

## **Muslim Society's Perceptions on the Needs of Android Application for Learning the Meaning of Words in *Surah Al-Fatihah***

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### **Abstract**

The rapid development in technology has brought conventional learning styles to a whole new level of e-Learning, in which learning is not necessarily carried out in the classroom, but through mobile learning or m-learning that transcends the boundaries of time and place. *Al-Quran* learning is not excluded from this fast-paced evolution that has observed the emergence of various *Quran*-related mobile learning applications today. In view of this emerging trend, this study identified Muslim society's perception on the need for an educational android application for learning the meaning of words in *Surah Al-Fatihah*. The descriptive method was adopted where a questionnaire was distributed through the social media platform, namely - WhatsApp. 233 responses were recorded from Muslims of various backgrounds and- 11 different nationalities. The results showed that the Muslim respondents have a high level of acceptance for the development of an android application for learning the meaning of words in *Surah Al-Fatihah*. They also preferred varied functions and a helpful presentation method in the application, and informative learning content that is suited to various levels of the learner. The results of this study can be further used as a base for designing an android application for learning the meaning of words in *Surah Al-Fatihah*.

**Keywords:** *M-Learning, Quran, android application, needs, Surah Al-Fatihah*

## INTRODUCTION

Education in the 21<sup>st</sup> century time has changed dramatically, affecting learners from different background and age. Technology has taken education to a new level which 20 years ago the world would not have expected. With the limitless information flowing on the net, people at any age can now learn and upskill themselves in their own area of interest. Learning no longer belongs to the realm of the conventional institutions of learning with the innovation of new forms and modes of learning such as social media, digital devices, and applications. It is almost impossible to think of education today without also thinking about the various kinds of technology used to support education (Spector, 2012). With mobile devices utilization increasing considerably, mobile appliances have become popular learning tools with excellent potential for both outdoors and in the classroom (Danado & Paternò, 2014; Sung, Chang & Liu, 2016). With the help of these intelligent mobile appliances, learners can initiate self-learning experiences at home or abroad (Sharples & Spikol, 2017). This has spurred the growth of mobile learning or m-learning in various fields of study, addressing a wide range of users regardless of age and education level. This new way of learning has also been well utilised by Muslims as there has been a rise in the number of mobile devices and applications developed for learning the *Quran*. As a result, the digital *Quran* is considered as the most common application that has been downloaded among Muslims (Eizan Sharif, 2019). In relation to the increasing popularity of the digital *Quran*, numerous studies have been conducted on the use of the digital *Quran*, particularly in its recitation and memorization (Almosallam et al., 2015; Norazmi et al., 2017; Noor Jamaliah et al., 2013). However, very few have focussed on the users' understanding of the *surahs* (Eizan Sharif, 2019). Since the most frequent *surah* recited by Muslims is *Surah Al-Fatihah* (when they perform their *solat*), thus this study aims to investigate Muslim users' perception of using the *Quran* application in understanding the meaning of the words in *Surah Al-Fatihah*.

## LITERATURE REVIEW

### Mobile Learning

Despite its many definitions, having access to educational context and environment without limitation of time and place is a common understanding of what m-learning is (Serin, 2012). Global usage, and sophisticated yet inexpensive technologies and infrastructures are factors that enhance m-learning to become an important requirement for students and trainers (Sahrir & Alias, 2011). It also contributes the high IT literacy, vast ownership, and wide usage of smartphones that are equipped with wireless technology such as the 3G or 4G (Yahaya et al., 2019). M-learning in the past years has proven to be successful in many different contexts and with various users, probably because of its effectiveness in education regardless of time and place (Kalloo & Mohan, 2012; Cacmak & Tanriverdi, 2013). Thus, researchers predict that mobile learning has an outstanding influence on education (Alden, 2013). This has been supported by many studies, which includes the study of Al-Khezzi and Al-Dousari (2016) that found the use of m-learning effectively improved students' understanding of vocabulary and grammar. Meanwhile, the study of Kocakoyun and Bicen (2017) involved developing and

testing an educational mobile application for undergraduates. The study concluded that mobile application has the potential to support education, increase motivation and improve academic achievement. Other than these quantitative studies, Yahaya et. al., (2019), in qualitative study that explored the development of multimedia technology in the field of Arabic language learning, concluded that the use of Arabic language mobile applications can benefit learners of Arabic language.

### ***Quran* Related Mobile Application**

Mobile application has not merely attracted learners of formal institutions of education, but it has also gained the attention of public users who are interested to learn and improve various skills, particularly in learning the *Quran*. Khan and Alginahi (2013) in their study involving nearly 700 participants from different parts of the world drew some important findings that shed light regarding *Quran* and mobile devices. The study found that almost half of the respondents preferred reading the *Quran* through a mobile device, while a majority preferred reading it on a mobile device or a digital device. The preference for reading the *Quran* using the mobile device was primarily due to unplanned reading schedule and the difficulty of carrying around a printed *Quran*, whereas, a mobile device, in contrast, usually resides in the pocket of people. This was an opportunity well grabbed by developers where more than 500 *Quran* apps used the android platform in the market from 2013 to 2016. (Zahari et al., 2017).

This is not surprising as *Quran*-related mobile applications have become popular among Muslim users since their content fulfills the need of Muslims as an easy and a quick reference (Zahari et al., 2017). Elmarhomy's study (2020) aimed to develop an android application to help users understand various verses and words of the Holy *Quran* effortlessly. The study found that both parents and children agreed that the application made it easier to know different and difficult words in *Quran*, and improved children's *Quranic* memorization. Meanwhile, Sharif's (2019) study found that digital *Quran* helped senior citizens to learn characters of *Quran* and simple *Tajwid* rules. Although, they did not have enough knowledge and experience as well as lacking in confidence to recite the *Quran* in front of an *Ustaz* or *Ustazah*, they continued their recitation using the digital *Quran*.

