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DEVELOPMENT OF SMARTPHONE-BASED ABBASID DYNASTY LEARNING MEDIA TO IMPROVE STUDENTS' UNDERSTANDING OF ELEVENTH GRADE IN MA

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Abstrak
Pembelajaran Sejarah Kebudayaan Islam (SKI) di Madrasah Aliyah Miftahul Jannah Palangka Raya sering kali menghadapi kendala dalam menarik minat peserta didik. Media pembelajaran yang digunakan cenderung konvensional sehingga kurang sesuai dengan kebutuhan generasi digital saat ini. Penelitian bertujuan mengembangkan media pembelajaran berbasis *smartphone* dirancang untuk meningkatkan kualitas dan pemahaman pembelajaran SKI. Penelitian menggunakan metode penelitian dan pengembangan (*Research and Development*) dengan pendekatan *define, design, develop, disseminate* terdiri dari pendefinisian, perancangan, pengembangan, penyebaran. Proses pengembangan melibatkan validasi ahli, uji coba, dan revisi memastikan kelayakan media. Hasil penelitian menunjukkan aplikasi yang dikembangkan mampu memfasilitasi pembelajaran lebih interaktif dan menarik bagi peserta didik. Kesimpulannya, media pembelajaran berbasis *smartphone* efektif dalam meningkatkan minat belajar dan pemahaman peserta didik materi dinasti Abbasiyah. Selain itu, media juga dapat menjadi alternatif inovatif dalam pembelajaran berbasis teknologi sesuai dengan kebutuhan pendidikan modern.

Kata Kunci: Media Pembelajaran; Smartphone; Android, Islam, Abbasiyah

Abstract
The teaching of Islamic Cultural History (SKI) at Madrasah Aliyah Miftahul Jannah Palangka Raya often faces challenges in attracting students' interest. The learning media used tends to be conventional, making it less suitable for the needs of the current digital generation. The research aims to develop smartphone-based learning media designed to enhance the quality and understanding of SKI learning.The research uses the Research and Development method with the define, design, develop, disseminate approach, which consists of definition, design, development, and dissemination. The development process involves expert validation, testing, and revision to ensure the media's feasibility. The research results show that the developed application is capable of facilitating more interactive and engaging learning for students.In conclusion, smartphone-based learning media is effective in enhancing students' interest and understanding of Abbasid dynasty material. Additionally, the media can also serve as an innovative alternative in technology-based learning in line with the needs of modern education.

Keyword*: Learning Media; Smartphone; Android; Islam; Abbasiyah*

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INTRODUCTION

The increasingly advanced era requires teachers' creativity in utilizing technology to develop learning (Vitaningsih et.al, 2023). However, teachers have not integrated Android-based learning into the learning process at Madrasah. This is intended so that classes can run smoothly (Fadilah et al., 2023). Education includes all learning events that occur throughout life in all situations and conditions. The fact that education is a lifelong process (long life education) (Agustin Purba et al., 2023).

To help achieve the best level of safety and enjoyment as individuals and as members of society, education aims to guide all human nature (Pristiwanti et al., 2022). In the learning process, media has a very important role in achieving learning goals. Books, tape recorders, cassettes, video cameras, video recorders, films, slides (picture frames), photos, graphics, television, and computers are examples of real aids used to channel information from teaching materials, according to Gagne and Briggs (Jennah, 2009). Everything is used as a means of conveying messages (materials), attracting attention, interest, and motivation of students can achieve learning goals called learning media (Wulandari et al., 2023). Especially in SKI subjects, teachers' creativity is needed in using learning media, so that students are interested in the learning process.

The history of Islamic Culture is an important subject for students in Islamic-based educational institutions (Istiqomah et al., 2023). The focus of the History of Islamic Culture is how Islamic culture can be developed by taking inspiration from historical events (Islam), emulating respected figures, and connecting social, political, cultural, economic, scientific, technological, and artistic aspects (Hasmar, 2020). Technology is very important, this shows how fast the development of science and technology is, but it still needs to be addressed, understood, and utilized (Radiansyah, 2020). The era of globalization places great importance on expertise in science and technology (Abadi, 2022). Many Islamic individuals and scientists were born who influenced the progress of science and technology today. Including Al-Khawarizmi as a scientist in the field of mathematics (Perkasa et al., 2021). Without his discovery, computers could not operate because they use electronic pathways, only recognizing two situations, namely life (1) and death (0), as well as in making Android applications.

