

CHAPTER 6

DATA ANALYSIS OF PHASE III : EVALUATION PHASE

6.1 Introduction

In this chapter, researcher had discussed the analysis of data for phase III: the evaluation phase. In this phase, researcher has come out with one research objective which is to evaluate the KKQ meaning-based *Tarannum* mobile app model and a research question. The details of research objective and research questions are shown in table 6.1 below.

Table 6.1: Matrix of Research Objectives and Research Question for Evaluation Phase

RESEARCH OBJECTIVES	RESEARCH QUESTIONS
4) To evaluate the KKQ meaning-based <i>Tarannum</i> mobile app model.	4) What is the level of experts' agreement in evaluating the designed model?

Basically, in this evaluation phase whereby the study was intended to obtain the expert agreements towards the prototype model that has been developed in the previous phase, which is in phase II; the design and development phase. The fuzzy Delphi method was used in this phase in order to evaluate the prototype model and to answer the research question. The instrumentation used in this phase is the expert evaluation questionnaire and the analysis for this phase were analysed by using the

Fuzzy Delphi Method of analysis. The table 6.2 below presented the matrix of research questions for this phase with the method, instrument and analysis used in order to answer the research question.

Table 6.2: Matrix of Research Questions for Evaluation Phase and its Method, Instrument and Analysis

Research Questions	Method	Instruments	Analysis
4) What is the level of expert agreement in evaluating the designed model?	Expert evaluation (Fuzzy Delphi Method)	Expert evaluation questionnaire	Fuzzy Delphi

6.2 Research Question 4: What is the level of expert agreement in evaluating the designed model?

As described in the above section, the research question four (4) used to evaluate the level of agreements of the experts towards the designed model. Through this phase, the evaluation process was conducted by the researcher whereby the expert evaluation questionnaire was used in obtaining the experts agreement. The data were collected through online platform and also face to face. The expert evaluation questionnaire comprises of three sections which is section A, B and C.

Section A is about the demographic information of the experts. Section B is the evaluation on the elements that are suitable with the KKQ meaning-based *Tarannum* mobile app model and section C is the evaluation on the overall usability of the model developed. A total of ten experts have been appointed to evaluate the designed model. The experts are among the KKQ teachers, IPTA lecturers, IPTS lecturers and also qāri'. In this process the experts are used to evaluate and validate

the model towards the elements from the model based on the consensus from a group of experts who are experienced and directly involved in this study. Panels of experts were identified and have been involved in providing recommendations and validations on the elements in the model are as follows:

1. Three experts were experienced KKQ teacher who had taught the KKQ subject for more than five years.
2. Five experts were from IPTA and IPTS in Islamic Studies field which is in the Qur'ān and Sunnah and Islamic Education and were directly involved and has specific expertise with the context of this study.
3. Two experts were the qāri' (*Tarannum* practitioners) who have experience in *Tarannum* field and practice to recite Al-Qur'ān with *Tarannum* which is significantly involved in this study.

Researcher had defined the experts by means of coding due to maintain the confidentiality of the respondents and also for documentation purpose. The codes were defined in the table below with their institutions.

Table 6.3: Code Representation of the Experts

No.	Experts	Code Representation	Institution
1.	Expert 1	P1	KKQ teacher - SMK (KAA)
2.	Expert 2	P2	KKQ teacher - SMKA
3.	Expert 3	P3	KKQ teacher – SMK (KAA)
4.	Expert 4	P4	<i>Qāri'</i>
5.	Expert 5	P5	Universiti Sains Islam Malaysia
6.	Expert 6	P6	Universiti Sains Islam Malaysia
7.	Expert 7	P7	Universiti Kebangsaan Malaysia
8.	Expert 8	P8	Universiti Pendidikan Sultan Idris
9.	Expert 9	P9	<i>Qāri'</i>
10.	Expert 10	P10	Kolej Universiti Islam Selangor

6.2.1 Demografic Information Analysis

A table below presents the analysis of experts' demographic information. Researcher had analysed the demographic information based on the frequency and percentage for each items.

