




## Development of Digital Application-Based Tahfiz Learning Models in Early Childhood Education

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| Article Info  | ABSTRACT  |
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| <p><b>Article history:</b><br/>Received: 5 May 2023<br/>Revised: 30 July 2023<br/>Accepted: 15 August 2023<br/>Published: 1 September 2023</p> <p><b>Keywords:</b><br/>Model<br/>Digital Application<br/>Tahfiz<br/>Learning Model<br/>Early Childhood Education</p> <p></p> | <p>This article describes the Development Needs Analysis of Digital Application-Based Tahfiz Learning Models in Early Childhood Education. At this age, children act actively on stimuli, respond with people around them and are sensitive to the surrounding conditions. Therefore, this age level is the most suitable stage for teachers to stimulate children's intelligence, among them through remembering or memorization techniques. In line with the aspirations of the Education system in Malaysia, 21st century education emphasizes on integrating the use of digital as a teaching aid. Digital storytelling education is among the new methods and techniques in teaching and learning language included in the tahfiz al-Quran. To create a model that can meet the needs of teachers as consumers, a needs analysis is carried out on 4 preschool teachers in the Selangor district. Data collection is done through semi-structured interviews and targeted sampling techniques. Qualitative data from interviews with teachers are categorized and analyzed to identify themes for understanding data. The needs analysis shows that the three main themes identified, recommendations and specifications derived from interviews with teachers provide useful information for developing digital application content. The findings will be used to design and develop digital applications in the next phase. The findings are expected to help produce applications that can help teachers in terms of teaching surah memorization to children.</p> |

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## INTRODUCTION

In the new era, the use of digital technology in the field of education has become a major attraction at various levels of study, whether primary, secondary or higher. Information and Multimedia technology in 21st century education has been widely used among educators as it can affect the quality of teaching and learning (Hussin et al., 2022). There are various digital platforms that can be used according to the level of technology literacy in children. One of the platforms that is often used nowadays is the use of mobile applications. In fact, with the development of cutting-edge technology, mobile apps have become an integral part of human daily life (Sarker et al., 2021). Mobile apps allow humans to share information extensively regardless of place and time especially through social media. Based on the advantages of the mobile app, its use should not be limited to mature students only but extended to the child level. For example, the field of Islamic education at the childhood level should also be ready to explore new learning and teaching methods through the development of mobile applications. Once upon a time, Islamic education was taught in conventional form in the classroom using books, now with new internet facilities and gadgets, education has become more interactive and interesting (Nawi et al., 2012). The delivery of effective teaching strategies may be supported by Education technology as it allows students to choose how they learn and teachers to act as mentors, rather than directing (Nur Hafizah & Fariza, 2021).

There is a significant relationship between child development and the use of mobile applications in the field of education (Sarlan et al., 2016). In this regard, Zarina Abd Malek (2004), stated that the traditional approach to teaching should be scraped from the teacher's thinking but changed by supplying knowledge and skills towards obtaining information. This is because most of the students are less interested in teaching techniques that only involve writing notes or teaching traditionally, which is to use only the blackboard without any more interesting elements such as animation, graphics, sound and so on. Therefore, in line with the rapid development of technology, teachers should take the initiative to use this technology in the process of teaching and learning to attract students and facilitate the acceptance of knowledge by students. Memorization is a pedagogical process of learning that means a mental process that emphasizes meaningful experiences, stores and reproduces those experiences when needed to solve a problem (Siti Suriyani, 2018). Therefore, this study focuses on identifying development of digital application-based tahfiz learning models for preschoolers.

## STATEMENT OF PROBLEM

The first problem identified is that most states usually move in their own direction based on the emergence of private tahfiz schools, government tahfiz schools that use different learning approaches without a single centralization of models, modules or recreation. This causes the problem of inconsistency of tahfiz learning methods in every state and even in every school (Pudjiati et al., 2022). The same goes for the research conducted by Hashim (2010) on the assessment of the achievement of tahfiz students in Darul Quran and MTQN. The achievement of the students has not yet achieved the objectives of tahfiz education which has been outlined which is to recite the Quran smoothly, recite the Quran by understanding the meaning of the verse, reciting the Quran by knowing the asbab nuzul and reciting the Quran by knowing the teaching of verse.

