

Available online at: http://journal.uinsgd.ac.id/index.php/al-aulad Al-Aulad: Journal of Islamic Primary Education, 5 (2), 2022, 68-78

# THE DEVELOPMENT OF ISLAMIC RELIGIOUS EDUCATION ANDROID-BASED APPLICATION OF *SALAT* MATERIAL FOR ELEMENTARY STUDENTS

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First received: 12 April, 2022, Revised: 20 September, 2022, Published: 30 September, 2022

#### ABSTRACT

The Covid-19 pandemic has had a significant impact on various lines of life, including the education sector. The government's policy to minimize the transmission of the virus is carried out by implementing physical distancing rules. Therefore, the government in this case the Ministry of Education and Culture (Kemendikbud) provides rules for conducting distance learning. One of the schools affected by this policy is SDI (Islamic elementary school) Losari Lor. Teaching and Learning Activities (KBM) at SDI Losari Lor, before the pandemic were completely carried out offline with a lecture model. However, during the pandemic, activities were carried out with limited face-to-face and online in accordance with the instructions of the Brebes Education Office. The weakness of KBM is that learning is less than optimal, the teacher explains the material in class in a limited way, students are required to study independently. Likewise with the subject of Islamic Religious Education (PAI). Salat material is the material taught in class II semester 2. This study aims to create an android-based learning application, in order to increase students' understanding and understanding of the material to be discussed, namely the salat material. In addition, this research is also to overcome learning that is constrained by the internet network. Data collection methods used are interview methods, direct observation methods and literature methods. While the method used in building the application is a 4D model. The steps taken are Define, Design, Develop, and Dessiminate. The software used is Microsoft Powerpoint, iSpring Suite, and Web2Apk Builder. The result of the research is an Android-based Salat application. The result of this research is a mobile learning of salat application that can be used to make teaching and learning activities more interesting and interactive. Besides the fact that the material presented to the student will be easier to understand, the application can also be accessed even without an internet network. Keywords: Salat Apps, Android, 4D Model, Pandemic

#### ABSTRAK

Pandemi Covid-19 mempunyai dampak yang signifikan terhadap berbagai lini kehidupan, termasuk bidang Pendidikan. Kebijakan pemerintah untuk meminimalisir penularan virus dilakukan dengan cara menerapkan aturan menjaga jarak (*physical distancing*). Oleh karena itu, pemerintah dalam hal ini Kementerian Pendidikan dan Budaya (Kemendikbud) memberikan aturan untuk melakukan PJJ (pembelajaran jarak jauh). Salah satu sekolah yang terkena dampak kebijakan ini adalah SDI (Sekolah Dasar Islam) Losari Lor. Kegiatan Kegiatan Belajar Mengajar (KBM) di SD Islam Losari Lor, sebelum pandemi sepenuhnya dilakukan dengan luring dengan model ceramah. Namun, saat

pandemi, kegiatan dilakukan dengan tatap muka terbatas dan daring sesuai dengan instruksi Dinas Pendidikan Brebes. Kelemahan KBM adalah kurang optimalnya pembelajaran, Guru menjelaskan materi dikelas secara terbatas, siswa dituntut untuk belajar mandiri. Begitu juga dengan mata pelajaran Pendidikan Agama Islam (PAI). Materi Shalat adalah materi yang diajarkan di kelas II semester 2. Penelitian ini bertujuan untuk membuat aplikasi pembelajaran berbasis android, guna meningkatkan pemahaman dan pengertian kepada siswa tentang materi yang akan dibahas, yaitu materi Salat. Selain itu penelitian ini juga untuk mengatasi pembelajaran yang terkendala jaringan internet. Metode pengumpulan data yang digunakan adalah metode wawancara, metode observasi langsung dan metode literatur. Sedangkan Metode yang digunakan dalam membangun aplikasi adalah model 4D. Tahapan-tahapan yang dilakukan adalah Define, Design, Develop, dan Dessiminate. Software yang digunakan yaitu Microsoft Powerpoint, iSpring Suite, dan Web2Apk Builder. Hasil penelitian berupa aplikasi Salat berbasis Android. Dari hasil pengujian yang sudah peneliti lakukan, maka dapat disimpulkan bahwa aplikasi salat dalam bentuk mobile learning ini menjadi sebuah solusi kegiatan belajar mengajar yang lebih menarik dan interaktif, yang berdampak kepada materi lebih mudah dipahami oleh siswa serta dapat diakses dimanapun meski tanpa jaringan internet.

