

There are four components of the module teaching curriculum based on Fred (2011), which are analyzed in this expert consensus study which are:

a) Objectives of the module
b) The content of the topics in the module
c) Module teaching activities
d) Module assessment activities.

5. Findings

The findings of this study are as explained and shown below:

a) Module Objectives

The findings of the Fuzzy Delphi analysis of the module objectives are shown in Table 1 below:

Table 1. Objectives of the module. (Adapted table from Cheng, Hsu, and Chang, 2011).

Results	item 1	item 2	item 3	item 4
Expert 1	0.0642	0.0257	0.0513	0.0770
Expert 2	0.0642	0.0257	0.0513	0.0770
Expert 3	0.0642	0.0257	0.0513	0.0770
Expert 4	0.0513	0.0898	0.0642	0.0385
Expert 5	0.0642	0.0257	0.0642	0.0385
Expert 6	0.0642	0.0257	0.0513	0.0770
Expert 7	0.0642	0.0257	0.0513	0.0770
Expert 8	0.2823	0.0257	0.0642	0.1540
Expert 9	0.0513	0.0898	0.0642	0.1540
Value of the item	0.08553	0.03992	0.05702	0.08553
Value of the "d" construct		0.067		
Item < 0.2	8	9	9	9
% of items < 0.2	88%	100%	100%	100%
Average of % consensus		97		
Defuzzification	0.68889	0.75556	0.71111	0.66667
Ranking	3	1	2	4
Status	**Accept**	**Accept**	**Accept**	**Accept**

Threshold value: **"d" value ≤ 0.2, Average of consensus ≥ 75%, Defuzzification ≥ 0.5 (Alpha cut).

Based on Table 1, the *threshold value* blacked out exceeds the *threshold value* of 0.2 (>0.2). This means there are uneven expert opinions and no consensus on certain items. However, the d value of the overall construct shows 0.067 (<0.2). According to Cheng and Lin (2002) and Cheng, Hsu, and Chang (2011), if the average *threshold value* (d) obtained is less than <0.2, then the item has reached expert agreement. Meanwhile, the overall percentage of expert agreement is at a value of 97% agreement, which is more than (75%) meaning that the expert

agreement on the item is met. According to Cheng, Hsu, and Chang (2011), the agreement percentage should exceed 75%. In addition, all the *Alpha-Cut defuzzication values (average of fuzzy response)* exceed 0.5. According to Tang and Wu (2010) and Bodjanova (2006), the alpha cut value should exceed >0.5. This shows that the experts have agreed upon the module's objective items. Overall, all items have been agreed by experts with a good agreement value and meet the specified conditions.

b) Module Content

The findings of the Fuzzy Delphi analysis of the content of the topics in the module are shown in **Tables 2-5** below:

Table 2. The prophets and messengers and their people. (Adapted table from Cheng, Hsu, and Chang, 2011)

