Development of Storyboard Media to Improve Storytelling Skills on The Material Plant Breeding in Elementary School

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Development of Storyboard Media to Improve Storytelling Skills on The Material Plant Breeding in Elementary School

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Abstract

The world of education today is developing so fast. Students are required to be able to master skills, one of which is storytelling skills. Students' low skills in storytelling are one of the consequences of implementing online learning so far. The purpose of this study is to regenerate and improve storytelling skills in grade VI students at SDN 21 Muara Telang, especially in Plant Breeding material. This research is a research and development (R&D) research that produces products in the form of learning media in the form of storyboards that are tested for effectiveness to increase students' ability to tell stories. The model used in this study is the ADDIE model, where the stages include: analysis, design, development, implementation and evaluation. The result of this study is the production of a product in the form of storyboard media that is proven to improve storytelling skills in grade VI students at SDN 21 Muara Telang, Banyuasin regency.

Keywords: storyboard, storytelling skills, plant breeding

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INTRODUCTION

Developments in the world of education are increasing rapidly. The government emphasizes that today's learning requires students to have 6c (collaboration, communication, creative thinking, critical thinking, compassion and compulation) skills (Kemdikbud, 2020). Students are required to be able to master various skills to face the times. At the elementary level, students are required to master language skills (communication). Language skills according to (Tarigan, 2013) there are four components including 1) listening skills, 2) speaking skills, 3) reading skills, and 4) writing skills. Children who have verbal-linguistic intelligence tend to have good and effective speech skills (Nau, Ngura, & Meo, 2022). This is in accordance with the opinion (Musfiroh, 2005) which posits that language intelligence is closely related to words, both spoken and written and their rules.

Language skills will greatly affect storytelling skills. A person can be said to be skilled in speaking if the person concerned is good at choosing language sounds in the form of words, sentences, and tones (Mulyati, 2014). A person will have storytelling skills if they regularly practice and practice continuously until the skills are mastered properly (Rohayati, 2018). Unfortunately, storytelling skills in elementary school-aged children have received less attention during this time. Especially since the COVID-19 pandemic which is an international disaster

that has shaken all aspects of life, one of which is the world of education (Akbar, Irwan, Kamarudin, Agussalim, Aswat, & Sanufi, 2021). Since then, meetings between teachers and students have been minimized to prevent the spread of covid-19 (Asha, 2019). The limited face-to-face time between teachers and students also affects the skills that should be obtained in school, including storytelling skills in front of the class.

Based on observations made by researchers in May 2022 at SDN 21 Muara Telang, students still have difficulty in retelling the lessons that have been delivered by the teacher. Therefore, to improve students' skills in storytelling, it is necessary to apply the right learning media, one of which is a serialized image (storyboard). The use of storyboard media is expected to stimulate students' creativity and memory to assemble stories based on the order in which they are in the image (storyboard). In addition, image media (storyboard) can also reduce boredom and attract students' attention to be active when telling stories (Wa Ode & Nurul, 2022).

Storyboard can be interpreted as a serial image made in a sequence and forming the plot of a story (Andreas, 2013). Storyboards are usually made like simple comics or in the form of illustrated stories (Kunto, Diana, Retno, & Syahyani, 2021). Therefore, the purpose of the storyboard is so that the narrative flow of a story becomes clear, and so that the placement of the point of view of each frame will be continuously displaced (Lestari, Agustini, & Sugihartini, 2019).

Previous research that has to do with the use of storyboards is a study conducted by (Rani & Astuti, 2019), entitled The Influence of the Use of Storyboard Learning Media on Student Learning Creativity in Cultural Arts Subjects. In this study, a product was produced in the form of a storyboard that has an influence on student learning creativity, especially in the subject of Cultural Arts in class VII of SMPN 1 Janapria, Lombok Regency. The result of the study was that there was an influence of the use of storyboard learning media on the learning creativity of grade VII students at SMPN 1 Janapria, Lombok Tengan regency in the 2019/2020 academic year so that the research was said to be 'significant'. Then the next similar research is a study conducted by (Idolla & Al-Hafizh, 2013) entitled *Using Multimedia Storyboard in Teaching Writing a Descriptive Text* which was carried out in class VII second semester. The results of this study concluded that multi-media storyboards can increase student motivation in the learning process. The next research related to storyboards is a study conducted by (Nau, Ngura, & Meo, 2022) entitled 'Development of Storyboards to Improve Early Childhood Speaking Skills Class B in PAUD Terpadu Citra Bakti Ngada'. In this study, a product was produced in the form of storyboard learning media that has been tested to improve speech skills in early childhood group B PAUD Terpadu Citra Bakti Ngada. (Musfiroh, 2005).

