

Typology and Effectiveness of Al-Quran Memorization Applications

M. Yudo Agresi Akbari¹, Kusaeri², M. Yunus Abu Bakar³, Evi Fatimatur Rusydiyah⁴

¹ Universitas Islam Negeri Sunan Ampel Surabaya, Indonesia; abinyafarros@gmail.com

² Universitas Islam Negeri Sunan Ampel Surabaya, Indonesia; kusaeri@uinsa.ac.id

³ Universitas Islam Negeri Sunan Ampel Surabaya, Indonesia; elyunusy@uinsa.ac.id

⁴ Universitas Islam Negeri Sunan Ampel Surabaya, Indonesia; evifatimatur@uinsby.ac.id

Abstract

Keywords:

Typology;
Effectiveness;
Application;
Memorizing the
Quran

This research aims to determine the typology of Al-Quran memorization application models and their effectiveness in learning Al-Quran tahfidz. The research method used in this research is Systematic Literature Review (SLR). SLR is a method used to comprehensively investigate relevant literature to understand the status of existing research on a particular topic. The data sources used come from Scopus and Semantic Scholar from 2019-2024 using the Publish and Perish (PoP) application. The results of this research found that there are 3 tahfidzul Quran application models: Voice Technology-Based Model, Gamification-Based Model and Modular-Based Model. Regarding effectiveness, it was found that the Voice Technology Based Model was still less effective. Meanwhile, the Gamification-Based Model has been proven to be effective in supporting learning. As for the Modular Based Model, there are those that have been proven to be effective in supporting memorizing learning of the Koran and there are also those that have not been proven because they are still in the needs exploration study stage. Further studies are needed regarding the challenges and obstacles as well as strategies for their use so that the development of the Tahfidz Al-Quran application model can be more effective in supporting the Al-Quran learning process.

Abstract

Keywords:
Tipologi; Efektivitas;
Aplikasi; Hafalan al-
Qur'an

Penelitian ini bertujuan untuk menentukan tipologi model aplikasi menghafal Al-Qur'an dan efektivitasnya dalam pembelajaran menghafal Al-Qur'an. Metode penelitian yang digunakan dalam penelitian ini adalah *Systematic Literature Review* (SLR). SLR adalah metode yang digunakan untuk menyelidiki literatur yang relevan secara komprehensif guna memahami status penelitian yang ada terkait topik tertentu. Sumber data yang digunakan berasal dari Scopus dan Semantic Scholar dari tahun 2019-2024 menggunakan aplikasi Publish and Perish (PoP). Hasil penelitian ini menemukan bahwa terdapat 3 model aplikasi menghafal Al-Qur'an: Model Berbasis Teknologi Suara, Model Berbasis Gamifikasi, dan Model Berbasis Modular. Terkait efektivitasnya, ditemukan bahwa Model Berbasis Teknologi Suara masih kurang efektif. Sedangkan Model Berbasis Gamifikasi terbukti efektif dalam mendukung pembelajaran. Adapun Model Berbasis Modular, sebagian telah terbukti efektif dalam mendukung pembelajaran menghafal Al-Qur'an dan sebagian belum terbukti karena masih dalam tahap eksplorasi kebutuhan. Studi lebih lanjut diperlukan terkait tantangan dan hambatan serta strategi dalam pemanfaatannya agar pengembangan model aplikasi menghafal Al-Qur'an dapat lebih efektif dalam mendukung proses pembelajaran Al-Qur'an.

Corresponding Author:

M. Yudo Agresi Akbari

Sunan Ampel Islamic University of Surabaya, Indonesia; abinyafarros@gmail.com

INTRODUCTION

Recently, many Quran memorization programs have emerged.(Heriyanto 2021), not only in Indonesia, but also in other countries such as Malaysia(Hashim, 2015) and India(Parveen, 2021). This is also marked by the emergence of institutions that organize online Quran memorization learning models.(Wajdi, Fahuzia, and Hakam 2020). This shows the great enthusiasm of the Muslim community in memorizing their holy book, the Quran, amidst technological advances. Technology has become an inseparable ally in advancing Islamic education in the modern era.(Andika, 2022, p. 138).Through technological advancements, access to religious learning resources has become easier to reach. Digital Qurans, Islamic learning applications, and social media platforms provide educational content that can be accessed anytime and anywhere. This allows students to deepen their understanding of Islamic teachings without being limited by time and location.(Ummah 2020).

Mobile applications are growing rapidly and can be used for various purposes. Today, they have been widely applied in the world of education. The incredibly fast pace of technological advancement has an impact on all levels.(Isa, Aziz, Ishak, Mustafa, & Rahman, 2023a).This includes the potential use of assistive technology for memorizing the Koran(Syaifulloh, 2023).Learning to memorize the Quran online is considered to make it easier for everyone to learn, because the busyness experienced is not a reason not to memorize the Quran. Various online tools and applications can also be used to memorize the Quran(Rusadi, 2020).

