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DEVELOPMENT OF ANIMATED VIDEO-BASED LEARNING MEDIA IN SOCIAL STUDIES SUBJECTS

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ABSTRACT

This development research is to streamline learning and increase students' understanding of Social Science lessons in the even semester VII class offering materials. Development research is carried out to overcome the problems faced by students who find it difficult to understand the concept of supply, the law of supply and how to make a supply curve correctly. The research was conducted by Research and Development with ADDIE design which includes analysis, design, development, implementation and evaluation steps. The process of making animated video-based media has three processes, namely the preparation process, production stage, and post-production. After the animation video-based media has been produced, then the media is tested on material experts, media experts, and linguists to determine the feasibility of the product to be used. Then tested on students individually, small groups and large groups. Based on the test results of animated video-based media products, it is very suitable to be used in Social Science learning to increase students' understanding of the material offered.

KEYWORDS: Development, media-based animation video, social studies

1. INTRODUCTION

The utilization of information technology in learning today is expected to facilitate the delivery of messages conveyed by educators to their students to achieve the competencies that must be mastered [1]– [6]. The communication process always involves three main components, namely the message sender component (communicator), the message recipient component (communicant), and the message component itself which is usually in the form of subject matter. Sometimes in the learning process, there is a communication failure. That is, the subject matter or messages conveyed by the teacher cannot be optimally received by students, in the sense that not all subject matter can be understood well by students, even worse, students as recipients of messages are not appropriate in capturing the contents of the message conveyed [7]– [10].

The selected learning media should be adjusted to the needs [11] and appropriate to the principles of selection, and it is also necessary to pay attention to the following factors: (1) objectivity, the method is chosen not for the pleasure or needs of the teacher, but for the needs of the learning system, it needs

input from the teacher learners; (2) teaching programs, teaching programs that will be delivered to students must be in accordance with the applicable curriculum, both regarding content, structure, and depth; (3) the target of the program, the media used must be seen for its suitability with the level of development of students, both in terms of language, symbols used, method and speed of presentation as well as the time of use; (4) situation and condition, namely the situation and condition of the school or the place and room that will be used in the learning process, in terms of size, equipment, and ventilation, the situation and condition of the students who will attend the lesson in terms of quantity, motivation, and enthusiasm; (5) technical quality, related to checking the state of the media before use [12]–[16].

Media can be interpreted as something that can bring information and knowledge to the ongoing interaction between educators and students [17], [18]. Educators must be able to design, compile, evaluate, analyze revise and develop media for the material to be delivered to students [19]. The role of learning media is very important in the learning process for students, both face-to-face learning and online learning [20]– [24].

In the industrial era 4.0 as it is today, where technology and information are developing so fast, an educator should be able to utilize and integrate this technology to support smooth learning activities. Information and communication technology (ICT) needs to be utilized in the world of education [25], [26]. Information Technology can display new features in the world of education, multimedia-based teaching systems (text, images, sound) can present an interesting thing [27], [28]. According to Edgar Dale's experience cone, through reading students will remember 10%, through listening students will remember 20%, through seeing pictures or diagrams, videos, and demonstrations students will remember 30%.

Therefore, the development of audio-visual (video) media is one alternative to perfect the shortcomings that occur in social studies learning during this covid-19 period. With the video, they can play it over and over again in their homes, then they can record questions if they feel they don't understand, which will later be discussed with the teacher when studying at school, so that the available time can be used as effectively and efficiently as possible [29].

2. METHOD

This research uses research and development (R&D) methods [30], [31]. Research and development methods are used to produce certain products and test those products. Research-based product development consists of five main steps, namely analysis of product development needs, product design as well as feasibility testing, product implementation or product manufacture according to the design results, product testing or evaluation and continuous revision. This proposed research is a step that seeks solutions to problems in the field, namely the lack of technology-based learning media in SMPN 3 Banjar Agung.

The development of animated video-based media with the ADDIE model is designed to lead to efforts to solve learning problems and is programmed in systematic sequences consisting of 5 steps with the ADDIE learning design model, namely Analysis, Design, Development, Implementation, Evaluation [32].