Table 6.4: Analysis of the Experts' Demographic Information

No.	Items	Demographic Information	Frecuency	Percentage
1.	Gender	Male	10	100%
		Female	0	0%
2.	Age	25-35	3	30%
		36-46	2	20%
		47-60	5	50%
3.	Field of work	KKQ teacher	3	30%
		IPTA's Lecturer	4	40%
		IPTS's Lecturer	1	10%
		Qāri' or Qāri'ah	2	20%
4.	Academic level	Diploma	0	0%
		Bachelor degree	5	50%
		Master	1	10%
		PhD	4	40%
5.	Field of study	Quran and Sunnah Studies	4	40%
		Al-Quran Education	4	40%
		Islamic Education	1	10%
		Others	1	10%
6.	Experience	0-4 years	0	0%
		5-9 years	5	50%
		10-14 years	1	10%
		15 years and above	4	40%
Total of Experts			10	100%

Based on the Table 6.4 above, there are five sub sections which have been answered by the experts and it covers the age, gender, field of work, academic level and field of study. For gender sub section, the experts are all male which is 10 experts

are male with the percentage of 100%. For age sub section, three experts aged between 25 to 35 years old with the percentage of 30%, two experts aged 36 to 46 years old with the percentage of 20% and five experts aged between 47 to 60 years old with the percentage of 50%. While for the field of work, three experts are the KKQ teachers with the percentage of 30%, four experts are the lecturers from IPTA with the percentage of 40%, only one expert from IPTS and the percentage of 10% and two experts were the qāri' with the percentage of 20%. For the level of academic qualification, five experts holds bachelor degree with the percentage of 50%, only one expert holds masters degree with the percentage of 10% and four experts holds PhD with the percentage of 40%. This is due to the experts were from a different background which is the KKQ teachers and also the qāri' only four experts are the lecturers from IPTA. For the field of study, four experts were from Quran and Sunnah studies with the percentage of 40%, four experts from Al-Qur'ān education studies with the percentage of 40%, only one expert was from the Islamic Education studies with the percentage of 10% and one of the experts, the qāri', choose 'others' which is the field of language and communication. In regard to for the experience in their field of study, five experts have experience in range of 5-9 years with the percentage of 50%, one expert has experience in range of 10-14 years with the percentage of 10% and four experts have experience of 15 years and above with the percentage of 40%.

So, it can be concluded that the selection of the experts in this study is based on the experts' field of work whereby researcher had chosen the experts based on consideration of whether they are the professional experts who came from higher education institutions; or field expert or practitioners who are the KKQ teachers who

teach in schools and qāri'/qāri'ah who practice in reciting the Qur'ān with *Tarannum*. Subsequently, in field of study, researcher had chosen the experts who are from Qur'ān and Sunnah studies, Al-Qur'ān Education studies and also Islamic Education studies whereby the experts' experience in their field was more than five years. This is in line with the view of Berliner (2004) which argues that someone who with over five years of experience in their field is considered as an expert.

6.2.2 Expert Evaluation on the Elements of KKQ Meaning-Based *Tarannum* Mobile App Model

In evaluation phase, the Fuzzy Delphi Method was applied in evaluating a prototype model of KKQ meaning-based *Tarannum* mobile app. Table 6.5 below presents the elements that have been evaluated by the experts which are in section B in the expert evaluation questionnaire, in order to gain the consensus.

Table 6.5: Questionnaire on the Elements of KKQ Meaning-Based *Tarannum* Mobile App