Kata Kunci: Aplikasi Salat, Android, Model 4D, Pandemi

#### 1. Introduction

The rapid advancement of technology and information in this digital era impacts every aspect of human life, including education. The development brings positive changes because it offers many conveniences in the teaching and learning process with the concept of Mobile Learning (M-Learning). The learning concept of Mobile Learning is a continuation of the learning concept of E-Learning which has a wider range of meanings. Suppose E-Learning learning includes Computer Based Learning, Web Based Learning, and Virtual Classroom. M-Learning also consists of all digital technology devices, including the internet, intranets, broadcast satellites, television, audio, radio, and so on. (Ziaurrahman & Surjono as cited in Kulbi, 2019).

In contrast to E-Learning, the M-Learning concept uses mobile devices such as Android, Smartphones, and Tablets, which all have limited storage. The content presented in M-Learning is generally only in the form of text and images, but as technology and information develop, content in the form of video, audio, and animation can also be used in learning through M-Learning. (Musahrain, Suryani & Suharno as cited in Kulbi, 2019)

Corona Virus (Covid-19), which has infected the world, including Indonesia, since 2019, has significantly impacted all aspects of life, such as health, economic and social factors (Chairani, 2020). In addition, the world of education has also been directly affected by the Covid-19 pandemic. According to the official website covid19.co.id, in general, to prevent the spread of Covid-19, the government has made policies divided into three parts, namely around the neighborhood, while traveling and when doing outdoor activities.

Efforts to prevent transmission of Covid-19, namely by physically distancing, limiting distance in society, and avoiding crowds, gatherings, and meetings involving many people. To limit community interaction, the Ministry of Education in Indonesia issued a policy to carry out a limited offline learning process, replacing the Teaching and Learning Activities process in the network (online) by closing schools. The online teaching and learning process requires us to adapt to various information technology media.

The rapid development of IT has changed the paradigm of society in seeking and obtaining information, not only limited to newspapers, television, and radio. Many of our people have even turned to the Internet in the form of applications. The education sector is

one sector that has a significant impact on the development of IT. Technology in the world of education has a very important role. The role of technology facilitates all needs in the teaching and learning process. Technology can act as a facilitator in learning, as an improvement in educational performance systems, as a support for learning systems, and as a support for learning materials in education (Salsabila et al., 2020).

Education is a communication and information process from educators to students who use the media to convey ideas, thoughts, and ideas. It is in line with what Ariani & Harianto said, that the media is everything done to deliver messages (Knowledge, Skills, and Attitudes) and can stimulate thoughts, feelings, attention, and willingness to learn so that the learning process occurs intentionally, purposeful and controlled (Ariani, 2010).

One of the subjects taught in schools is Islamic religious education (*PAI*). According to the Government Regulation of the Republic of Indonesia number 55 of 2007 concerning Religious Education and Religious Education.

"Religious education is education carried out through subjects or lectures at all levels of education which aims to provide knowledge and shape attitudes, the personality of people who believe and fear God Almighty, as well as the skills and abilities of students in addressing the values of religion, moreover to prepare students to become human beings who can carry out and practice their religious practices".

Based on these regulations, Islamic religious education (*PAI*) provides knowledge. Moreover, it shapes students' attitudes, personalities, and skills based on Islam as contained in religious lessons taught in schools and universities. According to Rahman (2012), *PAI* is an effort and process of instilling education continuously between teachers and students, with good morals as the ultimate goal. Instilling Islamic values in the soul, taste, and mind, as well as harmony and balance, are the main character (Firmansyah, 2019).

In general, education during the pandemic has many problems, both from the side of educators and students. Students do not understand the materials, and monotonous delivery of material can trigger feelings of boredom (Ramadhon & Khoiriyadi, 2021), students' lack of interest in distance learning (Basar, 2021) and internet network problems which can result in slow students accessing information or submitting assignments (Siahaan, 2020). There are also obstacles from an economic perspective, namely the cost of buying internet data because not all students have a good financial background. The problem from the educator's point of view is that explaining material to students is not optimal, and senior teachers do not understand to use the internet (Ramadhon & Khoiriyadi, 2021).

Overcoming these problems requires more creative and innovative learning by applying fun online learning media (Jaelani, Fauziah, Aisah, & Zaqiyah, 2020). The media used must be interesting so that the educator's messages can be well received and accepted by students (Andriyanto, 2017). According to the researcher, it is necessary to make learning strategies currently in demand by children, namely learning using M-Learning by utilizing Android-based smartphone media. This M-Learning method is preferred to E-Learning because mobile devices are handy, portable, and always active. It is, of course, very liked by children who tend to enjoy playing games. We turn this hobby of playing games into something useful in improving learning, especially in obtaining fast and specific learning content. Moreover, it can be accessed anywhere and anytime without having to turn on the computer first.

