



THE DEVELOPMENT OF ANDROID-BASED INTERACTIVE ISLAMIC LEARNING MEDIA FOR STUDENTS IN CLASS V IN INTEGRATED ISLAMIC ELEMENTARY SCHOOL AR-ROHMANIAH BOGOR

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Abstract

This type of research is research and development (Reserch and Development) which aims to analyze: (1) the process of developing interactive media for learning android-based Islamic religious education based on the Borg and Gall model for fifth grade students at SDIT Ar-Rohmaniyah Bogor, (2) media feasibility interactive learning of android-based Islamic religious education based on the Borg and Gall model for fifth grade students at SDIT Ar-Rohmaniyah Bogor, (3) the effectiveness of interactive media for learning android-based Islamic religious education based on the Borg and Gall model for fifth grade students at SDIT Ar-Rohmaniyah Bogor. The method used in this research is research and development (Reserch and Development) based on the Borg and Gall model. The validators consist of one material expert, one media and instructional design expert, one learning practitioner (PAI teacher), students for individual trials, 10 students for small group trials and thirty students for trials. field. The method of data collection used is a questionnaire. The data analysis technique used is qualitative and quantitative analysis.

The conclusions of this study are that: (1) the process of developing interactive media for learning Islamic religious education based on Android based on the Borg and Gall model for fifth grade students at SDIT Ar-Rohmaniyah Bogor with the procedures of 1) research and information collecting, 2) planning, 3) develop preliminary form of product, 4) preliminary field testing, 5) main product revision, 6) Main field testing, 7) operational product revision, 8) operational field testing, 9) final product revision, and 10) dissemination and implementation. (2) the assessment of the feasibility of interactive learning media by material experts obtained a score of 98.6% in the "Very Eligible" category. The feasibility assessment by media and instructional design experts obtained a score of 98.2% in the "Very Eligible" category. The feasibility value by learning practitioners (PAI teachers) obtained a score of 94.8% in the "Very Eligible" category. The average rating from the expert was 97.2% in the "Very Eligible" category. The response from students in this interactive learning media in individual trials is worth 96.6, in small group trials, values are obtained and in field trials, the average value of this application is 97.2, thus the interactive learning media for Android-based Islamic religious education is said to be very good. appropriate and good for fifth grade students of SDIT Ar-Rohmaniyah Bogor. The effectiveness of the media is seen from the results of the pre-test and post-test, namely the average N-Gain value students by 0.82. Based on these data, it can be concluded that the Android-based learning of Islamic religious education for fifth grade students of SDIT Ar-Rohmaniyah Bogor is in the High N-Gain category. Based on the N-Gain interpretation table, the Android-based Islamic religious education learning activities for class V SDIT Ar-Rohmaniyah Bogor are effective.

Keywords: Interactive Learning Media, Android

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I. PRELIMINARY

Islamic education is an obligation for someone to study religion properly and correctly. Seeking religious knowledge is a form of worship because Islam will elevate the degree of those who are knowledgeable. Knowledge will be a provision for us both in this world and the hereafter. Knowledge is like a lush tree that is deliberately planted to produce fruit. As with a child, they study well and will be held accountable for the knowledge they will practice and this will be a charity for both parents who have instilled knowledge in their children. As parents, it is the duty to provide proper education, especially religious education and to choose the best place of education at the elementary school level. At this level, it is not only necessary to be able to master writing, reading and arithmetic, but the most important thing is religious personality.

Learning strategy is one of the supporters in the learning process, so that the learning process is not monotonous or boring, and can help students develop abilities, encourage learning motivation and improve learning outcomes. In the implementation of the educational process, learning strategies vary widely that can be used by teachers to encourage student motivation, but in fact the strategies used are still conventional, namely, teachers only present learning with oral narratives to students. This is considered easier for teachers to do. In current conditions, teachers are required to be more innovative in presenting learning materials, besides being able to develop appropriate learning techniques and create a learning atmosphere that is free from distractions but there is still a discussion process that is comfortable and in accordance with the learning styles of students. As we know that the learning styles of students vary widely, namely, visual learning styles where this learning style focuses on the sense of sight, auditory learning styles where the learning style emphasizes sound compared to writing, then kinesthetic learning styles, namely learning styles that refer to visuals but are more details of movement.

