

Comparison between Conventional Method and Modern Technology in Al-Qur'an Memorization

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Abstract: Traditionally, a book called *mushaf* is used to memorize the al-Qur'an. Among conventional methods, there are two popular methods used for this purpose. There are *Takrar* and *Tasmi'* methods. The *Takrar* method which is a way of repeating the new memorization and previous memorization. On the other hand, the *Tasmi'* method is used to correct the memorization, strengthen the memorization and conduct the evaluation of the memorization. Nowadays, the improvement of smart phones technology and the availability of networking technology, many applications on al-Qur'an are being designed for mobile devices to make this learning process continually easier and faster than before. The growth of technology is also contribute in memorizing al-Qur'an in term of teaching and learning. The technology that assist the huffaz in memorizing al-Qur'an such as *E-Hafiz*, *Mobile Quranic Memorization system using RFID technology* and *Quran Companion application* are proven to be an alternative method. This paper compared the performance between the conventional and modern methods. Based on the comparison, it is shown that the modern technology gives better performance as compared to the conventional methods.

Index Terms: Keywords: *Al-Qur'an Memorization; Al-Qur'an Memorization Techniques; Mobile Application Technology.*

I. INTRODUCTION

Memorizing is one of the techniques used by ancient scholars in preserving knowledge, especially in the preservation of the al-Qur'an. There is no doubt that in this modern age there are many methods used to ensure the reservation of al-Qur'an. However, memorizing method is still used to ensure that the Qur'an remains intact in the hearts of its followers. This approach is fortified with a variety of rewards will be given by Allah for those who memorize the al-Qur'an. It is found through many of the saying by the Prophet Muhammad s.a.w. Memorizing the al-Qur'an is not an easy thing to be done by every Muslim. Al-Qur'an memorization process requires the person to have some skills

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beforehand that was to recite al-Qur'an well, with proper *tajwid* and smooth reading. Only then someone began to memorize the al-Qur'an. To produce a good and strong memorization and be able to remember all 30 *juzu'* of the al-Qur'an, the Muslim individual must follow the specific rules to ensure his memorization is really stick well in his mind. The existence of the creation Information Technology, a large number of software and mobile application have been developed to make this learning process continually easier and faster than before. Along with the improvement of smart phones technology and the availability of Internet, many applications for al-Qur'an are being designed for mobile devices. Although many application systems developed can help learn the al-Qur'an and recitation improvements such as Quran Audio Recitation (QAR) (Muhammad & Qayyum, 2012), by detecting the mistakes made by user. Today, with the availability of the tools for digitization (Muhammad, 2013), a variety of al-Qur'an related applications and software have been developed to cater the needs of online and offline users. These technologies will be an alternative that will help users learn, read and memorize the al-Qur'an in the best way other than conventional methods.

This study was conducted to compare between the used of conventional method and modern technology application in memorizing al-Qur'an. In al-Qur'an memorization using conventional method, the al-Qur'an was memorized using a book called *mushaf*. The duration of study depends on the academic ability of the student, the process of al-Qur'an memorization involves three stages, these are learning the al-Qur'an by heart (*Tilawa*), memorizing (*Hafizi*) and perfecting the ability to write the whole al-Qur'an with no error either on a slate or in a paper (*Darasi*) (Osman, 2013; Taiwo, 2014). Learning is done manually as the students have to sit face to face and the learner recites and the experts points out and corrects the mistakes (Muhammad & Qayyum, 2012). Memorize the verses of the al-Qur'an requires patience and discipline to achieve the target number of verses to be memorized at one time. *Hafiz* must prepare itself to face any kind of trouble when it started to memorize and review onwards in memorizing which was obtained. Indeed, the al-Qur'an memorization is too easy to disappear from the *huffaz* retention except for those who really ensure the preservation (Abdullah & Rahman, 2010). The process of repetition in the verses memorized the al-Qur'an were performed using the five daily prayers and daily remembrance to ensure that the verses of the al-Qur'an



