DEVELOPMENT OF VIDEO ANIMATION-BASED LEARNING MEDIA TO IMPROVE ELEMENTARY SCHOOL STUDENTS' LISTENING SKILLS

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Abstract— The objective of this research is to develop animation-based video media suitable for delivering reading materials of three text types (simple procedures, explanations, and objective descriptions) to fifth-grade elementary school students. This research utilizes a Research and Development design, commonly known as developmental research. Due to the ongoing Covid-19 pandemic, readability testing is conducted with 5 fifth- grade students from UPT SD Negeri Talun 05 and 5 elementary school teachers. Data collection techniques include surveys and documentation. Both quantitative and qualitative descriptive analyses are employed for data analysis in this research. The expert assessment of the content yields a 91% rating, categorized as highly feasible. The media expert evaluation results in a 90% rating, indicating the media is highly feasible. The language expert assessment produces an 88% matching category percentage. Students exhibit excellent performance in readability experiments, scoring 90% in the very good category, and they demonstrate a strong preference for animation-based video content. Teachers score remarkably high at 94% in readability testing. Consequently, teachers can consider animation-based media as a reference for Indonesian language learning that covers materials with three text types studied by fifth-grade elementary school classes: simple procedural text, explanation, and objective description.

Keywords— *Animation-Based Video Media, Listening*

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I. INTRODUCTION

Education plays a highly significant role in human life because through the educational process, an individual can develop positive thinking patterns and produce individuals with good quality. The importance of the role of education lies in determining the excellence of a nation; the progress of a country is influenced by success in the field of education, while educational failure can lead to national failure as a whole. Education is structured as a means to guide the growth of learners and should focus on clear goals, namely desired achievements. Establishing educational goals is one of the essential elements in educational planning, so it must be identified first before developing other educational components [1]. Education aims to provide intelligence to the younger generation through the teaching and learning process in the school environment.

Learning is a process in which living beings develop knowledge, skills, or subject matter through various sources, including educators and other resources. To achieve a good understanding in learning, elements supporting learning success are necessary. The learning process is an activity aimed at helping learners to effectively acquire knowledge. The focus of learning objectives is to achieve the desired outcomes through the learning steps undertaken by students. Learning is considered optimal when it can stimulate the overall creativity of learners, encourage active student involvement, achieve learning goals effectively, and take place in a pleasant environment [2].

In learning, language skills are required. Language proficiency is the ability to convey the feelings, facts, perspectives, and emotions of an individual, contributing to the attainment of effective communication. To support the social development of children into good individuals, it is essential for them to have an understanding and involvement in the mechanisms of communication, both for the present and the future. It is desirable for children to acquire appropriate language skills. In the context of the Indonesian language, mastery of four aspects is required: writing, reading, listening, and speaking [3].

One of the many important skills that should be taught to students at the Elementary School (SD) level is language proficiency. The goal of the Indonesian language lessons at the Elementary School level is to be beneficial in developing a child's ability to interact efficiently and effectively using both written and spoken language. Language proficiency is crucial for effective and efficient communication. One of these skills is listening, especially as terms such as hearing, listening, and comprehension are frequently used in the oral language education systen. Listening can be explained as a process. As a process, the

listening activity begins by hearing language sounds, either directly or indirectly [4]. The language sounds heard by the ears are then identified by their types and grouped into syllables, words, phrases, clauses, sentences, and discourses. Listeners also need to pay attention to pauses and intonation. After that, the received language sounds are interpreted. The meaning is interpreted and its accuracy is assessed so that it can be determined whether the information can be accepted or not.

To train and develop students' listening skills, appropriate and adequate learning media are needed for listening activities. Utilizing audiovisual media is one of the strategies. Audiovisual media includes both audio and visual components. This type of media is more effective as it combines auditory (hearing) and visual (sight) media. Because audiovisual media can encourage active student participation by relying on the sense of hearing, it can boost students' enthusiasm for learning and help them concentrate on the presented material. Students' listening skills will become broader and more relevant when using audiovisual learning materials [5].

