



Development of Interactive Video Learning Media Based on Articulate Storyline to Improve Students Critical Thinking Skills in Thematic Learning Grade V Elementary School

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ABSTRACT: The purpose of this study is to find out and analyze the needs of teachers and students in developing interactive video learning media based on articulate storyline to improve students' critical thinking skills in decent grade V elementary school thematic learning. Data collection was obtained through interviews with grade V teachers and field observations. Researchers obtained information based on observations made that the critical thinking skills of grade V students of SDN 3 Bumi Nabung Timur with a percentage of 58.88%. Based on observations made by researchers, obstacles were found in the implementation of teaching and learning, namely the lack of use of learning media that supports learning. The conclusion of the learning media research has met the criteria of being very feasible, used in research. The product has met practical criteria taken from the results of educator and student response questionnaires. The practicality of the product can be seen from the activities of students in using interactive video media based on articulate storyline. The effectiveness of the product taken from comparing the improvement of students' critical thinking skills in both samples, namely the experimental class and the control class. Based on the results of the recapitulation, it is proven that the experimental class gets an effect size value of 1.50 in the large category.

KEYWORDS: Articulate Storyline, Critical Thinking, Interactive Video Learning Media.

INTRODUCTION

Education is the most important thing in life. According to Law No.20/2003, education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential so that they have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation and state. In the world of education, learning is the most important part. Education in Indonesia can never be separated from various problems. This has an impact on basic education which needs improvement, efforts to improve the quality of education at the basic education level need to be carried out in a sustainable and integrated manner.

The learning process requires thinking skills for students. The ability to think is an ability to process mental operations which includes knowledge, perception, and creation of Fauziyah (2020). Critical thinking is rational thinking that requires the ability to evaluate a statement and identify a reason, such as the evidence that underlies the evaluation (Khastini, 2020). (Rubini, et al, 2019) revealed that critical thinking is a 21st-century skill that needs to be trained to students. Practicing critical thinking skills can help students have problem-solving skills. The ability to think critically is important in learning because it is one of the 21st-century skills to deepen knowledge and show understanding through activities (Putra, et al., 2021).

Many factors cause low critical thinking skills of learners. The results of Handayani's research, (2016) stated that students' critical thinking skills are still relatively low, based on an average score of 68 with sufficient category. The results of the researchers stated that 87% of students had difficulty in understanding the material. Difficulties arise because 80.35% of participants do not have learning media, so 83.03% do not understand the material to be learned in class. The problem was discovered by researchers through observations carried out at SDN 3 Bumi Nabung Timur. It is known that the critical thinking ability of students with a percentage of 58.90%. The

application of conventional learning methods or lecture methods, causes students to lack the opportunity to widely convey ideas or ideas, develop experience, and potential.

In line with the results of interviews conducted with educators of SDN 3 Bumi Nabung Timur students tend to be passive in the learning process, so they only receive information from teachers. Monotonous learning techniques, using verbal communication make students feel bored. The application of conventional learning methods or lecture methods, causes students to lack the opportunity to widely convey ideas or ideas, develop experience, and potential. Teachers have limited knowledge in developing interactive multimedia-based learning media as a medium for teachers to deliver topics.

Interactive video learning media needs to be used in learning because the media can interact more broadly (Mustikadkk, 2017). Interactive video is a learning media in which it combines elements of sound, motion, images, text, or graphics that are interactive to connect the learning media with its users. In interactive video, there is interaction or reciprocal relationship between users and the media itself. This is in accordance with the statement conveyed by Yasa, et al., (2017: 201), that a media is said to be interactive if there is involvement between students and the media so that students do not just see or listen to the material in the media.

Based on this background, researchers are interested in developing learning media entitled "Development of Interactive Video Learning Media Based on Articulate Storyline to Improve Critical Thinking Skills in Thematic Learning in Grade V Elementary School". The development of this research is also strengthened by the results of research, including research conducted by Thomas, et al. (2015) on the development of articulate storylines in atomic subjects mentioned that the media successfully influenced student engagement and made its use more accessible, showing the benefits of using interactive learning media in learning.