### **Objectives of the Study**

Hence, the study was conducted with the objectives to (i) identify the perception of Muslim society on the needs of android applications to learn meaning of words in *Surah Al-Fatihah*; (ii) Present a preliminary concept of an android application for learning the meaning of words in *Surah Al-Fatihah*; and (iii) Identify the users' needs when using the application based on their perceptions.

## METHODOLOGY

### Research Design

This study adopted the descriptive-analytical method design to elicit quantitative responses from the participants. According to Loeb et al. (2017), quantitative descriptive analysis characterizes the world or a phenomenon by identifying patterns in data to answer questions about who, what, where, when, and to what extent. Therefore, the quantitative descriptive analysis method employed in this study intends to gather responses from the Muslim society on their perception on the needs of android application for learning the meaning of words in *Surah Al-Fatihah*.

### Population and Sample

Participants in this study are drawn from Muslim in various countries. Participants are accepted of any nationality, age group, gender and educational level. Participants in this study were selected through non-probability convenience sampling method. Convenience sampling is a type of non-probability sampling where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the study (Sedgwick, 2013). According to (Etikan et al., 2016), non-probability sampling is useful when randomization is impossible given that the population is exceptionally large or when the researcher has limited resources, time, and workforce.

### Research Instrument

The study used a self-developed questionnaire as its instrument. The questionnaire consisted of two parts. The first part contained demographics questions such as questions on gender, age group, nationality, and education level. The second part consisted of 32 questions divided into four sections. The first section consisted of 12 questions focusing on the method of presentation in the learning application. For the second section, 11 questions on the learning content of the application were asked. The third section asked about learning strategies consisting of 9 questions while the fourth section contained open ended questions on level of acceptance, suggestions, and comments.

The questionnaire was designed according to the 5-point Likert scale which is a type of psychometric response scale in which respondents specify their level of agreement to a statement typically of five points: Strongly Disagree (SD); Disagree (D); Neither agree nor disagree (N); Agree (A); and Strongly Agree (SA) (Preedy & Watson, 2015). An odd-numbered Likert scales have an advantage in providing an option for indecision or neutrality. Meanwhile, a five-point Likert scale is proven to have the advantage of ease to use (Preston & Colman, 2000), less confusing and can increase response rate (Bouranta et al., 2009).

### **Instrument Validity**

After drafting the questionnaire, the researcher presented it to a committee consisting of seven experts in curriculum and teaching methods from various universities in Malaysia. These experts then commented on the questionnaire of what needed to be improved or altered, and the researcher carried it out accordingly.

### **Instrument Reliability**

The researchers confirmed the reliability of the first until the third section from the second part of the questionnaire by testing it on a limited sample of individuals, specifically 30 individuals, as an exploratory sample, whose characteristics are similar to members of the Muslim community. The researcher took note of all the comments of the questionnaire, made sure of the clarity of the questions, and time needed to answer the questions. Necessary adjustments were made before the finalization of the questionnaire.

To measure the degrees of variation between responses and the degree of reliability, the researchers adopted the Cronbach's Alpha Coefficient statistical analysis. The results were as follows:

**Table 1**  
*Instrument Reliability*

<b>Dimension</b>	<b>Value</b>	<b>Number of Items</b>	<b>Level of Reliability</b>
Learning Process (first section)	0.846	12 Items	Good
Learning Content (second section)	0.728	11 Items	Good
Learning Strategy (third section)	0.832	9 Items	Good

Results of the Cronbach's alpha coefficients show that the three sections obtained the value between 0.728 and 0.846 which indicate a good degree of consistency (Salkind, 2015).

### **Data Collection and Data Analysis**

The questionnaire was distributed via WhatsApp application in the form of Google Form to the researcher's various contacts of Muslims from different backgrounds and nationalities. After one month of distributing the questionnaire, 233 answers were collected and analyzed accordingly. Data collected were analysed using descriptive statistics i.e., percentage of each answer, mean and standard deviation.

## FINDINGS OF THE STUDY

### Demographic Background

The first part of the questionnaire examined distributions of the respondents based on their gender, age group, nationality, highest education level, and mobile phone system. Table 2 shows the majority of the respondents were female, which made up more than half (69.1%) of the total respondents. Most respondents (73%) were aged 12-21, while the smallest fraction of response with 1.3% was above 61 years old.

In terms of nationality, a vast majority of respondents were Malaysians (94.85%), while the rest were divided into ten nationalities: Australia, Indonesia, Jordan, Nigeria, Bangladesh, India, Sudanese, Kuwaiti, Libya, Thai, and Malaysia. Each of these nationalities contributed 0.43 % to the total percentage of respondents, except for Australia which contributed 1.29%.

All the respondents received education either until high school, undergraduate degree, or postgraduate degree. Over half of the respondents received the highest education level until bachelor's degree (53.6%), while the percentage of respondents to hold a postgraduate degree holder was the least (19.3%).