According to observations conducted in four elementary schools in Blitar regency, none of them utilize technology-based media. In the learning process, only audio from YouTube applications is used. As a result, some students understand the teacher's delivery, while others find the teaching method boring. Students find it easier to understand lessons when using animation-based or video-based media that support the existing facilities. Based on observations, students enjoy learning more when using methods that involve videos and other motion animations. This allows teachers to use engaging and easily understandable media.

Based on the above data, there is a need for the development of learning media to improve students' learning achievements more efficiently. This aims to increase students' interest in understanding. Video is one of the efficient tools in assisting the learning and teaching process [6]. Information-rich videos can be easily understood by students and accepted directly. In this study, the utilization of animation video technology for media development is carried out through the creation of animated story videos using a computer system. Video is considered a tool or medium with the ability to display simulations of real objects. As a digital medium, videos present sequences of moving images that can create illusions or fantasies [7].

One of the same previous studies developed Animation Video [8], entitled Development of Fairy Tale Animation Video Learning Media for Learning to Listen to

Stories in Class III at SDN Sukabumi VI Probolinggo. In this research, the ADDIE (Analysis, Design, Development, Implementation, Evaluation) research model was used. This research model embodies a systematic learning design model. This research is only limited to the development stage, namely media validation and media assessment from class teachers. Previous research and this research both developed animated videos, but the difference between the two is that previous research focused on listening to fairy tales. Meanwhile, the research currently being conducted focuses on listening material for three types of texts, namely simple procedural texts, explanatory texts, and objective descriptive texts [9].

Based on the recorded results, this research will produce the development of instructional media in the form of animated videos emphasizing more graphic animations, text, and direct explanations by the researcher through personal audio recordings. The title of this development is "Development of Animated Video-Based Learning Media to Improve Listening Skills in Elementary School." This research is crucial to meet the need for instructional media that aligns with technological advancements, aids in teacher competency development, and facilitates material presentation to students. Consequently, it is expected that students can easily understand the material.

II. METHODS

The method applied in this research is the research and development method, also known as Research and Development (R&D). Research and Development is a research method used to create specific products and test their effectiveness [10]. This research aims to develop a product that can be applied in the context of learning. The information search activities to meet user needs are referred to as the Research stage, while the activities to create Powtoon- based animated film products are referred to as the Development stage.

In the research and data collection phase, the researcher interacts with third-grade elementary school teachers through interviews, observations of teaching activities, and the distribution of questionnaires to evaluate the teachers' needs. Interviews with teachers are conducted to find information about the obstacles or difficulties faced by elementary school students in the listening learning process.

The collected data will be analyzed using qualitative and quantitative data analysis techniques. Qualitative data comes from expert validation results, including comments, suggestions, and feedback related to the suitability of media design, language accuracy, and the appropriateness of developed learning materials. Meanwhile, quantitative data is obtained

through the calculation of assessment scores for each indicator evaluated by media, language, and material experts. These scores will then be compared with ideal scores to evaluate the feasibility of the produced instructional media. The instrument used in the product validation is a questionnaire, which is designed to assess various aspects of instructional media products. The following is an overview of the questionnaire used by the researcher. This survey is designed to evaluate several features of animated video-based media products examined and evaluated by media professionals.

Table 1. Criteria for validation of animated video-based media

No	Assessed Aspect	Indicator
1.	appearance	Clarity in attachments
		Selection of font type and text size
		Selection of appropriate background images
		Selection of character images
		Color composition
		Audio suitability
2.	content	Software use
		Media size
3.	Technical usage	Clarity in usage instructions
		Suitability in button layout
		Ease of use
		Suitability between object visuals and layout placement

Table 2. Validation criterion for learning sheet

No	Assessed Aspect	Indicators
1.	Content	Suitability of content with the researcher's goals
		Relevance to learning objectives
		Completeness of material
		Suitability of material accuracy level
		Suitability of concepts used
2.	Material arrangement	Systematic presentation of material
		Suitability of material difficulty level with student development

Table 3. Validation Criteria for language sheet

No	Assessed Aspect	Indicators
1.	Language Usage	Language used is easily understood by students
		Language must be communicative
		Language must adhere to the rules of Indonesian language
		Language must be suitable for the student's developmental level

The data used by the researcher employed data analysis techniques with a Likert rating scale, utilizing a scoring table ranging from 1 to 5. The following is the weight assignment for the validation questionnaire.