preserved. Memorizing technique stages starting from individual memorization and followed by *Tasmi'* with peers and the lecturer. *Tasmi'* is one of the important processes in memorizing the al-Qur'an to be passed by each *huffaz* to ensure the memorization achieving perfection in terms of retention with good pronunciation of *tajweed* and *makhraj*. Different memory levels among students create difficulties in setting the *tasmi'* timetable between peers and lecturers. *Tasmi'* schedule depends on the availability of peers and lecturer times during classes are conducted and well-prepared by the *Hafiz*. It needs the student's responsibility to set an appointment between their peers and lecturer. Apart from that, the lecturer will provide a performance memorization book to facilitate the process of grading students.

Nowadays, the existence of modern technology has produced various alternative branches in various fields including al-Qur'an memorization. Each mobile technology application is created with its own unique function in helping *huffaz* memorize the al-Qur'an faster and more effectively. Moreover, the use of these applications does not require *huffaz* to have ablution while using it. The mobile applications involved in this study are E-Hafiz, Mobile Quranic Memorization system using RFID technology and Quran Companion application.

A. E-Hafiz Application

The recitation of Holy Quran by use of *Tajweed* rules is an art and reciters follow the *Tajweed* rules to build their recitation attractive (H. Tabbal et al., 2006). Learning is done manually as the student and Hafiz have to sit face to face and the learner recites and the experts points out and corrects the mistakes if any occur. Many audio enabled applications are available in the markets which offer the Holy Quran as audio streams. One of the most popular and commonly used is the Quran Auto Reciter (QAR). QAR provides a user interface where user can select the verse they intend to listen and the verse can be played stopped and paused. And as the words are played the text also gets highlighted. QAR can help learn the Quran and recitation improvements can be made as well as some basics can be learned. However, it cannot judge the user's accuracy and performance as there is no way QAR can indicate or detect the mistakes made by user. Therefore, E-Hafiz was designed, implemented, and tested to help learning like a Hafiz expert (M. Aslam et. al., 2012).

The goal or objective for the development of E-Hafiz system is to facilitate the learning/memorizing of the holy Quran, minimizing errors or mistakes of all kinds, and the systematization of the recitation process. Using this system any reciter can learn the recitation skills at any place and any time. The presence of an expert hafiz would not be needed. Consequently, this system helps the *huffaz* in preparation of recitation for 5 times prayers and *Teraweeh* prayer in the month of Ramadhan. The process occurs when speeches signals will be gained by a sound speak by a person in microphone. By means of Mel-Frequency Cepstral Coefficient (MFCC) (Noor Jamaliah Ibrahim et al., 2008) transformation, voice features are extracted from the signal emphasized for further processing. Then, the MFCC transformation technique produces remarkable results, because the emulation of an auditory system behavior. The

features of recorded voices using MFCC will be compared with experts' voices stored in database. Any mismatch on word level is pointed out and ask the user to correct it.

B. Mobile Quranic Memorization System using RFID (Radio-Frequency Identification) Technology

The use of Mobile Quranic Memorization system using RFID technology in the memorization of the Qur'an is to create a platform for controlling and reducing monitoring and management issues in scheduling and easy communication in the memorization process (Nor Musliza M. & Mokmin B., 2014). This system supports a range of framework information including location, time, date and user's performance to improve the memorization process in order to maintain their level of memorization and retention. Besides, this system allows students to memorize either individually or cooperation between their peers using mobile phone with flexible scheduling and systematically based on availability for each student and lecturer in the system. The using of mobile-RFID sensor will detect the RFID tag from the student card. Then, the RFID reader will read the data from the student card and send to the database server. Once the students identified by the system, it will give a unique ID for each of the student. This unique ID will be scan by the whole student to see their availability to do *tasmi'* each other. The *tasmi'* was done using videoconferencing to make sure the memorization using the *Talaqqi* and *Musyafahah* method. After all the processes are done, the system will detect mistakes and give a report of memorization performance for each verse Al-Quran by student.