Data collection techniques using documentation, and questionnaires. Questionnaires as research instruments [33] were given to class VII C students of SMPN 3 Banjar Agung and experts including material experts, media experts, and linguists.

The assessment scores carried out by material experts, media experts, linguists, and students were then tabulated and recapitulated to be analyzed based on the average score of each indicator. Calculate the average score of each indicator using the following formula:

$$\text{Average Score} = \frac{\sum \text{score earned}}{\sum \text{item} \times \text{number of highest score}}$$

$$\text{Percentage} = \frac{\sum \text{score earned}}{\sum \text{item} \times \text{number of highest score}} \times 100\%$$

Data regarding opinions or responses from experts and students regarding infographic animation video-based media about the offer are as follows:

Table 1: Media Eligibility Category based on Average Score

Average Score	Media Eligibility Assessment Criteria
4	Very Worthy
3	Worth
2	Not Eligible
1	Very Inappropriate

Source: [34]

By knowing the score of the item, it can be seen the feasibility of infographic animation video-based media about the bid material by looking at the following categories:

Table 2: Media Eligibility Category based on Score Percentage

Average Score	Media Eligibility Assessment Criteria
76%-100%	Very Worthy
51%-75%	Worth
26%-50%	Not Eligible
0-25%	Very Inappropriate

Source: [34]

3. RESULT AND DISCUSSION

Presentation of data in the form of a table of results: (1) a material expert questionnaire; (2) learning media experts; (3) Indonesian language expert. Data analysis was carried out after the research data was presented in the table. After being analyzed, evaluated, and then revised.

The test subjects were conducted in class VII C of SMPN 3 Banjar Agung. After the developer obtains research data, then performs data analysis, as for the discussion. The analysis of the data can be described as follows: After the developer creates an animated video-based media about the offering material with the ADDIE design, the resulting product is expected to be able to streamline learning, so that when it is used in the learning process in the classroom, it is expected that student learning outcomes in social studies subjects will be better.

At the analysis stage, it is carried out by conducting performance analysis and analyzing the needs of students. Based on the results of the daily test analysis, it is known that student learning outcomes are still low, while based on the learning style questionnaire that has been given by students, it is known that on average students have a visual-auditory learning style, therefore the development carried out is video-animation based media. At the design stage, the activities carried out include developing ideas, conducting concept analysis, assignments, and making storyboards. In the development of animated videos, the initial product (prototype I) was made based on the animated video storyboard that had been made previously. Meanwhile, at the implementation stage, trials were carried out on students between individual trials, small groups, and large groups. Individual user trials as many as 3 people received an assessment of 93.06%, small group test 97.22%, and large group 93.61%, meaning that animated video-based media is very suitable for use in social studies learning.

The final result of the analysis of the material expert's trial data is feasible to use with revisions with an assessment of 86.9% which means it is very feasible. The details are listed in table 3. The media expert received an assessment of 87.5% which means it is very feasible, as detailed in Table 4.

Meanwhile, the validation test for linguists received an assessment of 95% which means it is very feasible as shown in table 5.

Table 3: Material Expert Assessment

No	Assessment Criteria	Assessment	Description
1	Material developed in accordance with KI and KD	75%	Good
2	Learning objectives according to KI and KD	100%	Very good
3	The suitability of indicators, materials, and learning activities	75%	Good
4	The material presented reflects the description of Basic Competencies	100%	Very good
5	The material presented starts from the introduction of concepts, definitions, procedures, output displays, examples, cases, exercises, to interactions between concepts	75%	Good
6	Practice questions according to the material presented	100%	Very good
7	Practice questions can be used to measure the achievement of the indicator	75%	Good
8	The accuracy of concepts and definitions	75%	Good
9	Accuracy of facts and data	100%	Very good
10	Sample and case accuracy	100%	Very good
11	Accuracy of drawings, diagrams or illustrations	100%	Very good
12	Term accuracy	100%	Very good
13	Pictures, diagrams, facts, or illustrations are found in everyday life	75%	Very good
14	Using case examples found in everyday life	75%	Good
15	Cases, facts, and phenomena presented are in accordance with condition	75%	Good
16	The descriptions, exercises, or case examples presented encourage students to be curious and foster creativity	100%	Very good
17	The descriptions, exercises, or case examples presented require creative thinking and problem solving.	75%	Good