The findings of the syafawi test clearly show that their achievement in the smooth aspect of Quran memorization is still weak. Similarly, the findings of the comprehension test showed that students' skills in issuing certain sentences based on the law were poor. In addition, the achievement of retention of memorization is also at a weak level. Among the factors that have been identified as the cause of weakness in The achievement of this tahfiz is a weakness in the tahfiz learning method as well as teachers who still use traditional methods in their teaching process (Abdul Rahim, Borham, Hashim & Hashim, 2008; Hashim, 2010). Teacher expertise is very important to guide students to use effective and appropriate learning methods (Yahaya, M., Rasheed, Z. N., & Selamat, 2018).

However, when viewed from the study of Norizah Tukiman (2014) found 8% to 56% of students are on a scale of C (medium) and D (need guidance) in rote aspects contained in the National Preschool Standard Curriculum difficulty. Therefore, a follow-up action needs to be carried out so that the student's performance in memorizing the Quran can be improved. Asmawati et.al (2012) stated that the influence of media that provides

interesting entertainment is increasingly aired, while the use of memorization media of the Quran is still limited (Muhammad Basyirun 2012). The problem also occurs in the learning of hijaiyah letters which according to Ahmad's study (2016) there are still many pre-school students who have not mastered the letters of hijaiyyah well. It presents a great challenge for teachers, especially pre-school teachers, to create fun learning based on interactive media in order to attract students to memorize the Quran.

In this regard, through digital applications based on the tahfiz learning model, it is hoped that it will optimize the process of self-learning and become an alternative source in learning and improving skills in the Quran tahfiz among children. Quranic software in the form of games is a necessity given the influence of games in children's life activities.

## **LITERATURE REVIEW**

### **Analysis of Needs as the Initial Phase of the Research**

Needs analysis is an important aspect in designing a digital application-based tahfiz learning model. Pratt (1994) defines necessity analysis as a method of identifying the gap between the present situation and the desired situation. While McKillip (1990) Mc Killip (1987) also states that necessity analysis is a judgment of value that a particular group has a problem that can be solved. Phase analysis of needs provides important information in determining the design and construction of instructional materials in the next phase (Gagne et al., 2005). In the context of this research, a needs analysis study was conducted at the beginning of a model development study to find out what is the need for teachers to deal with first-time preschoolers through preschool experiences in terms of appropriate learning practices so that children are able to socialize well and how teachers apply new skills to students during transition as practices that need to be mastered in their lives (Edwards et al., 2020). Data findings in the need analysis phase are used for the design phase to be used as elements in the development of digital applications. The module is then applied and evaluated for its effectiveness in terms of knowledge, behavior and practice related to tahfiz learning on the end users of the product.

### **Digital Application-Based Learning**

The mobile apps available in smartphones make it easy for them to access learning with ease. Various software and mobile applications in smartphones have been developed to make the learning and teaching process in the field of Quran memorization easy and fast compared to traditional. Several aspects of knowledge of the Quran are studied and developed to produce application and system designs that can have a beneficial effect on the user. The methods and techniques of Quran memorization have become easy with the convenience of internet access as well as the development of hardware and software in the form of digitalization. With the development of technology today, the use of smartphones that can be carried anywhere is very easy and helps every user to obtain a source of information not to mention reciting and reviewing the Quran memorization. Among the software that can be downloaded and widely adopted on android and IOS related to mushaf al-Quran are Qur'an for Android and The Quran (Hilmi & Alias, 2021).

### **Early Childhood Education**

Early Childhood education plays an important role in the early development of the child. Through preschool education, children are exposed to a broader learning environment than home learning. Children who get a preschool education seem more mature, have better cognitive development, stronger emotions, do not cry easily or are afraid of the school atmosphere (Bai et al., 2020). This exposure can help these children to develop and be ready for schooling. Children sent to nursery and pre-school centers are more sociable and have higher intellectual compared to children who are self-care for by their mother or guardian (Tippett & Milford, 2017). It can therefore be concluded that early childhood education plays a role in helping children to undergo the next school session with greater confidence and preparedness.

