

The development of Animation Game-Based learning media in history of Islamic culture materials

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Abstract. This study aims to develop learning media for the animated game history of Islamic culture in the Umayyad dynasty, knowing the assessment of the feasibility of the product from media experts, the material from teachers and student responses to the media through a questionnaire. This type of research is research and development (Research and Development). The game was designed using the Construct 2 application. This research uses the ADDIE model consisting of five stages namely analysis, design, development, implementation, and evaluation. This research produces learning media in the form of computer-based animation game applications. The results of the study in the form of data from the results of the validation of the acquisition of media experts amounted to 4.5 “Very Good” material expert validation obtained 4.6 “Very Good”. Then the media was tested by SKI teachers with a percentage gain of 92% “Very Good” and media tests by students with a percentage of 89% “Very Good”. Then it can be concluded that the learning media of SKI animated game with the material from the Bani Umayyad Dynasty is in the category of “Very Good” and is worth using.

Keywords: *Learning Media, Animation Games, Bani Umayyad Dynasty*

Abstrak. Penelitian ini bertujuan untuk mengembangkan media pembelajaran game animasi Sejarah Kebudayaan Islam Dinasti Umayyah, untuk mengetahui penilaian kelayakan produk dari ahli media, materi respon guru dan siswa terhadap media melalui angket. Jenis penelitian ini adalah penelitian dan pengembangan (Research and Development). Game dirancang menggunakan aplikasi Construct 2. Penelitian ini menggunakan model ADDIE yang terdiri dari lima tahap yaitu analisis, desain, pengembangan, implementasi, dan evaluasi. Penelitian ini menghasilkan media pembelajaran berupa aplikasi game animasi berbasis komputer. Hasil penelitian berupa hasil validasi ahli media sebesar 4,5 “Sangat Baik” validasi ahli materi memperoleh 4,6 “Sangat Baik”. Kemudian media diujicobakan oleh guru SKI dengan presentase 92% “Sangat Baik” dan uji coba media oleh siswa dengan presentase 89% “Sangat Baik”. Maka dapat disimpulkan bahwa media pembelajaran game animasi SKI dengan materi Dinasti Umayyah masuk dalam kategori “Sangat Baik” dan layak digunakan.

Kata Kunci: *Media Pembelajaran, Game Animasi, Dinasti Umayyah*

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Introduction

In learning, there is a media that must be available in order to achieve a learning goal. Media is used to help teachers who should be used, but are often ignored. Not using media in learning is generally due to limited preparation time for teaching, delays in finding the right media, minimal costs and so on. then there are still Islamic Religious Education teachers who are less literate in technology which causes the media not to be embodied in a technology (Dewi et al., 2019).

Within the scope of Islamic Religion Subjects, Islamic Cultural History is one of the important lessons because it involves the dimensions of exemplary values which are not only read but also understood so that they can be applied in everyday life. Past life stories will be very valuable and influential in present and future lives. Like Islamic historical figures who advanced Islamic civilization in their time (Works & Triantoro, 2019).

In Regulation of the Minister of Religion of the Republic of Indonesia No. 2 of 2008 explains that the History of Islamic Culture in MTs is one of the subjects that examines the origins, development, role of Islamic culture/civilization and figures who have excelled in Islamic history in the past, starting from the development of Islamic society during the time of the Prophet Muhammad SAW and Khulafaurrasyidin, Bani ummayyah, Abbasids, Ayyubids to the development of Islam in Indonesia. Substantially, the Islamic Cultural History subject has a contribution in providing motivation for students to know, understand, live up to the history of Islamic culture, which contains wisdom values that can be used to train intelligence, shape attitudes, character, and personality of students (Regulation of the Minister of Religion of the Republic of Indonesia, 2008, p. 51).

In the process, teaching and learning activities require a media as a support. Likewise in the subject of Islamic Cultural History because in several studies it was stated that Islamic Cultural History lessons were less desirable due to many things including: the process of delivering material, the use of strategies and learning media and subject matter that requires a lot of memorization (Judge, 2019), then in its implementation, the media is very important to use in Islamic Cultural History lessons.

Today's education media used in classroom learning follows the development of information technology. Fast, practical, effective and efficient. So that requires teachers to create new innovations in making Islamic cultural history learning media. Media is used as a learning tool that helps achieve learning objectives. Game one that can be used as a medium of learning. Because all this time studying Islamic Cultural History tends to make students bored, the material is complex and requires a lot of memorization. This requires renewal in the use of learning media, one of which is through games.

From the description of the problems above, media is needed as a learning support that can assist teachers in teaching so that students are happy and pay attention when studying Islamic Cultural History. Students will enjoy learning history through animated games because it is in a journal written by Nelly Indriani & Irwan Setiawan (2012), based on a survey by Computer Technology Research (CRT) revealed "a person is only able to remember 20% of what is seen and 30% of what is heard. But people remember 50% of what was seen and heard and 80% of what was seen, heard and done all at once.