C. Quran Companion Application

Quran Academy released a one-of-a-kind al-Qur'an memorization application called Quran Companion. Much more than just an audio recitation application, it has revolutionary social-led gamification and learning technologies that not only make memorizing the al-Qur'an fun and easy, but also social, accessible and convenient for the everyday, busy Muslim (Bilal M., 2016). This application is bustling with unique features including flexible learning environments that can be customized to a student's learning preferences, guided lesson plans that can be customized to a student's time schedule and even a 'Swipe to Reveal' game based on proprietary technology to make learning and revision fun. There's also a Daily Leaderboard that shows the top 100 users with the highest Hasanah points. It resets daily, *huffaz* can be motivated to race to be on the board each day. Besides giving you the motivation, the app also helps in providing an organized way of memorizing. Whenever user tap on a Surah to open it, it will ask if user want to go by a "Guided Plan" or "No Guided Plan". Choosing the latter option will let user memorize at their own pace. On the other hand, choosing "Guided Plan" will break down daily lessons and even give user an estimate of the number of days it will take to memorize that Surah, if user keep to the plan.

Besides that, this application will also let user have up to 25 friends pursuing the same Quran memorization goal. The application is elegantly designed with a minimalistic,

and beautiful UI. Once user have opened it, it'll show three tabs; Challenges, Surah and Groups. Tap on any Surah to start memorizing and choose a plan. The application will now show user a neat layout of the respective Surah. At the bottom of the screen, user will see two options for "Swipe" or "Audio". Swipe is an innovative little feature that will let user simply swipe to display the number of verses user want displayed to help in memorizing. Meanwhile, Audio, as the name suggests, will let user instantly stream the audio recording of any verse user want to. A double-tap on any verse can also be used to access "Audio" or "Translation". The application is pretty generous in terms of customization too. User can head over to the Settings to switch between different scripts of al-Qur'an (Madina/Uthmani, Urdu, etc.), choose between a dozen or so reciters or even pick user own preferred translator. There's even an option to switch between layouts like Full Page or Verse View.



Fig. 1. Quran Companion Application

II. LITERATURE REVIEW

This research presented the two main frame methods of memorizing the Quran using a traditional memorization techniques and modern memorization techniques through applying the mobile application technology.

A. Traditional Memorization Techniques

Al-Ghazali's framework of the curriculum clearly represents his ideals of placing religion in the process of teaching and learning. He preached that children should start attending school upon reaching the age of 6 years. At this stage, their education should concentrate on Quranic studies such as reading, memorizing the Quran and Hadiths as well as developing their literary skills (Ariffin, 2012). The best way to learn and memorize al-Qur'an was through *Talaqqi* and *Musyafahah* methods. *Talaqqi* implemented through face to face or deal with teachers. *Musyafahah* mean that the word of mouth with lip-reading teacher watching to get the correct pronunciation of *tajwid* and *makhraj*.

Takrar and *Tasmi'* methods are often performed by students in teaching and learning the *Tahfiz* institutions. *Takrar* method is the main method in memorizing the al-Qur'an and the number of *takrar* is the determinant of the

student's strength (Hashim, 2014). The student's strength of memorization is closely related to the extent of the implementation of the *Takrar* method which is the way to repeat the new memorization and the past memorization (Mazaayaa, 2006). Meanwhile, *Tasmi'* method (Abdullah et al., 2005) is to correct the memorization, strengthening the memorization and evaluating the memorization.

