

CHAPTER 7

DISCUSSIONS, IMPLICATIONS AND RECOMMENDATIONS

7.1 Introduction

Chapter 7 which is the last chapter will briefly cover on the overall research that has been done in three phases that is based on the DDR systematic approach in the summary of the research. This chapter will also discuss on the research findings for phase 1 until phase 3. Besides, this research will look through the implication gained from this study and the suggestions towards it. Apart from that, researcher will describe the contributions from the research done. Last but not least, this chapter will wrap up with the research with recommendations for future estimation research.

The purpose of this chapter is mainly to discuss on the research findings from the need analysis research result, design and development research result and the experts evaluation of the KKQ meaning-based *Tarannum* al-Qur'ān model developed. So, the discussion will be more on reinforcement from the research findings that is supported by the previous studies, opinions, suggestions, and comments from participants who were involved in this research.

7.2 Summary of the research

This research is intended to design and develop a model of meaning-based *Tarannum* al- Qur'ān mobile apps for KKQ teaching and learning purposes. It was guided by the design and development research (DDR) approach by Richey and Klein. This research is systematically done in three phases which are; the need analysis phase (phase 1), the design and development phase (phase 2), and the evaluation phase (phase 3).

In phase 1 which is the need analysis phase, the objectives of the research conducted in order to identify the issues and problems then, analyse the needs in developing the KKQ meaning-based *Tarannum* al-Qur'ān mobile app. Through this phase, researcher had done the document analysis and interview session with the participants who were involved; the KKQ teachers, KKQ students and the qāri' and qāri'ah. The interview protocols guided researcher through this interview sessions. The interview protocols developed by the researcher based on research question of the study. The data were analysed by using thematic analysis.

Phase II of the research refers to the design and development model of KKQ meaning-based *Tarannum* al-Qur'ān mobile app conducted using the document analysis method. Through this method, researcher had done the survey form google Play Store in order to find out the existing *Tarannum* mobile apps that are available in the online market. Researcher had found out ten *Tarannum* mobile apps and documented each of the apps; their components, elements and the features of existing *Tarannum* mobile apps. Apart from that, the document analysis on KKQ *Tarannum*

handbook was done in order to extract the components of *Tarannum* learning in order to design and develop a model of KKQ meaning-based *Tarannum* mobile apps.

In phase III which is the last phase of the study is the expert evaluation phase towards the KKQ meaning-based *Tarannum* mobile app model developed. The model was evaluated by ten experts who were the lecturers in Islamic Studies fields, the experienced KKQ teachers, and the qāri's (Qur'ān reciters). The questionnaire was developed in order to gain the data regarding the model evaluation. The questionnaire comprises of three section respectively section A for demographic information, section B for the evaluation on elements of KKQ meaning-based *Tarannum* mobile app model and section C is for the evaluation on the overall usability of the model developed. The analysis of Fuzzy Delphi has been used in order to analyze the questionnaire in this phase.

Briefly, this research had figured out the issues and problems in *Tarannum* field and also the needs in developing KKQ *Tarannum* mobile app. Next, researcher had developed the model of KKQ meaning-based *Tarannum* mobile app as a blueprint for the product development in teaching and learning of *Tarannum* subject. Further, the developed model has been evaluated by the experts in verifying the elements of the *Tarannum* learning for the model of KKQ meaning-based *Tarannum* mobile app.

7.3 Discussion on Findings of phase 1: The Analysis Phase

As mentioned in the previous studies, there were insufficient materials and sources in teaching KKQ *Tarannum* al- Qur'ān. Therefore, this study shows that there

is a need and necessity in developing the model of *Tarannum* al-Qur'ān mobile app as a blueprint and guideline for the developer to design and develop the interactive teaching and learning aids for the KKQ *Tarannum* learning. So, in phase I, the analysis phase; researcher had conducted the document analysis and interview sessions with the participant to support the literature review. For document analysis, the documents such as the journals, proceedings, theses, and general articles regarding *Tarannum* were reviewed in identifying the general issues and problems in regard to the *Tarannum* field. All the relevant documents are included into Mendeley desktop and exported to Atlas.ti 8 software. Each of the documents was assigned with the relevant codes in order to find the answers for the research questions and the answers for this research question will be in the thematic analysis. While, for interview sessions researcher had conducted the sessions guided by the interview protocols. The audio of interview session were recorded and transcribed into documents. Then the same steps were used in order to analyse the interview. The transcribed interviews were compiled in Atlas.ti 8 and researcher had assigned the codes based on deductive and inductive coding approach. The next step, researcher had grouped the code into categories which is in the same attributes.