Memorizing the Qur'an has been known in Indonesia since the early childhood education level (Syaifulloh et al. 2023). The activity of memorizing the Qur'an is one form of interaction between Muslims and the Qur'an that has been going on for generations since the Qur'an was first revealed to the Prophet Muhammad SAW. until now and in the future(Guidance 2017). Dith motivation and belief to protect and preserve the Koran and get rewards(Latipah, 2022)mMemorizing the Qur'an and studying it is a very noble deed(Report, 2021).Apart from that, people who memorize the Qur'an are among the servants who have a high status on earth.(Luthfi Dhulkifli, 2020, p. 65).Memorizing the Quran is also believed to provide spiritual experiences, including feelings of calm, getting help when experiencing difficulties, feeling awake, and a feeling of peace in the heart.(Latipah, 2022).And a person who is able to memorize the Quran will feel satisfaction and pride in his life. (Ayyad, 2022).

In fact, according to research, it was found that the activity of memorizing the Koran occupies the highest level compared to just reading and listening because it combines three activities at once, namely reading, repeating the reading, and storing it in the brain's memory.(Krisnawati 2021).And not only that, it turns out that memorizing the Quran also has a good impact on brain health. The activity of memorizing the Quran which involves our brain by memorizing the holy book can improve brain health.(Che Wan Mohd Rozali et al., 2022) and improve performance or memory(Asqia and Suridha 2023),improve cognitive, linguistic and intellectual abilities(Ayyad, 2022) and reduce the impact of contracting serious diseases for the elderly(Saquib et al., 2017).

The great enthusiasm of the community in memorizing the Quran, and the awareness of the importance of maintaining the quality of learning, inevitably leads to conducting a study in order to explore the model of the Quran memorization application used and to determine its effectiveness in supporting learning so that it is in accordance with the achievements and in accordance with what is expected. This is also reinforced by previous literature study (SLR) research which only highlights interactive and multimedia elements to increase user involvement and motivation in learning Quran memorization.(Isa et al., 2023a).However, the study did not attempt to explore the model of the Quran memorization application used and its effectiveness in supporting learning, so it cannot be ascertained whether it is in accordance with the achievements and expectations. Therefore, further research is needed to evaluate the effectiveness of Quran memorization applications and overcome their limitations to contribute to the development of better innovations, especially in the field of technology-based Quran memorization learning in the future.

RESEARCH METHODS

This study uses the SLR (systemic literature review) research method. The SLR method refers to a specific research methodology and development to collect and evaluate research related to a particular topic focus.(Amam & Rusdiana, 2022).According to Ridley, the SLR method uses the following main stages: first, Formulation of research questions. Second, search strategy and selection of articles. Third, assessment of article quality. Fourth, data extraction and synthesis. Fifth, interpretation and reporting.(Ardyan et al. 2023).

The object of this study is an article related to the Quran memorization application with data sources from Scopus and Semantic Scholar from 2019-2024. In detail, according to Ridley, the research stages with the SLR Method are as follows(Ardyan et al. 2023) :

First, Formulation of Research Questions. This stage ensures the clarity of the research questions and the objectives of the SLR to be conducted. At this stage, the researcher writes the problem formulation that will be discussed in depth. This research question is made based on the needs of the selected topic, namely:

Table 1. Research Questions

Research Question 1	What is the typology of the Quran memorization application model?
Research Question 2	How effective is the application?

Second, Search Strategy and Article Selection This stage develops a search strategy to identify relevant studies or research from various database sources. By utilizing the Publish or Perish (PoP) search engine using the keywords "Tahfidz Application", "Tahfizh Quran Application", "Memorization Quran Mobile", "Memorization Quran Application", "Quran Mobile" and "Quran Mobile Application"

from Scopus and Semantic Scholar data sources. Then obtained as many as 263 related articles. Here is a detailed description:

Table 2. Article Identification Results

Data source	Keywords
Scopus and Semantic Scholar	Tahfidz Application Quran Memorization Application Memorize Quran Mobile Memorization Quran Application Quran Mobile Quran Mobile Application

Third, after conducting identification related to the research, then the selection of articles is carried out by screening by applying inclusion and exclusion criteria. The selected articles are those published between 2019-2024, in English, and have been finalized for publication. Here are the criteria:

Table 3 Inclusion and Exclusion Criteria

Inclusion	Exclusion
2019-2024	< 2019
Language English	Besides English
Journal Articles	Conference, Proceedings, Books
Final Process	On progress