No	Elements
1.	Types of <i>Tarannum</i> (<i>Bayyati, Nahawand, Rast, Hijaz, Soba, Sikah & Jiharkah</i>) should be included in the model of KKQ <i>Tarannum</i> mobile apps.
2.	<i>Tarannum</i> Variation should be included together with every types of <i>Tarannum</i>
3.	Text of <i>surah</i> should be included in the model of KKQ <i>Tarannum</i> mobile apps to make it easier for users to check their recitation of <i>surah</i> . (Selection of specific <i>surahs</i> from the <i>Tarannum</i> KKQ syllabus)
4.	Text of <i>tausyikh</i> should be included in the model of KKQ <i>Tarannum</i> mobile apps for each of the <i>Tarannum</i> melodies.
5.	The meaning of Qur'anic verses Text should be included in order to add the value of feeling in <i>Tarannum</i> recitation and at the same time users can correlated the verses with suitable <i>Tarannum</i> melody/ies.
6.	Audio of <i>Tausyikh</i> (<i>Tarannum</i> recitation) should be included in the model of KKQ <i>Tarannum</i> mobile apps for each of the <i>Tarannum</i> melodies.

7. Audio of Surah (*Tarannum* recitation) should be included in the model of KKQ *Tarannum* mobile apps so that users can hear and follow the recitation.
8. Graphics or Images are needed such as buttons and pictures to attract the students' attention so that, *Tarannum* mobile apps are not too empty and boring.
9. Video of *Tarannum* recitation by qāri' /qāri' ah should be included in the model of KKQ *Tarannum* mobile apps to add an interactive value for the KKQ model design.
10. Practice on *Tarannum* recitation should be included in the model of KKQ *Tarannum* mobile apps as reinforcement and attraction to the students.
11. Adzan with seven different melodies should be included in the model of KKQ *Tarannum* mobile apps in differentiating the *Tarannum* melodies.
12. Animation is not suitable to be embedded in KKQ meaning-based *Tarannum* as it may distract the *Tarannum* learning.

A total of ten experts were appointed to evaluate the prototype model that had been developed by the researcher by using an expert evaluation form. The instrument was distributed by face to face, using email and postal service. The expert evaluation form (questionnaire) (see **Appendix H**) was developed based on the document analysis conducted. The questionnaire developed based on the 7 point linguistic scale. Researcher had chosen the 7 point linguistic scale whereby the data obtained will be more precise and accurate. This view is according to Mohd Ridhuan and Nurulrabihah (2020) in their book which stated that the higher the number of scales the more precise and accurate the data obtained.

To determine the level of agreement among experts, there are few conditions that should be met by the researcher in order to gain a consensus. The first condition that the researcher should consider that the threshold value (d) of the items must be ≤ 0.2 . A threshold value will be calculated from the questionnaire and illustrated in the table that will be described below. The process of calculating the threshold value (threshold) will be done based on the following formula:

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

The threshold value will determine the value of the level of agreement among experts for each item. Each item that exceeds the threshold value (threshold) 0.2 will be marked. According to Cheng and Lin (2002), if there is a threshold value above 0.2, this indicates that the item did not reach the expert consensus. The second condition that the researcher needs to consider is the percentage of expert agreement must be $\geq 75.0\%$ (Chang et al., 2011). And the last condition is the Fuzzy score (A) must be \geq value α – cut = 0.5. Table 6.6 below presents the experts consensus in evaluating the elements of KKK meaning-based *Tarannum* mobile app model.

Table 6.6: Experts Concensus Findings in Evaluating the Elements of KKQ Meaning-Based *Tarannum* Mobile App Model