18	The material presented can create the ability to ask	75%	Good
19	Flexibility of adaptation to technological developments	100%	Very good
20	Ease of instruction and information exposure	100%	Very good
21	The content of the material is well conveyed	100%	Very good

Source: Research Results for 2022

Table 4: Assessment of Learning Media Experts

No	Assessment Criteria	Assessment	Description
1	The voice of the narrator in the animation video is clear and articulate	100%	Very good
2	Animated videos using informative narrative	75%	Good
3	Animated videos use common terms and are instructional	100%	Very good
4	The language used is communicative	100%	Very good
5	Narrative or presentation of material in accordance with KI/KD/Curriculum at the SMP/MTs level	75%	Good
6	The narration in the animated video corresponds to the good picture display	75%	Good
7	Video duration doesn't take long (5-20 minutes)	100%	Very good
8	Animated videos are to the point (directly on the presentation of the material)	75%	Good
9	Animated videos are simple and attractive	75%	Good
10	Animated videos are able to visualize the image and shape of the supply curve	100%	Very good

Source: Research Results for 2022

Table 5: Assessment of Linguists

No	Assessment Criteria	Assessment	Description
1	The accuracy of sentence structure	75%	Good
2	Sentence effectiveness	100%	Very good
3	Term Standard	100%	Very good
4	Understanding of messages or information	100%	Very good
5	Ability to motivate students	100%	Very good
6	Ability to encourage students to think creatively	75%	Good
7	Compatibility with the intellectual development of students	100%	Very good
8	Conformity with the level of emotional development of students	100%	Very good
9	Grammar accuracy	100%	Very good
10	spelling accuracy	100%	Very good

Source: Research Results for 2022

Evaluation activities are carried out by analyzing the effectiveness of using animated video-based media, where there are differences in learning outcomes before and after using animated video-based media, in which there is an increase in student learning outcomes, besides animation-based video-assisted learning can generate interest and pleasure to students during learning.

The development of this animated video learning media is packaged with interesting animations for students. The choice of color and background design is adjusted to the development of students, not only the color of the design, the researchers as well Pay attention to the selection of fonts and colors to be used. Learning using audio-visual media (video), makes students feel interested in the learning process.

This animated video learning media is a research development to make it easier for teachers in the learning process, animation is an activity to turn on or move inanimate objects (pictures) to be as if alive, because animation is able to explain a concept or process that is difficult to explain with other media, causing motivation. Users (students) to take an active role in the learning process, then the use of animated video media can make students easy to understand the material presented by the teacher. The same research conducted by Ponza et al in 2018 showed the results of using animated video media in teaching and learning activities had a positive effect on student learning processes than learning

activities using the classical method, so it can be said that the use of video media in the effective learning process can significantly increase enthusiasm for learning. on the material [35].

Based on the discussion, it shows that the animated video-based social studies learning media is included in the appropriate category and gets a very good category in the responses given by students. It is hoped that this animated video-based social studies learning media can help teachers explain social studies material and can make it easier for students to understand the material. In addition, it is also hoped that this media can improve the quality of education in schools and can add references to learning media.

4. CONCLUSION

Animated video-based media products were developed using the ADDIE design with the following stages: Analysis, Design, Development, Implementation, and Evaluation. Based on the assessment of material experts on several aspects, the percentage of the average score is 86.9%, which means that this media is "very feasible". Furthermore, based on the assessment of media experts, this animated video-based media product has an average score percentage of 87.5% which means "very feasible". While the percentage of the average score obtained from linguists is 95%, which means "very feasible". The feasibility of media products based on animated video offerings shows that the results are very feasible and effective for use in learning Social Sciences.

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