Android applications are gadgets created specifically for the Android operating system, providing several functions, including in the field of education. The Java or Kotlin programming language, often referred to as a conventional programming language, is usually used to create Android applications (Wanda et al., 2023). Conventional programming languages usually have more traditional syntax and refer to older programming languages. This includes programming languages such as Java, C, and C++ (Rahayu et al., 2022). Using Kodular Web as a programming language in this research and development offers a block programming tool for creating Android applications comparable to MIT App Inventor. (Basith, 2022). In other words, developers can create Android applications without typing program code manually.

It will be easier for developers to upload Android applications on the Kodular Store, and create custom extension IDE program blocks thanks to Kodular's extra capabilities, which include the Kodular Store and Kodular Extension IDE (Muhamad Taufik Hidayat & Yoyo Zakaria, 2023). The advantage of Kodular Web is its block programming functionality, which eliminates the need for manual programming code when developing Android applications. The code can be changed to match the theme in terms of interface/GUI, thus giving a more contemporary and smooth look to our applications (Azman et.al, 2023).

Thanks to Kodular Web's block programming functionality, it makes it very easy for novice developers to run the program. This facilitates the creation of Android application-based learning media.

Q.S. Al-Ahzab : 33 ayat 21 Allah SWT. berfirman:

لَقَدْ كَانَ لَكُمْ فِيْ رَسُوْلِ اللّٰهِ اُسْوَةٌ حَسَنَةٌ لِّمَنْ كَانَ يَرْجُوا اللّٰهَ وَالْيَوْمَ الْاٰخِرَ وَذَكَرَ اللّٰهَ كَثِيْرًاۗ ٢١ (الاحزاب/ ٣٣ : ٢١)

Artinya: "Sungguh, pada (diri) Rasulullah benar-benar ada suri teladan yang baik bagimu, (yaitu) bagi orang yang mengharap (rahmat) Allah dan (kedatangan) hari Kiamat serta yang banyak mengingat Allah" (Taufiq, 2019).

The verse above provides an understanding that Rasulullah SAW used media to convey his teachings through words and deeds.

Observation results at Madrasah Aliyah Miftahul Jannah in grade XI students, the majority of students use Android smartphones. Then during the learning process, learning at Madrasah Aliyah Miftahul Jannah uses learning media such as Microsoft PowerPoint (PPT). Sometimes teachers also use videos as SKI learning media in the classroom, but actually, this makes students sleepy because the videos are shown too long and are boring.

The results of the interview with the SKI subject teacher, Mrs. Sri Sukaprihatin, S.Pd., revealed that "SKI subjects are considered one of the most difficult subjects for students compared to other subjects. The main difficulties experienced by students are mainly in the Abbasid Dynasty material, where they have difficulty in remembering the figures and memorizing the regions that existed at that time". Therefore, the Abbasid Dynasty material is the main reference in this study due to the challenges faced by students in understanding the topic.

From the results obtained by researchers in analyzing student exam data for SKI subjects at Madrasah Aliyah Miftahul Jannah class XI, it shows a worrying condition, where most students have difficulty in achieving learning completion. With only 24% of students declared complete and 76% who have not reached the standard, it is clear that the existing learning methods are less effective in helping students understand the material. Given that the KKM set is 75, these results reflect the need for innovation in delivering material. Therefore, the development of Android or Smartphone application learning media on the Abbasid Dynasty material is a very relevant solution to improve student understanding.

METHOD

Research falls into the category of design and development research, also known as Design and Development Research. According to Sugiono, the design and development research method is a research technique used to create a particular product and evaluate its effectiveness (Sugiyono, 2022).