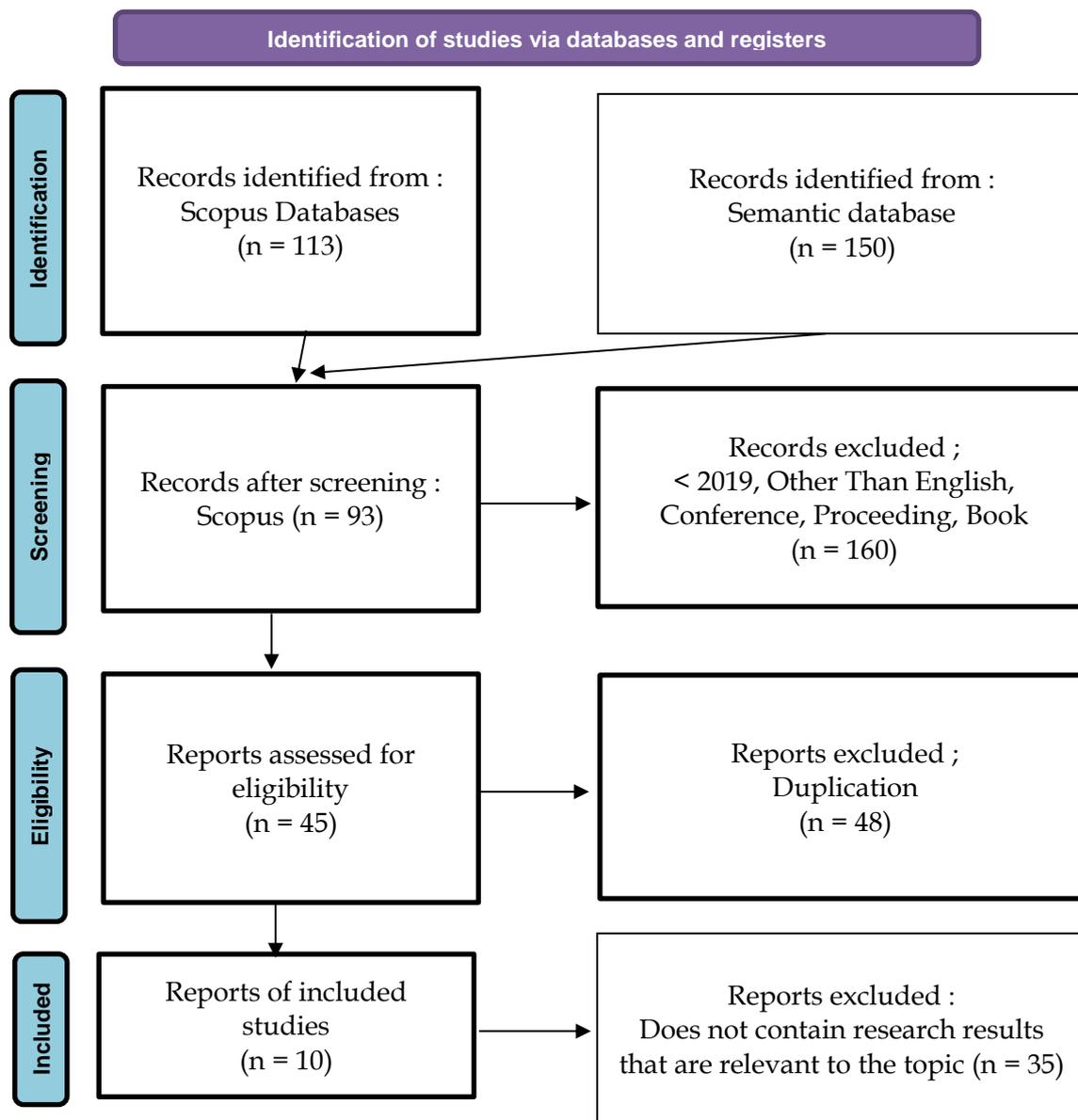
After going through the stages above, 93 articles were obtained that met the criteria. Which will then be tested in depth and must meet the quality assessment criteria (Quality Assessment) as a requirement for eligibility.

Table 4. Article Quality Assessment

Assessment Questions	Criteria
Question 1	Does the article contain research results on the application model for memorizing the Quran?
Question 2	Does the article contain research results on the effectiveness of the Quran memorization application model?

From the Assessment Results through the Quality Assessment above, 10 articles were obtained that met the criteria for assessing article quality. So this study will only focus on 10 articles that will be discussed in depth. The results of this article screening are described in the form of the following PRISMA flow diagram:

Figure 1. SLR PRISMA diagram



Fourth, Data Extraction and Synthesis. This stage extracts relevant data from various articles that have been obtained and meet the quality and eligibility tests and then synthesizes the results of previous research findings to obtain a comprehensive summary of results. This data will be explained in the results and discussion of the research with an in-depth review.

Fifth, Interpretation and Reporting. This final stage is the process of understanding the search results that have been summarized in the analysis stage. At this stage, the researcher makes a research conclusion, namely a brief statement description result based on facts or true relationships and contains answers to the questions presented in the problem formulation section. The entire answer only

emphasizes the scope of the question and the number of answers is adjusted to the problem formulation.