There are various memorization techniques studied by researchers in creating effective memorization. Turkish system (Abdul Hafiz & Norhanan, 2010) does not focus on any one principal for too long to avoid students getting bored because the memorized verses or pages different from day to day. The effectiveness of memorizing the Quran is evaluated through a short period of time, the student's success in maintaining the quality as well as memorizing quality. According to Abdul Hafiz & Norhanan (2010) the existence of the testimony *imtahan* actually is seen as a method to enhance the quality of memorizing through this system. Memorization and understanding as working together will produce higher quality consequences. The analysis showed that the distinction between understanding and memorizing is not easy to describe, with committing to memory and repetition learning of details both contributing to the production of knowledge object (Entwistle & Entwistle, 2003). The most important in learning al-Qur'an is how to make sure the knowledge valuable to apply for a real life. The key is memory retention. According to Benta & Cremene, (2004) increased student retention as a result of increased student motivation and understanding. Learning is based on a deep faith and passion for God. Involvements of permanent memorization quality are through understanding internalized and applied in everyday life. The implementation of traditional process is not solving a problem that arises when the memorization skill depends for availability of students. For that reason, the use of mobile application technology has been created to improve the traditional al-Qur'an process.

B. Modern Memorization Techniques

Information Technology advancement has introduced a large number of mobile software and applications has been developed to make the learning process easier and faster than before. By enhanced of smartphone technology and internet availability, many applications for al-Qur'an is being designed for mobile devices. The use of smartphones has revolutionized every aspect of our life, especially learning. The use of applications is a great way of start learning Quran. There are lots of al-Qur'an applications available on iOS and Android platforms that help the users in learning al-Qur'an without the need of an instructor. There are different features of good al-Qur'an applications which a Muslim must consider before utilizing them for the purpose of learning. The Quran Audio Reading application (QAR) (Muhammad & Qayyum, 2012), helps in detecting mistakes reading or memorization of the Quran but it cannot evaluate the accuracy and performance users. The availability of the tools for digitization (Muhammad, 2013), a variety of al-Qur'an related applications and software have been developed to cater the needs of online and offline users.



According to Bilal M. (2016), not every Muslim can dedicate full-time study in a school to memorize the al-Qur'an and now they do not have to. Built for the everyday common Muslim, the application systems in al-Qur'an memorization has revolutionary features to help *huffaz* memorize al-Qur'an more effectively, whether a student, a working professional, an entrepreneur, an athlete, a politician, a community worker, a stay-at-home mother or a combination of many things. Tahfiz learning methods have a strong relationship with student achievement (Hashim, 2014). Therefore, the elements of *tahfiz* learning needs to give a special consideration by all parties in the design of teaching and learning curriculum of *Tahfiz* institutions (Azmil Hashim, 2013). Therefore, the mobile applications systems as modern technology method involved in this study are E-Hafiz, Mobile Quranic Memorization System using technology RFID and Quran Companion which are performing its own unique function in helping *huffaz* memorize the al-Qur'an faster and more effectively. Some of the factors in learning that contribute to effective and efficient is an interactive learning system design (Baldwin & Sabry, 2003).

E-Hafiz was designed, implemented, and tested to help learning like a *Hafiz* expert (M. Aslam et. al., 2012). The process occurs when speeches signals will be gained by a sound speak by a person in microphone. By means of Mel-Frequency Cepstral Coefficient (MFCC) (Noor Jamaliah Ibrahim et al., 2008) transformation, voice features are extracted from the signal emphasized for further processing.

Based on R.Tesoriero (2008), they provides conceptual model on how RFID can ease the tracing process of Art Museums goods. A multi layered building with lots of antique and unique really required systematic approach in identifying the location and this will then assist the key personnel to strategies next events. In order to use RFID efficiently when dealing with database application, we can enhance the abilities by applying a smart coordination between RFID database and RFID data center. The architecture was well discussed in (Rong et al, 2008).

Quran Companion application is much more than just an audio recitation application, it has revolutionary social-led gamification and learning technologies that not only make memorizing the al-Qur'an fun and easy, but also social, accessible and convenient for the everyday, busy Muslim (Bilal M., 2016). This application will assist users from novice to expert in completing the entire of al-Qur'an memorization.

