

Powtoon-Based Animated Video Media Development on Subtheme 3 Humans And Objects In Their Environment

Ikbal Aldian Tawakal¹, Nurlinda Safitri², Rini Sri Indriani³, Resyi A. Gani^{4*}

^{1,2,3}Pendidikan Guru Sekolah Dasar, Universitas Pakuan, Bogor, Indonesia

^{4*}Program Pendidikan Profesi Guru, Universitas Pakuan, Bogor, Indonesia

ikbalaladin4@gmail.com¹, nurlinda@unpak.ac.id², rini_sriindriani@ymail.com³, resyi@unpak.ac.id^{4*}

Informasi Artikel

E-ISSN : 3026-6874

Vol: 2 No: 2 February 2025

Page : 56-67

Abstract

The development of this animated video media is based on the problems found at SD Negeri Singajaya 01 Bogor Regency. Starting from students not getting innovative learning media, and still using conventional methods in the learning process so that technology in learning is still very lacking. The purpose of this research is to develop powtoon-based animated video media in class V subtheme 3 humans and objects in their environment and determine the feasibility of powtoon-based animated video media with validation tests by material experts, media experts, and linguists, as well as student responses. The experimental subjects were fifth-grade elementary school students. The development of this video media uses the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). The results of the validation test by material experts showed a percentage value of 88% in the very feasible category, media experts gave a percentage value of 100% in the very feasible category, and linguists gave a percentage value of 60% in the feasible category with revisions. The student response based on the questionnaire shows a positive response with a percentage score obtained of 91% in the category of very feasible, student response. The results can be concluded that the development of powtoon-based animated video media on subtheme 3 of humans and objects in their environment is suitable for use and motivates teachers and students in the learning process.

Keywords:

R&D Development,
Animated Video Media,
Powtoon,
People and Things in Their
Environment.

Abstract

Pengembangan media video animasi ini didasari oleh permasalahan yang ditemukan di SD Negeri Singajaya 01 Kabupaten Bogor. Berawal siswa belum mendapatkan media pembelajaran inovatif, masih menggunakan metode konvensional dalam proses pembelajaran sehingga penggunaan teknologi dalam pembelajaran masih sangat kurang. Tujuan penelitian ini mengembangkan media video animasi berbasis *powtoon* pada kelas V subtema 3 manusia dan benda di lingkungannya dan mengetahui kelayakan media video animasi berbasis *powtoon* dengan uji validasi oleh ahli materi, ahli media, dan ahli bahasa, serta respons peserta didik. Subjek yang diujicobakan adalah siswa kelas V sekolah dasar. Pengembangan media video ini menggunakan model ADDIE (*Analysis, Design, Development, Implementation, Evaluation*). Hasil uji validasi oleh ahli materi menunjukkan presentase nilai 88% berada pada kategori sangat layak, ahli media memberikan presentase nilai 100% berada pada kategori sangat layak, dan ahli bahasa memberikan presentase nilai 60% berada pada kategori layak dengan revisi. Sementara itu respons siswa berdasarkan angket menunjukkan respons positif dengan presentase skor yang diperoleh sebesar 91% dengan kategori sangat layak. Dapat disimpulkan bahwa pengembangan media video animasi berbasis *powtoon* pada subtema 3 manusia dan benda di lingkungannya layak digunakan serta memotivasi guru dan siswa dalam proses pembelajaran.

Kata Kunci : Pengembangan R&D, Media Video Animasi, Powtoon, Manusia Dan Benda Di Lingkungannya

INTRODUCTION

Thematic learning in elementary schools requires media development. Learning media is one of the important components in the learning process in order to create interesting, meaningful and fun learning, (Apsari, Y., Lisdawati, I., & Mulyani, E. R., 2020), so that students not only listen to the lecture method in explaining the material delivered by the teacher but can also contribute to learning by exploring knowledge independently through the learning media used. The use of animated video media in learning serves to attract students' attention in learning so that it can provide faster understanding (Ashar & Supriansyah, 2023).