This encourages researchers to create an animated game-based media so that Islamic Cultural History lessons are easy to understand and fun. In this media, the researcher only limited it to class VII students, because this class was a transitional period, the characteristics of the students tended to be young towards the early adolescent phase with an average age of 11-15 years. According to Piaget in (Adnan et al., 2016), Cognitive development in early adolescence is at the initial operational thought stage where the adolescent's ability to think increases. Adolescents at this stage test the results of their reasoning on reality and there is a consolidation of operational thinking. Then, class VII is also the period when they are introduced to the material of Islamic Cultural History which is a stand-alone subject.

This media was created using a simple animation game maker application, namely Construct 2, which is an HTML 5 based game maker application specifically for the 2D platform developed by Scirra. Construct 2 does not use a special programming language, because all commands used in the game are arranged in an Event Sheet which consists of Events and Actions.

Methods

Researchers use the type of research and development (Research and Development / RnD). This research is a research method of developing or validating products and used in education (Sugiyono, 2016, p. 28). The development carried out is product development in the form of game learning media animation in the subject of Islamic Cultural History of the Umayyad Dynasty. The model used in this development is the ADDIE model. The development of the ADDIE model is carried out based on five stages, namely, analysis, design, development, implementation, and evaluation.

Data collection used instruments including: interview guides for teachers and students, material and media expert validation sheets, as well as teacher and student response questionnaires to the media. Following is the procedure for developing the ADDIE model:

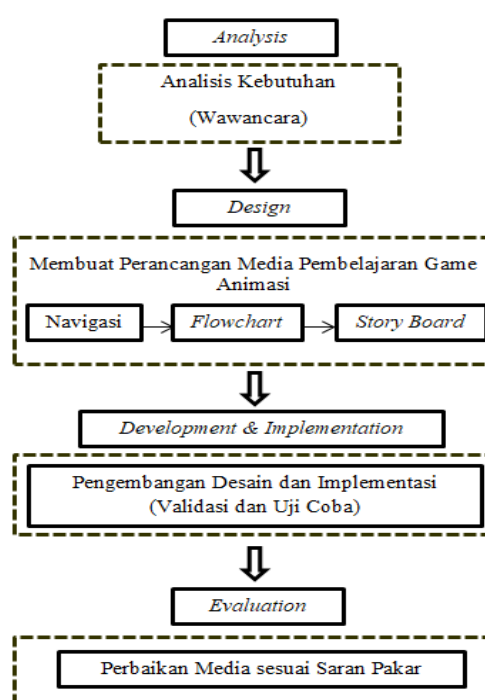


Chart 1 Development Procedure

Results and Discussion

This research produces a product in the form of an animated game in the form of an application that can be used via a computer/PC offline. This research product was made by utilizing a 2D game maker application, namely Construct 2 with the aim of the product not only images with material text, but also sound and animation so that learning is not saturated.

The results of development research have been summarized in several stages according to the ADDIE development model which consists of five stages, namely analysis, design, development, implementation, and evaluation.

According to John von Neumann and Oskar Morgantern in 1944 in Widiastuti and Setiawan (2012), game is: “the game consists of a set of rules that build a competitive situation from two to several people or groups by choosing a strategy that is built to maximize one’s own

victory or to minimize the opponent's victory. The rules define the possible actions for each player, the amount of information each player receives as the progress of play, and the amount of victory or loss in various situations." Game is one of the media that can be used in conveying a goal. The objectives contained in the game have various types, namely education, entertainment and simulation (Martono, 2015).

Then according to Mayer and Moreno in Sukiyasa(2013) argues that animation is one of the most interesting forms of pictorial presentation, in the form of a moving image simulation that describes the displacement or movement of an object. The use of learning media in the form of animation can help in increasing the effectiveness and efficiency of the teaching and learning process. The game animation used is assisted by a game maker application, namely Construct 2. This application is easy to use and does not require complicated programming. This application can also be accessed for free.

The next stage is the development stage/media making stage. Media is made based on a pre-designed design. In the development process, validation is carried out to determine the feasibility of the media. The validity test was carried out on lecturers as experts. According to Messick, as quoted by McClure (1999) in a journal written by Praharisti (Kurniasari & Mardikaningsih, 2018), the value obtained by the media that has been validated by experts can be a reference for determining whether the media can be used by researchers to continue for further testing or not. Media validation results data can be seen in Table 1 below.

Table 1 Results of Calculation of Validation Value by Media Experts

No	Validation Aspect	Number of Ratings	Maximum Amount	Percentage (%)	Product Eligibility Criteria
1	Appearance	20	25	80	Deserves the title of very good
2	Writing	15	15	100	Deserves the title of very good
3	Execution	10	10	100	Deserves the title of very good
	Amount	45	50	90	Deserves the title of very good

Based on data from the results of validation of animated game-based learning media by media experts, aspects of appearance, writing, and implementation have proper criteria with very good predicates. The overall percentage of animated game learning media is 90% and has the appropriate criteria with a very good predicate, but some revisions are still needed. Despite the drawbacks, Johari, et al(2016) explained that animated games for learning have many benefits one of which can attract students' attention when studying and students tend to quickly understand the material presented.

