

Development of 2D Animation Learning Media Akhlakul Karimah Materials (Ukhuwah and Husnudzon)

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Abstract

The national education system functions to increase faith and piety as well as noble character in order to educate the nation. These goals need to be pursued to improve the quality of learning and student learning outcomes. One effort to achieve this goal is to use learning media. Learning media is an introduction and learning tool that needs to be implemented to improve learning outcomes and quality learning. The focus of this study describes: (1) the need for learning media, (2) the development of learning media and (3) the effectiveness of 2D animation learning media in X Grades of SMA Negeri 12 Semarang. The aims and benefits of this research are to describe (1) the needs of learning media, (2) the development of learning media, and (3) the effectiveness of 2D animation learning media to improve learning outcomes for X Grades students of SMA Negeri 12 Semarang. The research method used is research and development. Data collection techniques were carried out by (1) observation, (2) interviews, (3) questionnaires (needs, validation, responses, pre-test and post-test questions). Data analysis used (1) needs analysis, (2) pre test and post test analysis, (3) expert validation analysis, (4) t test analysis (5) validity and reliability analysis. The conclusions from the study showed: (1) 2D animation learning media was created based on an analysis of the needs of teachers and students, (2) the development of 2D animation learning media includes pre-production, production, and post-production, (3) the effectiveness of 2D animation learning media shows increased results learning, based on the average value of the pre test (before using the media) is 72.5 while the average value of the post test (after using the media) is 81.2.

INTRODUCTION

Law Number 20 of 2003 concerning the National Education System states that education is a "conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character. and skills needed by the community, nation and state. the importance of something education because with education will gain knowledge and elevated degrees.

Educational media as one of the learning resources that can channel messages so that they can help overcome this. Differences in learning styles, interests, intelligence, sensory limitations, physical disabilities or barriers to geographical distance, time distance and others can be helped to overcome by using educational media (Susilana & Riyana, 2008). The development of science and technology in learning, one means of introducing the learning process is the use of media. There are several types of media such as audio, film, video, animation, simulation and interactive media. In using learning media students are expected to be able to learn an event with fun. Video learning is a product of audio-visual media that has better capabilities than other media because it includes audio and visual media. Video media can be used repeatedly and can be used in long-term processes in the learning process. One of them is the use of 2D animation, which is a form of 2D graphics (length and width) that moves with various transformations used (Basuki, 2005).

The interest of students in using media to increase the attractiveness of learning has also been researched by Putri (Agustien, Umamah, & Sumarno, 2018) in her research entitled "Development of learning media based on video animation in history subjects in X Grades of SMA with the Borg and Gall model. "The results of the small group tryout with 9 respondents in X Grades of SMAN 1, Their interest showed that 84.6% of the revised learning media were in good and interesting qualifications, as well as the large group tryout with 30 respondents in X Grades of SMAN 2 Situbondo showed that 80.6% of the learning media were in high qualification and very interesting. The results of the student assessment showed that the learning media were in high qualification and very interesting. The results of the student assessment showed that the learning media were good qualifications and were able to increase the attractiveness of the students' participant in history learning.

Learning media is very useful in improving the quality of learning, so researchers are trying to develop a media that is 2D animation, basically the animation used is a device that uses various types of media such as sound, images, video into one program and is supported by various software (software) such as Adobe Premiere, Adobe after effects, and Adobe Photoshop which is made into this animation will help teachers in conveying PAI lessons, namely akhlakul karimah. Based on interviews with the problem of boredom of students at SMA Negeri 12 Semarang and often playing cellphones in their studies, a solution can be given in the form of using animated learning media that can be played on cellphones or computers or CDs so that students understand and help open the knowledge horizons of students who are only bound by modules, worksheets, and textbooks for most schools that don't want and can't take advantage of today's technological sophistication.

Based on the background of the problems above, the researcher formulated a study in the form of a thesis with the title "Development of 2D Animation-Based Learning Media Material on Akhlakul Karimah in X Grades of SMA Negeri 12 Semarang". It is hoped that this research contribution can help and utilize technology and develop active, innovative, creative, effective and fun learning.