METHODS

This research is a Research and Development (R&D) conducted to develop products in the form of storyboards. Development research is research

conducted to develop certain products and test the effectiveness of these products (Sugiyono, 2011). In this study, it used the ADDIE model development procedure which stands for: Analyze, Design, Development, Implementation, Evaluation (Nyoman Sugihartini, 2018). In designing instructional systems, the ADDIE model uses a systems approach (Cahyadi, 2019). The ADDIE model provides a framework for responding to the complexity of the learning environment by responding to various contexts and situations, this is what makes the ADDIE process remain the most effective way of product development to date (Branch, 2009). The steps for developing the ADDIE model in this study can be seen in the picture below:

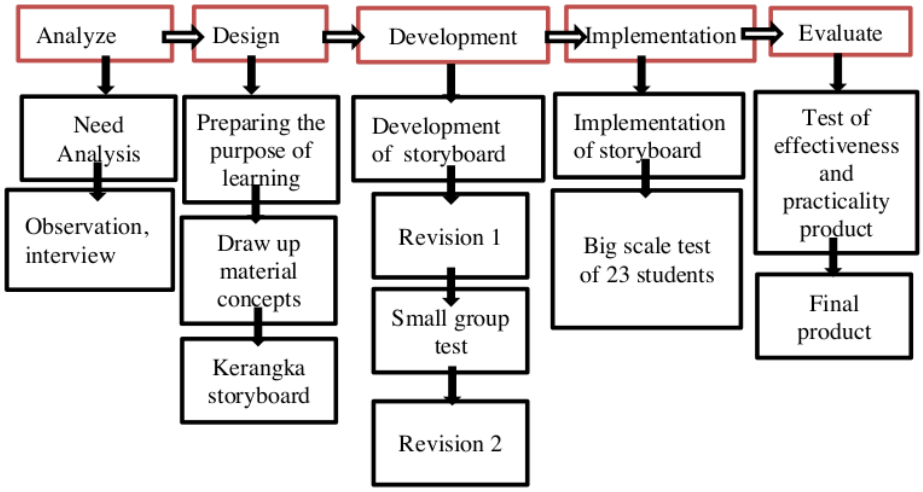

Figure 1. Stages of the ADDIE model used in the research

The stages in this study according to the picture above are explained as follows:

1. Analyze
   At this stage, an analysis of the needs of students is carried out and observations and interviews are carried out regarding students' needs for storyboard media as a medium in learning that can help improve students' skills in storytelling.
2. Design (Design Stage)
   In the design stage, researchers design learning objectives, then conceptualize the material and create a storyboard framework to be developed.
3. Development
   Inthe development stage, researchers began to develop storyboard media which was then validated by three validation experts, namely material experts, linguists and media experts. Furthermore, then the media product was tested to a small group of 8 (eight) students with different criteria and backgrounds.

4. Implementation

After the product is revised at the small group test stage, it is then implemented in a large-scale class as a form of field test or test in the actual class. After obtaining the results of this large group test, the evaluation stage is then carried out.

5. Evaluate

At the evaluation stage, you can see the results of large-scale tests that are poured into the table of field test results. At this evaluation stage, it can be known the validity and practicality of storyboard media to be used as a medium in learning to improve the ability to tell stories to students.

The data collection techniques carried out in this study were observation, interviews and questionnaires. The questionnaires used are linguist questionnaires, material expert questionnaires, media expert questionnaires. The questionnaires use a likert scale based on criteria: not good, good enough, good, and very good. Step by step in this study was carried out so that results were obtained that could be concluded to be feasible or unworthy of the developed storyboard media.