RESULTS AND DISCUSSION

Results

From the 10 articles studied, the following findings were obtained:

Table 5. Al-Quran memorization applications

Application Name	Information
TeBook A Mobile Holy Quran Memorization Tool (Abdullah, Aziz, Rauf, Shamsudin, & Latiff, 2019)	An application designed to provide a means of evaluating the reading of the Qur'an without the involvement of a third party by utilizing the use of voice recognition and an online Qur'an search engine. With this application, learners can learn to memorize without being constrained by being in a fixed place and this can happen outside the classroom.
Sound matching on the translation of Al-Quran verses (Abdurrodjak et al., 2019)	The application of voice matching of the pronunciation of the Al-Quran verses as a learning media for children using the Fast Fourier Transform (FFT) and Divide Conquer (DC) algorithms that support independent learning. The system built in this final project utilizes the Google API feature on Android as voice matching. Furthermore, the incoming sound will be converted into text using the Google API. The conversion method used is Fast Fourier Transform (FFT). The Divide Conquer assessment method is used by calculating the proximity value of the sound from the Google API conversion by matching the Arabic text in the database.
i Learning Management (Pranata, Suhada, Aini, Rahardja, & Amrikhasanah, 2020)	An online Al-Qur'an memorization learning application as a supporting media for students' memorization activities in a fun and easy-to-understand way. The iLearning management system has 2 advantages, namely online memorization can be accessed anywhere and data can be stored well and memorization activities can be done fun because of the gamification method that inserts games in between the memorization process.
Gamification Learning Analytics in Quranic	An adaptive gamification technology model that is integrated into the student learning experience by

Memorization (GLAM-Q) (Che Hassan, Wan Shamsuddin, & Yusof, 2022)	providing personalized formative memorization activities.
El- Ayah: Mobile Based Media For Al-Qur'an Memorization Using Takrar Method (Pradhana, Musthafa, Harmini, & Setiawan, 2019)	This media aims to help students improve the quality of memorizing the Qur'an with practical features in mobile applications. This media uses the takrar method that has been used since the time of the Prophet Muhammad SAW. The takrar method is used by repeating the reading 40 times for each sentence. This media is based on an android mobile application.
Qur'an Memorization Learning Model Based on Mobile Learning (Purbohadi, Rahmawati, & Setiawan, 2019)	A learning model using mobile technology. Which contains a mobile learning design that students can memorize independently; but teachers can still listen to the review of the reading sample, evaluate, and provide guidance. The student module is equipped with a paragraph display of verses, including translations. The student module is also equipped with reading references from international Qori. In addition, the student module is equipped with a voice recording facility so that students can compare with the reader's reference. Teachers can assess each student until the student is good at reading and more verses are memorized.
Same Verse Detection (Nor Laila, DARNOTO, Rahmawati, Surjono, & MUHTADI, 2020)	Same Verses Detection application based on Android as an innovation in memorizing the Quran. This application was developed to make it easier for students to find the same verses when memorizing the Quran because one of the things that students complain about is the difficulty of distinguishing the same or similar verses. This application has four menus, namely the verse menu which can be used to search for verses, the juz menu which is equipped with information on the prefix of the verse at the beginning of the juz, the letter menu which is equipped with information on letters and verse fragments at the beginning of the letter, the same verse menu contains a list of similar or identical verses and often there are errors or reversed when the verse is recitation.

<p>Modeling the Digital Al-Quran User Experience as Tahfidzul Quran Media (Khumairah, Sabariah, & Effendy, 2022)</p>	<p>Tahfidzul Quran Media uses the Task-Centered System Design method which places great emphasis on user requests and task requirements.</p>
<p>EzHifz Application (Mustafa, Mohd Zaki, Mohamad, Basri, & Ariffin, 2021)</p>	<p>Alpha Testing of EzHifz Application, is the initial testing stage carried out by the developer or internal team of the application before the application is released to the public or the beta testing stage. This application is designed to facilitate and improve the process of memorizing the Quran. These techniques support the use of various senses that can facilitate the process of memorizing the Quran independently.</p>
<p>E-Hafazan (Raof, Hashim, & Zainuddin, 2019)</p>	<p>This application is a mobile-based Quran learning platform designed to facilitate the process of memorizing the Quran for users efficiently and effectively.</p>

Discussion

Typology of Al-Qur'an Memorization Applications

From the research that has been conducted, the following typology of Al-Quran memorization applications was found:

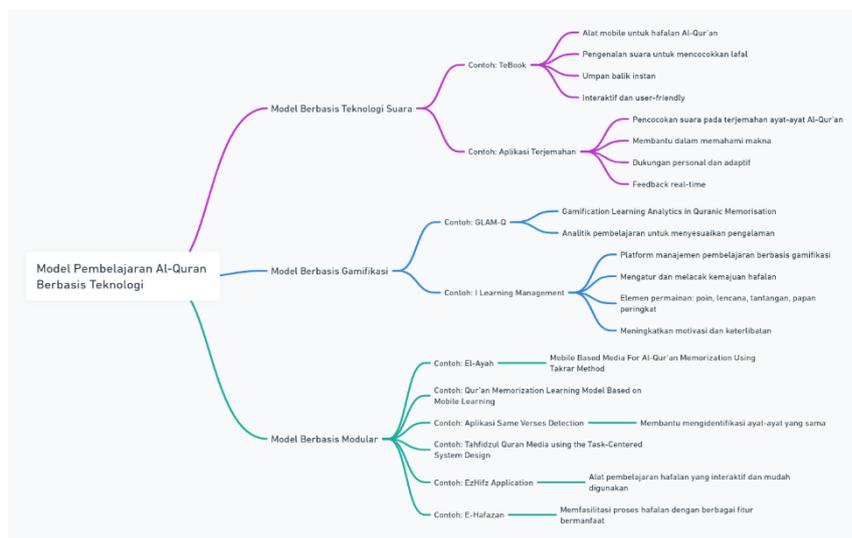


Figure 2. Typology of Al-Qur'an Memorization Application Models

The following is a typology of the Al-Quran memorization application model based on the Scopis database:

First, Voice-Based Technology Model. This model uses voice technology to match the pronunciation of the Qur'an, utilizing speech recognition capabilities to help users

correct and improve their reading. One example of this model is TeBook, a mobile tool for memorizing the Qur'an.(Abdullah et al., 2019), which uses speech recognition technology to match the pronunciation spoken by the user with the correct text of the Quran. TeBook allows users to practice their pronunciation independently, receive instant feedback on pronunciation errors, and correct their reading in an interactive and user-friendly way. Another example is an application that uses voice matching on the translation of verses of the Quran(Abdurrodjak et al., 2019).This application not only helps in memorization but also in understanding the meaning of the verses of the Qur'an through voiced translations. By using voice technology, this model offers an innovative approach to learning and memorizing the Qur'an, providing personalized and adaptive support to users, and improving accuracy and fluency of recitation through repeated practice and real-time feedback. This voice-based model shows great potential in supporting more effective and efficient Qur'an learning, especially for those who may not have easy access to traditional teachers.

Second, the Gamification-Based Model integrates adaptive gamification technology to provide an engaging and interactive learning experience. This model uses game elements, such as points, badges, challenges, and leaderboards, to increase students' motivation and engagement in the process of memorizing the Qur'an. Among these models is the Gamification Learning Analytics in Quranic Memorisation (GLAM-Q)(Che Hassan et al., 2022), which leverages learning analytics to monitor and customize learning experiences to suit individual student needs. In addition, there is I Learning Management(Pranata et al., 2020), which provides a gamification-based learning management platform to help students organize and track their memorization progress. By combining technology and game principles, this Gamification-Based Model has proven to be effective in increasing student retention, motivation and engagement, as well as providing a more enjoyable and memorable learning experience.

Third,Modular Based Model (Modular Based Model).is an approach that breaks down the Quran learning application into separate modules that focus on specific functions or features. In this context, modular applications provide flexibility for users to customize learning according to their individual needs and preferences. Some examples of modular models that have been found in research are: El-Ayah: Mobile Based Media For Al-Qur'an Memorization Using Takrar Method(Pradhana et al., 2019), which provides a mobile-based Quran memorization approach using the takrar method; Qur'an Memorization Learning Model Based on Mobile Learning(Purbohadi et al., 2019), which offers a mobile-based Quran memorization learning model; Android-based Same Verses Detection Application(Nor Laila et al., 2020), which helps users to identify similar verses in the Quran; Tahfidzul Quran Media using the Task-Centered System Design(Khumairah et al., 2022), which implements task-based system design in Al-Quran memorization learning media; EzHifz Application(Mustafa et al., 2021), which provides an interactive and easy-to-use Al-Quran memorization learning tool; and E-Hafazan(Raof et al., 2019), an application that facilitates the process of memorizing the Quran with various useful features. Through this modular approach, the Quran learning

application can be tailored to individual needs and provide a more effective and enjoyable learning experience for users.

Knowing these typologies is very important because it allows us to understand the patterns or characteristics that emerge in a particular field or domain. Typologies help in classifying, organizing, and analyzing information systematically, which in turn can provide valuable insights in various contexts.(O'Raghallaigh, Sammon, & Murphy, 2010). In addition, understanding the typology of an innovation, in this case the application of memorizing the Qur'an, can simplify conceptualization and provide more meaningful conclusions about the determinants of innovation. With the typology, we can identify effective and less effective models, so that we can direct application development efforts in a more targeted and efficient direction.(Rasyidi & Setiawan, 2021).

Effectiveness of Al-Quran Memorization Application

Through technological advancements, access to religious learning resources has become easier to reach. Digital Qurans, Islamic learning applications, and social media platforms provide educational content that can be accessed anytime and anywhere.(Ummah, 2020). Included in this is learning to memorize the Qur'an(Rusadi, 2020). Previous research has also revealed the potential of mobile Qur'an applications to support language learning, speech preparation, and spiritual experiences among users.(Isa et al., 2023a). However, the study did not explain the extent to which the application is effective in supporting the Quran memorization program.