No	Elemen	Condition of Triangular Fuzzy Numbers		Condition of Defuzzification Process				Experts Agreement
		Threshold Value, (d)	Percentage of experts agreement, (%)	m1	m2	m3	Fuzzy Score (A)	
1	Types of <i>Tarannum</i> (<i>Bayyati, Nahawand, Rast, Hijaz, Soba, Sikah & Jiharkah</i>) should be included in the model of KKQ <i>Tarannum</i> mobile apps.	0.094	100.0%	0.760	0.920	0.990	0.890	ACCEPTED
2	<i>Tarannum</i> Variation should be included together with every types of <i>Tarannum</i> .	0.107	100.0%	0.720	0.890	0.980	0.863	ACCEPTED
3	Text of <i>surah</i> should be included in the model of KKQ <i>Tarannum</i> mobile apps to make it easier for users to check their recitation of <i>surah</i> . (Selection of specific <i>surahs</i> from the <i>Tarannum</i> KKQ syllabus)	0.128	100.0%	0.760	0.910	0.980	0.883	ACCEPTED
4	Text of <i>tausyikh</i> should be included in the model of KKQ <i>Tarannum</i> mobile apps for each of the <i>Tarannum</i> melodies.	0.323	40.00%	0.500	0.680	0.820	0.667	REJECTED
5	The meaning of Qur'anic verses Text should be included in order to add the value of feeling in <i>Tarannum</i> recitation and at the same time users can correlate the verses with suitable <i>Tarannum</i> melody/ies.	0.140	100.00%	0.620	0.810	0.950	0.793	ACCEPTED
6	Audio of <i>tausyikh</i> (<i>Tarannum</i> recitation) should be included in the model of KKQ <i>Tarannum</i> mobile apps for each of the <i>Tarannum</i> melodies.	0.326	40.00%	0.560	0.730	0.850	0.713	REJECTED

7	Audio of Surah (<i>Tarannum</i> recitation) should be included in the model of KKQ <i>Tarannum</i> mobile apps so that users can hear and follow the recitation.	0.107	100.00%	0.720	0.890	0.980	0.863	ACCEPTED
8	Graphics or Images are needed such as buttons and pictures to attract the students' attention so that, <i>Tarannum</i> mobile apps are not too empty and boring.	0.183	100.00%	0.680	0.840	0.950	0.823	ACCEPTED
9	Video of <i>Tarannum</i> recitation by qāri'/qāri'ah should be included in the model of KKQ <i>Tarannum</i> mobile apps to add an interactive value for the KKQ model design.	0.168	100.00%	0.700	0.860	0.960	0.840	ACCEPTED
10	Practice on <i>Tarannum</i> recitation should be included in the model of KKQ <i>Tarannum</i> mobile apps as reinforcement and attraction to the students.	0.162	100.00%	0.760	0.900	0.970	0.877	ACCEPTED
11	Adzan with seven different melodies should be included in the model of KKQ <i>Tarannum</i> mobile apps in differentiating the <i>Tarannum</i> melodies.	0.249	50.00%	0.580	0.750	0.880	0.737	REJECTED
12	Animation is not suitable to be embedded in KKQ meaning-based <i>Tarannum</i> as it may distract the <i>Tarannum</i> learning.	0.353	60.00%	0.420	0.590	0.760	0.590	REJECTED

Conditions:

Triangular Fuzzy Numbers

- 1) Threshold value $(d) \leq 0.2$
- 2) Percentage of expert agreement $\geq 75.0\%$

Defuzzification Process

- 3) Fuzzy Score $(A) \geq \text{value } \alpha - \text{cut} = 0.5$

Table 6.6 had presented the findings of experts' consensus in evaluating the elements of KKQ meaning-based *Tarannum* mobile app based on the analysis of Fuzzy Delphi Method conducted. From the table, there are twelve elements which had been evaluated by the experts. In order to measure the expert consensus in the study, researcher needs to fulfill three conditions. The first condition that the study has to fulfill is the threshold value (d) must be ≤ 0.2 . The second condition is the percentage of expert agreement must be $\geq 75.0\%$, and the third condition is the Fuzzy score (A) must be \geq value α – cut = 0.5. Based on the elements in this study, there are four elements that did not meet the conditions of Fuzzy Delphi analysis respectively elements four, six, eleven and twelve.

Element four - "Text of *tausyikh* should be included in the model of KKQ *Tarannum* mobile apps for each of the *Tarannum* melodies."

Element six - "Audio of *Tausyikh* (*Tarannum* recitation) should be included in the model of KKQ *Tarannum* mobile apps for each of the *Tarannum* melodies."

The elements four and six which related to text and audio of *tausyikh* did not get the agreement from a few experts whereby the threshold value (d) is more than 0.2, for text *tausyikh* the threshold value is 0.323 and for audio of *tausyikh* the threshold value is 0.326. While for percentage of expert agreement, the percentage is below 75%. The percentage for text of *tausyikh* is 40.00% and the percentage of expert agreement for audio of *tausyikh* is also 40%. Therefore, the elements of *tausyikh*'s text and audio had been rejected hence, the elements was not included into the model.

