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Animated Video Development in Thematic Learning in the Fifth Grade of Elementary School

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Abstract

Thematic learning for elementary students is challenging since combining many subjects matter in one topic so appropriate medium to deliver the subject should be taken into consideration. This study aims to develop animated videos in fifth grade at SDN Cijeruk and determine the video's feasibility and student responses after using the video. The background of this research is that the teacher only used the lecture method and textbooks, making students feel bored and sleepy. In addition, teachers did not make good use of school facilities with laptops, InFocus, and speakers to apply digital learning media. Teachers also did not make use of their soft skills in using technology. This research method was R&D (Research and Development) using the ADDIE model, consisting of five stages: analysis, design, development, implementation, and evaluation. The results of the material expert validation from the two validators obtained an average percentage of 89.5%, on the criteria of "very feasible." The validation of linguists from the two validators attained an average percentage of 87% on the "very feasible" criterion. Furthermore, the average percentage of media expert validation from the two validators was 88.5% in the "very feasible" criteria. Hence, the overall average percentage of the material, language, and media validators was 88.3% in the "very feasible" criteria. For student responses, an average percentage of 97.475% was also obtained in the "very good" criteria. Based on the validation results and student responses, this animated video is feasible for school use.

Keywords: Animated Videos, Thematic Learning, Elementary School

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Abstrak

Pembelajaran tematik bagi siswa SD merupakan tantangan karena memadukan banyak materi pelajaran dalam satu topik sehingga media yang tepat untuk menyampaikan materi harus benar-benar dipertimbangkan. Penelitian ini bertujuan untuk mengembangkan video animasi di kelas V SDN Cijeruk serta untuk mengetahui kelayakan video tersebut dan mengetahui respon siswa setelah menggunakan video. Penelitian ini dilatar belakangi karena guru hanya menggunakan metode ceramah dan memanfaatkan buku paket saja membuat siswa merasa bosan dan mengantuk, guru kurang memanfaatkan fasilitas sekolah yang cukup memadai dengan adanya laptop, infokus, speaker untuk menerapkan media pembelajaran digital, guru pun kurang memanfaatkan soft skill nya dalam memanfaatkan teknologi. Metode penelitian ini adalah R&D *(Research adn Develpoment*) dengan menggunakan model ADDIE yang terdiri dari 5 tahap, yaitu *Analyze* (Analisis), *Design* (Desain), *Develop* (Pengembangan), *Implementation* (Implementasi), dan *Evaluation* (Evaluasi). Hasil validasi ahli materi dari kedua validator diperoleh presentase rata-rata 89,5% terdapat pada kriteria "sangat layak". Validasi ahli bahasa dari kedua validator diperoleh presentase rata-rata 87% terdapat pada kriteria "sangat layak". Presentase rata-rata validasi ahli media dari kedua validator diperoleh 88,5% terdapat pada kriteria "sangat layak". Presentase rata-rata keseluruhan dari validator materi, bahasa, dan media 88,3% terdapat pada kriteria "sangat layak". Respon siswa diperoleh presentase rata-rata 97,475% terdapat pada kriteria "sangat baik". Berdasarkan hasil validasi dan respon siswa, media video animasi ini layak digunakan di sekolah.

Kata Kunci: Video Animasi, Pembelajaran Tematik, Sekolah Dasar

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INTRODUCTION

The teachers have an essential role in learning success since they can build an optimal learning atmosphere and allow interaction with students (Mashuri & Budiyono, 2020). In this case, learning is carried out consciously to direct students to scientifically analyze various things in their environment to develop competence and lead to maturity (Kirom, 2017).

In mid-2020, the entry of the COVID-19 virus into Indonesia required that all levels of education be conducted online. Because of that, teachers must be able to understand technology to teach remotely and face-to-face. Related to that, the development of science and technology influences each generation in various fields of science so that this generation will be educated according to the development of science and technology (Ponza et al., 2018).

Technology further dramatically impacts the world of education and has both positive and negative sides. The positive side is spreading science and technology across space and time to the universe. On the other hand, the negative side is the change in character or virtue that differs from the current situation. For this reason, education must increase its positive side to reduce its negative side (Jamun, 2018).

Teachers must also be able to create and develop instructional media, whether using technology or not (Oktafiani et al., 2020). To achieve educational goals, learning sequences cannot be separated from the vital role of media (Arsyad, 2011 in Ponza et al., 2018).