METHOD

Research

The development model used is the Borg and Gall model in (Khadik, Sudarmin, & Widodo, 2014) suggests a research and development (R&D) approach includes 10 steps that must be taken, namely: (1) research and data collection includes literature studies and research on a small scale; (2) product planning and development; (3) initial product form development; (4) initial product trials; (5) initial product improvement; (6) trials of products that have been perfected; (7) enhanced product revisions; (8) product testing that has been perfected; (9) final product revision, and (10) *dissemination* and implementation.

The ten steps were modified by Sukmadinata (Khadik, Sudarmin, & Widodo, 2014) into three stages, namely: (1) preliminary study consisting of literature review and field study; (2) the product development stage includes the initial product manufacture and product evaluation by experts; (3) the product testing phase which includes limited trials and extensive trials, implementation. These three steps basically cover all the steps developed by Borg and Gall.

Development Procedure

Analysis of the needs of teachers and students, to find out the needs of teachers and students for the 2D animation media that will be applied.

Design, namely determining the material presentation and determining the design of 2D animation learning media.

Development, namely making 2D animations created *interface* (interfaces) will be designed for the convenience of students or teachers in using this animated learning media. Presentation of material is the format of presentation of material in this 2D animation learning media, namely subject matter, learning videos, practicums, and also exercises.

Implementation, implementation is carried out in X grades, namely by testing the product results. This trial was conducted to collect data on the *effectiveness* and *efficiency* of 2D animation-based learning media.

Trial

Trial Design

This 2D animation learning media was tried out by taking a sample of 31 students from X grades who had different characteristics (gender, age, level of ability and student skills, and level of student intelligence).

Subjects for the trial

Subjects for the trial were material experts, media experts, PAI subject teachers and students. Material experts and media experts, before being tested on students, 2D animation learning media was tested on material/content experts. This is done to determine the completeness and suitability of the material presented in the animation media according to the level of development targets. PAI Teachers after this animated learning media was tested on material experts and media experts, it was continued on to subject teacher subjects, namely to find out the validity of this learning media. Respondents who were the test subjects were X grades students of SMA Negeri 12 Semarang, Selection of SMA Negeri 12.

Types of Data

The types of data described above, to facilitate analysis, are grouped according to their nature into two, namely in the form of qualitative data and quantitative data.

Data Collection Instruments Data

Collection instruments used were tests. Tests are made to collect data about the results of changes in understanding before and after learning can use 2D animation-based learning media. The

data collection used in this study was expert validation sheets, needs questionnaires, interview guidelines, and learning outcomes tests (pre-test and post-test).

Data Analysis Techniques The data

Obtained is then analyzed, data analysis techniques from qualitative questionnaires are then made into quantitative data, data analysis techniques consist of analysis of needs for the development of 2D animation which serves as the creation of media according to the needs of teachers and students, analysis of pre-test and post-test to find out results of increased learning before the application of the media and after the application of the media, analysis of expert validation to obtain the level of validity or accuracy of the media and material in the 2D animation media that will be used for learning, the t test of student learning outcomes is obtained with test questions, namely the pre test and post test, of the two test results are calculated using the t test to determine the completeness of learning outcomes, validity analysis is a measure that shows the level of validity of a test. and reliable is the level of consistency of a test.

RESULTS AND DISCUSSION

Affirmation of Terms

Definition of Learning Media The

Media itself comes from Latin and is the plural form of the word "*medium*" which literally means "intermediary" or "distributor". Thus, the media is a vehicle for channeling learning information or conveying messages.

According to Gerlach and Ely in (Audie, 2019) states that media when understood broadly is human, material or events that build conditions that enable students to acquire knowledge, skills, or attitudes. In this knowledge, teachers, textbooks and the school environment are media. More specifically, the notion of media in the teaching and learning process tends to be interpreted as graphic, photographic or electronic means of capturing, processing, and reconstructing visual and verbal information.

According to (Aqib, 2013) learning media is something that can be used to channel messages and stimulate the learning process in the learner (student).

From the various opinions above, it can be concluded that basically the media is a tool or the like that can be used as a messenger in a learning activity. The message in question is the subject matter, where the existence of the media is intended so that the message can be more easily understood and understood by students. The position of the media is as an aid to the teaching and learning process as a tool in the learning environment that is regulated by the teacher.