There are times when the use of simple learning media such as books and pictures is not wrong, but there are times when the use of these media is less effective and efficient, or it can be said that it is not in accordance with the characteristics of primary school students. Elementary school students tend to like to play, like to demonstrate something, like to work in groups and like something interesting, funny and new. Because of this, if when learning continues to use learning media such as books and pictures, of course students will feel bored and bored because they think the learning is not interesting. This condition certainly makes students less interested in learning which leads to learning outcomes that are not optimal.

The results of observations and interviews on 25 January 2024, with the fifth grade teacher at Singajaya 01 State Elementary School. Researchers found problems during the learning process where teachers still use conventional methods or lectures when teaching so that students feel bored and learning seems less than optimal. The learning is still very fixated on textbooks, this makes the lack of supporting learning media at school, besides that the use of technology in the learning process is not optimal. Technological utilisation is only used when there are big events or activities such as displaying videos or images on a projector screen, of course this is very unfortunate because the use of technology itself can be integrated during the learning process, a good impact for teachers in making learning media, especially animated video media using powtoon.

The animation video is a media that combines audio and visual media. The use of animated videos can attract the attention of students, able to present information in detail so that difficult learning will be easier to understand. There are a lot of application suites that can be used in making animated video learning media, especially powtoon.

The Powtoon is a web application software based on advanced technology that can be used as a learning tool. Interesting animations such as cartoon animations, handwriting and transition effects. The interesting combination of images, sounds and movements in powtoon will be able to attract the attention of students to learn more actively. This animated video media can be played at any time by students to review the delivery of learning materials that have been passed through computers, laptops or devices, so that students can learn independently. This was supported by previous research conducted by (Akbar Muhammad Rusdi, UNP 2021) with the title 'Development of Powtoon-Based Video Animation Learning Media in Integrated Thematic Learning for Grade V Elementary School'.

METHOD

This research uses the research and development method or Research and Development (R&D), which is research that produces certain products developed and validates their effectiveness in education and learning. According to (Safira et al., 2021), Research and Development is an exploration stage by conducting research. This animation video media development uses the IADDIE approach, this model can be used for a variety of learning strategies, learning models, media and teaching materials. According to (Husain & Ibrahim, 2021), the ADDIE model consists of five stages in the form of the analysis stage, design stage, development stage, implementation stage and evaluation stage. Other opinions conveyed by (Nurhikmah et al., 2023) state that the ADDIE approach is simple and systematically structured, making it easy to learn. Here are the stages of the ADDIE approach in the Figure 1 procedure, below:

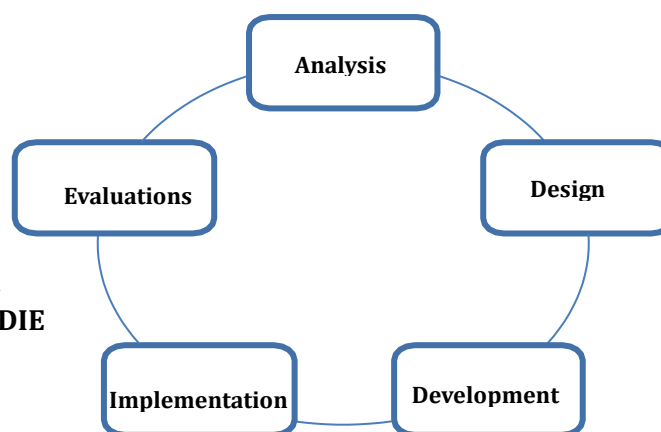


Figure 1: Stages of Model Development Procedure ADDIE

ADDIE development steps according to (Legina & Sari, 2022) as follows:

- a. Analysis of teaching material needs. needs analysis in learning at Singajara 01 Elementary School in Bogor district through observations and interviews with teachers. When conducting observations, there are needs in the use of learning media at the school, especially in class V. Teachers only use printed book learning media that is used by teachers. The teacher only uses printed book learning media used in class, this is deemed insufficient to achieve learning objectives, besides that the teacher has not developed powtoon-based animated video learning media as learning media. These problems that occur in elementary schools are used as the basis for formulating research objectives and products to be developed. According to these problems, solutions are formulated to overcome the problems as well as determine the objectives of this study. The goals formulated are how to develop learning media products that can be more effective and varied and make it easier for students to use such as powtoon-based animated video media in class V subtheme 3 humans and objects in their environment.
- b. The Design Stage. The designs of animated video media are as follows: The opening video contains material coverage in the form of learning material 1 subtheme 3 humans and objects in their environment theme 9 objects around us; The video contains Indonesian language material regarding the explanation of advertising material; further development validates the development product and makes product revisions according to input from the three expert validators in the development of animated videos using powtoon. The explanations of the three experts:

Table 1. Validators of animated video development using powtoon

No	Name of Validator	Validator Expert	Institution
1	Resyi A. Gani, M.Pd.	Material Expert	Universitas Pakuan
2	Dian Kartika Utami, M.Kom.	Media Expert	Universitas Pakuan
3	Siti Chodijah, M.Pd.	Language Expert	Universitas Pakuan

- c. The development stage (Development). This stage is carried out by providing expert evaluation in their fields. The suggestion is given to improve the product developed for further testing of the product design. The trial was conducted to find data on responses, reactions or comments from the products developed. The result of the trial is used to improve the product. At this stage, it is necessary to analyse the needs of teaching materials at Singajara 01 Primary School in Bogor Regency through observations and interviews with teachers.
- d. The implementation stage. These stages are carried out by conducting product trials to obtain feedback on products that have been made or developed. The products that have been revised are tested on 31 students. The instrument was given to provide a response to the animated video using powtoon which became the benchmark for the developed product.
- e. The Evaluation Stage. This stage is carried out simultaneously with the development and implementation stages. The evaluation is carried out at all stages continuously and continuously to produce products, the purpose of this evaluation is to determine the feasibility of teaching materials in learning activities, then the results of the questionnaire are used as input and improvements but if the students' response gives a good response then it can be said that the teaching materials have been developed.

Research Instruments

The development used to collect data on powtoon-based animated video. The following table 2. observation sheet:

Table 2: Development of animation video data

No.	Criteria	Yes	No
1.	Do the students pay attention to the teacher when the teacher explains the material?		
2.	Are the learning media often used?		
3.	Can they help students in learning?		

No.	Criteria	Yes	No
4.	Can the learning media motivate learners?		
5.	Is the development of teaching materials necessary?		

The interview was conducted with one of the fifth grade teachers of SD Singajaya 01 Bogor Regency to explore the information needed in the development of learning media during the initial observation, following table 3 of the interview sheet:

Table 3. The development of learning media data

No.	Answer	Respondent Question
1.	what are the learners' difficulties during the learning process?	
2.	Which factors cause learners' difficulties in learning?	
3.	Is the animated video media used during the learning process?	
4.	Which instructional media is usually used in the learning process?	
5.	Are there difficulties in developing learning media?	
6.	Which learning media is needed at this time?	

Furthermore, researchers used quantitative analysis techniques to analyse validator and respondent data. The quantitative analysis is obtained from the questionnaire collection data, which is in the form of numbers. Arikunto (2012) states that the following formula can be used to determine the percentage:

$$P = \frac{\sum X}{\sum X_1} \times 100\%$$

Description:

P : the percentage of feasibility

$\sum x$: the total number of validator answer scores (real value)

$\sum x_1$: the total score of the highest answer (expected value)

The following interpretation is used to interpret the results of data analysis:

Table 4. Qualifications of Feasibility Level Based on Average Presentation

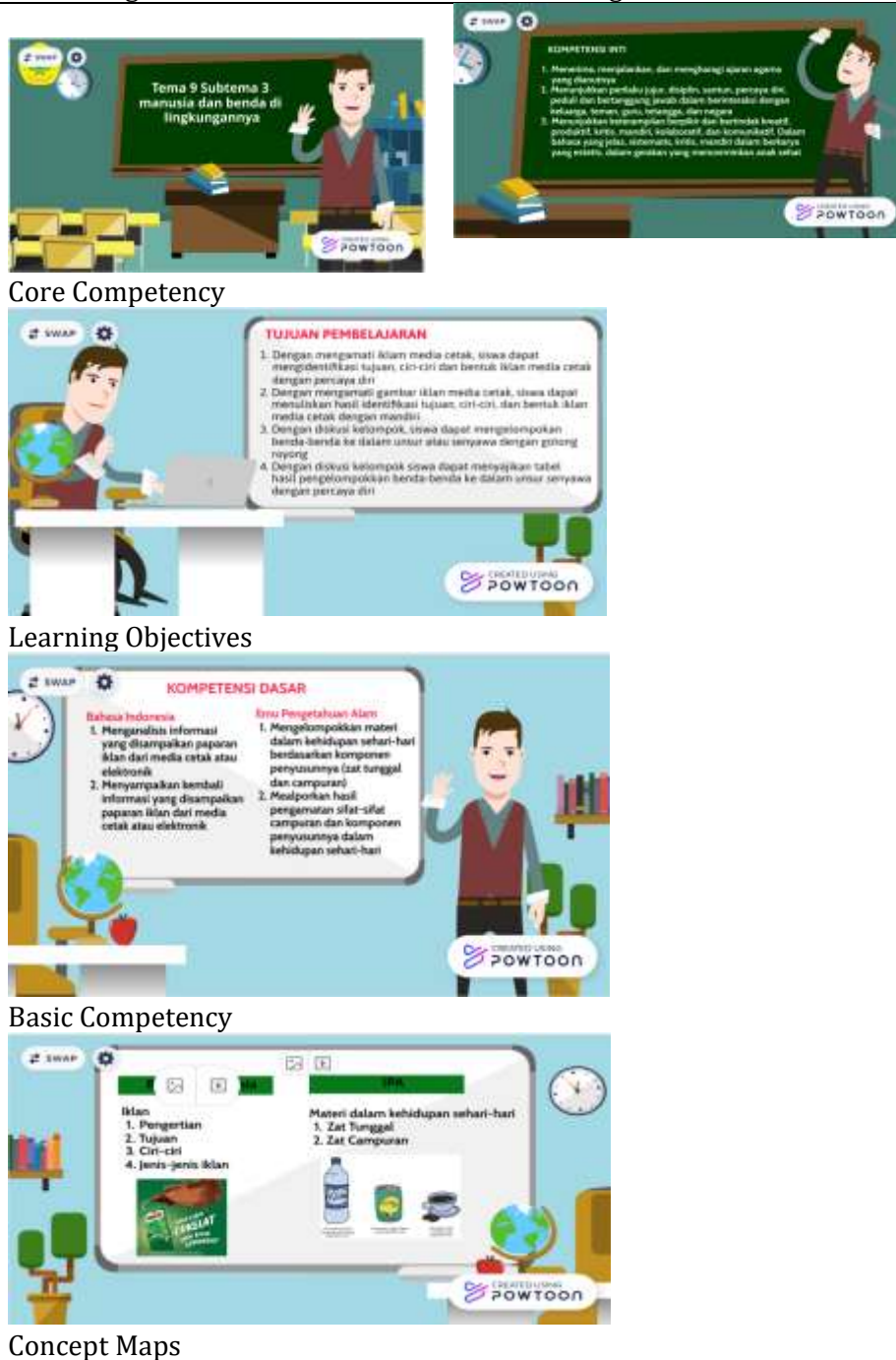
No.	Level of Achievement (100%)	Qualification	Description
1	81% - 100%	Excellent	valid/worthy/no revision
2	80 - 75%	Very Good	valid/feasible, revision as necessar
3	74 - 66%	fair fairly	considerable revision
4	66 - 55%	Less less	/many revisipns
5	54 - 0%	Very les not	valid/total revision