Android is one of Indonesia's most widely used operating systems, amounting to 91.25% of the total smartphone users (https://gs.statcounter.com). Android is a Linux-based operating system designed for mobile devices with touchscreen systems, such as smartphones and tablets. Initially, Android was developed by Andorid, Inc., in which Google invested. But in 2005, the Android system was purchased by Google, at the same time as the

start of the Open Handset Alliance, a consortium of hardware, software, and telecommunications companies aimed at making improvements to open standards for mobile devices. Moreover, Android phones began to be distributed in October 2008. Then the Android operating system has various versions. Each version has its advantages, starting from the appearance, security system, and so on. (Muyaroah & Fajartia as cited in Kulbi, 2019)

Research on the creation of Android-based applications has been carried out a lot. Among them: Andryanto & Wibawa (2017) conducted research with the title Android-Based *Salat Fardhu* Learning Media (Case Study: Al-Moeladi Mosque Al-Moeladi Mosque, Bantul). This research aims to make an android-based *salat fardhu* media application to provide convenience in learning *salat fardhu*, especially for students and female students at the Al-Quran Education School (*TPA*). They have an average age of 10-12 years. Moreover, Wahyudi (2016), in his thesis entitled Development of Android-Based *PAI* Learning Media to Improve Student Learning Achievement at SMAN 1 Tumpang, Malang Regency. The purpose of this study was to improve the learning achievement of class X *SMA/SMK* students through Android-based *PAI* learning materials.

The research to be carried out is to create learning media for Android-based PAI subjects with a research locus, namely Losari Lor Islamic Elementary School (SDI). SDI Losari Lor is a private elementary school in Losari Lor, Losari, Brebes, Central Java. SDI Losari is one of the sub-education units under the Diponegoro Islamic Wakaf Foundation (YWID). YWID is a Waqf Foundation that oversees Elementary, Middle, and Vocational Education levels. As an Islamic-based school institution, one of the efforts to achieve an Islamic generation is to make religious subjects a basic subject in the learning system at SDI Losari Lor. Religious subjects at SDI Losari Lor are divided into Islamic Religious Education and Behavior and Special Religious Education. Islamic Religious Education covers the subjects of Aqidah Akhlak, Fiqh, etc. Pre-pandemic teaching and learning activities at SDI Losari Lor were fully carried out offline using a lecture model. However, during the pandemic, limited face-to-face and online activities were carried out according to the instructions of the Brebes Education Office. The weakness of the learning process during the pandemic is that learning is less than optimal. The teacher explains the material in class in a limited way, and students are required to study independently, likewise with PAI subjects.

Salat material is material taught in second-grade, in the second semester. *PAI* teachers conduct teaching and learning activities during a pandemic using Offline and Online models. The offline teaching model uses the lecture method, while the online model uses WhatsApp media by sharing material photos. In general, *PAI* learning is still monotonous and tends to be boring. Although according to an information source from *PAI* teachers, occasionally, they use learning videos. According to the researcher, it is necessary to make learning strategies currently in demand by children, namely fun learning using Android-based applications.

It is hoped that displaying a full-color material application accompanied by pictures can stimulate students' learning interest to be more enthusiastic in studying *salat* material, which is the subject matter in *PAI* lessons. Apart from being a subject matter in *PAI* lessons, this *salat* material is the basic material that students need to get used to the obligations they must carry out as true Muslims. This good habit that is done from an early age will certainly have a positive influence on their next life in the future. As the prayer of the prophet Ibrahim becomes a generation that upholds *salat*, carries out all its commands, and stays away from its prohibitions.

At the same time, it gives a positive stigma to children that mobile phone is not only used for playing games but can also be an exciting learning media that can improve elementary school students learning achievement.

Based on these problems, we entitled this research "The Development of Islamic Religious Education Android-Based Application of *Salat* Material for Elementary Students".

# 2. Method

This research is included in the development research (Research & Development). R&D research is research to produce a product and test its effectiveness of the product (Sugiyono, 2016). This study developed an Android-based *salat* material of *PAI* learning application to make it easier for teachers to teach *salat* material to second-grade students of *SDI* Losari Lor. The initial stage in conducting research is the data collection stage, then developing the system.