The element eleven which is “Adzan with seven different melodies should be included in the model of KKQ *Tarannum* mobile apps in differentiating the *Tarannum* melodies”, the statement did not get the agreement from a few experts. The analysis showed that experts agreement does not meet condition one and condition two of Fuzzy Delphi analysis whereby the threshold value is more than 0.2 which resulted 0.249 and the percentage of expert agreement is 50% of agreement which is below the agreed value. So, the findings had rejected the element of *adzan*. Therefore, the element of *adzan* is not included in the model.

In the twelfth statement which is “Animation is not suitable to be embedded in KKQ meaning-based *Tarannum* as it may distract the *Tarannum* learning”, the analysis showed that experts agreement do not meet condition one and condition two of Fuzzy Delphi analysis whereby the threshold value is more than 0.2 which the result is 0.353 and the percentage of expert agreement is at 60% of agreement. So, the findings had rejected the statements and consider that the animation is suitable to be embedded in the model.

Table 6.7 presents the final results of the elements of KKQ meaning-based *Tarannum* mobile app. Three elements were rejected and were not included in the model. As for the statement “Animation is not suitable to be embedded in KKQ meaning-based *Tarannum* as it may distract the *Tarannum* learning.” is not relevant as it does not achieve the agreement among the experts. Therefore, the animation is suitable to be embedded in KKQ meaning-based *Tarannum* and should be included in the model.

Table 6.7: The final results of the elements of KKQ Meaning-Based *Tarannum* Mobile App Model

No	Elements
1.	Types of <i>Tarannum</i> (Bayyati, Nahawand, Rast, Hijaz, Soba, Sikah & Jiharkah) should be included in the model of KKQ <i>Tarannum</i> mobile apps.
2.	<i>Tarannum</i> Variation should be included together with every types of <i>Tarannum</i>
3.	Text of <i>surah</i> should be included in the model of KKQ <i>Tarannum</i> mobile apps to make it easier for users to check their recitation of <i>surah</i> . (Selection of specific <i>surahs</i> from the <i>Tarannum</i> KKQ syllabus)
4.	The meaning of Qur'anic verses Text should be included in order to add the value of feeling in <i>Tarannum</i> recitation and at the same time users can correlated the verses with suitable <i>Tarannum</i> melody/ies.
5.	Audio of Surah (<i>Tarannum</i> recitation) should be included in the model of KKQ <i>Tarannum</i> mobile apps so that users can hear and follow the recitation.
6.	Graphics or Images are needed such as buttons and pictures to attract the students' attention so that, <i>Tarannum</i> mobile apps are not too empty and boring.
7.	Video of <i>Tarannum</i> recitation by qāri'/qāri'ah should be included in the model of KKQ <i>Tarannum</i> mobile apps to add an interactive value for the KKQ model design.
8.	Practice on <i>Tarannum</i> recitation should be included in the model of KKQ <i>Tarannum</i> mobile apps as reinforcement and attraction to the students.
9.	Animation is suitable to be embedded in KKQ meaning-based <i>Tarannum</i> .

6.2.3 Expert Evaluation on Usability of the Overall Model

In section C of the expert evaluation form, this study is intended to gain experts consensus of the overall usability of the prototype model developed. Table 6.8 shows the statements that the experts have to evaluate in order to seek agreements towards the overall usability of the prototype model developed.

Table 6.8: The Statements of the Overall Usability of the Prototype Model

No.	Statements
1.	The model is very practical and suitable for developing mobile application for KKQ <i>Tarannum</i> subject.
2.	The model is able to be a guide to mobile application developers in developing <i>Tarannum</i> mobile applications for KKQ class.