RESULTS AND DISCUSSION

The learning media needs analysis is carried out to identify problems that arise in the learning process, the need for learning media at Singajaya 01 State Elementary School to conduct observations and interviews. At this stage of observation and interviews, it was found that the need for learning media in the school, especially in class V, as well as being accustomed to using printed learning media in the classroom, was deemed insufficient to achieve learning objectives and could also make students quickly become bored in learning, still lacking in utilising Powtoon animated video media technology. The implementation of Curriculum 2013 uses technology-based learning media such as powtoon to make learning more innovative and varied. Limited trials in class V A SD Negeri Singajaya 01 with a total of 31 students. The result of the trial in class V A in learning 1 subtheme 3 humans and objects in their environment on theme 9 objects around us is very feasible to use. The benefits of using this powtoon-based animated video media make students more excited and motivated.

The design stage of the design in video media contains templates, selection of images and animations, and selection of fonts that are tailored to the material of subtheme 3 humans and objects in their environment on theme 9 objects around us, the stages of the design of animated video media using powtoon, as follows:

Table 5. The design of Powtoon Video Animation learning media





Discussion of Materials



Closing



The data obtained from the average value of validity is converted to draw a conclusion about the validity of Powtoon-based animated video media based on ideal conversion guidelines based on the following table.

Table 6. A record of the results of the expert validation questionnaires

Validator	RTV
Media Expert	88%
Material Expert	100%
Language Expert	60%
average total	83%

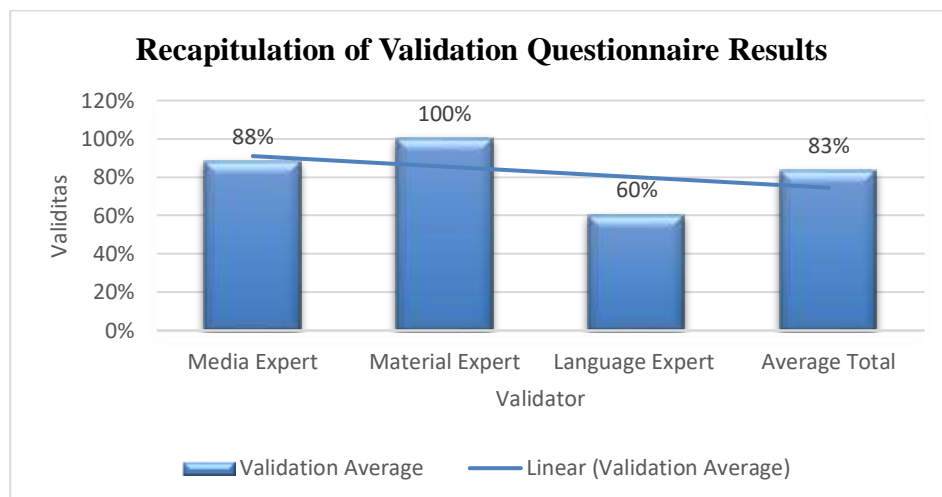


Figure 2. Rectification of validation questionnaire results

The validation from material experts, media experts, and linguists, obtained an average percentage with a total of 83% with the criteria "Very Feasible, No need for Revision" which means that powtoon-based animated video media on human material and objects in the environment in class V is very feasible to be tested in elementary schools.

The implementation stage was a limited trial for 31 students in grade IV at Singajaya 01 State Elementary School to determine students' responses to powtoon-based animated video media on the material of humans and objects in their environment. Implementation was carried out in the classroom starting with learning activities using powtoon animated video media. After the implementation, students filled out a response questionnaire and provided criticism and suggestions for the use of learning media.

The Evaluation stage (Evaluation) The product that has been declared feasible by the expert is then tested on students. The trial was conducted in the fifth grade of SD Negeri Singajaya 01 Bogor Regency. The implementation stage is an assessment activity to find out how students' perceptions after using powtoon-based animated video media through a student response questionnaire. The stages of the trial process were carried out directly at school by previously teaching so that it could be known directly that the use of powtoon-based animated video media could be accepted by students or not. This questionnaire was used to determine the response of students after using powtoon-based animated video media in the learning process on the material of humans and objects in their environment. In the following is a simple quantitative formula for managing data on the results of analyzing students' responses, (Septianingsih et al., 2023).