Learning media is one of the supporters of success in the learning process, it is the responsibility of the teacher to be able to create effective, efficient and fun learning. One of the obstacles felt by teachers is the ability to develop the media used because they are still in the media adaptation stage, where teachers still have to learn to know, use and apply the tools contained in PowerPoint. This is the basis for serious problems because it can hinder the effectiveness, efficiency and interest of students in the learning process.

Facing students with an age range of 7-11 years where they start to think creatively and innovatively and prefer action (action), this is very much needed a good and appropriate learning strategy. At this age students have rapid development and move according to what they want to know new things. In this stage, students experience cognitive development which is characterized by the development of organized and rational thinking. At this stage students use logical thinking, but can only apply logic to physical objects. Although students can solve problems in a logical way, they cannot think abstractly and hypothetically.

Providing learning facilities by developing interactive learning media based on Android. Android-based interactive learning media was developed with the aim of increasing the effectiveness and efficiency of learning. The selection of android-based learning media is expected so that students will learn better by doing independently focusing on mastering goals so that students will easily obtain learning resources. This program is based on student-centred independent learning (student center) so that they can explore their knowledge and skills and choose learning materials and learning developments. However, primary school education requires parental assistance with teacher supervision.

Interactive learning media serves as a means of independent learning so that students can learn according to their respective abilities and speeds. The learning media developed is an Android-based interactive learning media where students can participate actively and have more fun participating in the learning process. According to Safaat (2012: 1), Android is a collection of software for mobile devices that includes an operating system, middleware and main mobile applications. Some software that can be used by teachers to develop interactive media based on Android, among others, is Microsoft PowerPoint. Microsoft Power Point is a computer program for presentations developed by Microsoft, Microsoft Office, including Microsoft Power Point. Microsoft Word, Excel, Access and several other programs.

Interactive learning media contains media learning activities to streamline the learning process with this media chosen as an innovative solution in overcoming problems, because with this students can learn according to their individual desires, abilities and speed. Learning media plays an important role in the learning process as proposed by Kemp & Dayton in Arsyad (2013: 23), can fulfill three main functions, namely: (1) motivating interest or action, (2) presenting information, and (3) giving instructions. The benefits of learning media stated by Sudjana and Rifai in Arsyad (2013: 28) the benefits of learning media in the student learning process, namely: 1) It can foster student learning motivation because teaching will attract their attention. 2) The meaning of teaching materials will be clearer so that students can understand and allow mastery and achievement of teaching goals. 3) Teaching methods will be more varied, not solely based on verbal communication through words. By using the media, the teaching method will be different according to the teaching material that will be given. 4) Students do more activities during learning activities, not only listening but also observing, demonstrating, doing directly and acting. From the opinion above, learning media is very useful in the learning process because it helps overcome student boredom and attracts the attention of students in the class in participating in learning. Learning with interactive media aims to facilitate the learning process and stimulate teacher activity and innovation in designing the learning process (Saluki, 2016:25). The use of interactive learning media has the benefit that students can learn independently based on their ability level or in small groups, it is more effective to explain the material, so that students get a more interesting experience (Pujawan, 2012:27). The presence of interactive learning media in the learning process creates a different learning atmosphere, because previously monotonous teaching methods

could be varied with displays containing text, images, sounds, videos and games (Putri, 2014: 52).

This, students can make effective use of their respective learning styles so that learning becomes active and fun, besides that it is hoped that the learning process is not boring and feels more interesting. In using interactive learning media, students can discuss when they have difficulty with friends, parents or teachers. The teacher's task here is as a facilitator, namely a person who provides assistance in facilitating the learning process and as a good resource when needed. Interactive learning media provides slide facilities to provide information or learning that will be delivered to students with animation facilities and interestingly modified to help students master specific learning objectives. In android-based interactive learning media, it is equipped with picture, effect and sound font facilities to make the display better so that it can attract the attention of students with what is presented.

The use of Android in learning media will provide deeper opportunities, besides that students can develop learning through information search, train students' skills in carrying out practicals because of the mobility principle that Android has, by using Android students are able to build their competencies in a dynamic way. . The purpose of developing this android-based interactive learning media is to make it easier for teachers to deliver material to students without having to buy expensive teaching aids, and also to encourage students to learn independently using Android at home. In addition, it is expected to create effective, efficient and fun learning and provide an overview to students with interactive learning media so that they are easy to understand.