**Table 2**

*Demographic Background*

Variable	Category	N	%	Total
Gender	Male	72	161	n=233
	Female	30.9	69.1	100%
Age Group (years old)	12-21	170	73	n=233 100%
	22-30	7	3	
	31-40	25	10.7	
	41-60	28	12	
Nationality	60 and above	3	1.3	n=233 100%
	Southern-East Asia	221	93.85	
	Australia	3	1.29	
	Middle East	4	2.58	
	Indian subcontinent	5	2.87	
Education Level	High School	63	27	n=233 100%
	Undergraduate Degree	125	53.6	
	Post-Graduate Degree	45	19.3	

### Perception on Learning Process Android Application

There were 12 items under the section that assessed respondents' perception on the learning application's presentation method. Table 3 presents the items with a summary of respondents' answers:

**Table 3**  
*Learning Process of Android Application*

	Items	Response Categories					Mean	STD
		SD	D	N	SA	A		
1	It should be a requirement to sign up before accessing the application	55 8.6%	20 23.6%	76 32.6%	66 28.3%	16 6.9%	3.015	1.068
2	I prefer the language of the application to be English Language	1 0.4%	7 3%	79 33.9%	110 47.2%	36 15.5%	3.747	0.767
3	The fixed amount of time for learning the words in <i>Surah Al-Fatihah</i> will be set for 14 minutes (2 minutes for each verse)	3 1.3%	15 6.4%	94 40.3%	99 42.5%	22 9.4%	3.528	0.804
4	I would prefer that the application could only be used while connected to a network	46 19.7%	107 45.9%	52 22.3%	24 10.3%	4 1.7%	2.287	0.954
5	I would prefer that the content is presented via text rather than visual presentation	10 4.3%	61 26.2%	111 47.6%	40 17.2%	11 4.7%	2.916	0.889
6	I would prefer that the content is presented via visual rather than text	5 2.1%	18 7.7%	96 41.2%	87 37.3%	27 11.6%	3.488	0.876
7	I would prefer that the vocabulary is accessible by each separated verse	0 0.0%	2 0.9%	31 13.3%	135 57.9%	65 27.9%	4.133	0.656
8	I would like the original letters to be view-able when learning the vocabulary	1 0.4%	1 0.4%	26 11.2%	141 60.5%	64 27.5%	4.143	0.651
9	I would like to only know one original meaning for each vocabulary	7 3%	60 25.8%	67 28.8%	67 28.8%	32 13.7%	3.246	1.076
10	I would like to know additional meaning of the original word	1 0.4%	10 4.3%	48 20.6%	116 49.8%	58 24.9%	3.945	0.815
11	I would like to know the opposite meaning to the original word	1 0.4%	3 1.3%	20 8.6%	131 56.2%	78 33.5%	4.214	0.684
12	I would like to have the option to write memos within the application	2 0.9%	1 0.4%	37 15.9%	122 52.4%	71 30.5%	4.117	0.714
Construct Mean							3.564	0.629

Item number 1 examined respondents' view whether the application should require a sign-up before accessing. Respondents seem to have divided opinion in this matter with almost equal percentage of respondents who agreed (35.2%), were neutral (32.6%), and disagreed (32.2%).

With regards to the English language as the application's language, a majority of the respondents (72.6%) agreed, followed by a fair percentage (33.9%) of respondents who held a neutral view of the statement. The percentage of respondents that disagreed or strongly disagreed were very few (3.4%).

The same trend was observed for item number 3 that evaluated respondents' view on the amount of time fixed for learning *Surah Al-Fatihah* words to be set for 14 minutes (2 minutes for each verse). Majority of the respondents (51.9%) chose either agree or strongly agree with the statement, followed by a fair percentage (40.3%) of respondents who held a neutral view of the statement. The percentage of respondents that disagreed or strongly disagreed was minimal (7.7%).

Regarding the concern about the availability of application usage only while connected to a network as stated in item number 4, the majority of respondents (65.6%) chose either disagree or strongly disagree as to their answer, while those who chose either strongly agree or agree as their answer made up the least percentage (12.0%) than those who were neutral of the view (22.3%). This finding clearly indicates that respondents preferred the application to be available while not connected to a network as well.

Item number 5 and 6 examined respondents' preference for the content and its presentation, whether via text or visual. The two items showed the difference in the majority of answers chosen by respondents, with the majority respondents who were neutral (47.6%) for the content presentation to be via text, compared to those who answered strongly disagree or disagree (30.6%), and agree or strongly agree (21.9%). Meanwhile, almost half of the respondents (48.9%) preferred the content to be via visuals, which was slightly higher than the respondents (41.2%) who remained neutral of the view whereas those who disagreed were only 9.8% of the respondents. Hence, it can be implied that majority of the respondents expressed their preference for visual presentations for the application's learning content while the majority held a neutral view for text presentation for the learning content.

In terms of vocabulary accessibility and view-ability, a majority of the respondents preferred the former (85.8%) according to each separated verse, while 88% preferred the original letters to be view-able when learning the vocabulary. In contrast, respondents who disagreed were very few with 0.9% and 0.8% respectively.

Item number 9 regarding respondents' preference to know only one original meaning for each vocabulary was recorded with a higher percentage of respondents who agreed and strongly agreed (42.5%) compared to the equal percentage of 28.8% recorded for respondents who were neutral and disagreed (and strongly disagreed). This indicates that the respondents' preference to know only one original meaning for each vocabulary.

As for item number 10 about knowing the additional meaning of the original word, a very high percentage of positive answers (agree and strongly agree) (89.7%) was observed among respondents that obviously surpassed percentages of disagree and strongly disagree (1.7%) and neutral (8.6%) answers. This shows that most of the respondents were interested to know the additional meaning of the original word.

Regarding item number 11 on knowing the opposite meaning to the original word, a large percentage of the respondents (74.7%) agreed and strongly agreed with the statement, compared to a small percentage who disagreed and strongly disagreed (4.7%) and those who held a neutral view (20.6%). This shows respondents' desire to know the opposite meaning to the original word.

The last item that assessed respondents' preference to have the option to write memos within the application recorded a high percentage of positive answers (agree and strongly agree) (82.9%) compared to those who disagreed and strongly disagreed (1.3%).