# 2.1. Data Collection

The data collection method is carried out to obtain the data needed in research activities, while the method is carried out as follows:

- 1. Observation. Observation is a research technique carried out by directly observing the research object.
- 2. Interview. This technique is done by asking several questions to the resource person.
- 3. Literature. This method is carried out by reading books, journals, theses, and related materials to support research.

### 2.2. System Development

The method for developing learning applications uses the 4D model. The 4D model was first developed by Thiagarajan, Semmel, and Semmel in 1974. The 4D model has 4 main stages: Define, Design, Develop, and Disseminate (Amir & Parumbuan, 2018).

# 3. Results and Discussions

3.1 Data Collection

The first step is to analyze the data needed in the research. Based on data collection carried out to obtain the data needed in research activities. The method is carried out as follows:

- a. Observation. This method is carried out by directly observing the learning system that is already underway at *SDI* Losari Lor to obtain more accurate data. The observation results are that Islamic Education learning is carried out using a face-to-face model or what is referred to as offline (at class) and during a pandemic using a limited face-to-face model, a combination of offline and online. In the offline learning model, *PAI* teachers use the lecture method in the class by giving explanations written on the blackboard. Meanwhile, during online learning, teachers provide instructions through social media groups for each class.
- b. Interview. This method is carried out by asking several questions to the resource person, one of which is by coordinating directly with the Principal of *SDI* Losari, who also acts as a *PAI* teacher. At this stage, the researchers discussed with the *PAI* teacher what books would be used as the main reference for teaching materials and how the learning process had occurred both before and after the pandemic. Based on *PAI* teachers' information, prayer material can be used as research material. *Salat* material was chosen because *salat* material is one of the important materials that is always taught at every grade level, from grade one to grade six.
- c. Literature. This method is carried out by examining literature from various sources related to *salat* material, android-based learning media, and educational materials. The

main literature as a reference in making *salat* application material is obtained from the book "Al-*Quran Hadith, Aqidah Akhlak, Fiqh*, Arabic" written by Sri Mulyani, dkk, published Putra Nugraha Surakarta in 2021.

### 3.2 System Development

The development of an Android-based *salat* material learning application is carried out through four stages, namely:

a. Define Stage

At this stage the researcher determines the definition and terms of learning. Includes learning objectives and learning boundaries. Researchers also analyze what is needed in system development. The hardware as well as software needed by researchers to create an Android-based prayer material application for grade 2 elementary school students are as follows:

- 1. Hardware:
  - a. Intel Processor ® celeron ® CPU 877 @1.40GhzG
  - b. Random Acces Memory (RAM) 8,00GB
  - c. Harddisk 500 GB
- 2. Software:
  - a. Microsoft Powerpoint
  - b. iSpring Suite
  - c. Web2Apk Builder

### b. Design Stage

The design of this application includes several stages, namely:

1. Android Application Layout Design

This Android application layout design is a display layout for the application. In designing the application layout, it is made user-friendly so that users can operate it efficiently.

2. Application Graphic Asset Design

The purpose of this design is to prepare for the audio-visual needs of the application. Graphic assets need to be designed in advance so the application will look attractive later.

3. Application Content Design

The design of application content includes any components in the prayer application. Existing components include material on the meaning of *salat*, legal and obligatory requirements for *salat*, pillars and sunnah of *salat*, canceling *salat*, and questions related to the material.

c. Develop Stage

The third stage in the 4D model is the Develop stage. At this stage, the researcher develops an application based on the design that has been designed. The software used to create the application is Microsoft Office Powerpoint which is converted to HTML using the iSpring Suite software. The next step is to convert the HTML file into an APK file using the Website2Apk Builder software. This learning media is built in the form of an apk file to make it easier for students to learn because students can use this software anywhere.

The learning applications built include multimedia applications. The media used to present prayer material are text, images, and animation. The media to explain the readings and prayer movements uses pictures and audio media, to beautify the appearance using animation.

# d. Dissemnite Stage

The dissemination stage spreads the *salat* application apk file via social media (School Group WhatsApp). This stage aims to inform users about the material's content and how to use the application. In addition to using social media, researchers also socialize the application through face-to-face meetings with Class II SDI students and parents so that they understand and can use the application directly. Before this stage, a trial phase was carried out. The product of the learning application for prayer material for class II SD has been assessed by experts, namely the PAI teacher, and has been tested on students in class II SD and meets the criteria as the leading learning resource for *salat* material for class II.

# 3.3 Learning Application Display

The product display includes the splash screen, menu screen, and content.