In this phase, researcher had to answer the research questions one and research question two and the main research questions had been answered by the sub-research questions as follow:

- 1) What are the issues and problems in *Tarannum* field?
 - 1.1 What are the general issues and problems in *Tarannum* field?
 - 1.2 What are the issues and problems in KKQ *Tarannum* education?

2) What are the needs in developing a KKQ meaning-based *Tarannum* mobile app model?

2.1 How was the approach in teaching *Tarannum* recitation?

2.2 What are the materials used in teaching and learning KKQ *Tarannum*?

2.3 How was the technique in reciting the Qur'ān with *Tarannum*?

2.4 If there is a *Tarannum* mobile app available for KKQ, will it help in teaching and learning process?

7.3.1 Discussion on the Issues and Problems in *Tarannum* Field

In answering sub-research question 1.1 which is to figure out the general issues and problems in *Tarannum* field, researcher had solely conducted the document analysis method. As presented in Chapter 4, the findings show that there are two general issues in *Tarannum* field that is the law (*hukūm*) in reciting *Tarannum* al-Qur'ān and teachers' challenges in teaching *Tarannum* al-Qur'ān. While, for sub-research question 1.2 which is to figure out the issues and problems in KKQ *Tarannum* education, researcher had triangulate the document analysis method with the interview method in order to find the answer. For document analysis, the findings showed that there are several issues and problems in regard to the KKQ *Tarannum* education. As depicted in Figure 4.2 in Chapter 4, the issues and problems are from various perspective which are; 1) Unsuitable class time and session (evening) (Farah Ihyani & Mohd Aderi, 2011; Mohd Faisal et al., 2012) 2) Lack of qualified, skillful and experienced *Tarannum* teachers (Noor Najihan et al., 2011) 3) Teachers' questionable proficiency in *Tarannum* (Farah Ihyani & Mohd Aderi, 2011; Mohd Faisal et al., 2012; Muhamad Nasir et al., 2017) 4) Limited Tajwīd and *Tarannum*

knowledge among students (Muhamad Nasir et al., 2017) 5) Students are not provided *Tarannum* CD ROM by KPM (Noor Najihan et al., 2011) 6) unsatisfactory result or grades (Muhamad Nasir et al., 2017) 7) students' low proficiency in *Tarannum* (Muhamad Nasir et al., 2017) 8) Perception, attitude and students' problem in grasping *Tarannum* skills (Muhamad Nasir et al., 2017) 9) Inadequacy and Inefficiency of students' learning method (Aznil et al., 2014) 10) Conventional teaching approach (Farah Ihyani & Mohd Aderi, 2011; Mohd Faisal et al., 2012; Noor Najihan et al., 2011).

While for interview sessions, researcher had conducted sessions with five teachers and four students. In identifying the issues and problems in KKQ *Tarannum* education, researcher had segregated the analysis from the teachers' perspectives and from the students' perspectives. Based on the findings presented in Chapter 4, the teachers' perspectives on the issues and problems in KKQ *Tarannum* education are depicted in Figure 4.3, whereby the issues and problems includes; 1) the students' proficiency in *Tarannum* subject, 2) Teachers' proficiency in *Tarannum* subject 3) Students' interest in *Tarannum* subject, 4) Issues with KKQ class, 5) Issues with KKQ subjects and syllabus, and 6) Issues with teaching and learning aids. The issues and problems in KKQ *Tarannum* education identified based on the students' perspectives are depicted in Figure 4.4 that was presented in chapter 4. The issues and problems are; 1) the students having difficulties to follow *Tarannum* melodies, 2) the students did not have enough breath, 3) no gadget to use as learning aids, and 4) students having problems with tajwid al-Qur'an.