## Perception on Learning Content in Android Application

The section that assessed respondents' perception on learning content in the application that they needed consisted of 11 items. Table 4 presents the items with a summary of respondents' answers:

**Table 4**  
*Learning Content in Android Application*

	Items	Response Categories					Mean	STD
		SD	D	N	SA	A		
1	I cannot pronounce the letters correctly when reciting <i>Surah Al-Fatihah</i>	43 18.5%	92 39.5%	59 25.3%	35 15%	4 1.7%	2.421	1.101
2	I face difficulties in understanding some vocabularies when reading <i>Surah Al-Fatihah</i>	26 11.2%	85 36.5%	55 23.6%	61 26.2%	6 2.6%	2.726	1.051
3	I face some difficulties with in-depth understanding for the purpose of the verse	11 4.7%	48 20.6%	57 24.5%	92 39.5%	25 10.7%	3.313	1.062
4	I need to learn the right pronunciation for the letters in each word	10 4.3%	12 5.2%	37 15.9%	109 46.8%	65 27.9%	3.895	1.019
5	It is more important for me to learn the meaning of the words rather than the pronunciations	25 10.7%	82 35.2%	72 30.9%	38 16.3%	16 6.9%	2.736	1.073
6	I would prefer to focus on each individual meaning rather than the general meaning of the <i>surah</i>	9 3.9%	55 23.6%	94 40.3%	56 24%	19 8.2%	3.098	0.976
7	The general examples will help me to learn the meaning of <i>Surah Al-Fatihah</i>	2 0.9%	6 2.6%	42 18%	136 58.4%	47 20.2%	3.945	0.749
8	I would like an end of learning test after completing the learning process within this application	3 1.3%	10 4.3%	49 21%	118 50.6%	53 22.7%	3.895	0.846
9	I prefer the availability of supporting links for vocabulary meanings in the application	3 1.3%	3 1.3%	58 24.9%	126 54.1%	43 18.5%	3.876	0.766
10	I would like to have supporting activities to enhance my understanding on the meaning of the vocabularies in the application	3 1.3%	1 0.4%	36 15.5%	140 60.1%	53 22.7%	4.035	0.718
11	I would like to answer questions to test my understanding on the meaning of the vocabularies in the application	4 1.7%	4 1.7%	35 15%	126 54.1%	64 27.5%	4.043	0.805
Construct Mean							3.453	0.724

Item 1 was related to item 4 in terms of letter pronunciation. Item 1 evaluated respondents' perception on their inability to correctly pronounce the letters when reciting *Surah Al-Fatihah*. A majority of the respondents expressed their disagreement with this statement by choosing either disagree or strongly disagree as to their answer (58.0%), while the least percentage recorded for this item was agree and strongly agree (16.7%). This suggests that respondents did not have a problem pronouncing the letters in *Surah Al-Fatihah* correctly. However, item 4, which identified respondents' perception on the need to learn the right pronunciation for the letters in each word shows that majority of the respondents (74.7%) agreed that they need to learn the right pronunciation for the letters in each word, while only 9.5% of the respondents strongly disagreed and disagreed. This trend indicates that respondents generally saw themselves able to correctly pronounce the letters when reciting *Surah Al-Fatihah*, but still viewed that they needed to learn the right pronunciation for the letters in each word.

On the other hand, the second item assessed respondents' difficulties in understanding some vocabularies when reading *Surah Al-Fatihah*. Almost half of the respondents (47.7%), disagreed and strongly disagreed with this statement, while 28.8% agreed and strongly agreed, and the rest (23.6%) were neutral. This implies the limited difficulties faced by respondents in understanding some vocabularies when reading *Surah Al-Fatihah*.

Regarding item 3 on difficulties faced by respondents with in-depth understanding for the verse, the highest percentage of answers recorded was the total of agreement (strongly agree and agree), with a total of slightly more than half of the respondents (50.2%), followed by disagreement (strongly disagree and disagree) (25.3%), and neutral (24.5%). This infers a noticeable degree of difficulties faced by respondents to understand the purpose of the verse in -depth.

Item 5 evaluated respondents' view of the importance to learn the meaning rather than the pronunciation of the words. Almost half of the respondents expressed their disagreement with this statement (disagree and strongly disagree) (45.9%), while a small (13.2%) percentage agreed compared to those who had a neutral view (30.9%).

On the other hand, with regards to the respondents' preference to focus on each meaning rather than the general meaning of *Surah Al-Fatihah*, slightly more than forty percent of the respondents (40.3%) were neutral of this view, while 32.2% agreed (agree and strongly agree) and 27.5% disagreed (disagree and strongly disagree).

For item 7 that examined respondents' perception of whether general examples can help them to understand the meaning of *Surah Al-Fatihah*, majority of the respondents (78.6%) agreed (agree and strongly agree), which contrasted with the least percentage (3.5%) of respondents who disagreed (78.6%), while 18% remained neutral in this view. This infers the respondents' positive perception with regards to using general examples that can help them to learn the meaning of *Surah Al-Fatihah*.

Item 8 was related to item 11 in terms of tests in the application, where the former assessed respondents' perception about having an end of learning test after completing the learning process within this application, while the latter examined respondents' perception to answer questions to test their understanding on the meaning of the vocabularies. A majority of the respondents expressed their agreement to both of these statements (item 8=73.3%, item 11= 81.6%) compared to the respondents who disagreed (item 8= 5.6%, item 11= 3.4%). This suggests that respondents generally viewed positively to having an end of learning test after completion of the learning process and answering questions to test their understanding of the meaning of the vocabularies in the application.

Next, most of the respondents (72.6%) agreed and strongly agreed, while only 2.6% disagreed and strongly disagreed with the availability of supporting links for vocabulary meanings in the application.