The product developed in this study is a Smartphone-based Abbasid Dynasty learning media. The estimated time used in this study is from September to October 2024. The respondents in this study were 18 students of class IX of Madrasah Aliyah Miftahul Jannah Palangka Raya. They became the main subjects in the product trial to evaluate the effectiveness of Android application-based learning media. The product validation process was carried out by three categories of experts, namely media expert validators who were tasked with evaluating technical aspects, interface design, navigation, and ease of use of the application. These experts usually have a background in educational technology or multimedia design. Material experts ensure that the SKI learning content delivered in the application is accurate, following the curriculum, and relevant to student needs. These experts are generally lecturers or teachers who are competent in the field of

SKI studies. Language experts are tasked with checking the clarity of language, sentence structure, and suitability to the level of student understanding. These experts have competence in the field of linguistics or language education.

The research and development model uses a model developed by Thigarajan which is often referred to as 4D (Nova Yoga, 2022). Sugiyono stated that the 4-D model consists of several steps as follows: (1) Defining steps to identify and determine the requirements that must be met in learning development; (2) Designing Story Boards, organizing materials in media (layouts), creating learning scenarios, collecting information, and creating practice questions displayed on the media that has been created, are part of the design; (3) Development of expert validation and review before being tested on students; (4) Dissemination of the stage of disseminating the media that has been developed (Sugiyono, 2022).

There are two categories of data at this development stage: qualitative and quantitative. The SKI subject teachers provide qualitative data, while the results of the research product testing questionnaire, as well as validation by material, media, and language experts, provide quantitative data. The data collection techniques used in this study include observation, interviews, documentation, and questionnaires. Before using the questionnaire, the questionnaire was validated by research instrument experts (M. Afdhal Chatra P, Komang Ayu Henny Achjar, Ningsi, M. Rusliyadi, Zaenurrosyid, Nini Apriani Rumata, Iin Nirwana, 2023).

RESULT

The needs analysis stage is the initial stage of this development. Teachers use learning media in their teaching activities to ensure that the material given to students can be understood, according to the researcher's observations and interviews. It is expected that the creation of SKI teaching materials based on Android applications will further attract students' interest in the Abbasid Dynasty material. Because Madrasah Aliyah Miftahul Jannah Palanka Raya has never used Android application-based learning media (interview results).

Lack of learning media, Madrasah Aliyah Miftahul Jannah Palangka Raya has made students doubt their ability to understand the Abbasid Dynasty material because they consider it boring. Because researchers believe that this is very detrimental, researchers are trying to develop learning media to solve this problem. The purpose of creating smartphone-based learning media is to make it easy for students to understand the material and increase their learning output. Not only that, this learning media can be accessed from anywhere and anytime, so that students can learn independently related to the Abbasid Dynasty material.

The researcher collected some references related to the product developed based on the findings of the field needs analysis. Adapting the 2013 curriculum for SKI subjects, the researcher first determined the core competencies, basic competencies, indicators, and teaching materials. The next stage is to create lesson plans and learning media that are in accordance with the characteristics of grade XI students (Abdurrokhim et al., 2022). In addition, the researcher prepared research instruments in the form of validation questionnaires for language, media, and material experts as well as student response instruments. Interview data and implementation of lesson plans resulted in the definition of the History of Islamic Culture for the Abbasid Dynasty material, which serves as a guide for creating SKI learning media based on Android applications.

After obtaining the media development needs based on the definition stage, the researcher continued to the second stage, design. Compiling and organizing materials or products to be made is known as the design stage (Abdillah et al., 2021). The design of the learning media applied is to create lesson plans & storyboards. Then the product developed is in the form of SKI learning

media based on an Android application to improve the SKI learning output of class XI students of MA Miftahul Jannah Palangka Raya.

SKI learning media based on Android applications has been successfully developed using the help of Capcut, Media.io as sound editing, Wordwall as a quiz maker, Teachermade as an evaluation place, and Kodular Web as a container for making Android applications. Users can access learning media based on Android applications via WhatsApp Group or Google Drive. The following Android applications have been developed:

Figure 1. Application cover

On the cover of the application, there are campus and madrasah logos, title, application logo, class, madrasah name, and application start button. The application cover is made as the application identity, designed attractively to increase students' interest in studying the Abbasid Dynasty material.

Figure 2. Menu

The menu display is written with a welcome greeting and there is a picture of a famous scholar, namely Al-Khawarizmi, an al-Jabar scientist, introducing that today's electronic technology originated from famous Muslim scholars. Then there is a title of the material and a selection button leading to learning objectives, materials, quizzes, evaluations, developer biographies, and instructions for use.