As highlighted in the problem statements, the issues and problems regarding the *Tarannum* al- Qur'ān subject is on the teaching and learning aids whereby teachers tend to use traditional approach in teaching *Tarannum* (Mohd Aderi, 2011) and most of the teachers did not use teaching and learning aids in the classroom (Misnan et al., 2014). The problem statements are supported by the findings from this phase whereby there are the issues regarding the teaching and learning aids.

7.3.2 Discussion on the Needs in Developing a KKQ Meaning-Based *Tarannum* Mobile App Model.

- 2.1 How was the approach in teaching *Tarannum* recitation?
- 2.2 What are the materials used in teaching and learning *Tarannum*?
- 2.3 How was the technique in reciting the Qur'ān with *Tarannum*?
- 2.4 If there is a mobile app available, will it help in teaching and learning process?

In order to seek the needs in developing a model of meaning-based *Tarannum* mobile app for KKQ classes, researcher had formulated four sub-research questions as mentioned in the above section in gaining the needs. In this part, researcher had conducted the interview session with the teachers to get the answer. Five KKQ teachers had been interviewed by the researcher.

For the sub-research question 2.1, this study wants to know the approach in teaching *Tarannum* recitation. Based on the data presented in Chapter 4, it can be concluded that each of the teachers has their own teaching approach in teaching *Tarannum* al-Qur'ān. Some were using the *tausyikh* approach, some were using short

chapters to make the students master the *Tarannum* melodies and some were using CD to teach the students and they teach *harakat* by *harakat* until students get the melodies. It was also revealed here that the teachers who can do the *Tarannum* recitation will use their own voice to teach the *Tarannum* and the one who are not proficient in *Tarannum* recitation will use other sources to teach *Tarannum*.

For sub-research question 2.2, this study investigated the teaching aids used in KKQ *Tarannum* learning. The same method were used in which the interview session conducted with five KKQ teachers. As depicted in Figure 4.5 in Chapter 4, there were various kinds of teaching aids that were used by the teachers in teaching *Tarannum* subject. Upon with the result, there were only two kinds of teaching aids provided by KPM to the teachers in order to teach the KKQ subject which are the KKQ handbook and the CD. For students, they were not provided any materials in KKQ *Tarannum* learning. Hence, the teachers take an initiative in diversifying the teaching aids and learning materials to further improve the teaching and learning process.

Based on the interview session conducted in this study, researcher had found that the teaching and learning materials such as the KKQ exercise book, Youtube, PowerPoint, Whatsapp group, email, audio recording, laptop and speakers are the initiative that were used by the teachers in teaching *Tarannum* subject.

In answering the sub-research question 2.3, which is “How was the technique in reciting the Qur’ān with *Tarannum*?”, researcher had interviewed five KKQ teachers and the qāri’ and qāri’ah. In this section, researcher want to figure out the techniques of reciting the *Tarannum* al-Qur’ān which is; whether the *Tarannum*

practitioners recite it based on the meaning of the Qur'ānic verses or vice versa. Based on the data presented in Chapter 4, this study has concluded that in reciting *Tarannum* al-Qur'ān or in teaching the students to recite the *Tarannum* al-Qur'ān, the *Tarannum* practitioners which are the KKQ teachers and also the qāri' and qari'ah did not fully apply the *Tarannum* recitation based on the meaning of Qur'ānic verses due to the Arabic language limitations to understand the meaning of the Qur'ān. Besides, based on the teachers' responses, they claimed that the example the KPM has given in the KKQ handbook also did not emphasised the *Tarannum* recitation based on the meaning of Qur'ānic verses.

In sub-research question 2.4, this study wants to figure out whether the *Tarannum* mobile app can help in the teaching and learning process. Based on this study, researcher had conducted the interview session with five teachers and four students in figuring out this matter. This study had found that the teachers and the students all agreed that mobile application is needed as one of the teaching and learning aids. On the teachers' side, it will help those who are unproficient in reciting the Qur'ān with *Tarannum* by using this application as teaching aid in assisting teachers in the process of teaching and learning in class. Besides that, the students can use it and practice the *Tarannum* recitation at home. As for students' views, the KKQ *Tarannum* mobile app can be beneficial to them in practicing *Tarannum* recitation with mobile app. It can be one of the self-learning methods for them to improve their *Tarannum* proficiency and can cultivate students' interest in learning *Tarannum* Al-Qur'ān by using this kind of application. By diversifying the teaching aids and learning materials, it will help to improve the teaching and learning process.