Regarding item 10 on respondents' perception about having supporting activities to enhance their understanding of the meaning of the vocabularies in the application, the highest percentage of answers was recorded in the respondents' agreement (agree and strongly agree) (82.8%), followed by neutral (15.5%), while respondents who disagreed and strongly disagreed were represented with the lowest percentage (1.7%). This infers those respondents were in favour of having supporting activities to enhance their understanding of the meaning of the vocabularies in the application.

### Perception on Learning Strategies in Android Application

The section that assessed respondents' perception of preferred learning strategy in the application consisted of 9 items. Table 5 presents the items with a summary of respondents' answers:

**Table 5**  
*Learning Strategy in Android Application*

	Items	Response Categories					Mean	STD
		SD	D	N	SA	A		
1	I would like to be on my own when learning the meaning of vocabulary in <i>Surah Al-Fatihah</i>	4 1.7%	31 13.3%	94 40.3%	77 33%	27 11.6%	3.395	0.918
2	I understand the meaning of the vocabularies better when I read the translation of <i>Surah Al-Fatihah</i>	3 1.3%	10 4.3%	51 21.9%	122 52.4%	47 20.2%	3.867	0.831
3	I understand the meaning of the vocabularies better when I watch visual presentations of <i>Surah Al-Fatihah</i>	1 0.4%	9 3.9%	84 36.1%	105 45.1%	34 14.6%	3.709	0.708
4	Discovery approach is better for me in learning the meaning of vocabularies in <i>Surah Al-Fatihah</i>	0 0.0%	7 3%	80 34.3%	116 49.8%	30 12.9%	3.738	0.712
5	I would like the learning process to be divided into several sessions	1 0.4%	3 1.3%	68 29.2%	122 52.4%	39 16.7%	3.847	0.724
6	I would like the linking between vocabularies in <i>Surah Al-Fatihah</i> and vocabularies from other <i>Surahs</i>	1 1.3%	3 1.3%	42 18%	76 46.8%	66 32.6%	4.086	0.818
7	I would like each vocabulary to be put in different contexts	2 0.9%	5 2.1%	74 31.8%	104 44.6%	48 20.6%	3.825	0.801
8	I would like to draw a brainstorm with the meaning of vocabularies	0 0.0%	13 5.6%	92 39.5%	92 39.5%	36 15.5%	3.653	0.807
9	I would like to be able to connect the vocabularies meaning with physical things	1 0.4%	2 0.9%	60 25.8%	118 50.6%	52 22.3%	3.948	0.742
Construct Mean							3.784	0.731

Item 1 identified respondents' perception on being on their own when learning the meaning of vocabularies in *Surah Al-Fatihah*. Respondents' views were distributed between

agreement (44.6%) and being neutral (40.3%), while those who disagreed and strongly disagreed were noticeably very few (15.0%).

On the other hand, item 2 and 3 assessed respondents' perception on understanding the meaning of the vocabularies in *Surah Al-Fatihah* either by reading the translation or watching visual presentations. Most of the respondents agreed (agree and strongly agree) to these statements (item 2= 72.6%; item 3= 59.7%), while the percentage of respondents who disagreed (disagree and strongly disagree) was noticeably lower (item 2= 5.6%, item 3= 4.3%). This indicates that respondents can understand the vocabularies of *Surah Al-Fatihah* better using the translation and visual presentation.

Item 4 examined respondents' perception on discovery approach as a better approach to learn the meaning of vocabularies in *Surah Al-Fatihah*. The results show that a total of 62.7% respondents were in agreement (agree and strongly agree) with the statement, while 34.3% had a neutral view, and only 3% disagreed. Meanwhile, item 5 examined respondents' perception on the learning process to be divided into several sessions. Respondents generally held a positive perception of the statement, with 69.1% of them agreed and strongly agreed to have the learning process to be divided into several sessions whereas only 0.4% strongly disagreed and 1.3% disagreed.

On the other hand, item 6 assessed respondents' preference to link between vocabularies from *Surah Al-Fatihah* and other *Surahs*. Most of the respondents agreed with the statement (46.8%), followed by those who strongly agreed (32.6%), while the percentages of respondents who disagreed and strongly disagreed were 1.3% each. This implies respondents' preference for the vocabularies in *Surah Al-Fatihah* to be linked with vocabularies from other *Surahs*.

Item 7 identified respondents' preference for each vocabulary to be put in different contexts. More than half of the respondents (65.2%) expressed their agreement with this statement (strongly agree and agree), compared to 31.8% respondents who were neutral, while the rest disagreed. For item 8, slightly more than half of the respondents (55%) preferred to draw a brainstorm with the meaning of vocabularies, while 39.5% remained neutral and 5.6% disagreed.

The last item in this section examined respondents' preference to be able to connect the meaning of the vocabularies with physical things. Slightly more than half of the respondents agreed (50.6%), while 22.3% strongly agreed. In contrast, 1.3% disagreed and strongly disagreed. It can be concluded that most respondents wanted to connect vocabularies meaning with physical things.

### **Level of Acceptance, Comments, and Suggestions**

The last part of the questionnaire was about respondents' level of acceptance for the idea of developing the application and their comments and suggestions. 47.2% of the respondents strongly agreed with the idea, while 44.2% agreed, which summarizes a high level of acceptance of the idea among respondents:

The comments and suggestions for the development of the learning application to learn vocabulary meaning of *Surah Al-Fatihah* were analyzed and grouped according to categories as shown in table 6:

**Table 6**

*Respondents' comments, and suggestions about Android Application*

Themes	Categories and Respondents' Responses
Theme 1: Functions	<p><b>Pronunciation</b>            Include pronunciation learning through verbal coaching.            Male and female voice for pronunciation guide.            Have some voice of recitation from renowned <i>Sheikhs</i>.</p>
	<p><b>Tajwid</b>            Can save memo for <i>Tajwid</i>.            Differentiate <i>Tajwid</i> areas with color.</p>
	<p><b>Words Explanation</b>            Relevant <i>Seerah</i> and supplementary commentaries.            Adapt the <i>Quranic</i> Arabic Corpus method.            Diverse way in explaining the meaning of each word.</p>
	<p>Multiple sections to focus into reading, vocabulary, meaning.</p>
	<p><b>Effective Learning Strategy</b>            Can write highlightable memo with different colors of writing.            Interesting, attractive to young generation yet informative.            Colorful visual will be attractive to children.            Interactive learning with games and tests.</p>
	<p><b>Learning Support</b>            Contents comes in mind map.            Include video links that can be a reference.            Online <i>Ustaz</i> guidance.            Collaborative element to learn together with other students.</p>

**Table 6***Continued*

Themes	Categories and Respondents' Responses
Theme 2: Display	<p><b>Color and Themes</b> Design with mainly green colors. Many themes options (floral, ocean, etc.). Colorful, modern, eye catching, simple, editable. Calm color to enhance serenity.</p>
	<p><b>Interface</b> Darker night mode. Easy-to-read fonts (contra of background color). Single click buttons. Able to keep data to track progress after reusing the app.</p>
Theme 3: User Friendliness	<p><b>Post-App use</b> Allow users to give their review after using the app. Do a postmortem survey after app is launched for improvement. Have a donation button for any generous users to contribute.</p>
	<p><b>Ease of Use</b> Can be used even without the Internet. Light apps size. Easy to access. Remain free for users. Use flutter so the app runs on both IOS and android. Tutorial to show the function of each feature.</p>
	<p><b>Application Features</b> More stable, less bug. User friendly interface. Minimum or no ads. Up to date. Daily reminder and <i>Adzan</i></p>
	<p><b>Diverse Suitability</b> Ability to change font size will be useful to older user. Disability people friendly: equipped with more audio and visual. Consider users different competency of Arabic mastery. Include other languages (Mandarin, Tamil, etc.).</p>

Generally, the comments and suggestions from the respondents were grouped into eleven categories and further collapsed into three themes, which are functions, display, and user friendliness of the application. Functions as the first theme, consists of five categories i.e., pronunciation, tajwid, words explanation, effective learning strategy and learning support. Based on the respondents' suggestions, it is clear that they were much concerned with the varied functions of the application. Some respondents suggested the application to provide tajwid indicators by highlighting the tajwid areas with color. In addition, some respondents also suggested that both male and female voice are provided for pronunciation guide while other suggestion calls to provide relevant *Seerah* and supplementary commentaries.

Meanwhile, the second theme, that is, display has two categories, which are interface, and colour and themes of the application. Respondents suggested that the application's interface can be improved by providing day and night vision mode, easy to read font, and options to select attractive colours and background themes. Finally, the user friendliness of the application as the final theme comprises of categories related to ease of use, post app use, application features, and its suitability to diverse users. Suggestions by the respondents include how the application can be made inclusive when it considers the diverse users such as the elderly, learners with disability, users with low Arabic competency and users of other languages than Arabic. Apart from this category, respondents also made suggestions to make the application easier to be used and have more useful features. These suggestions are helpful in improving the application according to the users' interest and needs.

## DISCUSSION OF FINDINGS

This paper was aimed to identify Muslim society's perception on the need for an educational android application for learning the meaning of words in *Surah Al-Fatihah*. A questionnaire was given which yielded answers from 233 respondents. Respondents' perception regarding the need for an educational android application for learning the meaning of words in *Surah Al-Fatihah* was identified through the analyzed result.

The first section from the first part revealed some of the respondents' preferences regarding the presentation method of the application, including the application language to be English language, vocabulary accessible by each separated verse, original letters to be viewable when learning the vocabulary, are having the option to write memos within the application. Meanwhile, in terms of the meaning of the words, the results show that respondents would like to know only one original meaning for each vocabulary, the opposite meaning of and additional meaning of the original word. On the other hand, between visual presentation and text presentation, respondents expressed their preference for visual presentations for the application's learning content and held a neutral view for text presentation for the learning content. It was also found out that respondents wanted the application to be available while not connected to a network as well. Respondents also agreed with the time fixed for learning *Surah Al-Fatihah*'s words to be set for 14 minutes. Only one item reported respondents' divided opinion, which was the requirement of signing up to access the application. These results show respondents' preference of the presentation of the application in learning the meaning of words in *Surah Al-Fatihah*. Yahaya et. al (2019) found out that mobile learning was seen to be an alternative to conventional learning, hence, it is relatable why respondents in the current study needed a helpful presentation method in this application to aid them in learning *Surah Al-Fatihah*'s word meanings.

Regarding the second section that assessed the learning content for the application, the results found that generally respondents were able to correctly pronounce the letters when reciting *Surah Al-Fatihah*, but they perceived that they still need to learn the right pronunciation for the letters in each word. Apart from the pronunciation limited difficulties in understanding some vocabularies when reading *Surah Al-Fatihah* were also reported among the respondents.