In this study, it was found that of the three models of tahfidz al-Qur'an applications tested, the Voice-Based Technology Model was less effective. In contrast, the Gamification-Based Model proved to be very effective in supporting learning, especially for children. Surprisingly, this model not only improved memorization skills, but also increased student motivation and engagement in overall learning. The Modular Based Model showed varying results; some variants of this model proved effective in supporting memorization learning of the Qur'an, while others were still in the exploration study stage and their effectiveness had not been proven comprehensively. The effectiveness of the application if described with an effectiveness scale of 1-5 can be seen as follows:

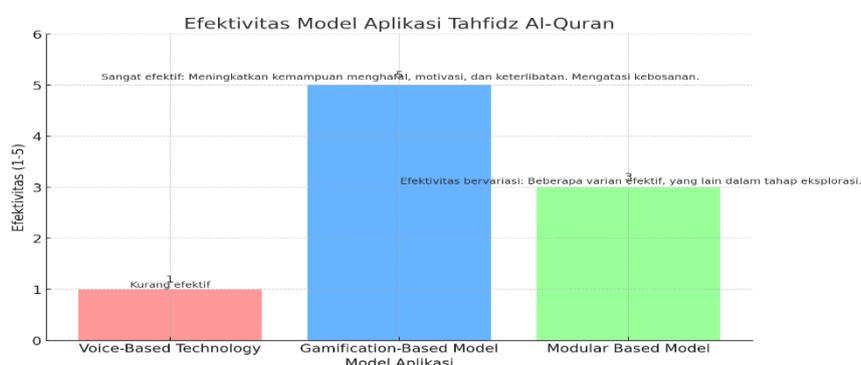


Figure 3. Effectiveness of the Al-Qur'an Memorization Application Model.

From figure 3. above, what is interesting is the finding that the Gamification-Based Model is the most effective model in helping to memorize the Qur'an. There is even research related to learning the Qur'an using a gamification approach to autistic children, the results of which show that learning with this model is considered capable of overcoming traditional challenges in learning tahfidz, such as boredom and lack of motivation, by presenting interesting and interactive game elements.(Borman & Putra, 2018). On the other hand, online or application-based games are often identified with negative things or things that are contrary to the effectiveness of the learning process.(Kompas, 2022). However, these results show that a holistic approach that combines technology with the educational process can create a more effective and enjoyable learning environment for students.(Daugaard, 2019). This approach not only breaks the negative stigma against games in education, but also paves the way for new innovations in teaching methods, demonstrating the great potential of technology in improving the quality of learning.(Isa, Aziz, Ishak, Mustafa, & Rahman, 2023).

Thus, this study not only fills the gap in the literature regarding the effectiveness of the application of tahfidz al-Quran, but also paves the way for further development of innovative and adaptive learning models, which are able to answer the needs of the times and significantly improve the quality of Islamic religious education, especially Tahfidzul Quran.

CONCLUSION

There are three models of Quran memorization applications: the voice-based Technology Model, the gamification-based Model, and the modular-based model. This study also found that the second model, the gamification-based model, is the most effective in supporting Quran memorization learning. This study contributes to further development related to learning the Qur'an through application features that can support independent and active learning. In addition, this study contributes a new perspective by introducing the variables of student engagement and gamification as important factors in the success of learning to memorize the Qur'an. The new method used in this study also offers an innovative approach to measuring learning effectiveness more comprehensively, thus providing a more holistic view of how technology can be integrated into religious education.

This study has several limitations that must be noted for a deeper and more comprehensive understanding. Among them are the limitations of data sources/databases because they only take from the Scopus and Semantic Scholar databases, as well as limitations in terms of the use of keywords in the article search process. In addition, there are limitations in the scope of the research topic, so the study's results may not reflect the entire spectrum of related studies. Therefore, further research is needed to expand and deepen understanding of the effectiveness of the Tahfidz Al-Quran application model. Further studies are needed to explore the challenges and obstacles as well as strategies for its utilization so that the development of the Tahfidz

Al-Quran application model can be more effective in supporting the Al-Quran learning process. Future research should also consider various data sources, the use of more varied keywords, and a wider scope of topics to obtain a more comprehensive and comprehensive picture.

