

# Adobe Animate-based Learning Media for IPAS Class V Elementary School Tlogosari Kulon 05 Effective and Improve Learning Outcomes

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**Abstract:** IPAS learning carried out at SD Negeri Tlogosari Kulon 05 experienced a decrease in learning outcomes marked by less than optimal KKTP results so that researchers conducted research related to learning media development. This study aims to develop Adobe Animate-based learning media and analyze the feasibility and effectiveness of Adobe Animate-based learning media. This research includes development research (Research and Development) with the ADDIE model. The subjects of this study were fifth grade students of SD Negeri Tlogosari Kulon 05. The results of this study developed learning media with the ADDIE model; Adobe Animate-based learning media are very feasible to implement with a percentage of material expert assessment of 91.6% and media experts 93.75%; and the effectiveness of learning media is tested with the results of the mean difference test by obtaining a sig (2-tailed) value of 0.000 which means that there is a significant difference in the average results of the pretest and posttest so that learning media can improve learning outcomes. It is concluded that Adobe Animate-based media is feasible and effective in learning IPAS in grade V of SD Negeri Tlogosari Kulon 05 which is known from the increase in learning outcomes.

**Keywords:** Learning media; *Adobe Animate*; Learning outcomes

## Introduction

Education has been regulated in the Republic of Indonesia Law No. 20 of 2003 which explains the definition of education, which is an effort that is arranged in order to create teaching and learning activities to be able to optimize their potential in order to have religious spiritual abilities, noble morals, intelligence, personality, self-control, and skills needed by themselves for the state and nation (Simanjuntak et al., 2023). Education as a place to prepare the formation of high-class human resources. In the 1945 Constitution of the Republic of Indonesia Article 31 Paragraph 1, it is explained that education is a right that can be obtained by all Indonesian citizens so that it can be useful for advancing a country (Setiawan et al., 2022). This is in

accordance with the function of national education, namely improving skills, shaping character, and educating the nation's life for a dignified national civilization. Education in schools aims to optimize student skills, both in terms of cognitive, affective, and psychomotor (Agusniati et al., 2024).

Social Studies (IPS) as one of the subjects that must be studied in formal education, both primary and secondary levels. Social studies is an insight that examines events, concepts, facts, and generalizations related to social in the community environment (Pratama Aribowo et al., 2022). According to Abdurrahman Ahmad & Nasobi Niki Suma (2021: 4) he purpose of studying social studies according to Permendiknas No. 22 of 2006, namely students can know the concepts related to environmental and community life; foster awareness and commitment to

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humanitarian social values; have basic skills in logical and critical thinking so as to be able to solve problems in society; and foster communication skills, compete, and work together in a pluralistic society. By studying social studies, students can increase knowledge, values, and skills to become democratic citizens (Suhelayanti, 2023). There are several factors that cause students to have difficulty in understanding social studies material, including social studies lessons are difficult for students to understand because they are abstract; lack of student interest in learning social studies who consider social studies as a memorizing subject; and teacher-centered learning (Purnamawati & Eldi Mulyana, 2022).

Cultural heritage material is one of the subject matter studied in elementary schools within the scope of Social Science subjects to provide knowledge to students about cultural heritage material. Culture is a complex whole such as beliefs, knowledge, morals, arts, customs, laws, and other skills. Culture is passed down from one generation to the next called cultural heritage. Cultural heritage is a national identity or identity whose existence is very important for current and future generations. Therefore, it is necessary to instill in maintaining and preserving cultural heritage starting from elementary school age children (Rizkia Pangestika et al., 2021).

One of the things that needs to be considered in learning activities is the use of learning media. Media means a tool or intermediary to convey information or demonstrate certain material that can help make it easier for students to understand the material (Viyan Surya Aji & Siswanto, 2020). Learning media as a tool to concretize abstract concepts in certain materials. The benefits of media in learning, among others, can increase student motivation to learn; clarify the material that the teacher will convey; the teacher's teaching method is not monotonous or more varied; and support the student-centered learning process (Nur Cholifah & Rahayu, 2021).

The reality in the field proves that the implementation of social studies learning of cultural heritage material has not been in accordance with expectations. Based on initial research conducted by researchers through observation, data collection, and interviews with fifth grade teacher Mrs. Yanti at SD Negeri Tlogosari Kulon 05, information was obtained about teaching and learning activities. The media used in learning has not been maximized. Teachers use media in the form of pictures to explain cultural heritage material. In this case, the learning media used is less varied so that students in understanding the material is not optimal.

Teachers have an important role in providing facilities for the implementation of learning. Teachers must be able to accommodate students' thinking skills to realize meaningful learning (Prasetyo et al., 2022).

