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Smart Design of Learning Media Innovation Module Based Character Education Technology

Vegia Oviensy*[1], Martin Kustati[1], Nanasepriyanti[1], Ali Marzuki Zebua[2], Asraf Kurnia[1]
[1]Universitas Islam Negeri Imam Bonjol Padang, Indonesia
[2]Institut Agama Islam Negeri Kerinci, Indonesia
vegiaoviensy4375@gmail.com

Abstract

The success or failure of a lesson, especially in Islamic religious education which focuses on character education is largely determined by the learning media used, in realizing this success a problem arises, namely the teacher is still monotonous in using learning media so that learning cannot be properly accepted by students. This is based on the results of a survey by researchers via Google form that 80% of students stated that educators tended to use the lecture system more in the learning process, 70% of students could not understand the subject matter only with notes given by the teacher, 95% preferred to learn using learning media, 97% of students agree to use multimedia so that learning is not boring. As well as the lack of development of learning media for the blind. During the Covid-19 pandemic, students tended to be closer to the digital world, this was based on survey data that 99% of students actively used social media during the pandemic, especially social media Tiktok, namely around 78% of students used Tiktok longer. Even Tiktok social media users have increased by around 14.3 million per month. Seeing these problems, the researchers created a new innovation Smart Module, an innovation of technology-based character education learning media, namely technology that can combine the virtual world with the real world at the same time and is equipped with braille letters that are used for normal students and people with visual impairments. This research uses the type of R&D with the Borg and Gall development model. Data collection techniques were carried out through observation, questionnaires, literature studies, documentation and trials and then analyzed using media expert validation analysis techniques, material expert validation analysis techniques and trial analysis techniques. The specific purpose of making this media is to find out whether the Smart Module is valid to use and how student learning outcomes are after using this module. The results of this study show that the Smart Module has a validity level of 92% and can improve student learning outcomes.

Keywords: *Islamic Religious Education, Learning Media, Tiktok Augmented Reality*

INTRODUCTION

The purpose of education is a conscious effort to transfer and transform knowledge and internalize religious, cultural values and so on in all its aspects and types to the next generation. The creation of insal kamil is the ultimate goal of Islamic

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education. In actualizing these goals into Islamic education, education has a responsibility to lead students towards these goals. Because the goal is not only to transform knowledge (knowledge) but also required to internalize the values (value) in students. The forms of internalized values at least include ethical values, social aesthetics, economics, politics, knowledge, pragmatics, and divine values (Wisnarni, 2018: 32). The quality of education determines the progress of a country, this is because the fate of a nation in the future can be seen from the quality and quantity of educational institutions, both formal, non-formal and informal. Therefore education is an important part in the life of every human being, where humans can develop their personality by developing their potentials in accordance with the values that exist in society. Thus, from the existing values, a process takes place that is in line with the main objectives of education, namely developing the abilities, knowledge, skills and attitudes of students optimally (Angraeni, 2018: 1).

The ideals of the Indonesian nation as contained in the preamble to the Constitution of the Republic of Indonesia are to educate the life of the nation, of course this must be through education. The word education itself comes from the Greek word "pedagogie" which means a direction given to children. This term, then translated into English "education" which means direction or guidance. Whereas in Arabic the word education is known as al-ta'lim, al-tarbiyah and al-ta'dib, al-ta'lim which means conveying knowledge and skills, while al-tarbiyah means nurturing or educating, and al-ta' 'dib means the process of educating which begins with improving the morals of students (Nurkholis, 2014: 1). In Law no. 20 of 2003 concerning the National Education System emphasizes that "National education functions to develop capabilities and form a dignified national civilization in the context of educating the nation's life. National education aims to develop the potential of students to become human beings who believe in and fear God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent and become citizens who are democratic and responsible (Law No. 2003).

Teachers are the most important human resources who deal directly with students. In Government Regulation Number 74 of 2008 concerning teachers in article 1 explains that teachers are professionals with the main task of educating, teaching, guiding, training, assessing and evaluating, students in early childhood education through

formal education, basic education and secondary education (Suprihatin, 2015: 73). A teacher has a very important role in efforts to form quality human resources. A teacher is also a key factor in the success of a process in education because the teacher is an example and role model to be imitated and a source of learning because if there is no teacher the goals of education itself will not be achieved. The development of science and technology today makes the teacher's task in creating quality human resources even more difficult (Hamid, 2017: 274).