7.4 Discussion on Findings of Phase 2: The Design and Development Phase

As stated in the problem statements, there is a need to develop an interactive teaching and learning aids for the use of KKQ *Tarannum*. According to the study conducted by Mohd Aderi (2011) he indicated that teachers' tendency to use traditional approach in teaching *Tarannum* causes a dull atmosphere and inactive students. Therefore, the study had suggested that the KKQ teachers should always improvise their pedagogical skills by using a diversity of teaching strategies and teaching aids in teaching *Tarannum* subject. Whereby, according to Misnan et al. (2014), the study had found that half of the students did not have knowledge on *Tarannum* al- Qur'ān and unable to recite al-Qur'ān with *Tarannum*. The study suggested that teachers require adequate training, specifically in the aspect of ICT and the use of teaching and learning aids. The study also shows that teachers who use teaching and learning aids in their *Tarannum* teachings are very little. In addition, as presented in Chapter 4, it has been found that there are plenty of issues arisen from this conducted research. In order to enhance the teaching and learning materials for KKQ *Tarannum* subject, this research conducted to design and develops a model of interactive material which is KKQ meaning-based *Tarannum* mobile app. This model will be a guide for developer to develop an educational KKQ *Tarannum* mobile app in the future. Furthermore, it can be one of the self-learning materials for both teachers and students.

Through this phase, the design and development phase; researcher had formulated one research question which is,

RQ2 : How to design and develop a model for KKQ meaning-based Tarannum mobile app?

In order to answer this main research question above, it has been measured by the sub-research question as follows;

- 3.1 What are the components of *Tarannum* learning in the existing *Tarannum* mobile apps?
- 3.2 What are the components of *Tarannum* learning in the KKQ handbook?
- 3.3 What are the elements of multimedia included in the existing *Tarannum* mobile apps?
- 3.4 What are the features of the existing *Tarannum* mobile apps?

In designing and developing the model of KKQ meaning-based *Tarannum* mobile app, researcher had done a survey through the GooglePlay platform in searching the *Tarannum* mobile apps available in the market. A few keywords were used in searching the apps and yield the targeted search. Ten *Tarannum* mobile apps have been chosen based on the keywords search on “*Tarannum* al-Qur’ān”, “*Maqamat* al-Qur’ān”, and “*Tilawah* al-Qur’ān”. Each of the *Tarannum* apps were documented every page in a table and researcher had figured out the elements of *Tarannum* learnings in each. Heading 5.2.1 in Chapter 5 presented the document analysis on each of the ten existing *Tarannum* mobile apps with its pages and elements in each.

The integration of *Tarannum* learning components, the multimedia elements, and the study of existing *Tarannum* mobile apps features yield to a comprehensive *Tarannum* mobile app model.

7.4.1 Discussion on the Components of *Tarannum* learning in the existing *Tarannum* mobile apps

To design and develop a KKQ meaning-based *Tarannum* mobile app, researcher had done several of analyses in figuring out the important components to be included in the model. One of the analyses done is a survey through the online market which is Google Play Store and finding the existing *Tarannum* mobile apps through this market. After the search was done, researcher had found out *Tarannum* mobile apps with the relevant keyword search and listed ten *Tarannum* mobile apps as presented in Table 5.3 in Chapter 5. Next, researcher had documented all the listed mobile apps and extracted all the components relevance to *Tarannum* learning. The matrix analysis had been done and the result as shown in Table 5.14 in Chapter 5.

From the analysis of the existing *Tarannum* mobile apps, it can be concluded that the components of *Tarannum* learning were 1) seven types of *Tarannum*, which are Bayyati, Soba, Hijaz, Rast, Sikah, Jharkah, and Nahawand, 2) *Tarannum* variation (Harakat of *Tarannum*), 3) Sūrah or verses whether in type of text or audio or both, 4) tausyikh or Arabic poems in type of text or audio or both, and 5) additional features provided from the apps which are the practice for *Tarannum*, Adzan and video of zikir for babies.