II. RESEARCH METHODOLOGY

The development of teaching materials in the form of android-based interactive learning media using the Research and Development (R&D) approach. This research involves both experts and users of product development. According to Syaodih (2009: 164), Research and Development (R&D) is a process or steps to develop a new product or improve an existing product, which can be accounted for. Sugiyono (2011:83) argues that research and development is a method used to obtain a certain product result, as well as to test the effectiveness of the product. This study uses the Borg and Gall Model which aims to 1) Find out the procedure for developing Android-based interactive learning media for Islamic Religious Education using the Borg and Gall model. 2) Analyzing the feasibility of Android-based interactive learning media for Islamic Religious Education using the Borg and Gall model for teachers at SDIT Ar-Rohmaniyah. And, 3) Analyzing how the effectiveness of Android-based interactive learning media for Islamic Religious Education using the Borg and Gall model for teachers at SDIT Ar-Rohmaniyah. This research was conducted at SDIT Ar-Rohmaniyah Bogor, which is located at Jl. KH. Ahmad Sya'yani RT.03 RW. 05 Ex. Mekar Wangi District. Tanah Sareal, Bogor City, West Java Province, Postal Code 16161. The research subjects were 30 class V students.

III. RESULTS AND DISCUSSION

A. Preliminary Research

In the preliminary stage of the field, what was done was observations at SDIT Ar-Rohmaniyah Bogor to find out the initial conditions of the learning process for Islamic Religious Education subjects regarding: (1) the condition of students towards Islamic Religious Education learning that had been carried out so far, (2) the absence of media interactive tools that can be used by teachers in delivering Islamic Religious Education subject matter, (3) the need for teaching materials that are in accordance with the teacher and the characteristics of students, (4) what efforts have been made by teachers to improve the quality of Islamic Religious Education learning, and (5) the concept of Islamic Religious Education learning activities. Based on the data from the analysis of the preliminary study, it is expected to obtain a product that is appropriate, effective and on target. With this product, the expected learning objectives can be achieved.

B. Development Planning

The development of android-based Islamic religious education learning media is carried out in various stages, namely, 1) analysis, this stage goes through three analyzes, needs analysis, curriculum analysis and student analysis. 2) the product design stage, in the form of basic concepts that will become guidelines in the process of designing and developing media and tools. Android-based interactive learning media for Islamic religious education has similarities with previously created media but has differences in the placement of the background, main menu and evaluation. Android-based interactive learning media for Islamic religious education is a digital learning media that contains learning material for Islamic religious education with the material "Complimentary Morals (honesty, respect and obedience to parents and teachers)". After determining the material, theme and words, then choose an image that matches the content of the material. The images used are obtained from trusted sources. 3) the development of interactive learning media products for android-based Islamic religious education to develop visual design, selection of images, colors, types and sizes of letters. For appearance, the colors used are pastel colors that seem soft and don't hurt the eyes. The type and size of the letters on the material "Commendable Morals (honesty, respect and obedience to parents and teachers)" uses TW Cent MT font sizes 12 and 14.

The next thing to do is to develop a storyboard as a guide in developing learning media so that it is in accordance with the learning objectives that have been set. The next step is in accordance with the learning objectives that have been determined, the next step is entering the material to be discussed in the learning media according to the storyboard developed in the previous stage and starting the production of interactive learning media for Android-based Islamic religious education. The device used in the Android-based interactive learning media for Islamic religious education is Microsoft Office PowerPoint 2016.

Next is the validation of product results by experts, namely, material validation and validation of media experts and instructional design. The results obtained from the validation process will be used as a reference for product development revisions.

The revision of the Android-based Islamic religious education learning media was carried out more than twice the design revision. In the process of developing this interactive media, the researcher designed an instrument to conduct an assessment by compiling a questionnaire and a product assessment instrument containing assessment scores from material experts as well as media and instructional design experts.



Figure 1The Final Display of Android-Based Interactive Learning Media

C. Implementation Stage

At this stage the trial process is carried out, namely 1) individual trials, 2) small group trials, carried out on 10 students with selection according to different competencies and levels of ability, and 3) field trials, which is the last stage in, in trial subjects totaled 30 students. In this step, the Android-based interactive learning media for Islamic religious education was tested on 30 students according to the number of students in 1 class. This evaluation stage is carried out to analyze how high the level of effectiveness and feasibility of developing this media product is. In its development, there are two data analysis techniques, namely qualitative data analysis techniques and quantitative data analysis techniques.