In the learning objectives section, it is made to adjust the KD and achievement indicators according to the Ministry of Religion's book. Learning objectives are made to produce clear learning outcomes, such as mastery of the material or the expected change in attitude. Learning materials are presented in Android application-based learning media adjusted to the book from the Ministry of Religion and a little addition as student insight. Among these materials are the history of the birth of the Abbasid dynasty, figures who played a role in the formation of the Abbasid dynasty, the caliphs of the Abbasid dynasty, the heyday of the Abbasid dynasty, the movement of the area to Baghdad and the decline of the Abbasid dynasty.

Next is the quiz display containing questions to determine students' understanding of the Abbasid Dynasty material. After completing the quiz, students can see whether their answers are right or wrong, and students can revise and increase their enthusiasm for learning activities. The next display is the learning evaluation, by entering student identity, students can immediately work on the questions in it. The evaluation aims to determine the student's learning output during the learning period.

From all the results that have been obtained above, of course, they are validated again by experts according to their respective fields, be it media, material, and language. The validation results are as follows.

Table 1. Expert Validation Results

NO	VALIDATOR	TOTAL SCORE	PRESENTATION VALIDATION
1	Media expert	79	98,7%
2	Content expert	47	83,9%
3	Language expert	18	75%
	TOTAL	**144**	**86% (Suitable)**

Based on the validation results obtained from various experts, researchers also conducted trials on students from small to large scales with the following results.

Table 2. Small and large scale trials

No	Trial Type	Number of Respondents	Score	Average Percentage	Criteria
1	Small scale	6	384	80%	Very Suitable
2	Large scale	18	1176	81,6%	Very Suitable

Small-scale student trials gave positive responses to learning using the Android application. They felt helped and more motivated to learn. Some criticisms that emerged regarding technical constraints indicated that there was room for further development to make this application more effective.

The results of the large-scale trial showed that most students responded positively to learning using the Android application. However, several suggestions indicated the need for improvements in terms of design, discussion features, and overcoming technical challenges for a more optimal learning experience.

DISCUSSION

Media expert validation was carried out by IAIN Palangka Raya lecturers in one stage. The results of the validation by media experts, material experts, and language experts are shown in Table 1. Media expert validation consists of two aspects, namely media engineering and communication aspects. The results were analyzed and converted. The results of the analysis by media experts stated that the SKI learning media based on the Android application received very feasible criteria with a percentage of 98.75%. A slight revision was made to add a menu of instructions for use.

The data from the validation of the material obtained was converted and then it can be stated that the learning material on the SKI learning media based on the Android application received very feasible criteria with a percentage of 83.9%. The results of the language validation stated that the language in the SKI learning media based on the Android application received a percentage of 75% with the criteria of being feasible to use with slight revisions to spelling errors and incorrect pronunciation.

Small-scale field testing was conducted after passing the validation stage. The purpose of small-scale testing is to obtain a general assessment of the quality of the product produced (Sari & Sugiyarto, 2015). Small-scale trials were conducted on 6 class XII students of Madrasah Aliyah Miftahul Jannah (Fichan et.al, 2022). Random selection was used to select students. Obtaining very feasible criteria, the trial results showed a percentage of 80% shown in Table 2. Students liked the SKI learning media based on the Android application because they thought the application display was attractive and not boring.

The students' responses to learning using Android applications are based on the average score data and response criteria, namely ease of access and use "Learning using Android applications makes it very easy for us to access learning materials anytime and anywhere. The application is easy to understand and use, even for those of us who are not very familiar with sophisticated technology." Increased learning motivation "This application makes learning more interesting and not boring. The interactive features such as quizzes and learning videos increase our enthusiasm to study harder." Material enrichment "The material presented in the application is very complete and helps us understand the lessons better. There are additional explanations that we don't always get in class." Time efficiency "Learning using Android applications is very efficient because we don't need to bring a lot of books. All materials are in one application." Technological challenges (More critical responses) "Although this application is very helpful, sometimes there are obstacles such as slow internet connections or our devices that do not support it. But overall, the learning experience is better." Suggestions for improvement "It would be better if this application had a live discussion feature with teachers or friends so that we could discuss more interactively when we have difficulties."