Teachers are required to have creativity in developing learning media by utilizing technology in order to facilitate students in learning because in this digital era students are easily bored with conventional learning, so teachers need to create interesting and fun learning so that learning objectives are achieved (Adib, 2022).

Efforts to renew technological results can be supported by the rapid development of science and technology so that it can have an impact in the scope of education (Sri et al., 2023). This can facilitate teaching and learning activities with the support of technology in developing learning media to improve the learning process. The use of technology in learning can increase interest and motivation, teaching and learning activities are more interactive, optimize the quality of learning outcomes, and have a psychological influence on students so that the teaching and learning process will run more effectively (Rahayu et al., 2022).

The utilization of technology in learning can be expressed through interactive media. Nowadays, there are many uses of learning media by utilizing technology, one of which is through applications or tools, such as Microsoft Power Point, Unity, Augmented Reality, Adobe Animate, and many more (Darsal et al., 2024). The application certainly has its own advantages and disadvantages. From various applications, researchers chose the Adobe Animate application as an application in the development of interactive media. Adobe Animate application is an application that provides a variety of features that can support the process of developing interactive media in the form of animation, writing, sound, video, and user interactivity so that it can visualize problems in learning (Audhiha et al., 2022). A program specifically designed by Adobe applications in creating interesting animations and bitmaps in interactive websites so as to visualize a learning problem (Maielfi et al., 2023). The work area of Adobe Animate application is quite complex but easily understood by users (Wibawanto, 2023). Adobe Animate as an application that makes it easier for teachers to develop innovative learning media (Afriani & Fitria, 2021). Adobe Animate software can be published for HTML5 animation, Flash Player format, and Adobe AIR so that it can be applied to the Android system (Novelina Santoso et al., 2022). Adobe Animate software works like the previous software, namely Adobe Flash, meaning that the Adobe Animate application is a developer application from the Adobe Flash application. According to (Wibawanto, 2020) Adobe Animate has a programming language in the form of actionscript 3.0 which can support the development of interactive learning media products

Based on this background, an exploration is needed that aims to develop Adobe Animate-based learning media that has an impact on student learning outcomes,

especially cultural heritage material in IPAS subjects in class V. Therefore, the researcher conducted a study with the title Adobe Animate-based Learning Media in IPAS Class V SD Negeri Tlogosari Kulon 05 Effective and Improve Learning Outcomes.

**Method**

The method used is Research and Development research with the aim of developing Adobe Animate-based learning media for IPAS class V subjects. This type of development research is applied to produce a product and analyze the feasibility and effectiveness of the developed product (Pratama et al., 2023). This research uses a development model in the form of ADDIE which consists of four stages, namely analyze, design, development, implementation, and evaluation.

The subjects in this study were fifth grade students of SD Negeri Tlogosari Kulon 05 with a total of 29 students. Data collection techniques used test techniques in the form of pretests and posttests and non-test techniques in the form of observation, interviews, questionnaires, and documentation.

The data collection instruments were interview guidelines, material expert and media expert sheets, and questionnaires. Interview guidelines were used as a benchmark in interviewing teachers. The validation sheet was prepared to measure the feasibility of the media developed about the design and material in the media product. The response questionnaire is to find out the responses given by teachers and students to the development of learning media.

This research data is quantitative data in the form of data from the assessment of the products developed and qualitative data obtained through the results of interviews with fifth grade teachers and suggestions / input from experts (material and media). Data analysis techniques include product data analysis obtained through media feasibility assessments by media experts and material experts, initial data analysis using the normality test, and final data analysis using the average difference test and average improvement test.

**Result and Discussion**

The stages of product development in this study are based on the ADDIE model, namely analyze, design, development, implementation, and evaluation.

First, Analyze. The first step is to identify problems and analyze the needs of teachers and students. Researchers conducted interviews, observation activities, equipped with documentation in identifying potential and problems. According to the results of interviews with fifth grade teachers and observation

activities at SD Negeri Tlogosari Kulon 05, researchers found problems, including the limited use of social studies learning media. Meanwhile, the results of the needs questionnaire distributed to teachers and students show that teachers utilize monotonous or conventional learning media so that students find it difficult to understand cultural heritage material in social studies subjects. Learning media with an attractive appearance as a new innovation that can support social studies learning especially cultural heritage material. Based on these problems, researchers are interested in developing learning media based on Adobe Animate cultural heritage material social studies subjects.

Second, Design. The next step researchers create a learning media design based on Adobe Animate cultural heritage material. This media is tailored to the needs and characteristics of students. Adobe Animate media contains several menus, such as learning outcomes and learning objectives, materials, videos, maps, developer profiles, and instructions for using the media.