Learning media is access to information that causes a sense of self to pay attention to objects and access to education through teachers and students. Educational media can overcome student passivity because a) it stimulates children's learning enthusiasm, b) it allows children to interact with the environment and reality for a long time, and c) it allows children to learn in their way according to their abilities and interests (Pakpahan et al. in Nurfa 2022). Thus, teachers must be more innovative in choosing learning media and making changes to improve the quality of teaching materials (Sunami & Aslam, 2021).

Moreover, learning media are classified into five types (Leshin et al., 1992 in Rohayati & Rizkyanti, 2019), including 1) Based on biology, it is a kind of teaching, animal observation, and others; 2) Based on print, there are student worksheets, modules, and others; 3) Based on visuals, they are charts, graphs, and others; 4) Based on audio-visual, it consists of videos, films, slideshows, television, and YouTube; 5) Based on computers, it includes computer-assisted learning, hypertext, web-based learning, and others.

In a study by Widiyasanti & Ayriza (2018), it was found that the learning model applied was conventional, i.e., conveying material using the lecture method, and the media employed by the teacher was in the form of printed media of student worksheets or textbooks only, which made students less enthusiastic about learning.

In fact, the number of learning media is consistent with technological developments, but research (Sylvia et al., 2019) stated that the percentage of domestic students interested in using learning video media and users from developed, developing, and underdeveloped countries obtained an average number of 84.0. It was asserted that they strongly agreed with using video media in learning. In addition, elementary school students learn 50% of what they see and hear (Hikmah & Purnamasari, 2017).

In this case, an animated video is a learning tool that uses moving images similar to those found in films (Agustien et al., 2018). Videos have both advantages and disadvantages. Among the advantages of video is that it can be used for a long time and at any time if the material in the video is still significant to the material being discussed; video is one of the educational media that generates pleasure; videos can make it easier for students to learn knowledge and make it easier for teachers during the learning process; the general public can also use videos and are easily accessible. Meanwhile, the weakness of video is that it takes a long time to make; videos can only be used with computers and require projectors and speakers when used in the learning process; video production costs a lot of money (Johari et al., 2014).

The steps that must be prepared in producing a video as mentioned by Pribadi in *Media and Technology in Learning* include 1) establishing an idea, 2) preparing a plan and storyboard, 3) embedding frames into the video, 4) working on voice recordings such as storytelling and rhythm, 5) working on a series of editing, and 6) doing procurement.

Several researchers have researched animated learning videos, but in this study, several things distinguished it in terms of subject, object, and research objectives. As in research by Ngenda et al. (2021), the research subject was high school students, Akmalia et al. (2021), and Sakti & Napsawati (2021) applied to junior high school and utilized Powtoon-based applications.

Based on interviews and observations on December 1, 2021, this study revealed that 1) in the current learning conditions, the teacher only used the lecture method and textbooks, making students feel bored and sleepy. 2) Teachers did not make good use of school facilities with laptops, InFocus, and speakers to apply digital learning media. 3) Teachers also did not utilize their soft skills in utilizing technology. In addition, it was discovered during the interview that the teacher already understood technology because the teacher was entrusted with teaching fifth-grade students to study computers for ANBK (Computer-Based National Assessment). 4) The teacher made learning video media when he was a fourth-grade teacher but had never made video media or other learning media when he was a fifth-grade teacher.

For this reason, this research developed media in animated videos containing thematic material. The combination of various subjects in the Islamic elementary school or elementary school environment includes themes and sub-themes; learning is referred to as thematic learning (Adlan et al., 2022), with Indonesian and natural science subjects. Natural science material discusses single substances and mixtures. Related to that, it was not easy to give examples of single and mixed substances to students in class because the teacher had to bring water, sugar, tea, and others to classify these objects/materials into single substances or mixtures.

Based on the problems above, the researchers are interested in developing learning media, i.e., animated videos. It aims to provide a different learning experience, make it easier for students to understand the material fully packaged in the animated video, and become a reference for teachers to innovate when producing learning media.