III. METHODOLOGY

The study of technological knowledge is expected to help the Quranic memorization technique be easy, fast and effective in producing quality and professional *huffaz*. This study chose the survey research design because it was in line with the purpose of this study, the comparison between conventional methods and modern technology in memorizing the al-Qur'an. The conventional method has been compared between modern technology in al-Qur'an memorization based on the four categories. The four categories of

comparison involved in this study are the issue of monitoring and management in memorization scheduling, easy communication in the memorization process, element of gamification in memorizing process and motivation in completing the al-Qur'an memorization.

A. Comparison on the Issue of Monitoring and Management in Memorization Scheduling

E-Hafiz application, Mobile Quranic Memorization system using RFID technology and Quran Companion application have been compared with the conventional methods which are *Takrar* and *Tasmi'* through the issue of monitoring and management during the memorization scheduling. Each application has its own functionality in managing this issue.

B. Comparison on Easy Communication in The Memorization Process

E-Hafiz application, Mobile Quranic Memorization system using RFID technology and Quran Companion application have been compared with the conventional methods which are *Takrar* and *Tasmi'* through the easy communication in the memorization process. Each application has its own functionality in managing this issue.

C. Comparison on Element of Gamification in Memorizing Process

E-Hafiz application, Mobile Quranic Memorization system using RFID technology and Quran Companion application have been compared with the conventional methods which are *Takrar* and *Tasmi'* through the element of gamification in memorizing process. Each application has its own functionality in managing this issue.

D. Comparison on Motivation in Completing the Al-Qur'an Memorization

E-Hafiz application, Mobile Quranic Memorization system using RFID technology and Quran Companion application have been compared with the conventional methods which are *Takrar* and *Tasmi'* through the motivation in completing the al-Qur'an memorization. Each application has its own functionality in managing this issue.

The results from this comparison will determine the need, advantage and disadvantage of the conventional method and modern technology usage in al-Qur'an memorization. In addition, this finding will be an alternative in teaching and learning methods in line with current technology in the *Tahfiz* institutions.

IV. RESULTS AND FINDINGS

The results and findings for this study are based on the analysis of comparison of the conventional method and applications as the modern technology in al-Qur'an memorization. The methods have been compared through four categories. Table I shows the comparison of the methods according to the issue of monitoring and management in memorization scheduling category.

Table I: Comparison of The Methods According to the Issue of Monitoring and Management in Memorization Scheduling Category

| Method | Category |
|--|---|
| Traditional Method | Issue of Monitoring and Management in Memorization Scheduling |
| <i>Takrar</i> | √ |
| <i>Tasmi'</i> | √ |
| Modern Technology | |
| E-Hafiz | √ |
| Mobile Quran Memorization System using RFID Technology | √ |
| Quran Companion | √ |

The results in Table I shows both methods meet the issue of monitoring and management in memorization scheduling category. This result is compared between conventional method and modern technology. Each of modern technology methods has its own functionality in al-Qur'an memorization process.

Table II: Comparison of The Methods According to the Easy Communication in The Memorization Process Category

| Method | Category |
|--|--|
| Traditional Method | Easy Communication in The Memorization Process |
| <i>Takrar</i> | √ |
| <i>Tasmi'</i> | √ |
| Modern Technology | |
| E-Hafiz | √ |
| Mobile Quran Memorization System using RFID Technology | × |
| Quran Companion | √ |

The results in Table II shows both methods meet the easy communication in the memorization process category. However, only Mobile Quran Memorization System using RFID Technology does not meet the category. This result is compared between conventional method and modern technology. Each of modern technology methods has its own functionality in al-Qur'an memorization process.

Table III: Comparison of The Methods According to the Element of Gamification in Memorizing Process Category

| Method | Category |
|----------------------------------|---|
| Traditional Method | Element of Gamification in Memorizing Process |
| <i>Takrar</i> | × |
| <i>Tasmi'</i> | × |
| Modern Technology | |
| E-Hafiz | × |
| Mobile Quran Memorization System | × |

using RFID Technology
Quran Companion √

The results in Table III shows that both of conventional methods do not meet the element of gamification in memorizing process category. However, in modern technology methods shows that only Quran Companion application meet the category. This result is compared between conventional method and modern technology. Each of modern technology methods has its own functionality in al-Qur'an memorization process.