In teacher education, the main component is demanded in order to provide a balance in science and technology which continues to experience development. In realizing this, it is certainly very necessary for a teacher who has the qualifications, competence and high dedication in carrying out his professional duties. Any efforts made to advance education will not be successful without the support of a professional teacher (Darimi, 2015: 309). Islamic religious education, especially character education, is an important subject in the world of education that must be included in the formal education curriculum in Indonesia. Through character education it is hoped that it can help realize life in an integrated manner, therefore character education is one of the most important subjects in Indonesia (Zaki, 2015: 42).

Character education also has goals that are in accordance with the philosophy and outlook on life outlined by the Qur'an. In Sholeh's research, he stated that the purpose of Islamic education which focuses on character education is to increase the ability of the mind and grow the mind, cultivate the potential of talents that are innate, develop the potential of the younger generation. In realizing these educational goals, there is a main agent who plays an important role, namely the teacher. A teacher is the person most responsible for transferring knowledge to students, especially during the Covid-19 pandemic (Sholeh, 2016: 60). The learning process in Indonesia during the pandemic was through an online learning system. It is not surprising that students spend more time using social media in this era of Covid19. Based on the survey results, the researchers found that 99% of students actively used social media during the Covid-19 pandemic and 78% of students used Tiktok more than other social media, even Tiktok social media users increased by around 14.3 million per month. The aim of Islamic education itself is

to perfect human morals and to hone talents, where the matter of getting education is not only for normal students but also for people with visual impairments (Putri, 2021: 37).

Tiktok is an application on the Android platform that provides creator and entertainment content. It has been around since September 2016. This platform allows users to create their own creative videos. Tiktok is an application that is increasingly booming in Indonesia. Tiktok is also used by various groups, from content creators to even educators. Tiktok can be used for branding a product, providing motivation, information and talent shows that can help independent learning. Independent learning tends to make students not serious in learning, especially in PAI learning. PAI is one of the 3 important factors that must be included in the curriculum in Indonesia. Because it aims to shape the morals of students. The success of the teaching and learning process, especially in PAI learning, is largely determined by the learning media used (Supradi, 2017: 160).

Learning media are all forms of means used in conveying information for learning so that messages or material are conveyed properly. The communicative process that takes place in the system, the learning media get a very valuable position in the learning process. Without media communication will not take place properly so that the learning process cannot take place optimally. Getting a proper education as a citizen is very important in living life, especially in facing increasingly fierce competition in the era of globalization. Article 31 of the 1945 Constitution stipulates that education is a right for every citizen. The constitutional mandate clearly emphasizes that every citizen without exception has the right to education, including children with visual impairments (Mardiyanti, 2017: 1). However, what is happening now are the problems experienced by blind persons with disabilities in obtaining books and learning media. This is caused by a lack of special attention in facilitating books and learning media for children with visual impairments. Even though the number of blind persons with disabilities in Indonesia reaches 1.5% of the total population of Indonesia. Based on BPS (Central Statistics Agency) data in 2010 it shows that the total population of Indonesia is 237,641,326 people. Of these, it can be concluded that there are 3.5 million people with visual impairments in Indonesia (Putri, 2020: 23).

According to a representative from the Mitra Netra Foundation, Aria, IKAPI (Indonesian Publishers Association) publishes 10,000 books per year, and as many as 100-150 books are retyped for the blind. This means that books in braille that can be read by the blind are only 10% -15% of the total books released to the market. The books are also only in certain categories such as school textbooks. Meanwhile, the availability of books for the blind is still limited and not balanced with the number of blind people (Lestari, 2019: 9).Blind is a term used to describe the condition of a patient who has an abnormal sense of sight, so that the eye cannot function properly. To overcome this problem, blind people will make intensive use of their senses of hearing and touch. Various kinds of assistive devices have also been developed to suit the condition of the blind. Of course, these tools can be used by compensating other senses that are still functioning, namely hearing and touch.However, not all emerging aids can be enjoyed by the blind equally. Because to fulfill the blind facilities requires a lot of money. Distribution limitations and limited funds become obstacles in this regard. Especially for the provision of technology-based blind facilities which are starting to develop will require relatively expensive costs so that they are not accessible to all people with disabilities

The next problem is that teachers are still monotonous in using learning media. Based on the results of a survey via Google form, 81% of students stated that the teacher still uses the lecture method while studying, while 67% of students cannot understand the subject matter only with notes provided by the teacher and 93% of students prefer to use learning media in the learning process and 91% students agree with the development of technology-based modules in the learning process. As well as the lack of learning media for the blind, which is only 15% of the total number of blind people.