- | | |
|----|--|
| 3. | The model clearly demonstrates the need to develop KKQ <i>Tarannum</i> mobile application. |
| 4. | The model clearly shows the essential components that need to be included in the <i>Tarannum</i> mobile application for KKQ class. |
| 5. | The model clearly shows the content that should be included in KKQ <i>Tarannum</i> mobile application for the class. |

Table 6.9 presents the findings of the experts' consensus on the overall usability of the prototype model. From the table, it can be concluded that all experts who were directly involved in this study agreed on the overall usability of the model. For condition 1, the threshold value (d) must be ≤ 0.2 , while the percentage of experts agreement must be $\geq 75.0\%$, and for the Fuzzy Score (A) the value of α - cut $\geq \alpha = 0.5$.

Based on the findings, the threshold value (d) for all statements were below 0.2 which is for statement one, 'The model is very practical and suitable for developing mobile application for KKQ *Tarannum* subject.' the result for threshold value is 0.096, while the experts agreement percentage is 100%, and for Fuzzy score (A), the alpha-cut were exceeds α -cut $= > 0.5$, which resulted 0.853. For statement two, 'The model is able to be a guide to mobile application developers in developing *Tarannum* mobile applications for KKQ class', the result for threshold value is 0.125, while the experts agreement percentage is 100%, and for Fuzzy score (A), the alpha-cut were exceeds α -cut $= > 0.5$, which resulted 0.837. For statement three, 'The model clearly demonstrates the need to develop KKQ *Tarannum* mobile application' the result for threshold value is 0.145, while the experts agreement percentage is 100%, and for Fuzzy score (A), the alpha-cut were exceeds α -cut $= > 0.5$, which resulted 0.820. For statement four, 'The model clearly shows the essential components that

need to be included in the *Tarannum* mobile application for KKQ class' the result for threshold value is 0.157, while the experts agreement percentage is 100%, and for Fuzzy score (A), the alpha-cut were exceeds α -cut = > 0.5, which the result is 0.830. For statement five, 'The model clearly shows the content that should be included in KKQ *Tarannum* mobile application for the class' the result for threshold value is 0.172, while the experts agreement percentage is 100%, and for Fuzzy score, the alpha-cut exceeds α -cut = > 0.5, which resulted 0.797. Overall, the statements for usability of the prototype model are that all items have obtained an expert agreement with good agreement value and meet the prescribed conditions.

Table 6.9: Experts Consensus Findings in Evaluating the Overall Usability of the Prototype Model

No	Items	Condition of Triangular Fuzzy Numbers		Condition of Defuzzification Process				Experts Agreement
		Threshold Value, (d)	Percentage of experts agreement, (%)	m1	m2	m3	Fuzzy Score (A)	
1	The model is very practical and suitable for developing mobile application for KKQ <i>Tarannum</i> subject.	0.096	100.00%	0.700	0.880	0.980	0.853	ACCEPTED
2	The model is able to be a guide to mobile application developers in developing <i>Tarannum</i> mobile applications for KKQ class.	0.125	100.00%	0.680	0.860	0.970	0.837	ACCEPTED
3	The model clearly demonstrates the need to develop KKQ <i>Tarannum</i> mobile application.	0.145	100.00%	0.660	0.840	0.960	0.820	ACCEPTED
4	The model clearly shows the essential components that need to be included in the <i>Tarannum</i> mobile application for KKQ class.	0.157	100.00%	0.680	0.850	0.960	0.830	ACCEPTED
5	The model clearly shows the content that should be included in KKQ <i>Tarannum</i> mobile application for the class.	0.172	100.00%	0.640	0.810	0.940	0.797	ACCEPTED

Conditions:

Triangular Fuzzy Numbers

- 1) Threshold value $(d) \leq 0.2$
- 2) Percentage of expert agreement $\geq 75.0\%$

Defuzzification Process

- 3) Fuzzy Score $(A) \geq \text{value } \alpha - \text{cut} = 0.5$

6.3 Finalized Model of KKQ Meaning-Based *Tarannum* Mobile App

After the data collection and analysis in the evaluation phase are done, researcher had come out with the finalized model of KKQ meaning-based *Tarannum* mobile app as depicted in Figure 6.1. But only for one element of multimedia, the agreement could not be reached by the experts whereby some of the experts would prefer that the animation of multimedia elements should be applied into KKQ meaning-based *Tarannum* mobile app.