Researchers compiled a flowchart as an illustration in designing learning media. Flowcharts are used to guide the process of developing Adobe Animate-based learning media products in the form of systematic charts (Syabrina, 2020). The following is a flowchart for designing Adobe Animate-based learning media products by researchers.

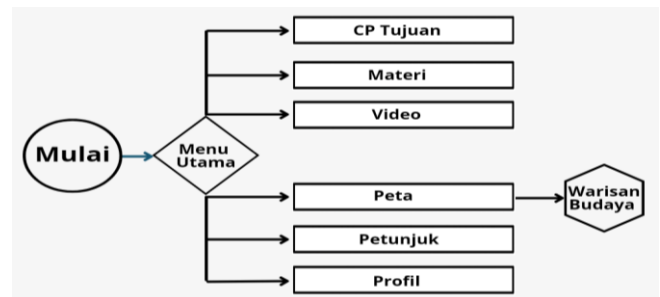


Figure 1. Flowchart

Third, development. In this stage, researchers made Adobe Animate-based learning media for social studies subjects of grade V cultural heritage material. Learning media development refers to the design that has been designed previously so that learning media has a feasibility value.



Figure 2. Home page



The initial page contains the title of the media containing the chapter studied in the learning process, namely Chapter 7 My Pride Region IPAS Grade 5 equipped with a start menu that automatically goes to the main menu.



Figure 3. Main menu

The main menu displays several menus, such as learning outcomes and learning objectives, materials, learning videos, map images, developer profiles, and instructions for using the media.



Figure 4. Learning outcomes menu

The next menu contains learning outcomes and learning objectives that will be discussed in the learning process. The learning objectives contain the goals that must be achieved after utilizing the media.



Figure 5. Material menu

The material menu displays the material to be learned on the learning media.

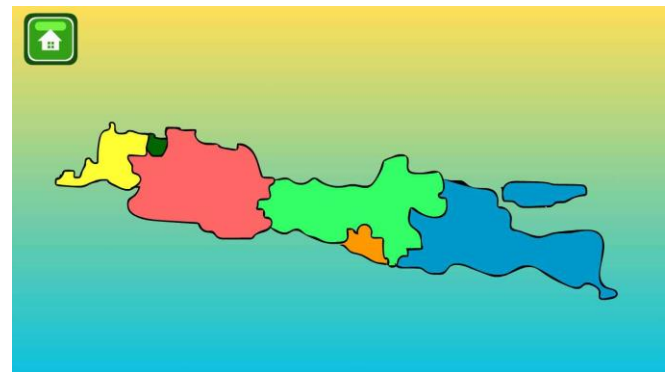


Figure 6. Map menu

This page displays a map image on the island of Java that can be operated so that when a button is pressed on a particular province, material about cultural heritage on the island of Java will appear.



Figure 7. Developer menu

The developer menu presents a glossary, bibliography, as well as the identity and photo of the product developer. The glossary contains vocabulary that is equipped with the meaning of these words. The bibliography contains references that the developer cites including book title, author's name, publisher, year of publication, and city of publication. The developer profile contains personal identity in the form of name and identification number.



Figure 8. Usability instructions

Instructions for use contain menu images that can be selected in operating the learning media. The menu in the instructions for use, namely the homepage or main menu, previous page, previous slide, and next slide.

Learning media that will be used by teachers and students must go through an assessment from experts, namely material experts and media experts to provide feasibility validation of the quality of learning media. The following are the results of the feasibility assessment by media validators and material validators in percentage form.

**Table 1.** Recapitulation of Feasibility Assessment by Experts

Parameters	Material Experts	Media Experts
Score acquisition	55	75
Maximum score	60	80
Percentage	91,6%	93,75%
Criteria	Very feasible	Very feasible

The results of the feasibility assessment from material experts with a percentage of 91.6% include very feasible criteria so that Adobe Animate-based learning media products do not need revision. Suggestions and comments from material experts as a consideration in refining learning media. The material expert gave advice that the material about cultural heritage presented in the form of a summary of the material so that students easily understand the core material studied. The results of the feasibility assessment from media experts with a percentage of 93.75% include very feasible criteria so that Adobe Animate-based learning media products do not need revision. The results of this validation prove that Adobe Animate-based learning media is worth testing to the next stage.

After obtaining an assessment from several experts, the researcher conducted a small-scale test on grade V students as many as 6 students. The small-scale test was carried out by simulation to determine the feasibility of the products developed before being tested in the field. Researchers gave a response questionnaire to students to find out whether the learning media was suitable for testing on a large scale. From the results of the student response questionnaire in the small-scale test, the results were obtained with a percentage of 88.89% which was classified as very feasible.