Based on the results of initial observations, the authors found data through the Google form, the authors found that, 56% of class VII students found it difficult to understand the subject matter of Islamic cultural history. Seeing these problems, the authors made new innovations in the learning process in the form of Smart Modules, innovations in technology-based character education learning media. Smart Module is a learning media based on Ar technology or Augmented reality is a technique that incorporates 3D virtual objects into a real environment. Ar is a technology that can process or unite the real world and the virtual world at the same time. This technological

sophistication can broadcast the virtual world to the real world with the help of an Android phone or special glasses. In his research Andri Chowanda explained that augmented reality is a technology that combines computer-generated virtual objects with the real world of interactive augmented reality. The use of augmented reality technology is very easy, namely by downloading an application on the PlayStore, namely the Asmbler Edu application. Then create a project as you wish and we will be given a Qr code so that it can be scanned and bring up advanced AR technology.

The purpose of this study was to determine the validity level of the Smart Module learning media prototype to improve student learning outcomes. To find out how the learning outcomes of students after using the Smart Module learning media. The formulation of the problem in this research is to what extent is the validity level of the Smart Module learning media prototype to improve student learning outcomes? what are the learning outcomes of students after using the Smart Module learning media?

RESEARCH METHODOLOGY

In this development the authors use the type of research R & D (Research and Development). The steps of this research use the model initiated by Borg and Gall in Herlina's research which has ten work steps which include: a) Initial information gathering b) Planning c) Initial form development d) Small-scale trials e) Product revision f) Testing limited trial g) Product revision h) due diligence i) Product revision j) Dissemination and implementation.

The selection of this research uses the Borg and Gall model because it has high validation that has been tested by several experts. The purpose of the model itself is to develop effective models or products to meet the interests of certain program activities which in this study emphasize the analysis of student needs. However, in this study the researcher only reached the fifth stage, namely product revision.In this development research, the author only reaches stage five, namely product revision according to what has been modified by Cuningham in Borg and Gall, namely: 1) reviewing initial information about product needs 2) planning goals to be achieved 3) developing initial products 4) trials on subjects with small numbers. In addition, in this study the limitations of researchers were only being able to carry out R&D research on a limited scale, but this

was felt to have fulfilled the essence of development research. The development procedures in this study are: a) initial information gathering: The research begins with the collection of information as a basis for developing teaching materials to find out about this, so researchers need a needs analysis. This stage is carried out through distributing questionnaires to students. The author distributes a questionnaire with the aim of knowing the reality in the field regarding the High School Module learning media. As well as analyzing the problems that exist during the learning process carried out in the classroom so far. In the needs analysis, the authors analyzed three analyses, namely, resource analysis, curriculum analysis and student analysis. b) Planning: From the output of initial information gathering carried out by the author through distributing questionnaires, the next step is for researchers to plan related learning media that will be developed in the form of Smart Module learning media c) product trials, d) product revisions.

Data collection techniques in this learning media are questionnaires, observation, documentation, literature studies and test questions. The data collection technique is as follows: The questionnaire used in this case is a closed questionnaire, namely a questionnaire that has already provided the answer, so that the respondent only has to choose and answer directly. Observations made by researchers were to find initial information so that results were obtained for the initial prototype development. Documentation was carried out by researchers, namely conducting a study of K13 documents, both document 1 and document 2. Literature study or what is commonly known as library research is one of the most popular data collection methods. Test techniques include written tests,. Test instruments can be used in the form of exam questions (test questions) and inventory.

The data analysis technique in this study was media validation and material validation made using a rating scale with a maximum score of 4 and the lowest score of 1.

RESULTS AND DISCUSSION

Starting from the problem of how to make students understand the material presented properly because based on survey results 67% of students could not

understand the subject matter only with explanations and notes given by the teacher. As well as during the Covid19 pandemic, students tended to be more active in using social media, especially social media Tiktok, which had an impact on knowledge in the field of education. The minimal development of learning media in the field of Islamic religious education which focuses on character education between science or technology and religion and also the absence of learning media for people with visual impairments. For this reason, Smart Module comes with the sophistication of Ar technology which can display 3-dimensional learning videos and is equipped with a Qr code that can be connected directly to Tiktok social media so that learning is not boring. This multiliteracy-based learning media is not only intended for normal students but can also be used by blind people.

a. Innovation Design

In accordance with the results of a survey that the author conducted, from the questionnaire distributed by the author found that 86% of students tended to prefer blue and 79% of students tended to like animated Islamic children's cartoons and 55% of students had difficulty understanding Islamic cultural history subjects and 100% of students had used Android-based smartphone with 78% longer time using Tiktok social media and also the lack of learning media for people with visual impairments. From the results of the analysis of these needs, the authors created an innovative design for Smart Module learning media innovation for Tiktok-based character education learning media. Has utilized the sophistication of augmented reality technology which can display 3-dimensional learning videos and this learning media is equipped with a Qr code that can be connected directly to the Tiktok social media which displays explanations of learning the morals of class VII K13 with video creators made directly by the author. The Smart Module learning media is presented in writing that is understandable by students. This media is also equipped with braille letters that can be used by blind people in the learning process.

b. Product Specifications

The development of learning media in the form of Smart Modules for Tiktok-based PAI subjects is a moral aqeedah learning media used by class VII K13. This module presents material about character education.