METHODS

This study applied the research method of R&D (Research and Development). R&D can also be interpreted as research used to produce a product and test the effectiveness of the product. Furthermore, this research procedure used the ADDIE model (Analyze, Design, Develop, Implementation, and Evaluation). This model serves as a guideline for developing higher, more effective learning capacities and supports learning itself (Rayanto & Sugianti in Zahra et al., 2021).

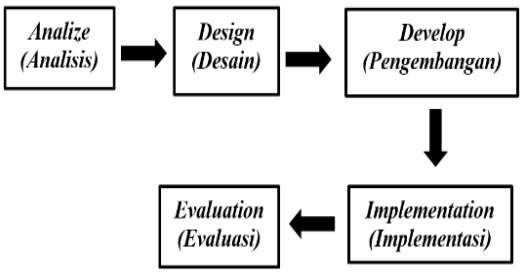

Figure 1. Flow on the ADDIE Model

This research procedure employed the ADDIE model. 1) Analyze. At this stage, the analysis was done through observation and interviews with fifth-grade teachers at SDN Cijeruk. 2) Design. The steps to make the design consisted of a. preparing materials, b. preparing Zepetto animated pictures and videos, and c. making a learning video storyboard. 3) Develop. The video editing stage was conducted using the Kinemaster application during the development process. After the editing was complete, it was validated by experts. 4) Implementation. At this stage, the video received expert validation and could be implemented for 25 students. 5) Evaluation. The last step was assessing the animated video by students and obtaining feedback, i.e., student responses based on the questionnaire given.

This study's data collection techniques and procedures were 1) interviews with class

teachers, 2) questionnaires, and 3) documentation. A validation questionnaire was given to experts to measure the feasibility of the material, language, and media contained in the developed videos and student response questionnaires. In addition, the documentation was distributed as evidence that thorough research was carried out. After all the data were collected, the next step was to analyze the data. Then, the interview analysis utilized recording equipment and writing tools. Validation questionnaire analysis used a Likert scale and percentage of validity criteria. Meanwhile, the analysis of student response questionnaires employed the Guttman scale and the percentage of student responses.

RESULTS AND DISCUSSION

This research was conducted in the fifth grade of SDN Cijeruk for the 2021/2022 academic year to discover the steps in developing learning media in the form of animated videos in thematic learning and its feasibility and student responses after using animated videos. The results of this study used the ADDIE model, including Analyze, Design, Develop, Implementation, and Evaluation.

Analyze

Based on the results of observations in the fifth grade SDN Cijeruk, the researchers knew that the learning conditions at that time were relatively quiet. The teacher only used the lecture method and textbooks, making students feel bored and sleepy.

Furthermore, the results of interviews with the fifth-grade teacher, Ms. Yunita Pujiasih, S.Pd., showed that teachers did not make good use of school facilities with laptops, InFocus, and speakers to apply learning media. Teachers also did not make use of their soft skills in using technology. In addition, it is known that the teacher already understood technology because the teacher was entrusted with teaching fifth-grade students to learn computers for ANBK (Computer-Based National Assessment). The teacher had made learning video media when he was a fourth-grade teacher but had never made this video media or other learning media when he was a fifth-grade teacher.

As explained, media comprises connectors, facilities, tools, and conveying messages (Rahmawati & Atmojo, 2021). The teacher can easily distribute messages or material to students with the media.

Based on the results of observations and interviews, the researchers were interested in developing media in the form of animated videos. According to the research time, the theme was theme 9 (Objects Around Us). On this theme, the researchers chose sub-theme 3 (Humans and Things in Their Environment), with the subject matter being Indonesian and natural sciences.

Video media was needed in this aspect of the curriculum because relatively long explanations were required in Indonesian lessons. Thus, if video media were not used, it would take quite a lot of time. Then, for natural science lessons, an explanation of single and mixed substances and examples in the surrounding environment was needed so that these examples were easier to show in the video.

Practical video media was in learning theme 9, sub-theme 3, 1st lesson. The practicality of use could benefit students, namely that it can be accessed anywhere and anytime, has long durability, is not damaged, has attractiveness in delivering material, and makes it easy for teachers (Johari et al., 2014).

Therefore, the researchers were interested in developing animated video media in the fifth grade of SDN Cijeruk. Apart from being a new learning experience for students, it is also a reference for teachers to utilize innovative learning media.