Yasin & Ducha (2017) stated that articulate storylines have the ability to flash in producing animation. The app also comes with several templates used in creating practice questions and exams. Then Widiyastuti, N., (2018) research the title "Development of Interactive Learning Media Using Adobe Flash Software Earth and Universe Material" shows that interactive learning results developed using interactive video learning media can increase student interest in learning materials and foster critical thinking and interest in learning. The purpose of this study is to design learning media that can empower students' critical thinking skills in elementary school thematic learning.

METHODS

This type of research is a type of research and development research. Development research aimed at developing products, in this study uses the ADDIE development model which consists of five stages (Branch, 2009), namely: (1) Analysis, (2) Design, (3) Development, (4) Implementation, (5) Evaluation. In summary, the steps of the ADDIE development model are outlined as follows:

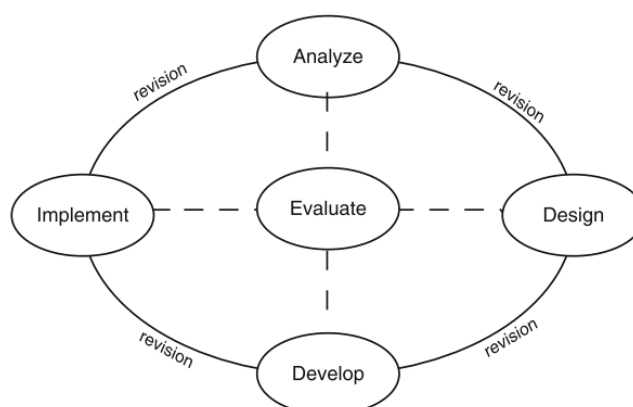


Figure 1. ADDIE (Branch, 2009)

The population in this study was grade V students of SDN 3 Bumi Nabung Timur and the research sample was grade V students as a trial class in using research products, namely video-based learning media articulate storyline to improve critical thinking skills. 3.3 Non-Test Engineering Research Instruments Expert Validation Sheet The expert validation sheet in this study is shown to experts who aim to validate articulate storyline video-based learning media development products. Data obtained through expert validation sheets in the form of quantitative data

Documentation Researchers use documentation techniques to obtain secondary data such as data on the number of students, critical thinking skill scores, and matters related to the learning process, as well as school profiles at SDN 3 Bumi Nabung Timur. It's

not just about collecting photos of learning activities. 7. Product Feasibility Validation The validity of research products is obtained from expert assessment through expert testing/validation. Validity is obtained from the results of content validation and construction of the product that was developed.

RESULTS

The result of this study is an interactive video learning media based on an articulate storyline to improve critical thinking skills in thematic learning in grade V elementary school. This development research refers to the ADDIE development model which consists of five stages (Branch, 2009), namely: (1) Analysis, (2) Design, (3) Development, (4) Implementation, (5) Evaluation. Each stage carried out in research and development can be explained as follows.

1. Analysis

This stage researchers get information based on observations made that the critical thinking skills of grade V students of SDN 3 Bumi Nabung Timur with a percentage of 58.88%. Based on observations made by researchers, obstacles were found in the implementation of teaching and learning, namely the lack of use of learning media that supports learning. Teachers have limited knowledge in developing interactive multimedia-based learning media as a medium for teachers to deliver topics. To strengthen observations, researchers conducted interviews with educators at SDN 3 Bumi Nabung Timur that students were less active and focused. Educators also have not used varied learning media and still run in one direction and lack of use of technology in learning.

2. Design



Figure 2. Start Page



Figure 3. Material Display



Figure 4. Human circulatory organ material



Figure 5. Material on How to Maintain Human Blood Organs



Figure 6. Circulatory material in animals



Figure 7. Presentation of evaluation

3. Development

Learning media validation

Table 1. Expert Validation Results

No	Validators	Value (%)
1	Material expert validation	80 %
2	Media expert validation	83 %
3	Linguist validation	85 %
Average	83 %	
Criterion	Very Worth It	

Based on the table above, it shows that the results of validation by experts who assess the design of articulate storyline-based learning media development to improve students' critical thinking skills have met the criteria with an average score with very feasible criteria.