Table 4. Validation questionnaire percentage

Score	Criteria
5	Strongly Agree
4	Agree
3	Somewhat Agree
2	Disagree
1	Strongly Disagree

After the questionnaire is filled out, the following formula is used to measure and process the

$$P = \frac{\Sigma x}{\Sigma xt} \times 100\%$$

values from the questionnaire:

Figure 1. The Likert Score Measurement Formula

Explanation:

P = Level of Feasibility

Σx = Total selected scores

Σxt = Overall total scores

The conversion scale of achievement levels found in the following Table 5 is used to give meaning and make decisions regarding the validity of the developed product.

Table 5. Validation questionnaire percentage

Achievement Level	Validity Level	Description
90%-100%	Very good	No need for revision
75%-89%	Good	No need for Revision
65%-74%	Fairly good	Revision
55%-64%	Less good	Revision
0%-54%	Not good	Revision

III. RESULT AND DISCUSSION

The Result

Initial observations conducted in four elementary schools, namely SD Negeri Talun 05, SD Negeri Bangle 02, SD Negeri Tumpang 02, and SD Negeri Gedog 01, revealed a minimal

utilization of technology-based media despite the availability of supporting resources such as projectors that can be used by teachers to enhance learning. Based on teacher interviews, YouTube videos are used as a learning media source in the classroom. The teaching method employed by teachers is a lecture method that reviews material from YouTube videos.

In this research, the researcher selected expert material validators for this product, namely Mr. Sabitul Kirom, M.Pd. as validator 1, who is a lecturer at FKIP Universitas Islam Balitar, Ms. Desy Anindia Rosyida, M.Pd.I as validator 2, who is a lecturer at FTI Universitas Islam Balitar, and Ms.Setyawati Sriana, S.Pd. as validator 3, who is a teacher with 5 years of teaching experience. The researcher selected these validators because the material validation questionnaire had to be filled out to complete the validation process. It can be seen in Table 6 that the validator evaluation is: Table 6. Expert material validation results

Question Number	Validator1	Validator2	Validator 3	Average
1	5	4	4	13
2	4	5	4	13
3	5	4	5	14
4	5	5	5	15
5	4	5	5	14
6	4	5	4	13
7	5	4	5	14
Total				96
Criteria Score				105
Percentage				91.42

According to the data provided in Table 1, from the total score criteria of 105 points, the assessment result from the expert material validator is 96, resulting in a percentage score of 91.42% out of a possible 100%. The 91.42% score, falling between 90% and 100%, is considered sufficiently feasible for use. To ensure the content of this media aligns with children's needs, the highest score is given to message and information comprehension as well as the use of simple language.

In the media validation stage, the researcher selected validators for this product: Ms. Ida Putri Rarasati, S.Si, M.Pd as validator 1, who is a lecturer at FKIP Universitas Islam Balitar, Ms. Yefi Dyan Nofa Harumike, S.I.Kom., MA as validator 2, who is a lecturer at FISIP Universitas Islam Balitar, and Ms. Elok Sriwati, S.Pd, an experienced teacher with 10 years of teaching experience. The validators are competent in assessing media. The validation process is conducted by filling out the media validation questionnaire. In this validation, the assessment by validators is as follows in Table 7:

Table 7. Expert media validation results

Question Number	Validator1	Validator2	Validator 3	Average
1	3	4	5	12
2	4	4	5	13
3	5	5	5	15
4	4	5	5	14
5	4	4	5	13
6	4	5	5	14
7	4	4	5	14
8	4	5	5	14
9	5	5	5	15
10	5	4	5	14
Total				138
Criteria Score				153
Percentage				90,17%

Considering the assessment from the expert media validator, with a total of 138 out of 153 score criteria, according to the information in Table 1, it yields a percentage score of 90.19% out of the maximum percentage score of 100%. The 90.19% score falls between 90% and 100%, meeting many criteria for highly suitable usage.