RESULTS & DISCUSSION

This research was conducted at State Elementary School 21 Muara Telang, Banyuasin Regency. The media developed in this study is in the form of a storyboard that contains material explanations about plant breeding. Storyboards are developed through stages that must be passed before they become a medium that is suitable for use. Researchers use an ADDIE development model that has been adapted to the study. The ADDIE development model is based on an effective and efficient system approach as well as an interactive process between students, teachers and the environment (Fitri & Muhammad, 2021). The stages of the ADDIE model implemented in this study are as follows:

Analysis

The main activity in this stage is to analyze students' needs for learning media. From the needs analysis, it was found that 86.96% of grade 6 students at SDN 21 Muara Telang needed learning media in the form of storyboards to stimulate storytelling skills. Then from the results of the analysis of student characteristics, it is known that 78.26% of grade VI students at SDN 21 Muara Telang have a visual learning style, namely learning using pictures. The learning objectives analyzed are on Core Competencies (KI) 3 aspects of knowledge and Core Competencies (KI) 4 aspects of skills, namely: students can understand how the process of plant breeding and can retell in front of the class about the process of breeding plants according to the sequence of images on the storyboard.

Table 1. Student Needs Analysis Interview Questionnaire

No	Statement	Score			
		1	2	3	4
1	The appearance of this storyboard appeals to students				
2	The material presented in the storyboard is easy to understand				
3	Sentences in the storyboard are clear and easy to read				

4	This storyboard medium helps during learning
5	Compatibility of examples with learning materials
6	I need this storyboard medium in learning

Table 2. Student Needs Analysis Questionnaire Filling Score Guidelines

Score	Valuation
4	In dire need
3	Need
2	Less need
1	Does not require

Quantitative data on the needs analysis questionnaire is then calculated using an average calculation *(x)* against the total score obtained.

Table 3. Percentage of Student Needs Analysis Results

Range	Frequency (F)	Relative	Category
18-24	14	60,87%	In dire need
10-17	6	26,09%	Need
5-9	3	13,04%	Less need
<5	0	0%	Does not require
	23		

From the table above, it can be seen that students' needs for storyboard media are quite high, namely 60.87% of the category is in urgent need, and 26.09% of the category is in need. So it can be concluded that more than 80% of students need storyboard media in learning.

Table 4. Benchmarks for Learning Styles of Students

Category	The number of students
Tall	14-20
Keep	7-13
Low	< 7

Table 5. Student Learning Characteristics Analysis Questionnaire

No	Statement	Answer	
		Yes	No
1	I easily understand the coats of arms or symbols		
2	I prefer to see pictures and paintings		
3	I love learning while listening to music		
4	I love writing stories		
5	I'd rather send a message than call		
6	I love watching youtube videos		
7	I love watching movies		

From the results of obtaining student answers obtained through the questionnaire shared, data was obtained regarding the analysis of student learning styles as follows.

Table 6. Analysis of Student Characteristics

Learning Styles	Number of students (F)	Relative	Category
Visual	18	78,26 %	Tall
Auditorial	4	17,39%	Low
Kinesthetic	1	4,34 %	Low
	23		

From the table above, it can be seen that students with a visual learning style are very deep in the classroom, namely 18 students out of 23 students, or 78.26% of students in the classroom have a visual learning style. Therefore, the development of storyboard media is considered appropriate in this study.

Design

Some stages in planning storyboard learning media include: formulating learning objectives, compiling material concepts about plant breeding, and determining the application to be used to create storyboards. The application chosen by the researcher to create this storyboard is kinemaster. The reason why the author uses this application is because the author is used to using it for various learning media in the form of story slides and learning videos. Then another reason is that the kinemaster application is an easy-to-use application with fairly complete features so that it is quite supportive for the creation of storyboard media made in this study.

Table 7. Basic Competencies of Science Subjects Grade 6 Material Plant Breeding

Basic Competencies	**Basic Competencies**
3.1 Comparing the ways of breeding plants and animals	4.1 Presenting works on plant breeding

From these basic competencies, the following learning objectives are made:
- After observing the storyboard media, students are expected to be able to understand the breeding of plants according to those on the storyboard.
- After observing the storyboard media, students are expected to be able to retell the material for breeding plants in front of the class.

After analyzing the learning objectives, the next step is to compile a material concept on plant breeding. The material that the storyboard will create is about vegetative and generative breeding in plants.