Early childhood education should reveal an early learning atmosphere to children before they enter primary school. Although early childhood education cannot determine a child's absolute abilities and success, the learning atmosphere at this stage can cause them great interest and desire to go to school in the future. Therefore, the planning and implementation of preschool education should be done carefully, neatly, structured and systematically (Counsell & Geiken, 2019; Lai et al., 2018; Nordin Mamat, 2022). Learning environments such as furniture layouts, learning tools, learning angles, interior decoration and leisure areas should be able to attract children. The curriculum compiled must be age-appropriate and able to arouse the child's curiosity to further learning. The teacher's teaching-learning strategy should be able to give them the opportunity to participate in every activity carried out (Nor Hasimah Hashim & Lah, 2004).

### **Children and Multimedia**

Types of media in education for children can be divided into two, namely non-electronic media and electronic media. Non-electronic media are devices that do not require battery power or electricity such as chalkboards, flashcards and books. Using multimedia can encourage children to learn better, easier, quickly and effectively (Nor Musliza Mustafa and Mokmin Basri 2014). It can inform children to believe and act in learning Islam. Jailani et al., (2020) states that digital storytelling, education is among the new methods and techniques in teaching and learning of languages included in the tahfiz al-Quran. In addition, interactive multimedia technology has the power to function in various aspects of educational programs to meet the needs of the 21st century (Wahab et al., 2017). The application of digital tools has proven that this mechanism is an alternative learning medium in the Quran tahfiz especially to children (Anas, 2019).

Through the use of technology, the Quran can indirectly be recited and children master the Quran through mastery of the skills of speaking the verses of the Quran in everyday conversation. Multimedia-based activities can help students better understand the knowledge learned. This variety of methods applied allows to assist children in improving their existing skills and blended in active learning. This is because learning the understanding of the Quran should be used as a practice that remains integrated in life (Wahab et al., 2017). Video screening approach for specific surahs and group competitions so that children enjoy reciting the Quran (Nazmin et al., 2020).

### **METHODOLOGY**

The study used a semi-structural interview method on 4 teachers from different preschools. This method was used by Norlidah (2010) and Aliza (2016) to obtain data analysis of the need to produce teaching modules. The sample selection technique is carried out purposefully by selecting respondents based on the criteria of teachers who perform tahfiz teaching and have academic qualifications at the degree level in the field of preschool education. To ensure that the information obtained meets the requirements of the study, the interview transcript questions through the pilot before the actual interview is conducted. The researchers selected a respondent who had the same characteristics as the actual study sample to be interviewed to see the appropriateness of the question.

### **RESEARCH FINDINGS**

The findings of the analysis of data from the interview of 4 preschool teachers were presented according to the following study questions:

"What is the need digital application construction requirements for preschool children's tahfiz learning?"

Interview questions about identifying the need for the construction of a digital application-based tahfiz learning model for pre-schoolers. Table 1 shows a summary of the overall findings for the needs of the learning model.

Table 1: Summary of findings for the needs of digital application-based tahfiz learning models for pre-schoolers'.

| Theme                         | Code  | N |
|-------------------------------|---|---|
| 1 Learning Strategies         | Talaqi<br>Listen<br>Repetition                  | 4 |
| 2 Element Application         | Audio<br>Pictures<br>Video<br>Movement<br>Voice | 4 |
| 3 Features of the application | Order<br>Riddles<br>Games                       | 4 |

Table 1 above presents the findings obtained for the needs of digital application-based tahfiz learning models for pre-schoolers'. Based on the analysis of the data done shows the three main themes found in this study.

### **Learning Strategies**

The first theme that exists in the need for the construction of digital applications for the tahfiz learning of preschoolers is learning strategies. The analysis showed that all preschool teachers interviewed had several learning strategies used in the classroom during the surah memorization teaching session. The following statement made by Teacher 1 illustrates this.

*"Usually method talaqi lah, student hears. We read it (al-quran) because student doesn't all know how to read."* -(C1 – PSA)

*"Although someone's messing around but student also knows how to remember also because always listen and willingly to follow teacher."*-(C1– PSA)

Teacher 2 states,

*"No, we read a verse (al-quran) straight away. It's just that I'll correct if there's a mistake in the reading. We hear the students reading something that's incorrect we'll fix it quickly"* -(C3 – PSB)

While Teacher 3 states,

*"for pre tahfiz at Pusat Asuhan Tunas Islam (PASTI), teachig student there is a sample technique of sorts for the new surah, first we let student hear the verse."* (C5-PSC)

And Teacher 4 gives a view,

*"Three times, or five times repitition, we read it together (Surah)." (C6-PSC)*

### **Digital Application Elements**

The second theme inherent in the need for the construction of digital applications for the tahfiz learning of preschoolers is the application element. The analysis showed that all preschool teachers interviewed received positively the elements that digital application construction should have. This is because they feel that digital applications are very important for preschool tahfiz learning under their supervision. All the preschool teachers interviewed stated that the construction of digital applications is compatible with children's tahfiz learning especially surah memorization. The following statement made by Teacher 1 illustrates this.