Definition of 2D

This 2D animation is a manual drawing animation and not a few also say this animation is an animation that only has two dimensions, it's just that 2D animation emphasizes more on the manufacturing techniques and the display that is given. It is not entirely true that 3D or 2D animation is not realistic. Maybe it's okay that 2D animation emphasizes digital animation made by digital tools, such as computers, with digital coloring and movement. The display given also shows the firmness of the movement lines, coloring, and gestures as well as the actions performed by the character.

Tony White gives examples in his book entitled "Animation: From Pencils to Pixels", that 2D animation is made using digital design tools, of course starting from several sketches done manually on paper. But in the end, such as thickening of images, colors, sounds, gestures, and the action is carried out on a computer or in other senses that an image that has been sketched on paper, then

recorded in its entirety via electronic media and put together in the form of a sequence, it can also be called 2D animation or *motion graphic*.

It is different between 3D and 2D animation, where this animation must have many images to create a character rotation animation for example. Character rotation, the animator must draw movements from the front, sideways, backwards, and back again to the front.

2D animation is a media that has 2 dimensions in terms of manufacturing techniques and the display given, so that the gestures of 2D animation media are expected to facilitate the continuity of the learning process that emphasizes computer-assisted manufacturing techniques from coloring, computer-assisted design, as well as the display needs to be emphasized. from movements, gestures, and actions (Ruslan, 2016).

Understanding Akhlakul Karimah (Ukhuwah and Husnudzhan)

Morals from a linguistic point of view come from Arabic, namely akhlaqa, yukhliq, ikhlaqan, khuluqun means manners, customs, temperament or everything that becomes tabi'at (Nata, 2002). Akhlakul karimah, comes from the word "karim" and is Asma'ul Husna from Allah Azza wa Jalla, which means "Glorious". In terms of akhlakul karimah is a commendable moral (behavior), that is a noble deed done repeatedly so that it becomes a habit on the basis of soul awareness, not because of compulsion. Prophet Muhammad Shallallahu 'alaihi wa sallam was sent as a Messenger not only to perfect noble morals or character. Akhlak al mahmudah/karimah (commendable/noble morals), namely inner nature and outward behavior that conforms to Islamic norms/teachings (Zurqoni, 2017).

The main aspects that will be discussed in PAI learning for X grades at SMA Negeri 12 Semarang are on the subject of akhlakul karimah husnuduzan (good prejudice), ukhuwah (brotherhood), and). according to the Competency Standards familiarize commendable behavior, and Basic Competency, namely KI 1 Living and practicing the teachings of the religion one adheres to, KI 2 demonstrating good prejudice behavior (husnudzan), brotherhood (ukhuwah) understanding the benefits and wisdom of being prejudiced (husnudzan), and brotherhood (ukhuwah), and apply it in everyday life.

Ukhuwah

Ukhuwah or better known as brotherhood, means close friendship. Close friendship means friendship or friendship that is strong and not easily broken or separated. Close brotherhood is called true brotherhood, not based on descent, language, ethnicity, physique, position, rank and family. But based on heart and faith and good deeds (Nasikhin, Raharjo, & Nasikhin, 2022).

Husnudzhan

Husnudzhan or good prejudice, carried out by keeping away bad attitudes or behavior in everyday life, among the attitudes that need to be avoided is su'udzhan (bad prejudice) is a feeling full of suspicion towards other people, is a despicable character and the opposite of husnudzhan or good prejudice.

Needs Analysis

Analysis of 2D animation can be seen from the results of the analysis of the needs of teachers and students, then the principles of preparation can be described as follows:

Needs and Character of Students

The needs and character of students have agreed on the application of 2D animation media in class, using Indonesian, and learning styles using audio-visual (pictures and sound).

Formulating Goals

Goals are adjusted to the 2013 curriculum material for ukhuwah and husnudzon that have been in force.

Material Formulation The

material is adapted to the core competencies and basic competencies of the 2013 curriculum, which are explained coherently, consisting of definitions, propositions, concepts, examples of application delivered by animated characters accompanied by supporting text.

Measure of Success

The measuring tool for success uses a pretest and posttest questionnaire and is supported by the Google form.

Media Script

Scripts 2D animation media scripts are equipped with audio (sound) with lots of colorful moving images, conveyed by young children's characters, while the screen size is landscape (elongated rectangle).

Tests and Revision (Validation)

The 2D animation learning media has been validated by material experts with a score of 100 (very valid) and media experts with a score of 87.4 (very valid).