7.4.2 Discussion on the Components of *Tarannum* learning in the KKQ handbook

As to design and develop the model of KKQ *Tarannum* mobile app, the document analysis on KKQ handbook is one of the analyses that had been done by the researcher in order to figure out the components of *Tarannum* learning. The KKQ handbook is one of the teaching materials that were provided by KPM to the KKQ teachers in teaching and learning for KKQ classes. Through this document analysis, researcher had identified the components of *Tarannum* learning to be included in the mobile app model. The Table 5.15 depicted in Chapter 5 had shown that the components which were necessary to be included in the model developed by the researcher.

The main components of *Tarannum* learning in KKQ handbook are; 1) the types of *Tarannum* which are *Tarannum* Bayyati, *Tarannum* Nahawand, *Tarannum* Rast, *Tarannum* Hijaz, *Tarannum* Soba, *Tarannum* sikah and *Tarannum* Jiharkah. 2) Qur'anic chapters and verses that were used in KKQ syllabus for *Tarannum* recitation, and 3) *Tarannum* variation which means the harakat for each of the *Tarannum* types.

As described in the literature review in chapter 2, the famous *Tarannum* melodies in all Islamic countries comprised of two streams which are *Tarannum* Hijazi and *Tarannum* Misri. *Tarannum* Hijazi is formed from *lahjah* Hijazi (Hijazi dialect) which originated and evolved in Mecca and around the Eastern part of the Arabian Peninsula, known as the *Hijaz*. The rhythm and melody are quite active and the voice is quite high. The Arabs Hijaz society usually recite al-Qur'ān with

Tarannum guided by the basics of the melodies as formulated with abbreviations

Bihumrin Jasad (بِحُمْرِ جَسَدٍ) which indicate:

- 1) The letter Ba' (ب) addresses the style of the Banjakah melody
- 2) The letter Ha' (ح) addresses the style of the Husaini melody
- 3) The letter Mim (م) addresses the style of the Mayyah melody
- 4) The letter Ro (ر) addresses the style of the Rakbi melody
- 5) The letter Jim (ج) addresses the style of the Jaharkah melody
- 6) The letter Sin (س) addresses the style of the Sikah melody
- 7) The letter Dal (د) addresses the style of the Dakkah melody

While *Tarannum* Misri is formed from *lahjah* Misri (Egyptian dialect) that evolved in the Nile valley and it is believed that it was popularised by Egyptian society after 1940s. The rhythm and melody are gentle and soft with mild and simple voice (Mohd Ali, 2015; Nik Jaa'far, 2012). *Tarannum* Misri have been guided by the basics of the melodies as formulated with abbreviations *Bihushrin Jasad* (بِحُصْرِ جَسَدٍ) which indicate:

- 1) The letter Ba' (ب) addresses the style of the Bayyati melody
- 2) The letter Ha' (ح) addresses the style of the Hijaz melody
- 3) The letter Shad (ص) addresses the style of the Soba melody
- 4) The letter Ro' (ر) addresses the style of the Rast melody
- 5) The letter Jim (ج) addresses the style of the Jiharkah melody
- 6) The letter Sin' (س) addresses the style of the Sikah melody
- 7) The letter Dal (د) addresses the style of the Nahawand melody

Based on the findings in Chapter 5, the seven *Tarannum* types that were applied in KKQ *Tarannum* learning were based from *Tarannum* Mistri which comprised of *Tarannum* Bayyati, *Tarannum* Hijaz, *Tarannum* Soba, *Tarannum* Rast, *Tarannum* Jiharkah, *Tarannum* Sikah and *Tarannum* Nahawand. According to Mohd Ali (2015) and Nik Jaa'far (2012), these seven types of *Tarannum* is considered as the basics of *Tarannum* melodies that are widely applied in the Muslims countries compared to *Tarannum* Hijazi.

The second component of *Tarannum* learning in KKQ handbook is the chapters and verses. There are nine chapters of al-Qur'ān in the syllabus which are verses al-Insān, as-Sajadah, al-Wāqiah, Nuh, al-Jum'ah, as-Soff, al-Munāfiqūn, Yāsinn and al-Mulk. Each of the chapters will be chunked into verses and the verses will be recited with a suitable *Tarannum* variation (*harakat*) accordingly.