Results of needs analysis

The first step taken by the researcher in this research and development was to observe the school and conduct interviews with the fifth grade Islamic religious education teacher to find out the problems faced during the learning activities. The results of observations at SDIT Ar-Rohmaniyah Bogor by researchers, it is known that currently there are no teachers who provide learning with Android-based interactive learning media. Likewise what has been conveyed by the Principal that so far there have been no teachers who have made interactive learning media, let alone Android-based interactive learning media that lead to the achievement of learning objectives.

The needs analysis here is to determine the interactive learning media that are needed by students and can use Android and are relevant to the conditions of students

who study with conventional media textbooks when outside of school and boredom is the implication. The results of the researchers' observations also show that in SDIT Ar-Rohmaniyah learning only.

The steps taken in developing Android-based interactive learning media for Islamic religious education are as follows: Preparing Material Design for interactive media. Developing interactive media materials. Develop Flowchart, Develop Storyboard.

Displays an evaluation menu, presents exercises in the form of multiple choices with a total of 10 questions and 3 answer options a, b or c. As an example image below:

D. Final model



Figure 2 Main Menu



Figure 3 Main Menu Display

Results of Model Trial Analysis (Feasibility Test)

Before the interactive learning media product is implemented for students, the product is reviewed by experts, namely material experts, media experts and learning design experts. This is done to get input and suggestions for improvements to the products developed so that maximum results can be obtained for the development of interactive learning media products. The results of the reviews from the experts are as follows

Material Expert Review Results

Based on the results of the recapitulation of learning material experts, the results of the calculation of the assessment of learning material experts obtained an average value of 98.6 which means "Very Eligible". That is, in terms of the material aspects of the product developed is feasible to be used for research.

Media Expert Review Results

Based on the results of the recapitulation of media experts, the results of the calculation of the media expert's assessment obtained an average value of 98.4 which means "Very Eligible". This means that in the media aspect, the product developed is feasible to be used for research.

Model Effectiveness Test

One For One Trial

Based on the data obtained through one-on-one trials, students' abilities were categorized as "very good." This was indicated by the average small group test result of 96.6.

Small Group Evaluation Trial

Based on the data obtained through the Small Group Evaluation trial, students' abilities were categorized as "very good." This can be shown by the average small group test result of 96.95. Uji Lapangan (Uji Lapangan)

Based on the results of the pre-test and post-test data analysis, it was shown that there was an increase in children's vocabulary mastery skills effectively. This can be seen in the learning outcomes of respondents in the high category with an N-Gain value of 0.82. So it can be concluded that the development of android-based interactive learning media for Islamic religious education is declared effective.

IV. CONCLUSIONS, IMPLICATIONS, AND SUGGESTIONS

Conclusion

Based on the process and results, the development has been carried out through the stages of testing material experts, media and instructional design experts, learning practitioners, individual trials, small group trials and field trials. So it can be concluded that the product of developing interactive learning media for Islamic religious education based on Android can be well received by users and experts who are targeted in development, such as students and full support from PAI teachers at SDIT Ar-Rohmaniyah Bogor.

Based on the results of these trials, the Android-based Islamic religious education learning development product, obtained an average value of 98.3% from the experts from the percentage value of 100% which belongs to the very feasible criteria. This assessment shows that the product of developing android-based Islamic religious education learning media is very feasible to be used by students of integrated Islamic elementary schools, where in their learning apply Islamic religious education. This android-based interactive learning media for Islamic religious education is feasible to

be produced by user institutions with the permission of the developer of android-based Islamic religious education learning media. Judging from the calculation, the average N-Gain of students is 0.82 which is categorized as High.

Implication

The implications of developing android-based interactive learning media for Islamic religious education are as follows: 1) Developing android-based interactive learning media for Islamic religious education. 2) Produce interactive learning media products for android-based Islamic religious education. 3) Produce interactive learning media that are suitable for use at SDIT Ar-Rohmaniyah Bogor. 4) To analyze the effectiveness of learning Islamic religious education for students at SDIT Ar-Rohmaniyah Bogor.

Suggestion

1) Developers are advised to make improvements to improve the quality of interactive learning media which includes learning (instructional design) and technical media to produce learning products that are more innovative, effective, efficient and fun. 2) It is expected that teachers can provide a growing and wider source of knowledge. 3) Increase teacher commitment to make the learning process more effective and maximize the use of learning media in accordance with the instructions for using Android-based interactive learning media.

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