Design and Development of Meaning-Based *Tarannum* Mobile Apps Model: A Prototype Model for *Kelas Khas Kemahiran Membaca dan Menghafaz Al-Qur'an* (KKQ)

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ABSTRACT

The purpose of this paper is to figure out the components and elements for the model thus to design and develop a prototype model of KKQ meaning-based Tarannum mobile app. This study employed document analysis which refers to a systematic procedure for reviewing or evaluating documents whether in printed or electronic materials. This research had systematically reviewed on ten existing Tarannum mobile apps in Google Play Store market to find out those components and elements. From document analysis, matrix analysis is used to analyse what are the components and elements that have in the existing Tarannum mobile apps to be embedded into the prototype model. The findings were analysed in thematic analysis whereby this paper explains each of the components and elements into themes. The result from the finding is a prototype model of KKQ meaning-based Tarannum mobile app was developed. The prototype model consists of six main elements and the meaning-based Tarannum element was added to the model as one of the contributions for this study.

Keywords: Design and Develop, model, *Tarannum*, Mobile apps, KKQ.

INTRODUCTION

KKQ class stands for *Kelas Khas Kemahiran al-Qur'an* or *Kelas Kemahiran Membaca dan Menghafaz al-Qur'an* translated as Special Classes of Reading and Memorizing the Qur'an (Azmil, 2015; Azmil et al., 2015). In Malaysia, KKQ classes is one of the co-curriculum activities that been implemented throughout SMKA (*Sekolah Menengah Kebangsaan Agama*) and SMK (*Sekolah Menengah Kebangsaan*) that have religious stream class (*Kelas Aliran Agam*a; KAA) which is under the Ministry of Education (MoE). This class comprises five subjects which are *Ulum Qur'an* , *Tajwid al-Qur'an*, *Hafazan al-Qur'an*, *Qiraat* and *Tarannum al-Qur'an* (Kementerian Pelajaran Malaysia, 2014).

Tarannum al-Qur'an or Qur'anic chanting (Wan Hilmi, et al., 2014) is one of the subject in KKQ classes and it refers to the art in reciting the Qur'an. *Tarannum* terminologically means knowledge or technique discussed on variation of sound according to certain tone, rhythm and melody and it is intended to highlight the artistic beauty of Qur'anic recitation (Bahagian Pendidikan Islam, n.d.; Ikmal Zaidi et al., 2018; Mohd Zaini et al., 2018; Muhammad Lukman et al., 2012; Nik Jaa'far, 2012). In Malaysia, the term *Tarannum* is synonym to *Tarannum* al-Qur'an, which refers to rhythmic song of Qur'anic recitation. In the Middle East countries, the *Tarannum* term was unpopular, the term *al-Nagham* (النغم) and al-maqamat (المقامات) defines the *Tarannum* al-Qur'an and it was also being used by Indonesian country (Khalid et al., 2016). *Tarannum* is one of the Qur'anic branches which emphasises on the method of reciting the Qur'an with melodious voice. There are seven melodies that are popularised among almost all over the countries which are *Bayyati, Soba, Hijaz, Rast, Sikah, Jiharkah* and *Nahawand* (Saidah et al., 2015).

The philosophy in reciting Qur'an with *Tarannum* is tied to the idea of connecting the feelings between reciter and listener towards the glory of Allah's words (Nik Ja'afar, 2012). Other than that, reciters can internalise the value of Qur'anic *uslub* while chanting it and both reciters and listeners can understand the meaning of the Qur'anic verses and try to practice it (Wan Hilmi, et al., 2014). According to the mentioned philosophy in reciting the Qur'an with *Tarannum*, the important element in chanting the Qur'an is understand; which means to recite the Qur'an with *Tarannum* melodies that are correlated with the meaning of the Qur'anic verses (Nik Jaafar, 2012; Wan Hilmi, et al., 2014). Ultimately, listeners can try to understand the message from the recited Qur'anic recitation. It can be concluded that, reciting al-Qur'an with *Tarannum* and correlating the *Tarannum* melodies with the meaning of the recited verses will lead to the perfection of *Tarannum* recitation.