Table 8. The Concept of Plant Breeding Material

Plant Breeding	Generative	By pollen origin	Self-pollination, neighbor pollination, cross-pollination, bastar pollination
		Based on the intermediary	Anemogami, hydrogamy, zoidiogamy, anthropogamy
	Vegetative	Natural vegetative	Shoots, spores, adventitious shoots, lapis tubers, stem

			tubers, root tubers, dwelling roots, geragih (stolons)
	Artificial vegetative		Grafts Grafting Copulation
		Cuttings	Stem cuttings, roots, leaves

Table 9. Storyboard Outline

Opening Slide	Material slides	Closing slide	Practice question slides
2 slides	28 slides	1 slide	2 slides

Development

At the development stage, researchers make learning media in the form of storyboards in accordance with previously made plans (Andi & Rismayanti, 2021). Storyboard is a visual description and explanation of each plot in a flowchart (Youllia & Senyelda, 2011). In the ADDIE model, the development stage contains the realization activities of the product design, in this case it is a storyboard design that will be created with the kinemaster application. Steps in product development include: 1) storyboard development, 2) expert validation, and 3) small-scale testing. Product validation from three experts, namely material experts, linguists and media experts has been carried out and produced the following data:

Table 10. Material Expert Validation Results

Before Revision	After Revision
	
material furnished and illustrative drawings made actual	

Table 11. Linguist Validation Results

Before Revision	After Revision
	
on the word 'breed' the letter 'k' is not double note spelling according to UEBI, fix preposition	

Table 12. Media Expert Validation Results

Before Revision	After Revision
	
Improve more attractive looks and animations that can arouse students' enthusiasm for learning	

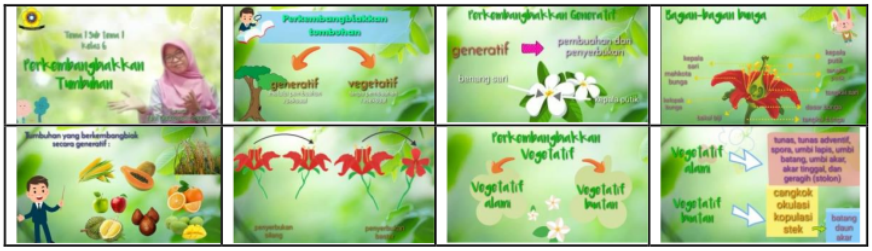

Figure 2. Some Storyboard Views After 3 Expert Revisions

The next step at the development stage is the small-scale test stage. This stage is carried out on 8 students with different levels of ability and background. This small group test stage is carried out by distributing questionnaires to be filled by students. The assessment of this questionnaire is measured using a likert scale with a range of scores: 5 (very practical), 4 (practical), 3 (quite practical), 2 (less practical) and 1 (impractical).

The questionnaire instruments distributed to students during the small group test can be seen in the table below.

Table 13. Small Group Test Questionnaire Instrument

No	Indicators	Alternative Options				
		SP	P	CP	KP	TP
1	Clarity of text and sentences in storyboards					
2	Clarity of images and illustrations					
3	Attractive appearance and does not saturate students					
4	This storyboard media attracts students' interest in learning					
5	The material presented is easy to understand					
6	Complete and sequential presentation of the material					
7	Sentences contained in the material are easy to understand					
8	Image clarity to give examples					
9	Suitability of colors and appearance with learning materials					
10	Compatibility of examples with learning					

	materials
11	This learning medium helps you during learning
12	Interest in learning to use storyboard media
13	Increased storytelling after using storyboard media

The assessment scale used in the small group test stage can be seen in the table below.

Table 14. Grading Scale

Score Range	Category
5	Very practical
4	Practical
3	Quite practical
2	Less practical
1	Impractical

Table 15. Score Categories

Average	Category
81%-100%	Very practical
61%-80%	Practical
41%-60%	Quite practical
21%-40%	Less practical
0%-20%	Impractical

The results obtained at the small group test stage can be seen in this table.

Table 16. Results At the Small Group Test Stage

No	Student name	Number of scores	Average score	percentage (%)	Information
1	AME	33	4,71	94,28	very practical
2	MAY	32	4,57	91,43	very practical
3	AND	30	4,28	85,71	very practical
4	FEB	30	4,28	85,71	very practical
5	MAN	30	4,28	85,71	very practical
6	ENG	28	4,00	80,00	practical
7	RES	29	4,14	82,86	very practical
8	RIA	31	4,42	88,57	very practical
	average			86,78	very practical

Implementation

The implementation stage is the stage of implementing the product in a real class. In this case, it is in class VI of SDN 21 Muara Telang in August 2022. At this stage, try to answer according to research from (Aries, 2017) which states that in essence, the use of media in this case is storyboards capable of causing students' interest in telling stories. The purpose of implementing this storyboard media is to improve storytelling skills in grade VI students at SDN 21 Muara

Telang. During implementation, the storyboard media that has been developed is applied to the actual conditions.