Development Results Development

results consist of three stages, namely:

Pre Production

Pre production includes story ideas about *ukhuwah* (brotherhood) and *husnudzon* (good prejudice), then a synopsis or story board is made and finally *the story board* (making sketches).

Production

Production is the process of drawing animation in Adobe Photoshop CS 6, then moving (animating) in Adobe After Effects CS 6 and finally finishing uniting all the videos into one film using Adobe Premiere CS 6.

Post Production

Post production is the process of editing or tidying up images, audio and validation by media experts and material experts.

Effectiveness Test

Pretest and Post Test Effectiveness

Test of Pre test and post test were used to find out the difference with the test shown to 31 X grades students at SMA Negeri 12 Semarang.

The pre-learning achievement test was carried out using 2D animation learning media as many as 2 students got a score of ≤ 55 or less category, after using 2D learning media it decreased to 0 (none) students in the less category. Before using 2D animation media, 10 students got a score of 56-70 or an adequate category, after using 2D animation media it decreased to 5 students getting a score of 56-70 or an adequate category. Before using 2D animation learning media, 17 students got a score of 75-85 or good category, after using 2D animation learning media, 19 students got a score of 86-100 or good category. Before using 2D animation learning media, 2 students got a score of 86-100 or very good category, after using 2D animation learning media, 7 students got a score of 86-100 or very good category. The results of the initial test (pre test) and post test (post test). Based on the research, it can be seen that there are differences in the acquisition of the highest scores and the lowest scores in the pre-test and post-test. The highest score on the pre-test is 95 while the lowest score on the post-test is 100. The lowest score on the pre-test is 45 while the lowest score on the post-test is 60.

The t

The t test also shows a significant level $(0.064) < \text{failure rate } (0.05)$ then H_0 is rejected and H_a is accepted, showing a significant difference between the two variables, while $t \text{ count } (5.340) > t$

table (1.697) then H_0 is rejected and H_a is accepted, indicating that there is a significant difference in learning outcomes between the pre-test and post-test.

Validity and Reliability

Validity and reliability were analyzed using Microsoft excel 2010 software. Analysis of the validity or level of validity of the questions resulted, out of 20 multiple choice questions 12 questions were invalid because $r_{count} < r_{table}$ means it needs to be revised, while 8 questions are valid and don't need to be revised. The reliability or consistency level of the questions has a value of 0.57 with moderate reliability criteria.

Expert

Validation Media expert validation gave a value of 87.4 very valid criteria, while material experts gave a value of 100 very valid criteria. Media and material expert validation shows that 2D animation learning media is feasible to be applied in learning in schools.

Response Analysis

Teacher's response after implementing learning using 2D animation media obtained an average score of 3.9 in the good category. Student responses obtained an average of 4.3 very good categories.

CONCLUSION

2D animation learning media based on *ukhuwah* and *husnudzan* is a tool or one that is used to convey messages in the form of two-dimensional animation that contains morals, namely *ukhuwah* and *husnudzan* which have been adapted to the needs of teachers and students in the form of 4 segments, namely understanding, propositions, concepts and example.

Development of 2D animation learning media through 3 stages, namely pre-production (planning, making animation material), production (animating the material made) and post-production (improving animation) then validating 2D animation-based learning media material *ukhuwah* and *husnudzan* declared feasible to be implemented. This result is clarified from the average acquisition of the material validator with a value of 100 with very valid criteria, while the media validator gives an average value of 87.4 with very valid criteria.

The effectiveness of 2D animation-based learning media for *ukhuwah* and *husnudzan* material for students that was developed effectively improves learning outcomes. Judging from the highest *pre-test* 95 while the lowest score is 45. Then, it increases in *post-test* scores with the highest score of 100, the lowest score of 60, the average *pre-test* average score *post-test* 81.2 so that it increases 8.7%. The t test also shows a significant level ($0.064 < failure\ rate\ (0.05)$) then H_0 is rejected and H_a is accepted showing a significant difference between the two variables. While $t_{count} (5,340) > t_{tabel} (1,697)$ then H_0 is rejected and H_a is accepted indicating that there is a significant difference in learning outcomes between the *pre-test* and *post-test*. While the teacher's response obtained an average score of 3.9 with good criteria and student responses obtained an average score of 4.3 with very good criteria.

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