The Smart Module media specifications are technology-based learning media innovations using advanced augmented reality technology which can display 3-dimensional learning videos and are equipped with Qr codes that can be connected directly to Tiktok social media so that they display video content creator researchers regarding a brief explanation of class VII moral aqidah material. Smart Module learning media is also equipped with braille letters that can be used by people with visual impairments. On this sheet there are also Qr and Ar codes which when scanned using an Android-based smartphone can display 3-dimensional video creators and tiktok videos with Green Screen technology so that audio, visuals appear so learning is not boring.

c. Making process

The first step is to prepare an Android-based printer and smartphone, download the Qr Generator, Edu Asembler and Tiktok applications. then create content using the Green Screen on the Tiktok application and design the material you want to explain. Then generate a Qr code from the Tiktok video link using the Qr Generator. As well as preparing 3-dimensional learning videos made using the Asembler Edu application.

The next step is to prepare HVS paper and latches and make subject matter using latches so that the material is formed in the form of Braille letters that can be used by blind people. After all the materials are ready, the next step is just to print the media using Art Paper and the media is ready to use.

d. Advantages and Disadvantages

The Smart Module is equipped with advanced augmented reality technology so that it can display 3-dimensional learning videos so that learning activities become more enjoyable. The Smart Module is also equipped with a Qr code that can be connected directly to the Tiktok social media so that the material taught can be easily understood through the author's creator content and TikTok is no longer considered a social media that is only for music videos but can also have an impact on the world of education.

The Smart Module is also equipped with braille letters that can be used by people with visual impairments to learn. The Smart Module has the advantage of being a learning module for students during a pandemic which can make it easier for students to study independently. It is equipped with an interesting and concise color and presentation.

The drawbacks of this learning media are that Smart Modules have used technological sophistication and utilized the internet network so that when there is interference on the network, one can only learn through modules without using Tiktok videos and augmented reality videos.

e. Presentation of Trial Data

1) Needs Analysis

At this stage the author analyzes the resources, curriculum and students. students tend to prefer blue and have difficulty understanding Islamic cultural history lessons and they have used Android-based smartphones with longer use of Tiktok social media compared to other social media.

2) Planning

designed a Tiktok-based Smart Module learning media design in accordance with the results of the needs analysis so that an initial prototype was formed.

a. Initial Product Development

At this stage a learning media prototype design has been formed so that it can be validated by experts. After validation is complete, prototype 1 is formed.

Table 5 Validation Results of Material Experts and Media Experts

No	Validator	Hasil Validasi Media Smart Modul	
		Skor (%)	Kategori
1.	Validator 1 Ahli Media	100%	Sangat Valid
2.	Validator 2 Ahli Media	92%	Sangat Valid
3.	Validator 3 Ahli Media	83%	Sangat Valid
4.	Validator 1 Ahli Materi	92%	Sangat Valid
5.	Validator 2Ahli Materi	97%	Sangat Valid
6.	Validator 3 Ahli Materi	92%	Sangat Valid
Jumlah		**556%**	
Rata-Rata		**92%**	
Kategori		**Sangat Valid**	

b. Trials

After conducting expert validation, the next step is to try out a limited scale product which is only tested on 6 students.

Table 6 Comparison of values before and after using the Smart Module media

No Responden	Nilai awal	Nilai akhir
Responden 1	25	62
Responden 2	62	81
Responden 3	81	87
Responden 4	68	68
Responden 5	43	62
Responden 6	75	87

CONCLUSIONS AND RECOMMENDATIONS

Smart Module has a validity level of 92%, meaning that this learning media is valid and feasible to try out. Smart Modules can improve student learning outcomes and learning can be more fun with tiktok videos and 3-dimensional learning videos. The design of the Smart Module learning media uses the Borg and Gall development research procedures only up to step 5, this is due to the limited time needed to conduct research and the Smart Module learning media will be made only up to a limited test so only 3 media experts and 3 people are needed material expert.

Based on the research limitations found by researchers, suggestions for other researchers who will develop Smart Module learning media are as follows: Deepen the learning material of Islamic cultural history and look for research sites that provide wifi so you don't experience network interruptions when scanning QR and Ar codes

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