LITERATURE REVIEW

From the past research in *Tarannum* field, researcher had found that there are insufficient materials and research related to *Tarannum* field. Moreover, very few researches have conducted in integrating *Tarannum* with technology. Based on the

study conducted by Mohd Aderi (2011) he indicated that teachers tend to use traditional approach in teaching *Tarannum* that causes a dull atmosphere and inactive students. He suggested that KKQ teachers should always have to improvise their pedagogical skills by using a diversity of teaching strategies and teaching aids in teaching *Tarannum* subject. While, based on Misnan et al. (2014) found that over half of the students did not have knowledge on *Tarannum* al- Qur'an and they are unable to recite al-Qur'an with *Tarannum*. In Misnan et al.'s study, the findings had showed that only 6.3% students' are able to recite the Qur'an with *Tarannum* well, 20% students' were at the moderate level while, over half of the students' which is 63.8% of the students are weak in reciting the Qur'an with *Tarannum*. Misnan et al. (2014) had concluded that teachers who use teaching and learning aids in their *Tarannum* teaching are very little. Therefore, the study suggested that teachers require adequate training, specifically in the aspect of ICT and the use of teaching and learning aids. The findings of the study are in line with the study done by Muhamad Nasir, Sedek, and Zulkifli, (2017) whereby the analysis of *Tarannum* recitation proficiency according to KPM's grade is conducted. The result shows that 15 students (22.7%) achieve A grade, while over half of the students which is 44 students (66.7%) get the D grade. It shows that there is a low proficiency of the students in reciting the Qur'an with *Tarannum*.

Another study that had been done by Azmil et al. (2014), this study finds that, students in overall are very weak in practicing the techniques that were found in the teaching and learning of *Tarannum* al-Qur'an and the study also showed that the students' achievement towards the goals of teaching and learning *Tarannum* al-Qur'an is somewhat unsatisfactory. Based on the issues, problems and suggestions from the previous studies, this study had identified a few issues concerning to *Tarannum* education that lead to the study to be carried out. The issues such as lack of using teaching and learning aids in KKQ *Tarannum* classes, low proficiency in reciting the Qur'an with *Tarannum*, and low of achievement in *Tarannum* subject, this study had developed a prototype model which integrated with the interactive learning for the future development of KKQ *Tarannum* mobile app.

This research has a purpose to design and develop a KKQ meaning-based *Tarannum* mobile app model. In order to fulfil the objective of this study, it was seeking to answer the following research questions:

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

RQ1: What are the components of Tarannum learning in the existing Tarannum mobile apps?

RQ2: What are the components of Tarannum learning in the KKQ Tarannum handbook?

RQ3: What are the elements of multimedia included in the existing Tarannum mobile apps?

RQ4: How were the features of the existing Tarannum mobile apps?

METHODOLOGY

This paper is a qualitative study which employed document analysis in order to design and develop a prototype model of KKQ meaning-based *Tarannum* mobile apps. Qualitative study is primarily an exploratory research. It is used to gain an understanding of underlying reasons, opinions, and motivations. It is also used to uncover the trends in thought and opinions, and dive deeper into the problem (Creswell & Poth, 2018). While, the document analysis is a systematic procedure for reviewing or evaluating documents whether for both printed and electronic (computer-based and internet-transmitted) materials. Document analysis requires that data be examined and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge (Bowen, 2009; Mohd Zaini et al., 2021; Owen, 2014). Through document analysis method, researcher had conducted search towards the *Tarannum* mobile apps in Google Play Store marketplace. Based on the search, researcher had compiled ten *Tarannum* mobile apps that are available in the marketplace based on the relevance keyword search which are "*Tarannum al-Qur'an*", "*Maqamat al-Qur'an*", and "*Tilawah al-Qur'an*". Researcher had selected ten *Tarannum* mobile apps based on the suitability of the learning style of KKQ students at the secondary school level, that have the interactive elements whereby it is convenient at the age of the students. The researcher then documented each of the *Tarannum* mobile apps' contents pages and navigation before tabulated for the document analysis purpose. These processes were necessary in order to find the components and elements of *Tarannum* learning in the existing *Tarannum* mobile apps. The document analysis on the KKQ handbook was also made with the same purpose. Based on these document analyses, researcher had summarized and analysed qualitative data into matrix analysis tables. Then, the thematic analysis was used in the final step whereby the researcher described the findings into themes.