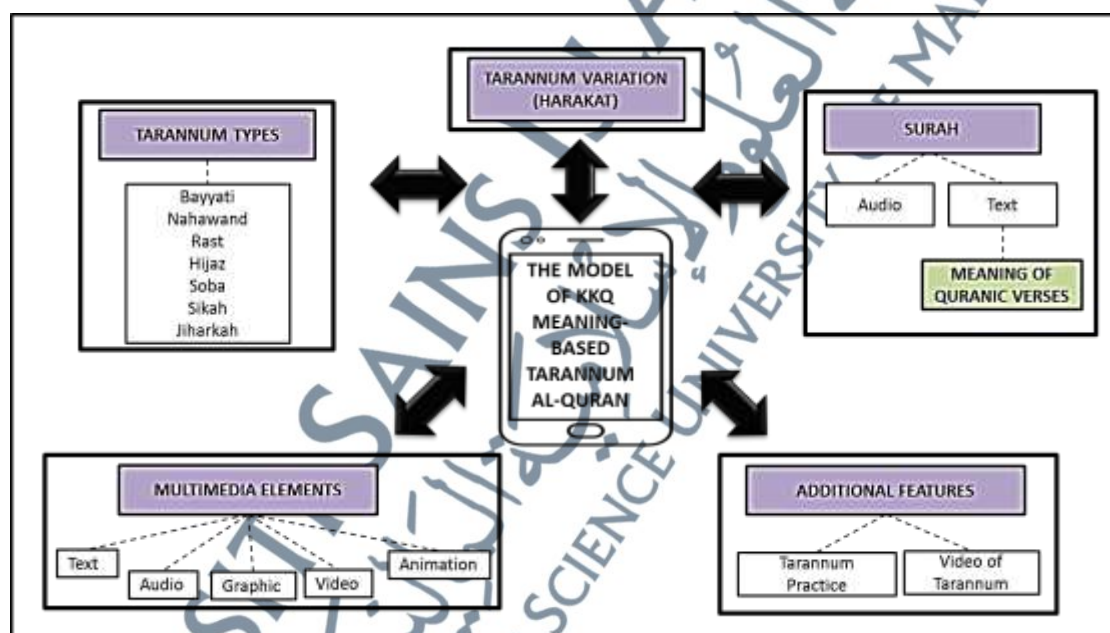


Figure 6.1: The Finalized Model of KKQ Meaning-Based *Tarannum* Mobile App

In conclusion, there are five main elements that the KKQ meaning-based *Tarannum* Al-Qur’ān mobile application model should include. The main elements of the model are (1) ***Tarannum* types** which consist of seven types of *Tarannum* that is *Bayyati*, *Nahawand*, *Rast*, *Hijaz*, *Soba*, *Sikah* and *Jiharkah*. Each type of *Tarannum*

melodies has its own characteristics, thus the recitation of *Tarannum* must be recited based on its characteristic which for example, *Tarannum Hijaz* is suitable for verses which indicates the command, prohibits and anger. So, the verses that indicate those meaning has to be the example for that type of *Tarannum*.

(2) ***Tarannum* variation or the *harakat* of *Tarannum*.** *Harakat* means style of singing or chanting that is composed from several *qit'ah* with its particular mahattah. *Qit'ah* means the shortest motion of a song without a specific mahattah while *mahattah* means end style to a certain *harakat*. Generally, the role of *harakat* is to diversify the sound art, enliven the recitation, improve the quality of performance, and also as a measure of the melodies which to be recited afterwards. Basically, in *Tarannum* science, the number of *harakat* is six and each of it has its own role (Nik Jaa'far, 2012). From the analysis of KKQ handbook, each of the *Tarannum* melodies has to be recited in different *harakat*. For example; in reciting *Tarannum Bayyati*, *surah As-sajadah* verses one until three, it must be recited based on *harakat* one until *harakat* four.