Results	item 1	item 2	item 3	item 4	item 5	item 6	Item 7	item 8	item 9	item 10	item 11	item 12	item 13	item 14	item 15	item 16	item 17	item 18
Expert 1	0.013	0.038	0.026	0.026	0.038	0.038	0.026	0.038	0.064	0.077	0.051	0.077	0.064	0.077	0.051	0.064	0.051	0.064
Expert 2	0.013	0.077	0.026	0.026	0.038	0.038	0.026	0.038	0.064	0.038	0.051	0.038	0.064	0.038	0.051	0.064	0.051	0.064
Expert 3	0.013	0.038	0.026	0.026	0.038	0.038	0.026	0.038	0.051	0.038	0.064	0.038	0.051	0.038	0.064	0.051	0.064	0.051
Expert 4	0.103	0.077	0.090	0.090	0.077	0.077	0.090	0.077	0.064	0.077	0.051	0.077	0.064	0.077	0.051	0.064	0.051	0.064
Expert 5	0.013	0.038	0.026	0.026	0.038	0.038	0.026	0.038	0.051	0.038	0.064	0.038	0.051	0.038	0.064	0.051	0.064	0.051
Expert 6	0.013	0.077	0.026	0.026	0.077	0.077	0.026	0.077	0.051	0.038	0.051	0.038	0.051	0.038	0.051	0.051	0.051	0.051
Expert 7	0.013	0.038	0.090	0.090	0.077	0.077	0.090	0.077	0.064	0.077	0.051	0.077	0.064	0.077	0.051	0.064	0.051	0.064
Expert 8	0.013	0.038	0.026	0.026	0.038	0.038	0.026	0.038	0.051	0.038	0.064	0.038	0.051	0.038	0.064	0.051	0.064	0.051
Expert 9	0.013	0.038	0.026	0.026	0.038	0.038	0.026	0.038	0.051	0.038	0.064	0.038	0.051	0.038	0.064	0.051	0.064	0.051
Statistics	**item1**	**item2**	**item 3**	**item 4**	**item 5**	**item 6**	**item7**	**item 8**	**item 9**	**item 10**	**item 11**	**item 12**	**item 13**	**item 14**	**item 15**	**item 16**	**item 17**	**item 18**
Value of the item	0.023	0.051	0.040	0.040	0.051	0.051	0.040	0.051	0.057	0.051	0.057	0.051	0.057	0.051	0.057	0.057	0.057	0.057
Value of the construct	0.050																	
Item < 0.2	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
% of items < 0.2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Average of % consensus	100																	
Defuzzification	0.778	0.733	0.756	0.756	0.733	0.733	0.756	0.733	0.711	0.733	0.689	0.733	0.711	0.733	0.689	0.711	0.689	0.711
Ranking	1	3	2	2	3	3	2	3	4	3	5	3	4	3	5	4	5	4
Status	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept

Threshold value: **"d" value ≤ 0.2, Average of consensus ≥ 75%, Defuzzification ≥ 0.5 (Alpha cut).

Based on **Table 2**, no threshold value is blacked out above the *threshold value* of 0.2 (>0.2). This means there is an even expert opinion and consensus on certain items. However, the d value of the overall construct shows 0.050 (<0.2). According to Cheng and Lin (2002) and Cheng, Hsu, and Chang (2011), if the average *threshold value* (d) obtained is less than <0.2, then the item has reached expert agreement. Meanwhile, the overall percentage of expert agreement is at a value of 100% agreement, which is more than (75%) meaning that the expert agreement on the item is met. According to Cheng, Hsu, and Chang (2011), the agreement percentage should exceed 75%. In addition, all the *Alpha-Cut defuz-*

zication values (*average of fuzzy response*) exceed 0.5. According to Tang and Wu (2010) and Bodjanova (2006), the alpha cut value should exceed >0.5. This shows that the experts have agreed upon the items in the construction of the prophets and their apostles and their people. Experts have agreed upon all items with a good agreement value and meet the specified conditions.

Table 3. Basic skills in reciting the Quran and Tajwid. (Adapted table from Cheng, Hsu, and Chang, 2011)

results	item 1	item 2	item 3	item 4	item 5	item 6
Expert 1	0.038	0.051	0.051	0.051	0.051	0.026
Expert 2	0.077	0.064	0.051	0.051	0.051	0.026
Expert 3	0.077	0.064	0.051	0.051	0.051	0.026
Expert 4	0.038	0.051	0.064	0.064	0.064	0.090
Expert 5	0.038	0.051	0.064	0.064	0.064	0.090
Expert 6	0.038	0.064	0.051	0.051	0.051	0.257
Expert 7	0.077	0.064	0.051	0.051	0.051	0.026
Expert 8	0.038	0.051	0.064	0.064	0.064	0.090
Expert 9	0.038	0.051	0.064	0.064	0.064	0.090
statistics	**item 1**	**item 2**	**item 3**	**item 4**	**item 5**	**item 6**
Value of the item	0.05132	0.05702	0.05702	0.05702	0.05702	0.07983
Value of the d construct	0.05987					
Item < 0.2	9	9	9	9	9	8
% of items < 0.2	100%	100%	100%	100%	100%	88%
Average of % consensus	98					
Defuzzification	0.733	0.711	0.689	0.689	0.689	0.644
Ranking	1	2	3	3	3	4
Status	Accept	Accept	Accept	Accept	Accept	Accept

Threshold value: **"d" value ≤ 0.2, Average of consensus ≥ 75%, Defuzzification ≥ 0.5 (Alpha cut).