The next stage is a large-scale trial for students of class XI MA Miftahul Jannah Palangka Raya. SKI learning media based on Android applications are distributed to students via Google Drive and WhatsApp Group. Conducted to 18 students of class XI. The trial was carried out to find out how students responded to the product and to find out the feasibility of the SKI learning media based on the Android application that was developed. The results of the large-scale trial stated that the percentage of 81.6% of the criteria were very feasible. The results show that SKI learning media based on Android applications is very feasible to be used as a learning tool for class XI students on the Abbasid Dynasty material.

The following are students' responses to learning using Android applications based on respondent data from large-scale trials, namely ease of access and affordability "This Android application makes it easy for us to learn anywhere and anytime. We don't need to bring a lot of books because all the materials are already available in the application." Increased interest in learning "Learning using Android applications makes lessons more interesting and fun. Its interactive features, such as quizzes and animations, make us more enthusiastic about learning." Relevance of material "The material presented is very appropriate for our needs at school. The explanations are clear, and there is additional information that helps us understand the topic more deeply." Technical challenges (Slightly critical responses) "Although the application is very useful, there are some obstacles that we experience, such as dependence on a stable internet

connection. Some of us also have devices that do not support the application." Learning effectiveness "With this application, learning time feels more efficient. We can immediately repeat material that we have not understood without having to wait for an explanation in class." Suggestions for development "It would be better if this application had a feature to discuss directly with teachers or friends so that we can solve difficult questions quickly. In addition, the application design can be made more attractive."

According to research by Rizky Rizal Fanani et al., the creation of learning media is very important to improve the standard of the learning process, especially in helping students understand, absorb, and capture learning materials. In addition to techniques, media also plays an important role in education (Rizal Fanani et al., 2021). If the communication method can attract students' attention and facilitate their understanding of the teacher's topic, learning activities will have a more meaningful value (Nafi'a et al., 2020).

The purpose of the research and development of SKI learning media based on Android applications is to help and support students in their learning process (Helnanelis & Anam, 2023). It is hoped that the development of SKI learning media based on Android applications will have a positive impact on students, in studying and understanding the Islamic Cultural History (SKI) lesson on the Abbasid Dynasty material.

Four steps in creating SKI learning media based on Android applications: define, design, develop, and disseminate. The learning media is validated by expert validators in media, materials, and language. After completing these steps, it then undergoes a slight revision to correct deficiencies in the SKI learning media based on Android applications (Vitianingsih et.al, 2023).

The advantages of the Smartphone-based Abbasiyah Dynasty learning media developed are that the 20 MB application can be installed on students' smartphones without causing storage space problems, the application interface is made as attractive as possible with various bright and clear images, the application has many features such as videos, quizzes, and evaluations. Smartphone-based Abbasiyah Dynasty learning media also has disadvantages, such as this application only focuses on one chapter, and features such as videos, quizzes, and evaluations require an internet connection.

The Android application that is the basis of the SKI learning media product has the characteristic of being accessible from anywhere and anytime, helping students understand, and remember material about the Abbasid Dynasty. The results of the development are in the form of media products that have gone through the testing and validation stages of media, material, and language experts. Thus, the product is very suitable for use as a learning medium in the Islamic Cultural History (SKI) lesson on the Abbasid Dynasty material.

Students who use SKI learning media based on Android applications are considered to perform better than those who use traditional teaching techniques. In line with its objectives, the media not only has artistic components but also facilitates learning, so that it can increase students' enthusiasm for learning (Sukmawati et al., 2022).

CONCLUSION

The results of the discussion above concluded that the SKI learning media based on the Android application intended for class XI students of Madrasah Aliyah Miftahul Jannah Palangka Raya has been declared very suitable for use. This is based on the reference of the validation results of experts, including media experts, material experts, language experts, and student responses to the product. Furthermore, the SKI learning media based on the Android application can improve students' understanding of the Abbasid Dynasty material as seen from the students' responses after

using the SKI learning media based on the Android application. Suggestions for further research are expected to be able to carry out development with a more complete concept, such as selecting other materials and adding interesting features according to needs. So, the learning media can be used as optimally as possible.

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