(3) **Surah or chapters;** which include the audio or text or both of the surah or chapters. Based on the analysis done on the KKQ handbook, the chapters were from the selected *surahs* which are *surah al-Insan*, *surah as-Sajadah*, *surah al-Waqiah*, *surah Nuh*, *surah al-Jum'ah*, *surah as-Soff*, *surah al-Munafiqun*, *surah Yasinn* and *surah al-Mulk*. All of these *surahs* were chunked into verses and recited based on different *Tarannum* melodies with its variation (*harakat*).

(4) **Additional features** (*Tarannum* practice, and Video of *Tarannum*). Additional features are the additional elements that are available in the existing *Tarannum* mobile apps. Based on the analysis done towards the exiting *Tarannum*

mobile apps, researcher had found that there are three interesting features that can be included into the KKQ meaning-based *Tarannum* mobile app model. Then, these elements had been evaluated by the experts whereby they had agreed that only two elements should be included into the mobile app model in order to grab the users' attention and interest. The additional features of *Tarannum* practice and video of *Tarannum* are described as follows:

(a) The features of ***Tarannum* practice** is whereby users can do the *Tarannum* recording voice and the apps are able to give the marks for the recording of *Tarannum* recitation. This engaging function is attractive and will grab the users' interest to do more practices on *Tarannum* recitation.

(b) **Video of *Tarannum*** is one of the additional features that can be included in the designed KKQ mobile app model in order to attract the users' interest to learn and practice the *Tarannum* recitation. For example; the video of famous reciter that recites the Qur'an with *Tarannum* recitation.

(5) The **Multimedia elements** which according to Vaughan (2011) and Costello et al. (2012), there are five elements of multimedia which are text, audio, graphics, video and animation. In this study, researcher had proposed four types of multimedia elements in prototype model of KKQ meaning-based *Tarannum* mobile app which are the elements of text, graphic, audio and video. But, after conducting an expert evaluation, the experts agreed that the elements of animation should also be applied into the model. So, all elements of multimedia that is text, audio, graphic, video and animation have to be included in the KKQ meaning-based *Tarannum* mobile app model.

For the element of **Qur'ānic verses meaning**, researcher proposed that the element of meaning of Qur'ānic verses should be included into the KKQ *Tarannum* mobile apps in the form of text; so that the element of meaning can be applied into the *Tarannum* recitation as users understand the meaning of the verses. At the same time, users can feel and internalise (*tadabbur*) with the Qur'ān recitation. Based from expert evaluation analysis done, the experts agreed that the element of meaning should be included in the model.

6.4 Summary of research findings phase 3

In conclusion, this phase which is the evaluation phase, this study had done an analysis of the experts' agreement. A Fuzzy Delphi Method was used in this phase in order to obtain the experts consensus of the model developed. Ten experts has been appointed to evaluate the model by using the questionnaire as an instrument to measure the elements of KKQ meaning-based *Tarannum* mobile app model and the usability of the model developed. The result from the findings has been presented in this phase. Each of the items were measured by using the Fuzzy Delphi conditions which are 1) The threshold value (d) must be ≤ 0.2 , 2) The percentage of expert agreement must be $\geq 75.0\%$, and 3) The Fuzzy Score (A) value must be $\geq \alpha - \text{cut} = 0.5$. Item number 4, 6 and 11 did not fulfill the conditions required and have to be rejected. While, item number 12 is the negative item and as the experts did not achieve the agreement, the negative item were converted to the positive item.

It can be concluded that the experts agreed to accept some of the model of KKQ meaning-based *Tarannum* mobile app developed. There are three elements that had been rejected throughout this study after the experts' evaluation process. For the element of multimedia which is an animation, the experts agreed to include the element as they see that the element is important and suitable to be applied in *Tarannum* mobile app in attracting the users' attention and interest. Overall, for usability of the model developed, the experts agreed with the model of KKQ meaning-based *Tarannum* mobile app development.