RESULTS AND DISCUSSION

Based from the search conducted through this study, researcher had listed ten existing *Tarannum* mobile apps based on the relevance keywords mention in methodology. The existing *Tarannum* mobile apps are listed as 1) Tilawah Qur'an, 2) Belajar BerTarannum mp3. 3) Learning Al-Qur'an , 4) AlQur'an (Belajar Qiro'at), 5) Tn Hj Radzi Kamarul Hailan, 6) Syarifah Khasif Fadzilah, 7) Belajar tilawah offline, 8) Belajar tilawah, 9) Belajar Tilawah Dasar, and 10) Al-Bayan. Table 1 below displays the icon of the apps, its developer and the apps category.

Table 1. Existing *Tarannum* mobile apps

| Apps	Developer	Category
	LABKOMIF UIN Bandung	Education
	Khasyaff Store	Education
	Edukasi Anak Nusantara	Education
	Queenza dev	Music & audio
	Mustel App	Music & audio
	Mustel App	Music & audio
	WorthLucky	Music & audio
	Rian Cupika	Books & Reference
	cakMad	Music & audio
	Ilmiah Resources	Music & audio

Source: https://play.google.com/store?hl=en

Based on the search from Google Play Store on *Tarannum* apps above, researcher had detected three main categories for existing *Tarannum* mobile apps which are; 1) education category, 2) Music and audio category, and 3) Books and reference category. There are three *Tarannum* apps from education category which are the 'Tilawah Qur'an', 'Belajar Ber*Tarannum* mp3' and 'learning Al-Qur'an' app. While there are six category from music & audio category which are 'AlQur'an (Belajar Qiro'at)', 'Tn Hj Radzi Kamarul Hailan', 'Syarifah Khasif Fadzilah', 'Belajar tilawah offline', 'Belajar Tilawah Dasar', and 'Al-Bayan' apps. For books & reference category, only one *Tarannum* app under this category which is 'Al-Bayan' app.

Tarannum apps for education category, this category has element on learning for example; the apps have a practice on *Tarannum* recitation. It means that users can use these apps in practicing the *Tarannum* recitation and the marks would be given for that practice (see Fig. 1 and 2). Other than that, the text of Qur'anic verses

are depicted together with the audio to assist users in reviewing the audio of recitation that being recites (see Fig. 3). The navigation is broad in order to navigate across the different pieces of content within the app.

Fig 1. The Practice Page for 'Tilawah Qur'an' App
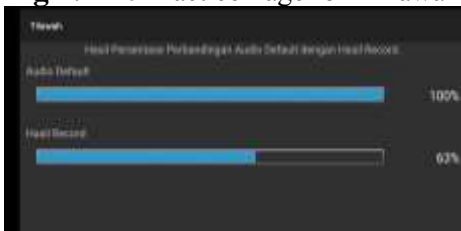
Fig 2. The Marks Given to the *Tarannum* Recitation Practice

Fig. 3 Show two different *Tarannum* Apps that depicted the text of *Tarannum* Recitation with the Audio Recited

Tarannum apps for music & audio category, the apps are more focused on the audio of *Tarannum* recitation. This category is lacking on the element of learning such as practice on *Tarannum* recitation. The navigation is limited whereby it limits to audio navigation only. Other than that, from this category, one of the apps provides the text of Qur'anic verses in the pdf format but the text and audio of recitation would be in different page and it complicate the users to check and review the audio of *Tarannum* recitation along with the text. Fig. 4 depicted the apps that only have the audio without the Qur'anic text displayed in the page.

Fig. 4 Only the audio of *Tarannum* without the Qur'anic text.

Tarannum apps for book & reference category, for each of the *Tarannum* melodies the page will depict the text of the Qur'anic verses together with the audio player. Users can follow the *Tarannum* recitation, stop or even repeat the *Tarannum* recitation and at one point users can check and review the recitation based on the text depicted in the same page. Fig. 5 displays the *Tarannum* apps with the audio player and the Qur'anic text together in the same page that ease the users to play the audio of *Tarannum* melodies and revise the text at the same time.

Fig. 5 The audio player of *Tarannum* with the text displayed in same page.

The components of Tarannum learning in the existing Tarannum mobile apps

In this section, researcher had had analyzed the findings by using the matrix analysis. A matrix analysis or matrix method is a way of summarizing and analyzing qualitative data in the form of table rows and columns. It allows for both cross-case as well as sorting data by theme (Averill, 2002; Hoehle & Venkatesh, 2015; Lee & Kim, 2014). For the research purpose, the compilations were made through documenting and analyzing the existing Tarannum mobile apps in the Google play marketplace into a matrix table. Researcher had developed the matrix (see appendix A) in order to figure out the components of Tarannum learning in the existing Tarannum mobile apps in Google Play store based on the document analysis of ten existing *Tarannum* mobile apps. The matrix analysis then was verified by the experts of KKQ teacher and the software engineer background.