Table IV: Comparison of The Methods According to the Motivation in Completing the Al-Qur'an Memorization Process Category

| Method | Category |
|--|---|
| Traditional Method | Motivation in Completing the Al-Qur'an Memorization |
| <i>Takrar</i> | × |
| <i>Tasmi'</i> | × |
| Modern Technology | |
| E-Hafiz | × |
| Mobile Quran Memorization System using RFID Technology | √ |
| Quran Companion | √ |

The results in Table IV shows that both of conventional methods do not meet the motivation in completing the al-Qur'an memorization category. However, in modern technology methods shows that only E-Hafiz application meet the category. This result is compared between conventional method and modern technology. Each of modern technology methods has its own functionality in al-Qur'an memorization process.

Table V: Comparison of The Methods According to the Four Categories in Al-Qur'an Memorization

| Method | Categories | | | |
|---------------------------|---|--|---|---|
| | Issue of Monitoring and Management in Memorization Scheduling | Easy Communication in The Memorization Process | Element of Gamification in Memorizing Process | Motivation in Completing the Al-Qur'an Memorization |
| Traditional Method | | | | |
| <i>Takrar</i> | √ | √ | × | × |
| <i>Tasmi'</i> | √ | √ | × | × |
| Modern Technology | | | | |
| E-Hafiz | √ | √ | × | × |

| | | | | |
|--|---|---|---|---|
| Mobile Quran Memorization System using RFID Technology | √ | × | × | √ |
| Quran Companion | √ | √ | √ | √ |

In this survey study, four categories have been compared between conventional method and modern technology used in al-Qur'an memorization. Results from the tables shows that the modern technology methods almost fulfilled all the categories compared to conventional methods. It is shows that the used of modern technology in al-Qur'an memorization can be an alternative method to the teaching and learning process in *Tahfiz* institutions. Besides, the conventional methods still play an important role in al-Qur'an memorization process. Modern technology methods still need to refer to the conventional methods as a guide in the development of al-Qur'an memorization application. Modern technology in teaching and learning at the *Tahfiz* institution nowadays is a necessity and is no longer an option.

V. CONCLUSION

Memorizing is one of the techniques used by ancient scholars in preserving knowledge, especially in the preservation of the al-Qur'an. There is no doubt that in this modern age there are many methods used to ensure the reservation of al-Qur'an. However, memorizing method is still used to ensure that the al-Qur'an remains intact in the hearts of its followers. Memorizing the Quran is not an easy thing to be done by every Muslim. Al-Qur'an memorization process requires the person to have some skills beforehand; that was to recite Qur'an well, with proper *tajwid* and smooth reading. Therefore, the design of interactive and systematic system and application development is also very important in ensuring the effectiveness of the students in al-Qur'an memorization. This is because of the diversity of style and strategy the developed learning will produce a quality *huffaz* in terms of knowledge and professionalism. The change in education approach in the new millennium is a positive sign of the education arena globally. Changes in the minds of students on teaching and learning methods have made education in Malaysia especially is dynamic and progressive. Teenage dependency in Malaysia to smartphones cannot be denied anymore. Therefore, the *Tahfiz* institution needs to be more prepared to improve the existing teaching and learning system by accepting modern technology as an alternative method in the field of memorization of the al-Qur'an. This approach will have a positive impact on *huffaz* as well as instructors in *Tahfiz* institutions to be more competitive and advanced in technology era in line with its rapid development. In addition, conventional methods and modern technology have its own advantages and disadvantages. The advantage of using modern technology is that *huffaz* should not have ablution to use it compared to conventional methods where *huffaz* should have ablution while using

mushaf. However, there is also have a lack in using modern technology where *huffaz* needs to have a smartphone to use it as a replacement of a *mushaf*.

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