Based on **Table 3**, one threshold value is blacked out above the *threshold value of* 0.2 (>0.2). This means there are uneven expert opinions and no consensus on certain items. However, the d value of the overall construct shows 0.05987 (<0.2). According to Cheng and Lin (2002) and Cheng, Hsu, and Chang (2011), if the average *threshold value* (d) obtained is less than <0.2, then the item has reached expert agreement. Meanwhile, the overall percentage of expert agreement is 98% agreement, which is more than (75%) meaning that the expert agreement on the item is met. According to Cheng, Hsu, and Chang (2011), the agreement percentage should exceed 75%. In addition, all the *Alpha-Cut defuzzication values* (*average of fuzzy response*) exceed 0.5. According to Tang and

Wu (2010) and Bodjanova (2006), the alpha cut value should exceed > 0.5. This shows that the experts have agreed upon exemplary moral constructs in life. Experts have agreed upon all items with a good agreement value and meet the specified conditions.

Table 4. Tafsir and tadabbur. (Adapted table from Cheng, Hsu, and Chang, 2011)

results	item1	item2	item 3	item 4	item 5	item 6	item 7	item 8	item 9	item 10	item 11	item 12
Expert 1	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Expert 2	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Expert 3	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Expert 4	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
Expert 5	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Expert 6	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Expert 7	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
Expert 8	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
Expert 9	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
statistics	**item1**	**item2**	**item 3**	**item 4**	**item 5**	**item 6**	**item7**	**item 8**	**item 9**	**item 10**	**item 11**	**item 12**
Value of the item	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051
Value of the construct												0.051
Item < 0.2	9	9	9	9	9	9	9	9	9	9	9	9
% of items < 0.2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Average of % consensus												100
Defuzzification	0.733	0.733	0.733	0.733	0.733	0.733	0.733	0.733	0.733	0.733	0.733	0.733
Ranking	1	1	1	1	1	1	1	1	1	1	1	1
Status	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept

Threshold value: **"d" value ≤ 0.2, Average of consensus ≥ 75%, Defuzzification ≥ 0.5 (Alpha cut).

Based on **Table 4**, no threshold value is blacked out above the *threshold value* of 0.2 (>0.2). This means there is an even expert opinion and consensus on certain items. However, the d value of the overall construct shows 0.051 (<0.2). According to Cheng and Lin (2002) and Cheng, Hsu, and Chang (2011), if the average *threshold value* (d) obtained is less than <0.2, then the item has reached expert agreement. Meanwhile, the overall percentage of expert agreement is at a value of 100% agreement, which is more than (75%) meaning that the expert agreement on the item is met. According to Cheng, Hsu, and Chang (2011), the agreement percentage should exceed 75%. In addition, all the *Alpha-Cut defuzzication values* (*average of fuzzy response*) exceed 0.5. According to Tang and Wu (2010) and Bodjanova (2006), the alpha cut value should exceed > 0.5. This shows that the experts have agreed upon the items in constructing tafsir and ta-

dabbur. Overall, all items have been agreed by experts with a good agreement value and meet the specified conditions.