In this study, the researcher selected language experts as validators for this product: Mr. Sabitul Kirom, M.Pd as validator 1, Ms. Desy Anindia Rosyida, M.Pd.I as validator 2, who is a lecturer at Universitas Islam Balitar, and Ms. Diana Mudianti, S.Pd as validator 3,

who is a 2nd-grade teacher with 16 years of teaching experience. The assessment can be seen in Table 8:

Table 8. Expert linguistic validation results

Question Number	Validator1	Validator2	Validator 3	Average
1	4	4	5	13
2	4	4	4	12
3	5	5	5	15
4	5	4	4	13
5	4	4	4	12
6	5	5	5	15
Total				80
Criteria Score				90
Percentage				88.88%

The language expert validator's assessment result is 80 out of a possible 90, with a percentage score of 88.88% out of a possible 100%. This score falls within the range of 75% to 89% and meets the criteria for being deemed suitable for use.

The Readability Test Analysis conducted with 5 students from SDN Talun 05, all from the 5th grade. Additionally, 5 teachers from SDN Talun 05 were also involved in this readability test. The purpose of this trial is to determine the readability of the developed animated video-based media. Tables 9 and 10 contain information about the readability findings for both students and teachers:

Table 9. Teacher Readability Questionnaire Results

Question Number	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Total
1	5	5	5	4	5	24
2	5	4	5	5	4	23
3	4	5	4	5	4	22
4	5	5	5	5	5	25
5	5	5	5	5	5	25
6	5	5	5	5	5	25
7	4	5	4	5	5	23
8	5	5	5	4	4	23
9	5	5	5	5	5	25
10	5	5	5	5	5	25
11	5	4	5	5	5	24
12	5	4	5	4	5	23
13	4	4	4	5	5	22
14	4	5	4	5	4	22
15	5	5	4	5	5	24
Total						355
Maximum Score						375
Percentage						94,6%

Based on the readability questionnaire, teachers gave a score of 355 out of a possible 375, which means a percentage score of 94.6% out of a possible 100%. Therefore, the score of 94.6% falls within the range of 90% to 100% and meets the requirements of teachers and criteria for highly suitable use. Then, table 10 shows the results of the student readability questionnaire.

Table 10. Student Readability Questionnaire Results

Question Number	Student 1	Student 2	Teacher 3	Teacher 4	Teacher 5	Total
1	1	1	1	1	1	5
2	0	0	1	0	1	2
3	0	0	1	1	1	3
4	1	1	1	1	1	5
5	1	1	1	1	0	4
6	1	1	1	1	1	5
7	1	1	1	1	1	5
8	1	1	1	1	1	5
9	1	1	1	1	1	5
10	1	1	1	1	1	5
11	1	1	1	1	1	5
12	1	1	1	1	1	5
Total					**54**	
Maximum Score					**60**	
Percentage					**90%**	

Based on findings from the student readability questionnaire, a total score of 54 out of a possible 60 was achieved, resulting in a percentage score of 90% out of a possible 100%. The score of 90% falls within the range of 90% to 100% and meets the criteria for highly suitable use, making it suitable for students.

The Discussion

The outcome of developing this media is a product called Animated Video-Based Media. In the animated video-based media, there are three types of text materials: procedural text, explanatory text, and objective description text, along with evaluation in the form of multiple-choice questions. The animated video-based media has a size of 1.7 GB, playable on laptops or computers with Windows systems. During validation, content experts evaluated the content and language of the animated video-based media and categorized it as suitable for use with a percentage of 91.42%. This percentage was derived from points in the questionnaire, especially in the understanding of messages and information and the use of easily understandable language. This aligns with the needs of elementary school education, providing engaging content, especially in Indonesian language lessons, with interesting text readings accompanied by concrete examples.

Regarding the media aspect, media validators stated that the Animated Video-Based Media is suitable in terms of media appearance, sound compatibility, illustration suitability, and ease of media use. Thus, based on the assessment of three media validators, the animated video-based media falls into the suitable category with a percentage of 90.17. Language experts added that the animated video-based media adheres to language rules, is acceptable for student development, and uses simple and understandable language. The percentage of 88.88% places the animated video-based media in the suitable category according to the assessments of three language validators.

Limited testing was then conducted after the media was validated. Students were exposed to the media during the test, and they were subsequently asked to fill out a readability questionnaire covering topics such as media appearance, content understanding, interest in assessment questions, interest in visuals, sound compatibility, language use, and interest. The media was rated as "Highly Suitable" based on the student readability questionnaire, scoring 54 out of a possible total score of 60, placing it in the "Highly Suitable" category with a percentage of 90%.