Results of validation of animated game media material by material experts on the History of Islamic Culture as follows.

Table 2 Calculation Results of Expert Validation Value of Islamic Cultural History Material on Animation Game Learning Media

No	Validation Aspect	Number of Ratings	Maximum Amount	Percentage (%)	Product Eligibility Criteria
1	Presentation of material	18	20	90	Deserves the title of very good
2	language	14	15	93	Deserves the title of very good
3	Execution	14	15	93	Deserves the title of very good

Amount	46	50	92	Deserves the title of very good
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Based on data from the results of material validation on animated game-based learning media by material experts, aspects of material presentation, language, and implementation have appropriate criteria with a very good predicate. Overall material in animated game learning media has a percentage of 92% and has appropriate criteria with a very good predicate but still needs some revisions.

After being validated, the animated game learning media will be revised based on input and suggestions from the validator. Then it was tested on Islamic Culture History teachers and three Madrasah Tsanawiyah students. Based on the results of the trial by the teacher getting a score of 92% with very good criteria. In detail, the teacher’s assessment is in Table 3.

Table 3 Teacher Assessment Results Data

No	Validation Aspect	Number of Ratings	Maximum Amount	Percentage (%)	Product Eligibility Criteria
1	Appearance	22	25	88	very good
2	language	14	15	93	very good
3	Execution	10	10	100	very good
	Amount	46	50	92	very good

The results of the teacher’s assessment are presented in Table 3, the percentage calculation results are 92% and are included in the very good category from all aspects. Furthermore, the trial was carried out by 3 Madrasah Tsanawiyah students and received a score of 89% with very good criteria. In detail, the assessment of the 3 students is in Table 4.

Table 4 Data on Student Trial Results

No	Validation Aspect	Number of Ratings	Maximum Amount	Percentage (%)	Product Eligibility Criteria
1	Appearance	68	75	91	very good
2	language	26	30	87	very good
3	Execution	40	45	89	very good
	Amount	134	150	89	very good

The results of the teacher’s assessment are presented in Table 4, the percentage calculation results are 89% and are included in the very good category from all aspects.

The animated game component consists of the main page, instructions for using the game, learning objectives page, material page, game along with practice questions in it and finally the score display. Type color and font size set to be attractive. An example of the appearance of the animated game is presented in the following pictures.



Picture 1 Main page

The main visual page contains the subject title then the user clicks start to start, clicks sound for mute / unmute options and clicks the search button to see game instructions which can be displayed as follows.



Picture 2 Game Instructions

Game instructions contain instructions that must be passed by the player. Starting from the keyboard arrow keys to move the player, yellow gems to get points, keygreens to get questions as keys to enter the next level, as well as enemies that must be killed or passed. Players are given 3 lives in the form of love which means they can survive in the game if their lives don't run out. After that, return to the main page and click the start button to continue the game, then players are asked to fill in their names in the available fields. Next is an example of display material.



Figure 3 Example of Material

The picture is the content of level 1 material, which is about the history of the Umayyad dynasty. Then click the “practice” button to go to the game and practice questions. The results of the design development of the game and level 1 questions can be seen in the following

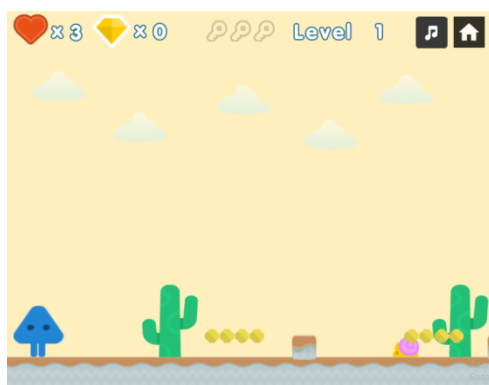


Figure 4 Game Display

After the “practice” button is pressed a game layout will appear as shown in the picture above. Players who are blue can walk on the playing field by pressing the arrow keys on the computer keyboard. Get the yellow ball, kill the enemy, and get the keygreen to get practice questions. Here’s a look at the practice questions.

After getting the green key, players will answer practice questions based on the material. There are 3 keys in each game, questions will appear randomly. If the answer is wrong, another question will be displayed, if it is correct the player will continue the game until the end of level 1. After the level 1 game is finished, a score acquisition display popup will appear, which can be seen in the following



Figure 5 Example Problem

When the player has managed to get 3 keygreens, it means indicating that the player has finished in the game, then a score acquisition popup appears as shown above. The score acquisition popup may appear when the game hasn’t finished yet but the lives have run out.

The method of use above is the same as for material, games and practice questions at levels 2 to level 8. The only difference is the appearance of the material presented, the playing field displayed, and the practice questions that appear based on the material.

Conclusion

This research produced a product in the form of animated game-based learning media with material from the Umayyad Dynasty. The results of the validation show that according to media experts it is in a very good predicate (90%). The results of the material expert validation obtained a very good predicate. Then the response of the teacher and students as users of the animated game learning media was in a very good category (92% response from teachers and 89% response from students)

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