# a. Splash Screen Display

The splash screen page is the first or front page displayed by the Android device when the user first opens the application. Users will see the display of the Splash Screen background for approximately 5 seconds before heading to the home page. The splash screen page display is presented in Figure 1 below:



Figure 1. Splash Screen Display

# b. Application Menu Page Display

The application menu page is the second page displayed after the application's front page (splash screen). On the home page menu, which is the main page of the application, the user will find 9 (nine) menus, which consist of the Definition of *Salat*, Requirements for Obligatory *Salat*, Requirements for *Salat*, Pillars of *Salat*, Sunah *Salat* (recitation), Sunnah *Salat* (movement), Things that invalidate *Salat*, Practice Questions and last about the application.



Figure 2. Application Menu Page Display

# c. Salat Material Display

The *salat* material display is the third page and is the main page that is displayed after the Application Menu page. One example of *salat* material is the pillars of the *salat* menu. There are 12 steps: *Salat* Intentions, *Takbiratul Ihram*, Reciting *Al-Fatihah*, *Ruku'*, *I'tidal*, *Sajdah*, Sitting Between Two *Sajdah*, and *Tashahud*, and *Salaam*. In this menu, the user can not only see the salat movements as exemplified by the pictures but also an audio menu is added so that students can listen to the recitation of *salat* directly on each menu when clicked and can be repeated until students memorize the recitation.



Figure 3. Twelve Steps of Salat Display

# d. Exercise Display

The exercise question menu in the application displays *salat* practice questions in the form of multiple choices, which can be used as evaluation material after students have

studied all the material in the application. Tests in the form of multiple choice are included in the category of objective tests, which have advantages compared to subjective tests, including having objectivity, validity, high reliability, and being representative in representing all the material being taught (Novitasari, 2014).

	SOAL PILIHAN GANDA
	Pilihlah jawaban yang benar
1.1	Mengerjakan solat hukumnya adalah
	a. Sunah
	b. Wojib
	c. Mubah
	YES! YES!

Figure 4. Exercise Display

3.4 User Response to Mobile Learning Application

User experience of the *Salat* Mobile Learning Application was obtained by researchers from interviews with *PAI* teachers, class teachers, some students, and parents of students. Questions related to the ease and usefulness of the application. Most users state that the application is easy to install on a smartphone and use. Then, icons and navigation work well. Moreover, users also agree that the application benefits in increasing understanding of *salat* material with an interactive and attractive display. However, researchers also found that students were more comfortable and knowledgeable using face-to-face methods in class than mobile learning. Further, the input from users is by adding *salat* videos to complement the application.

Based on the results and discussion above, we can see that the learning process through Mobile Learning (M-Learning) has three functions and benefits obtained in classroom learning. To use or not use M-Learning in teaching and learning activities, but even though it is optional, educators, in this case, teachers in the class, still encourage students in terms of using mobile learning so that students can absorb a lot of information and also be effective in learning. Second, Mobile Learning as complementary, meaning that the M-Learning method is a complement to the face-to-face learning process, which usually happens in class, meaning that the material taught in M-Learning is a form of reinforcement for students in understanding the material taught. The third is M-Learning as a Substitution. In several developed and developing countries, Educational Institutions are given whole choices to choose effective learning methods for students, which are, of course, not the same in every country, and it also adjusts to the level of abilities possessed by each student (Bahar Nur Batubara dalam Kulbi, 2019).

# 4. Conclusions

From the design results of the Development of Islamic Islamic Education Teaching Materials on Android-Based Prayer Materials, the following conclusions can be drawn:

- 1. Utilization of Android-Based Mobile Learning in *PAI* Subjects, especially prayer material at *SDI* Losari Lor runs effectively, is fun, and attracts students' attention, so learning is varied and exciting.
- 2. The Android application can be a more interactive learning media to encourage students' interest and enthusiasm for learning.
- 3. Application of *salat* materials can be used to address educational problems in general, such as limited internet access or quota constraints because they do not require internet access.
- 4. Application of *salat* materials can be widely used by the general public, temporarily spread through social media.

# 5. Acknowledgment

The researcher would like to thank the Community Research and Development Institute IAIN Syekh Nurjati Cirebon for funding this community service program, so the output of the community service activities that the researchers have done can produce a learning application and also a scientific journal that not only used by *SDI* Losari Lor also all *SD/SDI/SDIT/M*I in Indonesia so that its usefulness can be felt more broadly. We also thank the Diponegoro Islamic Waqf Foundation, which oversees the Elementary, Middle, and Vocational Education levels in Losari, have been willing to provide information, the willingness of time and place for us to interview so that this community service program can be carried out properly. The researcher hopes that what has been done can be useful in the future to improve learning, especially the *PAI* subject.

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