REFERENCES

- Abdullah, MHB, Aziz, ZA, Rauf, RH Abd., Shamsudin, N., & Latiff, RA (2019). TeBook A Mobile Holy Quran Memorization Tool. <https://doi.org/10.1109/CAIS.2019.8769472>
- Abdurrodjak, M., Mud'is, MH, Qodim, H., Khaerani, IFSR, Rosidin, U., & Busro, B. (2019). Sound matching on the translation of Al-Quran verses as a learning media for children using mobile-based fast fourier transform and divide conquer algorithm. *Journal of Physics: Conference Series*, 1402(7), 077060. <https://doi.org/10.1088/1742-6596/1402/7/077060>
- Amam, A., & Rusdiana, S. (2022). The Role of Animal Husbandry Institutions, An Existence Not Just a Dream: A Review Using the Systematic Literature Review (SLR) Method. *Journal of Animal Husbandry*, 19(1), 9. <https://doi.org/10.24014/jupet.v19i1.14244>
- Andika, A. (2022). RELIGION AND TECHNOLOGY DEVELOPMENT IN THE MODERN ERA. *Abrahamic Religions: Journal of the Study of Religions*, 2(2), 129-139. <https://doi.org/10.22373/arj.v2i2.12556>
- Ardyan, E., Boari, Y., Akhmad, A., Yuliyani, L., Hildawati, H., Suarni, A., ... Judijanto, L. (2023). QUALITATIVE AND QUANTITATIVE RESEARCH METHODS: Qualitative and Quantitative Method Approaches in Various Fields. PT. Sonpedia Publishing Indonesia.
- Asqia, N., & Suridha, S. (2023). Improving the Ability to Memorize the Qur'an Through the Talaqqy Method in Children Aged 5-6 Years at Iman Al-Qurbah Kindergarten. *Journal of Education and Counseling (JPDK)*, 5(1), 4129-4138. <https://doi.org/10.31004/jpdk.v5i1.11675>
- Ayyad, E. (2022). Re-Evaluating Early Memorization of the Qur'ān in Medieval Muslim Cultures. *Religions*, 13(2), 179. <https://doi.org/10.3390/rel13020179>
- Borman, RI, & Putra, AS (2018). HIJAIYAH LETTERS RECOGNITION GAME FOR AUTISTIC CHILDREN WITH THE IMPLEMENTATION OF MULTISENSORY EDUCATION APPROACH. *SEMNAS TEKNOMEDIA ONLINE*, 6(1), 1-25.
- Che Hassan, SH, Wan Shamsuddin, SN, & Yusof, NH (2022). Towards Designing a Framework for Adaptive Gamification Learning Analytics in Quranic Remembrance. *Pertanika Journal of Science and Technology*, 31(1), 257-278. <https://doi.org/10.47836/pjst.31.1.16>
- Che Wan Mohd Rozali, WNA, Ishak, I., Mat Ludin, AF, Ibrahim, FW, Abd Warif, NM, & Che Roos, NA (2022). The Impact of Listening to, Reciting, or Memorizing the Quran on Physical and Mental Health of Muslims: Evidence From Systematic Review. *International Journal of Public Health*, 67, 1604998. <https://doi.org/10.3389/ijph.2022.1604998>
- Daugaard, L. (2019). Quranic app practices among multilingual Muslim youth in Denmark. *Apples - Journal of Applied Language Studies*, 13(4), 43-69. <https://doi.org/10.17011/apples/urn.201912185424>

- Dergisi, CTJ-C. İ. (2021). Hâfız as a Social Source for the Visually Impaired People / Görme Engelliler İçin Toplumsal Bir Kaynak Olarak Hâfızlık. *Cumhuriyet Theology Journal New Issue: Volume 25 Issue 2*. Retrieved from https://www.academia.edu/67993498/%E1%B8%A4%C4%81fi%E1%BA%93_a_s_a_Social_Source_for_the_Visually_Impaired_People_G%C3%B6rme_Engelliler_%C4%B0%C3%A7in_Toplumsal_Bir_Kaynak_Olarak_H%C3%A2f%C4%B1z%C4%B1k
- Hashim, A. (2015). Correlation between strategy of Tahfiz learning styles and students performance in Al-Qur'an memorization (Hifz). *Mediterranean Journal of Social Sciences*, 6(2), 85–92. <https://doi.org/10.5901/mjss.2015.v6n2s5p85>
- Heriyanto, H. (2021). Portrait of the Phenomenon of Online Tahfiz in Indonesia. *SUHUF*, 14(1), 153–177. <https://doi.org/10.22548/shf.v14i1.574>
- Hidayah, A. (2017). Al-Qur'an Memorization Method for Early Childhood (Review of the Book Secrets of Success of 3 Little Quran Hafizhs Who Shook the World). *Journal of Al-Qur'an and Hadith Sciences Studies*, 18(1), 51–70. <https://doi.org/10.14421/qh.2017.1801-04>
- Isa, NHM, Aziz, NHA, Ishak, M., Mustafa, WA, & Rahman, MNA (2023a). Quran Mobile Application: A Structured Review. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 34(2), 117–132. <https://doi.org/10.37934/araset.34.2.117132>
- Isa, NHM, Aziz, NHA, Ishak, M., Mustafa, WA, & Rahman, MNA (2023b). Quran Mobile Application: A Structured Review. *Journal of Advanced Research in Applied Sciences and Engineering Technology*, 34(2), 117–132. <https://doi.org/10.37934/araset.34.2.117132>
- Khumairah, AR, Sabariah, MK, & Effendy, V. (2022). Modeling the Digital Al-Quran User Experience as Tahfidzul Quran Media using the Task-Centered System Design. *JURIKOM (Jurnal Riset Komputer)*, 9(4), 921–929. <https://doi.org/10.30865/jurikom.v9i4.4649>
- Kompas, KC (2022, November 21). 8 Impacts of Online Games on Students, One of Which is Getting Angry Easily. Retrieved 31 May 2024, from KOMPAS.com website: <https://edukasi.kompas.com/read/2022/11/21/105741971/8-dampak-game-online-bagi-pelajar-salah-satu-jadi-mudah-marah>
- Krisnawati, N. (2021). Improving Al-Qur'an Memorization Learning Through the Talaqqi Method in Early Childhood | Wahana. Retrieved from <https://jurnal.unipasby.ac.id/index.php/whn/article/view/3181>
- Latipah, E. (2022). Motives, Self-Regulation, and Spiritual Experiences of Hafizh (The Qur'an Memorizer) in Indonesia. *International Journal of Instruction*, 15(1), 653–672. <https://doi.org/10.29333/iji.2022.15137a>
- Luthfi Dhulkifli, M. (2020). The Influence of the Kauny Quantum Memory Method in Memorizing the Qur'an from an Early Age at SD IT Lukman Hakim Yogyakarta. *SPEKTRA: Journal of Science Education Studies*, 6(1), 64. <https://doi.org/10.32699/spektra.v6i1.111>
- Mustafa, N.M., Mohd Zaki, Z., Mohamad, KA, Basri, M., & Ariffin, S. (2021). Development and Alpha Testing of EzHifz Application: Al-Quran Memorization Tool. *Advances in Human-Computer Interaction*, 2021, e5567001. <https://doi.org/10.1155/2021/5567001>
- Nor Laila, A., DARNOTO, Rahmawati, A., Surjono, H., & MUHTADI. (2020, October 1). Same Verse Detection Application: Innovative Media for Memorizing the Qur'an in Tahfidz Islamic Boarding Schools. | *International Journal of Pharmaceutical*