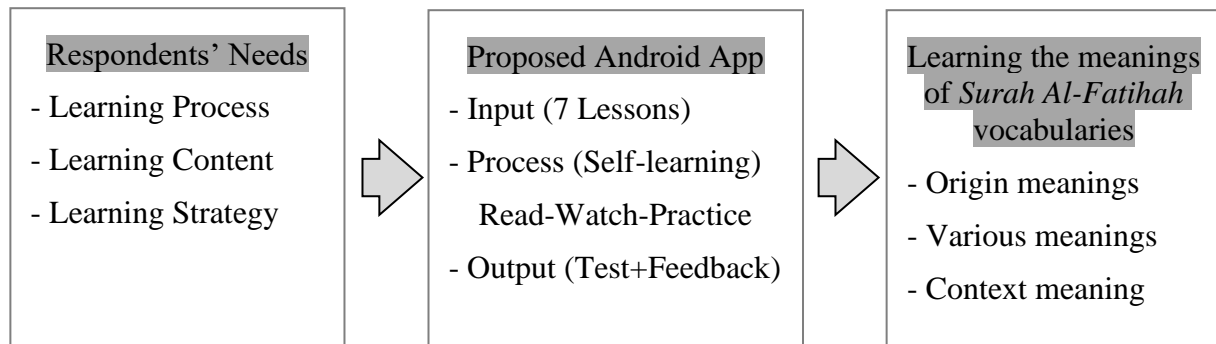
In contrast, a noticeable degree of difficulties was faced by the respondents to understand the purpose of the verse in depth. When asked about learning the pronunciation and meaning of the words, respondents generally agreed that it was more important for them to learn the pronunciation of the words than their meaning. Other elements such as availability of supporting links for vocabulary meanings in the application, having supporting activities to enhance their understanding of the meaning of the vocabularies, and the help that general examples can bring in learning the meaning of *Surah Al-Fatihah* were reported to be in positive perception of the respondents. Respondents also reported to have positive perceptions regarding tests, be it an end-of-learning test as well as questions to test their understanding of the meaning of the vocabularies within this application. Only one item displayed the respondents' neutral view, which was their preference to focus on each meaning rather than the general meaning of *Surah Al-Fatihah*. These findings of the learning content reflect the various learners' levels and learning styles, which was in line with a study by Abdul Rahman et al. (2017). Their study discovered four levels of understanding the content of the *Quran* among diverse groups of people namely naïve, novice, intermediate, and expert, which were influenced by the differences in the dimensions of diversity, including age, race, gender, language, work experience and others.

Results of the third section yielded a positive perception from the respondents regarding the Learning Strategy employed by the applications in learning the meaning of the words in *Surah Al-Fatihah*. The respondents generally have a neutral view regarding being on their own when learning the meaning of vocabularies in *Surah Al-Fatihah* but were positive if the learning process is divided into several sessions indicating their preference for the vocabularies in *Surah Al-Fatihah* to be linked with vocabularies from other *Surahs*. They also agreed that the discovery approach, translation reading, and visual presentation helped them to understand the meaning of *Surah Al-Fatihah* words better. Apart from these strategies, the respondents also preferred that each vocabulary is put in different contexts, while they view positively the use of brainstorming and connecting physical things to the meaning of vocabularies. The strategies preferred by the respondents are in line with the method commonly used to understand meaning of words in the *Quran* (Yusuff et al., 2021). According to Yusuff et al. (2021), these were some of the techniques and elements used in the *tadabbur* of the *Quran*, particularly observed among non-Arabic speakers.

Lastly, a high level of acceptance for the application development was reported among the respondents. This may be partly due to the proven effectiveness of mobile learning applications to assist teaching and learning as had been found in previous studies (Alkhezzi & Al-Dousari, 2016; Kalloo & Mohan, 2012; Cacmak & Tanriverdi, 2013). Meanwhile, suggestions made by the respondents include the improvement of the application in terms of its varied functions, display, and user friendliness. These findings are in line with the study of Sahrir and Alias (2011), that identified these as the basic elements to support the use of online games for Arabic language learning.



Based on the findings of the final section, the respondents' perceptions on Android App can be summarised in the following diagrams:



## CONCLUSION

This paper examined Muslim society's perception on the need for an educational android application for learning the meaning of words in *Surah Al-Fatihah*. As m-learning is being more widespread each day, *Quranic* learning also needs to keep in pace with the evolving learning environment. Respondents in this study showed a high level of acceptance for the development of an application for learning the meaning of words in *Surah Al-Fatihah*. Results from this study can be further used to develop an android application for learning the meaning of words in *Surah Al-Fatihah*.

However, the study is not without limitations, one of which concerns the sample, where the respondents were Android users, considering that a majority of them preferred the application for the android format. Future studies may present application that serves the same purpose in IOS format as well.

This study only focused on the meaning of words in *Surah Al-Fatihah*, hence further research may be expanded to include other *surahs*, particularly those in *Juz 'Amma*, since these *surahs* are widely recited and familiar to a wide group of Muslims regardless of different age and background. In addition, this study involved 94% Muslim respondents from Southeast Asia, particularly Malaysia. Hence, this study may not represent the perception of the general Muslim community in the world. However, it is important to note that Muslims in this particular continent are non-Arabic speakers, so it is expected that they would be frequent users of the app as they may find it most useful to learn the meaning of words in *Surah Al-Fatihah*. Considering these limitations, future research should consider involving Muslims from other parts of the world, of varied age and education level, so that the trends of using the application can be further studied.