The recapitulation of learner response data after using powtoon-based animated video media is presented in table 7.

Tabel 7. Recapitulation of Learners' Responses to the Use of Animated Video Mediaasi

Responden	Total Score	Maksimal Score	Persentase	Average
1	45	50	90	91%
2	47	50	94	
3	49	50	98	
4	47	50	94	
5	44	50	88	

Responden	Total Score	Maksimal Score	Persentase	Average
6	43	50	86	
7	45	50	90	
8	40	50	80	
9	44	50	88	
10	44	50	88	
11	44	50	88	
12	35	50	70	
13	46	50	92	
14	45	50	90	
15	48	50	96	
16	45	50	90	
17	49	50	98	
18	48	50	96	
19	47	50	94	
20	46	50	92	
21	46	50	92	
22	43	50	86	
23	42	50	84	
24	47	50	94	
25	47	50	94	
26	48	50	96	
27	48	50	96	
28	48	50	96	
29	49	50	98	
30	45	50	90	
31	46	50	92	
Jumlah	1410	1550	2820	

The responses of 31 students to the powtoon-based animated video media received a very good response. These can be seen from the average percentage given by students, namely with a score of 91%. This is between 80%-100% so that the use of powtoon-based animated video media is declared "very feasible" to be used by students in the learning process, especially the material of humans and objects in their environment.

This development model was chosen because it has simple and systematic steps. According to (Magdalena et al., 2024) the ADDIE model has five steps that are systematically interrelated, where the implementation must be systematic. The ADDIE model according to (Nurhikmah et al., 2023) is simple and systematically structured, making it easy for educators to learn. ADDIE model is oriented towards product development so it is suitable for use in developing powtoon-based animated video media.

Powtoon-based animated video media feasibility the results of the material test validation by material experts are in the very feasible criteria with the results of the feasibility test score of 53 out of a maximum score of 60 with a percentage of 88%, the results of media validation by media experts are in very feasible criteria with the results of obtaining a score of 80 out of 80 maximum scores with a percentage of 100%, the language validation results by linguists are quite feasible by obtaining a score of 44 out of 75 maximum scores with a percentage of 60%, the learner response questionnaire is in a very feasible category with an average score of 91%.

These stages of the learning media development process produce a learning media product that is suitable for use in students with a product assessment by material experts of 88%, media experts of 100%, linguists of 60%.

CONCLUSION

The development of powtoon-based animated video media in class V Subtheme 3 of humans and objects in their environment at Singajaya 01 Elementary School in Bogor Regency using the ADDIE development model can be concluded as follows: powtoon-based animated video media development is very feasible to use in subtheme 3 humans and objects in the environment in class V SD Negeri Singajaya 01 Bogor Regency. This is based on material expert validation of 88% with a very feasible category, media expert validation of 100% with a very feasible category, and linguist validation of 60% with a sufficient category. Using the ADDIE model in developing animated video-based learning media using Powtoon has proven to be effective and in accordance with the needs of learning media development. This Powtoon based animated video media is designed to assist students in understanding the material of humans and objects in their environment with the help of interesting images, animations, and audio-visuals. This media has the advantage of being able to be used anytime and anywhere and also provides opportunities for students to learn independently.

The eligibility of powtoon-based animated video media is very feasible to use in subtheme 3 of humans and objects in the environment of class V SD Negeri Singajaya 01. This is based on the results of validation that has been carried out by material experts, media experts, and linguists. The expert assessment of the material obtained a score of 53 out of 60, with a feasibility percentage of 88% or in the very feasible category. The media expert's assessment showed perfect results with a score of 80 out of 80 or a percentage of 100%, confirming that this media has met the quality standards in visual and technical aspects. Meanwhile, the assessment by linguists resulted in a score of 44 out of 75, with a percentage of 60%, indicating that the language used in this media still needs improvement but is still suitable for use. The learners' response to this media was very positive, with an average score of 91%, indicating that this media was well received and considered useful in learning.

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