As a result, it can be concluded that there are six components of *Tarannum* learning that available in the existing *Tarannum* mobile apps. The components of *Tarannum* learning included in the existing apps are types of *Tarannum* that comprises of seven different *Tarannum* melodies, Qur'anic verses in text and audio, *tausyikh* in text and audio, *Tarannum* practice, *adzan* and video.

The components of Tarannum learning in the KKQ Tarannum handbook

In this section, researcher had done an analysis of documents. As been explained in methodology, the document analysis is a systematic procedure for reviewing or evaluating documents whether for both printed and electronic materials. (Bowen, 2009; Mohd Zaini et al., 2021; Owen, 2014). In this study, researcher had analyzed from the KKQ handbook in finding out the components of *Tarannum* learning for the KKQ syllabus.

Based on the matrix analysis (see Appendix B) there are three components of *Tarannum* learning in the KKQ handbook which are the types of *Tarannum* that comprises of seven different *Tarannum* melodies, Qur'anic chapters or Qur'anic verses that were used in KKQ syllabus for *Tarannum* recitation and the *Tarannum* variation (*harakat*).

The elements of multimedia included in the existing Tarannum mobile apps

In this section, researcher had come out with the elements of multimedia that were included in the existing *Tarannum* mobile apps. Based on Tariq Hassan and Qais (2015) and Costello et al. (2012), there are five elements of multimedia which are text, audio, graphics, video and animation.

Researcher had listed ten *Tarannum* mobile apps and done the matrix analysis on the elements of multimedia that are available in each of the *Tarannum* mobile apps (see Appendix C). The matrix analysis done in order to find out the elements of multimedia that was commonly applied in the existing *Tarannum* mobile apps to be embedded into KKQ *Tarannum* mobile app.

For text and audio, researcher had categorized it into *surah* and *tausyikh*. Based on the matrix analysis (Appendix C), it can be concluded that the audio of *surah* and the graphics elements are the important elements that have to be included into mobile apps for *Tarannum*. As in *Tarannum* al-Qur'an learning, voice or audio is the main thing to deliver the learning. For graphic elements, it is the main component to be included in every multimedia product to simplify the presentation and attract the users to utilize the learning product. For video, none of the *Tarannum* mobile apps included the video, except for only one app, 'al-Bayan' app which has included the video into the app. However, the video is not related to *Tarannum* learning or *Tarannum* recitation, the embedded video is the video of *zikir* for babies. For animation element, all of the studied apps did not apply any animated transition

in the presentation; as all the apps were very straightforward in presenting the content or learnings except for 'al-Bayan' app.

The features of the existing Tarannum mobile apps

Through this section, as researcher had selected the ten existing *Tarannum* mobile apps, this study then segregates it based on the apps category which are education category, music and audio category and book and reference category (see Appendix D). This study compared the features of ten existing *Tarannum* mobile apps in a matrix analysis based on its interface, performance, user friendly, the cost for downloading mobile apps and the use of internet while using the apps for each of the mobile apps. From the analysis of ten *Tarannum* mobile apps, none of it was based on KKQ *Tarannum* syllabus.

Based on the interface and performance, most of the apps have moderate interface and performance. While for user friendly, most of the apps are easy to use and navigate; except for some of the apps, the buttons are not functioning well. For the cost in downloading the mobile apps, all the existing *Tarannum* mobile apps were free to be downloaded. For the last feature, all of the existing *Tarannum* mobile apps can be used while the mobile devices are in an offline mode.