Fourth, Implementation. In the implementation stage, researchers conducted product tests on a large scale in class V of SD Negeri Tlogosari Kulon 05 with 23 students. The learning media was tested on a small scale which resulted in student responses to the learning media so that researchers understood the shortcomings of the product to be revised. After that, a large-scale test was conducted to determine the effect of using Adobe

Animate-based learning media on the learning outcomes of IPAS subjects on cultural heritage material for 23 students in class V of SD Negeri Tlogosari Kulon 05. The initial step in the large-scale test, namely students working on pretest questions. After working on pretest questions, teachers and students carry out teaching and learning activities using Adobe Animate-based learning media products for two meetings (4 lesson hours). After getting treatment by utilizing Adobe Animate-based learning media, students work on posttest questions.

Fifth, Evaluation. The last stage in development research with the ADDIE model, namely the evaluation stage. This stage aims to evaluate each stage of the development model so that it can minimize the shortcomings of the product and improve the product. Evaluation at each of the four stages of this development model is called formative evaluation which is carried out for revision needs. The evaluation in this study was used to measure the success of the Adobe Animate-based learning media product development objectives of IPAS subject matter of cultural heritage in class V SD Negeri Tlogosari Kulon 05 Semarang City.

The following is an analysis of the feasibility and effectiveness of Adobe Animate-based learning media products developed by researchers.

### 1. Media Development Results

Development of Adobe Animate-based learning media to support the teaching and learning process in grade V social studies subjects. The design of this media product considers the results of the teacher needs questionnaire and the student needs questionnaire including a matter relating to the specifications of Adobe Animate-based learning media. Media development design is designed with several steps, namely first, selecting learning media tailored to the problems that occur, the needs of students and teachers, and the characteristics of the material. Second, compiling media designs through combining media designs into one product. Third, media development by creating designs through the Canva application which are then exported into HTML5. Fourth, conduct product validation by material experts and media experts to determine product feasibility. Fifth, small-scale testing with 6 students in class V. Sixth, after knowing the shortcomings of the developed product, revisions are made based on the results of expert validation and small-scale testing. Adobe Animate-based learning media developed by researchers consists of various menus, namely the home page, main menu, CP and TP menu, material menu, video menu, map menu, developer menu, and usability instructions.

### 2. Feasibility of Learning Media

The feasibility of Adobe Animate-based learning media is seen from the assessment of experts, both material experts and media experts as well as responses from teachers and students because researchers can get suggestions and criticisms in making learning media. Material experts assessed the learning media as very feasible to use in the learning process supported by suggestions and criticisms from material experts with a total score of 55 and a percentage of 91.6%. Meanwhile, media experts assessed learning media products as very feasible to use to support the learning process with a total score of 75 and a percentage of 93.75%.

The feasibility of the product also adjusts the student response questionnaire and teacher response questionnaire after the media is tested in the field. The small-scale test student response questionnaire obtained a score of 80 out of a maximum total score of 90 with a percentage of 88.89% which included very feasible criteria. After the product was tested on a small scale, the next media was also tested on a large scale followed by filling out a response questionnaire. The results of the large-scale test student response questionnaire received a score of 308 out of a total maximum score of 345 with a percentage of 89.28% which is classified as very feasible. Meanwhile, the teacher response questionnaire obtained a score of 57 out of a total score of 60 with a percentage of 95% which included a very feasible category.

### 3. Effectiveness of Learning Media

The effectiveness of Adobe Animate-based learning media is reviewed from the cognitive domain in the form of student learning outcomes. This research was conducted for 2 meetings in the teaching and learning process by utilizing Adobe Animate-based learning media. Students were asked to answer pretest and posttest questions used for cognitive domain learning outcomes.

**Table 2.** Recapitulation of Pretest Posttest Scores

No.	Pretest	Posttest	No.	Pretest	Posttest
1.	72	84	13.	48	76
2.	76	80	14.	44	68
3.	76	80	15.	52	72
4.	64	72	16.	64	76
5.	68	76	17.	40	52
6.	84	92	18.	36	60
7.	72	80	19.	56	76
8.	68	72	20.	72	84
9.	76	88	21.	80	96
10.	64	88	22.	40	64
11.	84	84	23.	52	72
12.	72	80	Mean	63,48	78,43

The pretest results prove that there are 10 students who are complete and 13 students who are not complete. Meanwhile, the posttest results proved that 19 students were complete and 4 students were not complete. The calculation of completeness is adjusted to the KKTP (Criteria for Achievement of Learning Objectives) in IPAS class V SD Negeri Tlogosari Kulon 05. Student scores are considered complete if they reach a minimum score of 70. The Table 2 is data on student pretest and posttest scores.