The *harakat* is whereby the third component of *Tarannum* learning in the KKQ handbook. According to Bahagian Pendidikan Islam (n.d.); Mohd Ali (2015); Nik Jaa'far (2012), *harakat* means style of singing or chanting that is composed from several *qit'ah* with its particular *mahattah*. Generally, the role of *harakat* is to diversify the sound art, to enliven the recitation, improve the quality of performance, and also as a measure of the melodies which to be recited afterwards (Nik Jaa'far, 2012).

7.4.3 Discussion on the Elements of multimedia included in the existing *Tarannum* mobile apps

As described in chapter 2, multimedia refers to the integration of two or more of different information media within a computer system. These media can include text, images, audio, video, and animation (Sethi, 2005) and (Mayer, 2001) in (Mohd Elmagzoub, 2015). Vaughan (2011) and (Costello et al., 2012) define multimedia as any combination of text, graphic art, sound, animation, and video delivered to the user by computer or other electronic or digitally manipulated means. As presented in Chapter 5, researcher had described on each of the multimedia elements then displayed the interface for each of the elements from the existing *Tarannum* mobile apps studied.

Through a document analysis done on ten *Tarannum* mobile apps, researcher had come out with a matrix analysis on the elements of multimedia which comprises of text, audio, graphics, video and animation in the existing *Tarannum* mobile apps. Through this section of the study, researcher had analysed the multimedia elements that are available in each of the *Tarannum* mobile apps in the form of table. The result of the analysis is presented in the Table 5.16 in Chapter 5. This matrix analysis was validated by the software engineer expert. These multimedia elements are one of the components that were included into a model of KKQ meaning-based *Tarannum* developed.

7.4.4 Discussion on the features of the existing *Tarannum* mobile apps

In this section, researcher wants to figure out the features of the existing *Tarannum* mobile apps based on its interface, performance, user friendly, cost for downloading the apps and the internet usage when using the apps. This study had segregated the apps based on its category which are education category, music and audio category and book and reference category. Then, this study had compared the features of ten existing *Tarannum* mobile apps in the matrix analysis. Table 5.17, 5.18 and 5.19 in Chapter 5 presented the analysis from each of the categories towards *Tarannum* apps features.

In this section, researcher had studied on the features of the existing *Tarannum* mobile apps based on their interface, performance, user-friendliness, cost for downloading the apps and the internet usage after installing to the device. From this analysis done towards the interface and performance, most of the apps have moderate interface and performance. While for user-friendliness, most of the apps were easy to use and navigate; but for some of the apps, their buttons are not functioning well. For the cost in downloading the apps, all the *Tarannum* mobile apps were free to be downloaded. All of the *Tarannum* mobile apps can be used while the mobile devices are in offline mode.

7.5 Discussion on Findings of phase 3: The Evaluation Phase

The third phase which is the last phase of the study is an evaluation of the KKQ meaning-based *Tarannum* mobile app prototype model that has been developed in phase 2; the design and development phase. The evaluation phase is intended to answer the research question 3 as follow:

RQ 3 : What is the level of experts' agreement in evaluating the designed model?

Based from the research question above, the model of KKQ meaning-based *Tarannum* mobile app has been evaluated based on two aspects which are the elements that are suitable with the model and the overall usability of the model developed. The evaluation of the model is based on ten experts' views who have been appointed to evaluate the research model. A modified Fuzzy Delphi method has been used in evaluating the model designed. The appointed experts has responded to the questionnaire which contains three sections, namely section A which contains the background information of the respondents which is the demographic information, 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.

Based on the data findings for this phase which are presented in Chapter 6, ten experts were appointed in evaluating the model. The experts involved were the KKQ teachers, the qāri's and the lecturers from IPTA and IPTS. Table 6.4 in Chapter 6 presented the analysis of section A, which analyzed the experts' demographic

information that is the gender, age, field of work, academic level, field of study and the experience in their field. Through this analysis, all experts were male and their field of study was Qur'ān and Sunnah studies, al- Qur'ān Education studies and also Islamic Education studies. While, their experience in the field is five years and above which was in line with the view of Berliner (2004) which argues that someone who has over five years of experience in their field is considered as an expert.