The prototype model of KKQ meaning-based *Tarannum* mobile app

The research model prototype of KKQ meaning-based Tarannum mobile app was developed based on the document analysis conducted through the existing Tarannum mobile apps and KKQ handbook by the Ministry of Education (MoE). All the components of the research model prototype were extracted in the form of matrix analysis and the model of KKQ Tarannum mobile app prototype were developed.
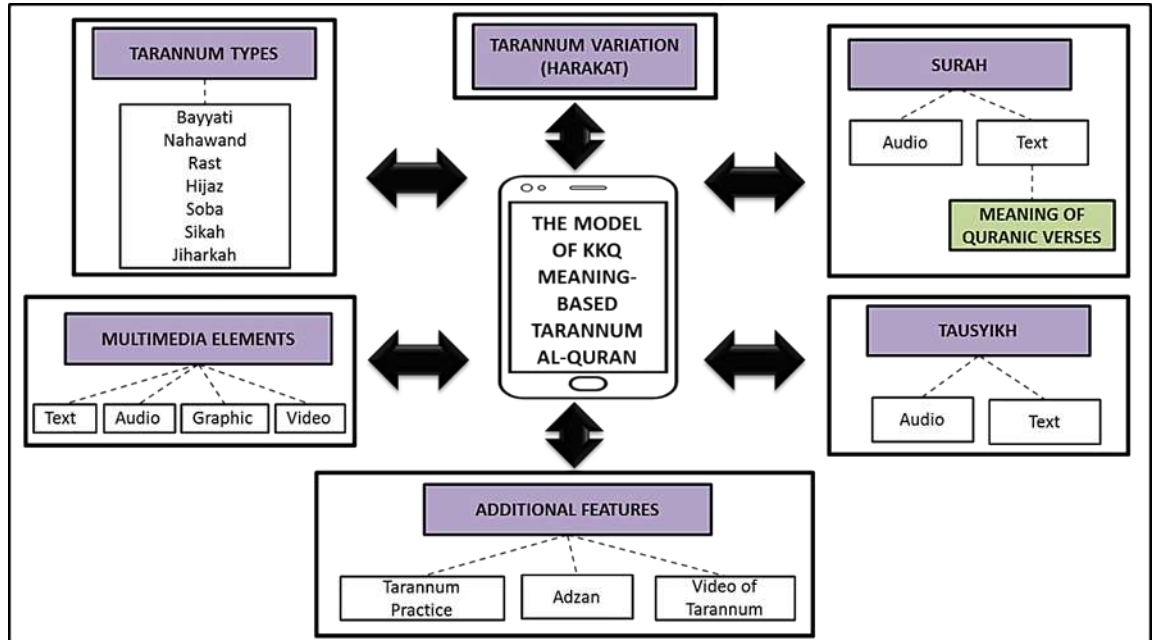
Fig. 6 The Prototype Model of KKQ Meaning-Based Tarannum Al-Qur'an

As depicted in the Figure 6 above, based from this study done, there are six main elements that should have to be included into a prototype model of KKQ meaning-based Tarannum Al-Qur'an mobile application. The main elements of the model are (1) Tarannum types which consist of seven types of Tarannum (i.e *Bayyati*, *Nahawand*, *Rast*, *Hijaz*, *Soba*, *Sikah* and *Jiharkah*), (2) Tarannum variation (*Harakat*), (3) *Surah*; with the audio or text or both of the *surah* (4) *Tausyikh*; that have the audio or text or both of *tausyikh*, (5) additional features (Tarannum practice, *Adzan*, Video of Tarannum), and (6) multimedia elements (text, audio, graphics, and video).

For the element of Qur'anic verses meaning, researcher proposed that the element of meaning of Qur'anic verses should be included into this prototype model in the form of text; so that the element of meaning can be applied into the *Tarannum* recitation as users can understand the meaning of the verses. At the same time, users can also feel and internalise (*tadabbur*) with the Qur'an recitation.

CONCLUSION

Based from the findings on this paper, a prototype model of KKQ meaning-based *Tarannum* mobile app model has been formed. The model is developed from several document analyses that were conducted by the researcher. The document analysis towards ten existing *Tarannum* mobile apps through Google Play Store application was conducted in order to find out the elements of *Tarannum* learning that have in the apps. Furthermore, the study has also figured out the elements of multimedia that are included in the apps that work in attracting the users to utilize

the application as one of the learning materials. Besides, this study was explore on the features that are available in the selected *Tarannum* mobile apps. On top of that, the document analysis towards the KKQ handbook was conducted in order to figure out the element of *Tarannum* learning that are suit for KKQ students. The outcomes from these analyses are the matrix analysis that presents components of *Tarannum* learning, the multimedia elements, and the features of each of the existing *Tarannum* mobile apps. Finally, from the matrix analyses conducted, a prototype model was developed which signify to the problems faced especially towards the development of interactive teaching and learning aids for KKQ subject specifically in *Tarannum* to increase the students' interest.

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