To measure the level of storytelling skills in students, researchers used skill quality criteria which can be seen in the table below.

Table 17. Scoring Guidelines for assessments

No	Assessment Aspects	Maximum Score
1	Story order	20
2	Sound volume	20
3	Pronunciation	20
4	Intonation	20
5	Gestures	20
	Max Number of Scores	100

To determine the results of the assessment, researchers determined the quality of students' storytelling skills using storyboard media based on the criteria determined by Nurgiyantoro (1998) as in the following table.

Table 18. Quality Criteria for Storytelling Skills

No	Value interval	Information
1	85-100	Highly skilled
2	75-84	Skilled
3	60-74	Quite skilled
4	40-59	Lack of skill
5	0-39	Unskilled

After being applied in learning activities, a preliminary evaluation is then carried out to get feedback on the next development application (Cahyadi, 2019). The implementation in this study has the main objectives including: 1) guiding students in achieving learning goals, 2) arousing student interest after seeing the material on the storyboard, 3) stimulating students to be able to tell the process of breeding plants according to the images on the storyboard.

Figure 3. Media Storyboard Implementation Phase

After the implementation stage, it can be seen that students' ability to tell stories in front of the class has increased quite significantly. At this stage, students are required to be able to tell stories according to the images they see on storyboard media (Rahmah, 2016). After almost all students are able to tell about the process of breeding plants like those on the storyboard in sequence. In addition, students' self-confidence has also increased, because almost all students can tell stories freely in front of the class without being nervous and afraid.

Table 19. Product Implementation Results to improve storytelling skills

Number of Scores	Number of students (F)	Percentage	Category Storytelling Ability
85-100	14	60,87%	Highly skilled
75-84	5	21,74%	Skilled
60-74	2	8,70%	Quite skilled
40-59	1	4,34%	Lack of skill
0-39	1	4,34%	Unskilled
	23		

From the table above, it can be seen that the skills of class VI students in storytelling are very good, as many as 14 students or 60.87%, students are very skilled in telling stories about plant breeding materials in front of the class, then as many as 5 students or 21.74% of students are included in the category of skilled in telling stories in front of the class. Meanwhile, for students who are not skilled in telling stories using storyboard media, there are 1 person or 4.34%, and students who are not skilled in telling stories there is also 1 person or 4.34%.

Evaluation

Evaluation is the final step of addie model development design. Evaluation is a process carried out to provide value to the application of storyboard media in improving storytelling skills in plant breeding materials for grade VI students at SDN 21 Muara Telang. This agrees with research done by (Rani & Astuti, 2019) that produced a storyboard medium that had an impact on creativity studying students especially on cultural arts subjects in class VII. Additionally, similar research results from studies conducted by (Nau, Ngura, & Meo, 2022) that produced a storyboard product to improve speaking skills for the students. Implementation of it on a large scale will follow up with an evaluation of implementation against the media storyboard. The results of the evaluation are used to provide feedback on the development of the storyboard that has been created.

Table 20. Storyboard Media Evaluation Results

Number of Scores	Frequency (F)	Relative	Category
31-40	12	52,17%	Excellent
21-30	8	34,78%	Good
11-20	3	13,04%	Good enough
≤10	0	0%	Not good enough
	23		

From the table above, it can be seen that the assessment of the storyboard media that has been implemented for students can be said to be good, because almost all students give a fairly good assessment of the media.

CONCLUSION

The use of learning media in the form of storyboards has proven to be able to improve the skills of grade VI students at SDN 21 Muara Telang in telling

stories. The results of the implementation showed that more than 70% of students were able to tell stories about the process of breeding plants with confidence in front of the class. Thus, this research can be said to be successful in developing learning media products in the form of storyboards that are used to improve storytelling skills in students. From the results of this study, it is hoped that it can be a reference in future research for other researchers to develop storyboard products as a medium in improving students' skills in storytelling.

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