4. Implementation

This activity is carried out to measure the practicality criteria of the developed product. The trial conducted was a limited trial involving 6 educators, and 6 grade V students with criteria 2 high, 2 medium, and 2 low based on educator information through daily test scores in grade V at SDN 3 Bumi Nabung Timur. The following are the results of the practicality test in the research can be seen in the following table 2.

Table 2. Educator Practicality Test Results

No	Assessment aspect	Presentase	Interpretasi
1	Materi	88 %	Very Practical
2	Serving	89 %	Very Practical
3	Video implementation opportunities	91 %	Very Practical
4	Implementation	90 %	Very Practical
Average		90 %	Very Practical

The conclusion of the practical test results that have been tested through the distribution of questionnaires to 6 grade V educators is information that the average results of educator practicality are 90% with a very practical interpretation.

Table 3. Student Practicality Test Results

No	Assessment aspect	Presentase	Interpretasi
1	Ease	98 %	Very Practical
2	Sustainability	79 %	Very Practical
3	Interest	93 %	Very Practical
Average		90 %	Very Practical

The conclusion of the UI limited to this study is that the product is very practical to use. The conclusion of the UI limited to this study is that the product is very practical to use.

5. Evaluation

A summary of pre-test and post-test data in this study can be seen in the table below.

Table 4. Recapitulation of Test Results

Information	Experiment		Control	
	Pretest	Posttest	Pretest	Posttest
Max Score	43	90	40	55
Max Min	23	70	13	30
(X)	33,24	81,76	29,98	40,19
Stdv	4,89	5,96	7,28	7,20

The table above shows that there is a significant improvement in the experimental class using articulate storyline-based video. The results of the analysis of identifying critical thinking skills that have been analyzed by researchers using Aiken's V formula can be seen in the following table.

Table 5. Results of identifying Critical Thinking Skills

No	Indicator	Control average	Experiment Average
1	<i>Elementary Clarification</i>	40,43 %	79,01 %
2	<i>Basic Support</i>	40,74 %	92,59 %
3	<i>Inference</i>	44,44 %	83,33 %
4	<i>Advanced Clarification</i>	36,11 %	77,78 %
5	<i>Strategies and Tactics</i>	37,96 %	89,81 %
Average		39,96 %	84,53 %



DISCUSSION

This research focuses on developing interactive video learning media based on articulate storyline to improve the critical thinking ability of students using the ADDIE development model consisting of stages (1) Analysis (needs analysis), (2) Design, (3) Development, (4) Implementation, (5) Evaluation. The practicality of articulate storyline-based video products is measured through the implementation of learning implementation plans (RPP) which are interpreted on a Likert scale (very practical, practical, quite practical, less practical, and impractical).

Although this thematic interactive video only takes on one of the learning in grade V elementary school, but it does not reduce the value that ideo interactive thematic based on articulate storyline developed is one of the alternative teaching material innovations that are good and can be used in learning designed and developed. The characteristics in this product are shown that the lessons are specially formulated, the material taught contains a learning language that is easy for students to understand, and gives students the opportunity to learn independently.

CONCLUSION

The conclusion of the research on the development of interactive video learning media based on articulate storyline to improve the critical thinking skills of grade V students produced has been tested for feasibility and has met the criteria of being very feasible. The product has met practical criteria taken from the results of educator and student response questionnaires. The practicality of the product can be seen from the activities of students in using interactive video media based on articulate storyline. The effectiveness of the product taken from comparing the improvement of students' critical thinking skills in both samples, namely the experimental class and the control class. Based on the results of the recapitulation, it is proven that the experimental class gets an effect size value of 1.50 in the large category.

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