Table 5. Selected hadith. (Adapted table from Cheng, Hsu, and Chang, 2011)

Results	item 1	item 2	item 3	item 4	item 5	item 6	item7	item 8	item 9	item 10	item 11	item 12
Expert 1	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Expert 2	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Expert 3	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Expert 4	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
Expert 5	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Expert 6	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
Expert 7	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
Expert 8	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077
Expert 9	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
statistics	item1	item2	item 3	item 4	item 5	item 6	item7	item 8	item 9	item 10	item 11	item 12
Value of the item	0.05132	0.05132	0.05132	0.05132	0.05132	0.05132	0.05132	0.05132	0.05132	0.05132	0.05132	0.05132
Value of the construct	0.05132											
Item < 0.2	9	9	9	9	9	9	9	9	9	9	9	9
% of items < 0.2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Average of % consensus	100											
Defuzzification	0.73333	0.73333	0.73333	0.73333	0.73333	0.73333	0.73333	0.73333	0.73333	0.73333	0.73333	0.73333
Ranking	1	1	1	1	1	1	1	1	1	1	1	1
Status	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept

Threshold value: **"d" value ≤ 0.2, Average of consensus ≥ 75%, Defuzzification ≥ 0.5 (Alpha cut).

Based on Table 5, no threshold value is blacked out above the *threshold value* of 0.2 (>0.2). This means there is an even expert opinion and consensus on certain items. However, the d value of the overall construct shows 0.0513 (<0.2). According to Cheng and Lin (2002) and Cheng, Hsu, and Chang (2011), if the average *threshold value* (d) obtained is less than <0.2, then the item has reached expert agreement. Meanwhile, the overall percentage of expert agreement is at a value of 100% agreement, which is more than (75%) meaning that the expert agreement on the item is met. According to Cheng, Hsu, and Chang (2011), the agreement percentage should exceed 100%. In addition, all the *Alpha-Cut defuzzication values* (*average of fuzzy response*) exceed 0.5. According to Tang and Wu (2010) and Bodjanova (2006), the alpha cut value should exceed > 0.5. This shows that the experts have agreed upon the items in constructing Tafsir and Tadabbur. Experts have agreed upon all items with a good agreement value and meet the specified conditions.

c) Module Teaching Activities

The findings of the Fuzzy Delphi analysis of the module teaching activities are shown in Table 6 below:

Table 6. Module teaching activities. (Adapted table from Cheng, Hsu, and Chang, 2011).

results	item 1	item 2	item 3	item 4	item 5	item 6	item7	item 8	item 9	item 10	item 11	item 12	item 13	item 14	item 15	item 16	item 17	item 18	item 19	item 20	item 21	item 22
Expert 1	0.04	0.03	0.01	0.03	0.03	0.06	0.05	0.05	0.05	0.04	0.04	0.05	0.04	0.05	0.03	0.03	0.03	0.04	0.03	0.03	0.06	0.04
Expert 2	0.04	0.03	0.01	0.03	0.09	0.05	0.06	0.18	0.06	0.08	0.04	0.06	0.04	0.05	0.03	0.03	0.03	0.04	0.03	0.03	0.05	0.04
Expert 3	0.04	0.03	0.01	0.03	0.03	0.05	0.06	0.06	0.06	0.08	0.04	0.06	0.08	0.06	0.03	0.03	0.03	0.04	0.03	0.03	0.06	0.08
Expert 4	0.08	0.09	0.10	0.09	0.09	0.05	0.06	0.06	0.06	0.08	0.08	0.06	0.08	0.06	0.09	0.09	0.09	0.08	0.09	0.09	0.06	0.08
Expert 5	0.08	0.09	0.01	0.03	0.03	0.05	0.05	0.05	0.06	0.04	0.08	0.05	0.04	0.06	0.03	0.03	0.03	0.04	0.03	0.03	0.05	0.04
Expert 6	0.04	0.03	0.01	0.03	0.03	0.06	0.05	0.05	0.05	0.04	0.04	0.05	0.04	0.05	0.03	0.03	0.03	0.08	0.03	0.03	0.05	0.04
Expert 7	0.08	0.03	0.01	0.03	0.03	0.05	0.06	0.05	0.05	0.04	0.08	0.06	0.08	0.06	0.09	0.09	0.09	0.08	0.09	0.09	0.06	0.08
Expert 8	0.04	0.03	0.01	0.03	0.03	0.06	0.05	0.05	0.05	0.04	0.04	0.05	0.04	0.05	0.03	0.03	0.03	0.04	0.03	0.03	0.05	0.04
Expert 9	0.04	0.03	0.01	0.09	0.03	0.06	0.05	0.05	0.05	0.04	0.04	0.05	0.04	0.05	0.03	0.03	0.03	0.04	0.03	0.03	0.05	0.04
statistics	item 1	item 2	item 3	item 4	item 5	item 6	item7	item 8	item 9	item 10	item 11	item 12	item 13	item 14	item 15	item 16	item 17	item 18	item 19	item 20	item 21	item 22
Value of the item	0.0513	0.0399	0.0228	0.0399	0.0399	0.0570	0.0570	0.0684	0.0570	0.0513	0.0513	0.0570	0.0513	0.0570	0.0399	0.0399	0.0399	0.0513	0.0399	0.0399	0.0570	0.0513
Value of the construct	0.04821																					
Item < 0.2	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
% of items < 0.2	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Average of % consensus	100																					
Defuzzification	0.733	0.756	0.778	0.756	0.756	0.689	0.711	0.711	0.711	0.733	0.733	0.711	0.733	0.711	0.756	0.756	0.756	0.733	0.756	0.756	0.711	0.733
Ranking	3	2	1	2	2	5	4	4	4	3	3	4	3	4w	2	2	2	3	2	2	4	3
Status	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept

Threshold value: **"d" value ≤ 0.2, Average of consensus ≥ 75%, Defuzzification ≥ 0.5 (Alpha cut).

Based on Table 6, no threshold value is blacked out above the *threshold value* of 0.2 (>0.2). This means there is an even expert opinion and consensus on certain items. However, the d value of the overall construct shows 0.0482 (<0.2). According to Cheng and Lin (2002) and Cheng, Hsu, and Chang (2011), if the average *threshold value* (d) obtained is less than <0.2, then the item has reached expert agreement. Meanwhile, the overall percentage of expert agreement is at a value of 100% agreement, which is more than (75%) meaning that the expert agreement on the item is met. According to Cheng, Hsu, and Chang (2011), the agreement percentage should exceed 100%. In addition, all the *Alpha-Cut defuzzication values* (*average of fuzzy response*) exceed 0.5. According to Tang and Wu (2010) and Bodjanova (2006), the alpha cut value should exceed >0.5. This shows that the experts agreed upon the items in the module's Teaching Activity construct. Experts have agreed upon all items with a good agreement value and meet the specified conditions.

e) Module Evaluation Activities

The findings of the Fuzzy Delphi analysis of the module evaluation activities are shown in Table 7 below:

Table 7. Module evaluation activities. (Adapted table from Cheng, Hsu, and Chang, 2011)

Results	item 1	item 2	item 3	item 4	item 5	item 6	item7	item 8	item 9	item 10	item 11	item 12	item 13
Expert 1	0.103	0.077	0.167	0.064	0.051	0.064	0.051	0.077	0.038	0.026	0.038	0.141	0.077
Expert 2	0.218	0.038	0.064	0.051	0.051	0.064	0.051	0.038	0.038	0.026	0.038	0.026	0.038
Expert 3	0.128	0.038	0.064	0.064	0.180	0.167	0.051	0.038	0.077	0.090	0.154	0.141	0.154
Expert 4	0.013	0.077	0.051	0.064	0.064	0.051	0.051	0.077	0.077	0.090	0.038	0.026	0.038
Expert 5	0.013	0.038	0.051	0.051	0.051	0.064	0.064	0.038	0.038	0.026	0.077	0.090	0.038
Expert 6	0.013	0.038	0.051	0.051	0.051	0.064	0.064	0.038	0.038	0.026	0.077	0.090	0.077
Expert 7	0.103	0.077	0.064	0.064	0.064	0.167	0.051	0.077	0.077	0.026	0.038	0.026	0.038
Expert 8	0.128	0.038	0.064	0.051	0.051	0.064	0.064	0.038	0.038	0.026	0.077	0.090	0.077
Expert 9	0.128	0.038	0.064	0.051	0.051	0.064	0.064	0.038	0.038	0.026	0.077	0.090	0.077
statistics	item1	item2	item 3	item 4	item 5	item 6	item7	item 8	item 9	item 10	item 11	item 12	item 13
Value of the item	0.094	0.051	0.071	0.057	0.068	0.086	0.057	0.051	0.051	0.040	0.068	0.080	0.068
Value of the construct							0.06492						
Item < 0.2	8	9	9	9	9	9	9	9	9	9	9	9	9
% of items < 0.2	88%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Average of % consensus							99						
Defuzzification	0.578	0.733	0.689	0.711	0.711	0.689	0.689	0.733	0.733	0.756	0.667	0.644	0.667
Ranking	7	2	4	3	3	4	4	2	2	1	5	6	5
Status	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept	Accept