Design

After going through the first stage, i.e., analysis, the next stage was the learning video design stage, consisting of three steps:

Before producing this animated video, the first thing was to make a design or outline, commonly known as a storyboard. Designing in advance made it easier for researchers to determine the following sections in the animated video.

The second thing was gathering materials. The subject matter is a core part of teaching activities because it is the subject students try to master (Arikunto in Pane & Dasopang, 2017). This animated video learning media raised theme 9, sub-theme 3, 1st lesson, with Indonesian and natural

sciences lessons. The material was obtained from the 2017 curriculum student book.

The material in the Indonesian lesson discussed was about print media advertising. The things included in the video were the definition of print media, the characteristics of advertisements, and various types of print media advertisements. An explanation of the print media itself would take a long time. Therefore, using video media to explain the material did not take much time because it had been adjusted to the specified duration, and students could re-watch the video for understanding at home or anywhere. As is the opinion, animated videos combine audio and visual elements to increase student attention, present objects in detail, and assist in understanding difficult lessons (Apriansyah, 2020).

The material in natural science lessons is pure substances and mixtures. The material has examples found in everyday life. It aligns with natural science lessons having concepts related to the surrounding environment and having abstract concepts. Abstract concepts in material were changed to become concrete in line with the use of media in learning activities. The lessons taught bring students into the real and concrete world according to their development (Ananda, 2017).

The third thing was the manufacturing stage, where the researchers prepared materials to support the making of the animated video, such as 1) gadgets, 2) Kinemaster applications, 3) moving animations from YouTube, 4) back sounds obtained from YouTube, and 5) images from Google.

The manufacturing stage is:

1) Open the Kinemaster application, click the circle with a plus sign, and select size 16:9.

Figure 2. Video Size

2) After that, click media, then the background to add a background already available in the Kinemaster feature, or select an image as desired.

Figure 3. Adding the Background

3) Then, click a layer to add text, effects, overlays, or handwriting.

Figure 4. Adding Text

4) Then, click the media feature again to add an image or video and add an effect feature to make it interesting.

Figure 5. Adding a Transition Effect

5) Click Rec to perform dubbing of the text written.

Figure 6. Recording for Dubbing

6) The final stage is to click audio to add a back sound.

Figure 7. Adding Backsound

Develop

The third step was development. The first was preparing the learning tools needed during teaching and learning activities, namely lesson plans and materials. The second was the validation test. This validation test aimed to find out how feasible and valid the animated video learning media developed was to be implemented on students.

This validation test was submitted to material, linguists, and media or design experts. Material validation was addressed to the first validator, Mr. S, M.Pd., a lecturer in the PGSD UNTIRTA department, and the second validator to Mrs. P, S.Pd., a teacher at SDN Cijeruk. The assessment results of the validator are as follows.

Table 1. Material Expert Assessment Data

Validator	Score	%	Criteria
I	39	86	Very feasible
II	42	93	Very feasible
Average		**89.5**	**Very feasible**

In addition to this assessment, there were several suggestions from the validators so that researchers made improvements on changing examples of single and mixed substances in only writing form into an image so that students could easily understand it.

Figure 8. Initial Design

Figure 9. After Revision by Adding Images

Language validation was submitted to Mrs. Hj. TH, M.Pd., as the first validator, and Mrs. AAKD, M.Pd., as the second validator from the UNTIRTA PBSI department. The assessment results of the validator are:

Table 2. Linguist Assessment Data

Validator	Score	%	Criteria
I	42	84	Very feasible
II	45	90	Very feasible
Average		**87**	**Very Feasible**

Through this assessment, there were several suggestions from the first and second validators to improve punctuation and capital letters.