## REFERENCE

- Abdul Rahman, S., Baharuddin, N., Ahmad, H., Baharun, H., Sempo, M., Mat Saad, N., Mohd Nizah, M. (2017). Exploring the level of understanding the content of *Quran* among diverse groups of people. *Sains Insani*, 2(1), 61-65.
- Alden, J. (2013). Accommodating mobile learning in college programs. *Journal of Asynchronous Learning Networks*, 17(1), 109-122.
- Alkhezzi, F., & Al-Dousari, W. (2016). The impact of mobile learning on esp learners' performance. *The Journal of Educators Online*, 13(2), 73-101.
- Almosallam, E., Alawadh, M. M., Alhasani, R. S., Almansour, S. M., Altamimi, W. A., & Altujjar, Y. R. (2015, October). ITQAN: A mobile based assistant for mastering *Quran* memorization. In 2015 Fifth International Conference on e-Learning (econf) (pp. 349-352). IEEE.
- Bouranta, N., Chitiris, L., & Paravantis, J. (2009). The relationship between internal and external service quality. *International Journal of Contemporary Hospitality Management*, 21(3), 275-293.
- Cacmak, E. K., Tanriverdi, M. (2013). Development of a mobile learning application to support e-learning and analysis of its effects. *International Journal of Mobile Network Communications & Telematics*, 3(5), 1-11.
- Danado, J., & Paternò, F. (2014). Puzzle: A mobile application development environment using a jigsaw metaphor. *Journal of Visual Languages & Computing*, 25(4), 297-315.
- Eizan Sharif (2019). E-Talaqqi: An analysis of Technology Acceptance Model 3 (TAM3) on the understanding of digital *Quran* usage and implications among senior citizens in Malaysia. *Journal of Islamic, Social, Economics and Development (JISED)*, 4(16), 66 - 81.
- Elmarhomy, G. (2020) Understanding hidden meanings of *Quran's* words using mobile/android application. *Journal of Computer and Communications*, 8, 41-53.
- Etikan, I., Musa, S. A., Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1-4. doi: 10.11648/j.ajtas.20160501.11.
- Kaloo, V., & Mohan, P. (2012). Correlating questionnaire data with actual usage data in a mobile learning study for high school Mathematics. *Electronic Journal of e-Learning*, 10(1), 76-89.
- Kocakoyun, S. & Bicen, H. (2017). Development and evaluation of educational android application. *Cypriot Journal of Educational Science*, 12(2), 58-68.
- Khan, M. K., Alginahi, Y. M. (2013). The holy *Quran* digitization: Challenges and concerns. *Life Science Journal*, 10(2), 156-164.
- Loeb, S., Dynarski, S., McFarland, D., Morris, P., Reardon, S., & Reber, S. (2017). Descriptive analysis in education: A guide for researchers. (NCEE 2017-4023). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance.

- Norazmi Anas, Zulkifli Mohd. Ghazali, Anasztasia Natasha Muhamad Ramlan & Mohd. Rizal Hanafi (2017). The use of digital *Quran* application among diploma students of UiTM Perak Branch, Tapah Campus. *International Journal of Academic Research in Business and Social Sciences* 7(2), 561-569 doi:10.6007/IJARBS/v7.
- Noor Jamaliah, I., Zaidi, R., Mohd Yamani, I. I., Zulkifli, M. Y., Noorzaily, M. N., Emran, M. T. & Noor Naemah, A. R. (2013). Mobile Application of *Al-Quran* and Arabic Language for Interactive and Self Learning Assistant for support in j-QAF Learning: A Survey, Paper presented at the Seminar Kebangsaan Penyelidikan j-QAF 2013 organized by Ministry of Education Malaysia, and Hadhari Institute.
- Preedy V.R., Watson R.R. (2010) 5-Point Likert Scale. *Handbook of Disease Burdens and Quality of Life Measures*. Springer, New York, NY. [https://doi.org/10.1007/978-0-387-78665-0\\_6363](https://doi.org/10.1007/978-0-387-78665-0_6363)
- Preston, C. C., & Colman, A. M. (2000). Optimal number of response categories in rating scales: reliability, validity, discriminating power, and respondent preferences. *Acta Psychologica*, 104(2000), 1- 15.
- Salkind, N. (2015). *Encyclopedia of Measurement and Statistics* (1st Edition). SAGE.
- Sedgwick, P. (2013). Prospective cohort studies: advantages and disadvantages. *Bmj*, 347.
- Serin, O. (2012). Mobile learning perceptions of the prospective teachers (Turkish Republic of Northern Cyprus sampling). *Turkish Online Journal of Educational Technology*, 11(3), 222-233.
- Sahrir, M. S., Alias, N. A. A study on malaysian language learners' perception towards learning Arabic via online games. *GEMA Online Journal of Language Studies*, 11(3), 129-145.
- Sharif, E. (2019). E-Talaqqi: An analysis of Technology Acceptance Model 3 (TAM3) on the understanding of digital *Quran* usage and implications among senior citizens in Malaysia. *Journal of Islamic, Social, Economics and Development (JISED)*, 4(16), 66 - 81.
- Sharples, M., & Spikol, D. (2017). Mobile learning. In E. Duval, M. Sharples, & R. Sutherland (Eds.), *Technology-enhanced learning* (pp. 89–96). Springer. [https://doi.org/10.1007/978-3-319-02600-8\\_8](https://doi.org/10.1007/978-3-319-02600-8_8)
- Spector, J. M. (2012). *Foundations of Educational Technology: Integrative Approaches and Interdisciplinary Perspectives*. New York, America: Routledge.
- Sung, Y. T., Chang, K. E. & Liu, T. C. (2016). The effect of integrating mobile devices with teaching and learning on student's learning performances: A meta-analysis and research synthesis. *Computers and Education*, 94, 252-275.
- Yahaya, H., Sardi, J., Radzi, M., Abdelhamid, I. Y., & Islam, F. P. (2019). Development of a mobile application in Arabic language learning in Malaysia: An overview. *International Journal of Academic Research in Business and Social Sciences*, 9(7), 1366–1376.
- Yusuff, M. S. S., Haji-Othman, Y., & Manaf, M. R. A. (2021). Tadabbur surah Al Hadid using the *Quran Tadabbur* digital application: A critical analysis. *International Journal of Academic Research in Business and Social Sciences*, 11(4), 1138–1143.

Zahari, N., Syed Bidin, S., & Syamsuddin, S. N. (2017). Development of *Al-Quran* android application from year 2013 to 2016: The highlight. *International Journal of Academic Research in Business and Social Sciences*, 7(6). doi:10.6007/ijarbss/v7-i6/2954