Threshold value: **"d" value ≤ 0.2, Average of consensus ≥ 75%, Defuzzification ≥ 0.5 (Alpha cut).

Based on Table 7, no threshold value is blacked out above the *threshold value* of 0.2 (>0.2). This means there is an even expert opinion and consensus on certain items. However, the d value of the overall construct shows 0.0482 (<0.2). According to Cheng and Lin (2002) and Cheng, Hsu, and Chang (2011), if the average *threshold value* (d) obtained is less than <0.2, then the item has reached expert agreement. Meanwhile, the overall percentage of expert agreement is at a value of 100% agreement, which is more than (75%) meaning that the expert agreement on the item is met. According to Cheng, Hsu, and Chang (2011), the agreement percentage should exceed 100%. In addition, all the *Alpha-Cut defuzzication values* (*average of fuzzy response*) exceed 0.5. According to Tang and Wu (2010) and Bodjanova (2006), the alpha cut value should exceed >0.5. This shows that the experts agreed upon the Module Evaluation Activity construct items. Experts have agreed upon all items with a good agreement value and meet the specified conditions.

6. Implication of the Study

The consensus among experts underscores the critical need for these updates to ensure the module's relevance and effectiveness in delivering essential religious education to the Pahang Indigenous community. By addressing the unique educational needs of the *Orang Asli*, this updated module aims to provide a more robust and comprehensive religious education framework.

The implications of this study are profound. It not only identifies specific areas for curriculum enhancement but also provides a clear pathway for the implementation of these changes. The findings will inform the upcoming implementation stage of the Fardhu Ain strengthening program, where the updated module will be applied and its effectiveness rigorously evaluated. This study sets a precedent for future curriculum development initiatives, emphasizing the importance of continuous improvement and expert validation in educational program design.

7. Conclusion

This quantitative study has substantially enhanced the Fardhu Ain module for the Pahang Indigenous community by updating its content and structure through a meticulous expert consensus process using Fuzzy Delphi analysis. The experts identified four essential components to be included in the module: a) Objectives of the Module, b) Content of the topics, c) Teaching activities, and d) Module assessment activities. These updates have led to adding four new topics, expanding the module from seven to eleven components. The new topics—basic reading skills of the Quran and Tajwid, interpretation of selected Quranic verses, selected hadiths, and stories of selected Prophets—address critical areas necessary for a comprehensive religious education. The consensus reached among experts highlights the importance and relevance of these updates in enhancing the educational framework tailored for the Orang Asli community in Pahang. By in-

corporating these new topics, the module offers a more robust and inclusive curriculum better suited to meet this community's educational needs.

The findings of this study provide a clear roadmap for implementing the updated module in the upcoming Fardhu Ain strengthening program. This implementation phase will allow for a thorough evaluation of the module's effectiveness in delivering enhanced religious education. The study contributes to immediate curriculum improvements and sets a foundation for ongoing curriculum development efforts, emphasizing the value of expert validation and continuous enhancement in educational program design. The anticipated impact of this study extends beyond immediate educational outcomes, aiming to foster long-term educational and spiritual growth within the Pahang Indigenous community.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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