*“We give applications to students, so they can listen to the recitation of the surah.”(C1 – PSA)*

*“ Can, the application with visual pictures and color. So Insyallah is more interesting for the child to be more to remember, more eager to learn with this application.” -(C1 – PSA)*

Another teacher, Teacher 2, stated,

*“ If only listen but in the surah we press surah an-Nas (application) student has to do the movement, because if there is movement and voice student quick to memorise surah, .” (C5 – PSC)*

*“I think Insyallah, can be because now children are more likely to use the app. Students with pictures and interesting voices to be more attracted.” (C5 -PSC)*

While Teacher 3 states,

*“ It means pictures, movements, videos do help because now this thing is not new to student and it's easy to keep up with that thing (apps) by press a little bit button do repetition surah for they memorize.” -(C6 – PSC)*

*“That's what the icon can press, there's a picture that's everywhere moving, it's all multimedia.” - (C2 – PSA)*

and Teacher 4 gives a view,

*“ Is it okay if a lot of students want to move their hands or voice? (researcher) Absolutely necessary.” - (C7– PSD)*

*“ In my opinion, it's fun (apps), don't get tired of watching the teachers. It's best just now student looks so stunned because of interesting colors in the application.” (C3 – PSB)*

### **Digital Application Features**

The interview analysis also found that all research participants agreed that the digital apps built had game features. The following statements made by four teachers illustrate this.

*“Maybe have to do a game, maybe if the game we can do sentence of "Qul huallah" Then that like paste activity, the students write first paste in order, arrange it.” - (C1 – PSA)*

*“We don't know what's the effect of playing some game, but not, like this one has benefits. The apps at the same time helps student to memorize surah while playing game. Just like learning while playing” -(C2– PSA)*

*“Fun, because puzzles are hard, it's easy to play on the phone. (apps)” -(K3 – PSB)*

*“Like the existing game but for tahfiz (memorize surah)” (C7-PSd)*

### **DISCUSSIONS**

To increase children's learning, applications need to be well designed more likely to be game-based, according to respondents of applications that allow them to continue communicating with others especially teachers such as playing learning games while playing and being able to ask questions will be more excited and have the illusion of interesting images. This study has similarities to Papadakis et al., (2016), carefully planned educational activities with the use of mobile devices, improving motivation and performance of students.

## CONCLUSION AND RECOMMENDATION

Need analysis study important in obtaining information about the content and specifications of the digital application to be developed. The development of digital applications should take into account the needs of teachers as well as the existing experience of pupils so that the applications produced are suitable for teachers to use for children's learning. Data analysis has identified three main themes: (1) Learning Strategies (2) Application Elements, (3) Digital Application Features. The findings of this need analysis will be used as a guide to design and develop in the next phase of model development. While the digital applications developed are proposed to contain the following aspects:

- I. Stimulate children to socialize and communicate effectively
- II. Able to increase children interest in the activities.
- III. Educate children of new skills in a relaxed way
- IV. Applying ICT elements
- V. Children see and practice
- VI. Flexible and changeable according to the needs of the teacher

In conclusion, multimedia plays a very important role in helping the process of teaching and learning in the educational system in the country including in the education of children such as preschool (Edwards et al., 2020; Elyana & Utanto, 2019; Paulus et al., 2021; Wu & Zhao, 2022). Therefore, existence of multimedia in the learning system, this can help students to more easily understand and capture everything their teachers teach them while attracting them to follow the learning process. However, designing an educational multimedia software or application is not an easy process and can be implemented in a short time. It involves various research activities that need to be carried out in order for the software to be built to meet the needs of the target group of students. Knowledge of learning theories and how to apply them in designing software needs to be mastered first.

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