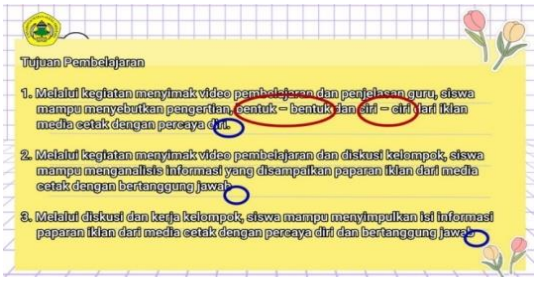

Figure 10. Initial Design

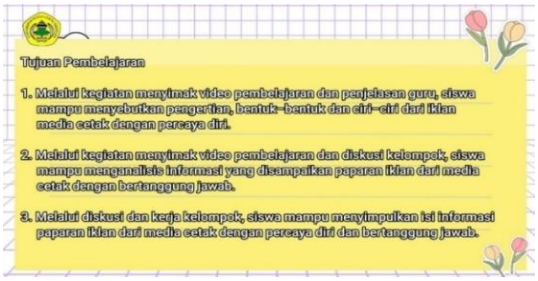

Figure 11. After the Revision of Punctuation

Media validation was submitted to Mr. MH, M.Pd from UPI Serang, as the first validator, and to Mrs. SR, M.Pd. from UNTIRTA, as the second validator. The assessment results of the validator are:

Table 3. Media Expert Assessment Data

Validator	Score	%	Criteria
I	47	85	Very feasible
II	51	92	Very feasible
Average		**88.5**	**Very Feasible**

Aside from this assessment, there were several suggestions, such as adjusting the indicators in the lesson to those in the video, adding links from Indonesian material to natural science, adding identity, changing the background, and adding animation.

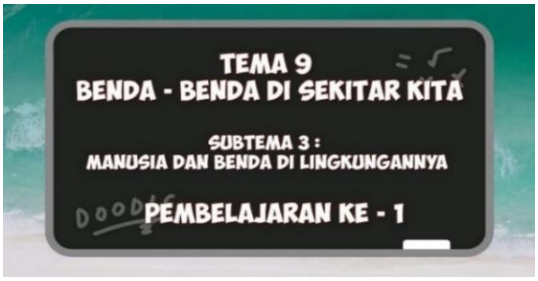

Figure 12. Before Background Revision

Figure 13. After Revision Changing the Background and Adding Animation

The media had received assessments from material experts, media experts, and linguists. The media feasibility criteria were ($60\% < NP \leq 80\%$) with feasible criteria. Thus, the overall average value of the expert validation could be calculated, namely:

Table 4. Average Expert Validation Data

Validator	%	Criteria
Material Expert	89.5	Very feasible
Linguist	87	Very feasible
Media Expert	88.5	Very feasible
Average	**88.3**	**Very feasible**

Implementation

The third stage was implementation. At this stage, the researchers carried out the implementation to fifth-grade students at SDN Cijeruk, totaling 25 students.

Implementation was applied to students. Then, student responses were found after using the product, the animated video media developed by the researchers and validated by the validators. Student responses were obtained from a questionnaire the researchers gave after the lesson.

After the validator validated the animated video and with comments or suggestions, the researchers revised it first. After that, the researchers applied an animated video in the fifth grade at SDN Cijeruk on June 3, 2022. The assessment results of student responses included:

Table 5. Student Response Assessment Data

Information	Aspect			
	K	Ma	B	M
Total Score	74	49	48	73
(%)	98.6	98	96	97.3
Criteria	Very good	Very good	Very good	Very good

Description= K: Interest, Ma: Material, B: Language, M: Benefits

Evaluation

The final step was evaluation. The evaluation used in this research was formative since this research was not to find out the effectiveness of the product being developed but only to determine whether the animated

video media developed by the researchers was feasible.

This evaluation activity was carried out during the validation of material expert validators, linguists, and media experts and obtained suggestions or criticisms to improve the product being developed to become media with the feasible criteria for use.

Animated video media obtained very feasible criteria for use in the field, and the results of the student responses were very good, i.e., they met the success category.

CONCLUSION

The purpose of this study was to find out the steps in developing a product in the form of animated learning videos, to see the feasibility of animated learning videos, and to find out the responses given by students.

The following conclusions can be obtained based on the results and discussion of the research described above. This animated video on thematic learning was developed using the ADDIE model, consisting of five stages: analysis, design, development, implementation, and evaluation.

The results of the percentage of material experts from the two validators got an average percentage of 89.5% on the very feasible criteria. Then, the percentage of validation by linguists from the two validators obtained an average of 87% on the very feasible criteria. Also, for the percentage of media expert validation from the two validators, an average percentage of 88.5% was obtained, which was within the very feasible criteria. Overall, it was found that the average percentage of the material, language, and media validators was 88.3, on the very feasible criteria. For student responses to animated video products in the fifth grade SDN Cijeruk, 25 students were given a questionnaire and obtained an average percentage of 97.475%, in very good criteria.

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