In this research, a trial was conducted with 5 teachers. They were shown the media, and afterwards, they were asked to answer a readability questionnaire that included questions about the appropriateness of the learning material, language use, interest, and ease of using the media. The media was deemed highly suitable based on the readability questionnaire, scoring 355 out of a possible total of 375 and a percentage of 94.4%, falling into the "Highly Suitable" category, considering the appropriateness of the material, the attractiveness of the media as a learning tool, and the use of language that received a high score. Teacher confidence, improving the quality of teaching, offering and adding variety to learning, and much more. Students benefit from learning media in several ways, including increased interest in learning, increased variety of learning, stimulation of critical thinking, learning in a fun, pressure-free environment, and the ability to thoroughly understand the subject matter presented so that it can influence learning outcomes [11]. According to [13], media has an impact on how well students' cognitive abilities develop. There are several forms of media which, because of their attractiveness, can stimulate students' interest and thus influence their learning outcomes. Based on the definition of media explained above, learning media can be interpreted as a type of equipment that has the function of being an intermediary or instrument used in conveying messages during teaching and learning activities. Animation-based learning videos are components of television sets that transmit visuals or record live images for television broadcasts. Video media is anything that allows audio signals to be combined with images sequentially [13]. In group, individual and mass learning, video is a very powerful medium to use (Daryanto 2013). Videos in general, offer an alternative to poor learning outcomes, including mastery of concepts. Apart from providing students with a unique learning experience, videos can be used in the classroom because they are quite good at helping students visualize dynamic material. The emphasis of learning video media on visuals, according to [14] which defines video media as a combination of software and hardware, especially objects that can be seen, heard, or touched using the hands and five senses, audio to communicate learning resources to students individually or in groups, which can influence thought patterns, feelings, attention , and interest in learning, apart from that it can also capture, process and restructure verbal or visual information in such a way that learning becomes smoother.

The Big Indonesian Dictionary defines animation as a television show in the form of a collection of paintings or images that move mechanically and electronically to give the impression of moving on the screen. However, another definition of animation states that animation is the process of changing still photos into moving images when filmed using stop motion. By quickly navigating through a collection of photos with gradual movement for each component of a visual object, the illusion of movement can be created. When a series of photos moves quickly, the eye will pay attention to the movement of objects, not the visuals of each frame. Stop-frame cinematography is a general term for such animation standards. The Learning Process is a process that people go through in order to gain understanding and related information. The use of animation-based video media is one of several learning media used to produce the desired effect. According to previous research which both developed animated videos, applying learning through video media, learning provided greater results. One of the same previous studies developed Animation Video of [10].

The Development of Fairy Tale Animation Video Learning Media for Learning to Listen to Stories in Class III at SDN Sukabumi VI Probolinggo. In this research, the ADDIE (Analysis, Design, Development, Implementation, Evaluation) research model was used. This research model embodies a systematic learning design model. This research is only limited to the development stage, namely media validation and media assessment from class teachers. These two studies both develop animated videos, but the difference between the two is that the previous research focused on listening to fairy tales. Meanwhile, the research currently being conducted focuses on listening material for three types of texts, namely simple procedural texts, explanatory texts, and objective descriptive texts.

IV. CONCLUSION AND RECOMMENDATION

Conlusion

1. The animated video-based media in this study received a rating of "excellent" from content experts with a score of 91.42%, from media experts with a rating of 90.17%, and from language experts with an overall rating of "good" at 88.88%. This implies that the animated video-based media is highly suitable for use as a learning tool.

2. Based on the readability results in this study obtained from several students, it received an "excellent" rating with a total of 90%, and the teacher's reading test scored 94.6%. Therefore, this media is highly suitable for use and qualifies as a learning tool for both teachers and students.

Recommendation

1. For students, video-based animated media greatly facilitates the learning process and allows them to focus on the material learned from the three types of texts.

2. For teachers, utilizing media as a delivery tool can make the material more engaging and easier for students to learn.

3. For future researchers, after creating this video-based animation, efforts can be made to add more evaluation questions and expand the content. Additionally, to enhance accessibility, an Android version with different animation variations could be developed.

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