In section B of the expert evaluation form, the experts had evaluated the elements of KKQ meaning-based *Tarannum* mobile app model in the form of questionnaire. In this section, there are twelve elements that had to be evaluated. Table 6.5 in Chapter 6 (**page:207**) presented the questionnaire on the elements of KKQ meaning-based *Tarannum* mobile app model. The expert evaluation form (questionnaire) (see **Appendix G**) 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 in order to obtain a more precise and accurate results. As explained by 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. Table 6.6 in Chapter 6 (**page:210**) presented the result of experts consensus in evaluating the elements of KKQ meaning-based *Tarannum* mobile app model based on the analysis of Fuzzy Delphi Method conducted. Based on the elements in this study, there are four elements that did not meet the conditions of Fuzzy Delphi analysis. As the elements did not achieve the experts' consensus, the elements were rejected. Table 6.7 in Chapter 6 (**page:214**) presented 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 into the model. So, all together, there are nine final elements of KKQ meaning-based *Tarannum* mobile app model to be included.

In section C of the expert evaluation form, the expert evaluation on the overall usability of the prototype model had been conducted. Table 6.8 in Chapter 6 (page:214) presented the statements that the experts had evaluated in order to seek agreement on the overall usability of the prototype model developed. The Fuzzy Delphi Method of analysis was also being applied in this section. Table 6.9 in Chapter 6 (page:217) 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. All the result had met the conditions of Fuzzy Delphi method of analysis. Figure 6.1 in Chapter 6 (page:218) presented the finalized model 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 dizzy 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.

The model had been evaluated by the experts in order to figure out the elements of KKQ meaning-based *Tarannum* mobile app model and the usability of the prototype model. By using Fuzzy Delphi Method analysis, this study had obtained the experts consensus developing a meaning-based *Tarannum* mobile app.

7.5.1 Implication and Contribution of the study

This study aims to provide some insights on the design and development of the multimedia interactive model towards KKQ *Tarannum* subject which is the mobile app model design and development. The purpose of the model designed and development as a guide and a blueprint for other researchers or developers to develop the *Tarannum* mobile app product for the use of KKQ teachers and students as their learning materials. In doing so, the evaluation on the model had been done with the group of experts in confirming the model developed. Therefore, the findings of this study offer several implications and contribution on the model developed. The implications are:

Methodological Implications

As there is lack of the research on *Tarannum* field, this study is conducted to add some value for the research in *Tarannum* field. This study had contributed to the literature for the field of *Tarannum* and interactive multimedia by offering a specific analysis which is appropriate to the research model. By conducting the research using a design and development research (DDR), this study had come out with the research model. A systematic study had been done by using this approach with the multi-

methods applied through this research. With the integration of *Tarannum* field and multimedia technology field, this study had contributed to methods of design and development the model of KKQ meaning-based *Tarannum* mobile app.

Theoretical Implications

As this study had emphasised on the practice of *Tarannum* Qur'ān accordance to the meaning of Qur'ānic verses, it gives an attention and create an awareness to teachers and qāri'/qāri'ah in reciting the *Tarannum* Qur'ān in a better way. Therefore, this study had contributed to the *Tarannum* theoretical knowledge and philosophy whereby the meaning of the Qur'ān was being emphasised in reciting the Qur'ān with *Tarannum*. By adapting the theory of meaning-based *Tarannum* by Sheikh Muhammad Rif'at and the theory of teaching and learning al- Qur'ān by Al-Qabisi.

With the use of mobile app platform as one of the mobile learning strategies, it is believed that it can attract students in learning *Tarannum* Qur'ān and add the teaching and learning aids. The mobile app can also be used as a self-learning material for students wherever they are. The constructivist learning theory were applied in the use of mobile app platform as learning material whereby student will construct their prior knowledge in the classroom while using and practicing *Tarannum* Al-Qur'ān. As defined by Ozdamli (2012), constructivism can be summed up as learners who are actively constructing knowledge rather than passively receiving it from the environment.