- Research (09752366) | EBSCO host.
<https://doi.org/10.31838/ijpr/2020.12.04.615>
- O'Raghallaigh, P., Sammon, D., & Murphy, C. (2010). Theory-building using Typologies—A Worked Example of Building a Typology of Knowledge Activities for Innovation. 371-382. <https://doi.org/10.3233/978-1-60750-577-8-371>
- Parveen, N. (2021). Investigating the Memorization of the Quran Using the Grounded Theory Methodology. The Qualitative Report. <https://doi.org/10.46743/2160-3715/2021.4752>
- Pradhana, FR, Musthafa, A., Harmini, T., & Setiawan, MD (2019). Elayah: Mobile Based Media For Al-Qur'an Memorization Using Takrar Method. Journal of Physics: Conference Series, 1381(1), 012025. <https://doi.org/10.1088/1742-6596/1381/1/012025>
- Pranata, S., Suhada, H., Aini, Q., Rahardja, U., & Amrikhasanah, OG (2020). I Learning Management System Using Shari'a Gamification Method for Qur'an Hafiz. Journal of Advanced Research in Dynamics and Control Systems, Volume 12(Issue 2), 2532-2540. <https://doi.org/10.5373/JARDCS/V12I2/S20201301>
- Purbohadi, D., Rahmawati, BR, & Setiyawan, H. (2019). Development of Qur'an Memorization Learning Model Based on Mobile Learning. Journal of Physics: Conference Series, 1381(1), 012029. <https://doi.org/10.1088/1742-6596/1381/1/012029>
- Raof, SFA, Hashim, NA, & Zainuddin, NA (2019). An Evaluation of Quran Memorization Mobile App among Middle-Aged Adults and Early Elderly. Journal of Computing Research and Innovation, 4(1), 1-7. <https://doi.org/10.24191/jcrinn.v4i1.98>
- Rasyidi, A., & Setiawan, A. (2021). Typology of Tahfidz Islamic Boarding School Curriculum in South Kalimantan. SYAMIL: Journal of Islamic Education, 9(2), 151-164. <https://doi.org/10.21093/sy.v9i2.3923>
- Rusadi, BE (2020). Tahfiz Online: A Means of Memorizing the Quran Online. Intiqad: Journal of Religion and Islamic Education, 12(1), 18-33. <https://doi.org/10.30596/intiqad.v12i1.4593>
- Saquib, N., Saquib, J., Alhadlag, A., Albakour, M.A., Aljumah, B., Sughayyir, M., ... Al-Mazrou, A. (2017). Health benefits of Quran memorization for older men. SAGE Open Medicine, 5, 2050312117740990. <https://doi.org/10.1177/2050312117740990>
- Syaifulloh, MK (2023). Electroencephalography (EEG) Frontal Alpha Asymmetry Index as an Indicator of Children's Emotions in the Three Quran Learning Methods: Visual, Auditory, and Memory. Iranian Journal of Psychiatry, 18(1), 93-96. <https://doi.org/10.18502/ijps.v18i1.11417>
- Ummah, AH (2020). DIGITAL PREACHING AND THE MILLENNIAL GENERATION (Exploring the Preaching Strategy of the Indonesian Santri Information Flow Community). TASAMUH, 18(1), 54-78. <https://doi.org/10.20414/tasamuh.v18i1.2151>
- Wajdi, F., Fauzia, S., & Hakam, A. (2020). Evaluation of the Tahfidz Program Through Social Media at the Indonesia Berkah Foundation. Journal of Al-Qur'an Studies, 16(1), 69-88. <https://doi.org/10.21009/JSQ.016.1.05>