After knowing the pretest and posttest scores, the researcher calculates the normality test to determine whether the learning outcome data is normally distributed or not. The normality test was analyzed with the help of SPSS 25 using the Shapiro-Wilk formula. The following is a recapitulation of the normality test results for pretest and posttest scores.

**Table 3.** Recapitulation of Normality Test Results

Data	Statistic	df	Sig.
Pretest	.928	23	.098
Posttest	.956	23	.386

From the table above, it is known that the pretest normality test obtained a significance value of 0.098. Meanwhile, the posttest normality test obtained a significance value of 0.386. Data is said to be normally distributed if the significance result is more than 0.05. The normality test results on the pretest showed  $0.098 > 0.05$  so the data was normally distributed. The normality test results on the posttest showed  $0.386 > 0.05$  so the data was normally distributed. Thus, the pretest and posttest data are said to be normally distributed.

After the data is declared normally distributed, then calculate the mean difference test with the t-test formula using SPSS 25. The mean difference test was analyzed to prove the average difference in pretest and posttest scores. The hypotheses in this study are:  
 $H_0$  : There is no difference in learning outcomes before and after the use of Adobe Animate-based learning media on cultural heritage material in class V SD N Tlogoosari Kulon 05.

$H_1$  : There are difference in learning outcomes before and after the use of Adobe Animate-based learning media on cultural heritage material in class V SD N Tlogoosari Kulon 05.

If the significance value is less than 0.05 then  $H_0$  is rejected.

Based on the results of SPSS 25, it is known that the significance result is 0.000 which means less than 0.05 so that  $H_0$  is rejected and  $H_1$  is accepted. Thus, there is a significant difference in learning outcomes before and after the use of Adobe Animate-based learning media on cultural heritage material in class V SD Negeri Tlogosari Kulon 05. The difference in learning outcomes can be



seen through the average pretest and posttest scores produced by students. In the pretest score, the average student score was 63.48 and the average posttest score was 78.43.

Furthermore, researchers analyzed the N-gain test to measure the average increase in pretest and posttest scores after utilizing Adobe Animate-based learning media. The following are the results of the average increase test (N-gain) from the pretest and posttest scores using SPSS 25 calculations.

Tabel 4: N-Gain Test Results

Mean Pretest	Mean Posttest	Difference Average	N-gain Value	Criteria
63.48	78.43	14.95	0.4100	Medium

Based on the table, the average increase in pretest and posttest scores in the large-scale test was 0.4100 which is included in the medium criteria and the average difference from the pretest and posttest scores was 14.95. This shows that Adobe Animate-based learning media products have an impact on student learning outcomes. Learning outcomes are planned, systematic, and continuous data collection stages regarding learning objectives in order to monitor the learning process, learning development, and learning evaluation. Learning outcomes consist of three domains or domains, namely affective, cognitive, and psychomotor (Silvia et al., 2021).

Based on the results of the study, it is concluded that the use of Adobe Animate-based learning media on cultural heritage material for social studies subjects is feasible and effective in the learning process to improve the learning outcomes of fifth grade students of SD Negeri Tlogosari Kulon 05 Semarang City.

**Conclusion**

The conclusions from the research results in the form of Adobe Animate-based learning media development are as: (1) The product design of Adobe Animate-based learning media for IPAS class V subjects was developed in five stages of ADDIE, namely analyze, design, development, implementation, and evaluation; (2) Adobe Animate-based learning media for IPAS class V is proven to be feasible to use in learning, which is known from the assessment given by material experts and media experts. The percentage of assessment by material experts is 91.6% and the percentage of assessment by media experts is 93.75%. The assessment given by the teacher received a percentage of 95% which included very feasible criteria and the assessment given by students received a percentage of 89.28% which included very feasible criteria; (3) Adobe Animate-based learning media is effectively utilized in an effort to

improve student learning outcomes in IPAS class V SD Negeri Tlogosari Kulon 05. The effectiveness of learning media products is reviewed from the calculation of the t test on the pretest and posttest results. On the pretest value, the t-test result was 2.443 with an N-gain score of 0.56678 which included moderate criteria. Meanwhile, the posttest value obtained the result of t count 3.851 with an N-gain score of 0.41003 which included moderate criteria.

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In this study, all authors contributed to completing their tasks in accordance with research procedures. The authors worked together in every stage of the research in order to produce the best scientific work.

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**Conflicts of Interest**

There is no conflict of interest in this writing.

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