Research Model Implication

The model development of the KKQ meaning-based *Tarannum* mobile app has drawn out the elements of *Tarannum* learning together with the suitable multimedia elements that have to be applied to the *Tarannum* mobile apps. Therefore, the development of this model has contributed in this study whereby the model will be guidance and a blueprint for the mobile application developers to develop the real product which is the *Tarannum* mobile application for the use of KKQ classes. In addition, the element of meaning in reciting Qur'ān with melodious voice (*Tarannum*) is applied. Hence, the development of this model has implications for this study whereby the elements of *Tarannum* learning were analysed from several sources and the emphasis towards meaning is given attention in chanting the Qur'ān in a better way.

7.6 Further research recommendations

There are several directions that the future researchers can take to further research in the area of *Tarannum* study. First, since the formation of the research model (KKQ meaning-based *Tarannum* mobile app) has been developed thus, it is recommended to develop a real product of KKQ *Tarannum* mobile app that is based on the meaning of Qur'ānic verses. That kind of research is expected to help to evaluate the effectiveness of this model when it will be implemented towards the KKQ teachers and students. This product can be one of the interactive teaching and learning aids for the use of KKQ *Tarannum* subject in order to grab students' interest

to learn and practicing the *Tarannum* recitation. Apart from that, this product can be one of the self-learning materials for the students, as stated in the problem statements and in findings; there were lack of materials or teaching and learning aids for students to do the revision or practical assessment in *Tarannum* subject. It is an effort in diversifying the teaching and learning materials.

The second direction for future research is to consider the research on the effectiveness and usability of the *Tarannum* mobile apps developed. Future researcher can explore on the effectiveness of the *Tarannum* mobile apps utilization towards the KKQ students and its usability in using the mobile apps as their one of the learning materials. Furthermore, the research on the effects of *Tarannum* mobile app can also be investigated whether to investigate the effects on students' interest, motivation or achievement in learning *Tarannum* al-Qur'ān by using the *Tarannum* mobile app.

As this study has its own limitations, further studies are also needed to be conducted towards the meaning-based *Tarannum*. The research on *Tarannum* recitation based on the meaning of Qur'ānic verses should be expanded and deepen more to gain a better understanding in respect of this subject matter.

7.7 Conclusions

Overall, this study was conducted by the researcher based on the objective in developing a model of KKQ meaning-based *Tarannum* mobile app. By applying the design and development approach pioneered by Richey and Klein (2007), this study covers three important phases which are the need analysis phase, the design and

development phase and the evaluation phase. The model developed as a blueprint in future development of the KKQ *Tarannum* mobile app.

Phase I which is the need analysis phase includes two aspects of study. The first one is the study that intended to identify the issues and problems in *Tarannum* field. The document analysis and interview session has been conducted in obtaining the data and information regarding the issues and problems in *Tarannum* field. The second aspect of this phase, this study also intended to analyse the needs in developing a model of KKQ meaning-based *Tarannum* mobile app. Through this aspect, the study has conducted the interview sessions with different types of respondent in order to gain a vast data findings and to triangulate the data of the study. The interview protocols were used through this study conducted and the data were analysed using thematic data analysis.

Phase II is the design and development of the research model which is the vital part of the study. Through this phase, this study is intended to design and develop a KKQ meaning-based *Tarannum* mobile app model. The document analysis had been done whereby the analysis of ten existing *Tarannum* mobile apps had been analysed in order to find the important elements in *Tarannum* learning and to be included into the model. In line with that, the document analysis towards the KKQ handbook has also been done in identifying the components of *Tarannum* learning. The matrix analysis has been used in figuring out the elements of the model. The findings from this phase were analysed in themes.

Phase III is the expert evaluation phase towards the prototype of the model developed. Through this phase, two aspects had been evaluated by the experts which are the elements that are suitable for the *Tarannum* mobile app model and the overall usability of the model developed. This research had applied the Fuzzy Delphi technique in order to get the consensus among the experts and the questionnaire had been distributed to the appointed experts.

Briefly, generation Z learners and generation Alpha learners were exposed to the technological developments of Information and Communication Technologies (ICT). Nowadays, through sophisticated devices such as smartphones, tablets, and portable laptops with the support of internet, students can learn much more in getting the information and the learnings and they can benefit a lot from it. The mobile learning strategy is one of the technological developments which would be the most helpful to increase learners' skills, attitude, motivation, grade, and knowledge while learning.