



Development of Learning Videos Assisted by the Sparkol Video Scribe Application on Science Object Material Class V Elementary School

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ABSTRACT

This paper presents the development of animated video learning media on object material assisted by the Sparkol Video Criebe application at Class V Elementary School. This research is valid and practical. This research uses the type of research and development (RnD) validated by media experts at 85%, material experts at 84%, and language experts at 82%. Practical stages, in addition, were carried out at the one-to-one stage and in small groups. The population involved five people (one-to-one) with a percentage score of 92.8%. And 15 people (small group) got a percentage score of 84%. Data were obtained through documentation, and questionnaire sheets. Data analysis techniques tested were the validity and practicality of animated video media. The research results show that the animated video media assisted by the Sparkol Video Scribe application has met the valid and practical criteria for use in the learning process.

Keywords: animation video, sparkol video scribe, object material

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INTRODUCTION

Education is important for the Indonesian people to achieve the national goals of the Indonesian nation stated in the opening of the 1945 Constitution (UUD) in the 4th paragraph, namely educating the nation's life (Pulungan & Hasanah, pp. 22-27). Through education, students can develop their abilities and potential so that they can become the next generation that can advance the nation. Education in the 21st century can be seen from the rapid growth of science and technology, most notably in information and communication technology. Broadly speaking in human life education is an important thing humans and education are closely related, which is why education is a person's process of gaining broader insight (Rosada et al., 2023, pp. 389-403). Education is the most important thing so that human resources increase and develop in order to ensure the progress of a nation and state.

One of the creation of quality education is teachers who are the main actors in the educational process, in their duties and functions in education teachers are required to have the ability to choose methods and design learning activities that can make students active in learning and provide sources, diverse learning media in order to foster learning motivation to students (Fadillah & Bilda, 2019, pp. 177-178). Teaching aids or media are all physical aids or techniques for teaching. Helping teachers convey learning to students so that they can achieve their goals (Firmansah et al., 2021, pp. 145-158). When using media, teachers must be creative and innovative and use complex technology for the learning process. Information will be easier to convey to students with the help of learning media so that the learning process will be more interesting and interactive.

Media is a tool that can support the learning process in the classroom and serves to convey the material delivered by the teacher so that learning objectives can be achieved better and more perfectly (Wijaya et al., 2023, pp. 662-669). One of the innovative learning media using technological media is sparkol video scribe. Sparkol video scribe-assisted learning is software that can create an animation in the form of

handwriting that can explain a certain concept. As technology develops, it is also developing for the learning media provided, such as video scribe, which benefits from existing technology such as computers, laptops and mobile phones. The application can also combine interesting animations with sound (Triyani et al., 2022, pp. 269-277).

Natural Science (IPA) is the study of events that occur in nature. Science learning in (in Sudiar et al., 2023, pp. 4625-4654.). The general purpose of learning science during elementary school is to learn science with a broad context but still focus on everyday life. In essence, science is built on the basis of products, processes and scientific attitudes. In addition, science is also viewed as a process, product as a procedure. This is because one of the subjects that must be mastered at the elementary school level is IPA (Natural Sciences), because it is a subject that is always used daily. Students learn science by using real objects or objects around them (Syafitri et al, 2023, pp. 769-776.). Methods or ways of investigating science that can be used include observation, experimentation and mathematics in the form of facts, principles, theories and laws, metacognitive knowledge dimensions (Riski, Riyanti, & Lubis, 2023, pp. 269-281).

Based on observations made by researchers at SD Negeri 13 Palembang located on Jl. Macan Lindungan Bukit Baru, Kec. Ilir Barat I, Palembang City, it was found that in the process of learning science still uses very simple learning media, namely image media, modules and theme books. Even though the school facilities have supported to use digital media such as projectors, sound systems and so on. The methods used also still use conventional methods and interactive methods such as lectures, questions and answers, discussions. In the process of learning science has never applied learning media in the form of sparkol video scribe assisted animation video. As for good and interesting scribe videos, the use of scribe videos in learning can have an impact on the learning process, such as more fun, learning becomes fun and students are not easily bored given the opportunity to solve problems motivated and active in the classroom so that the learning process becomes fun, and becomes independent. And the teacher also stated that the achievement of science learning outcomes on the material form of objects was still unsatisfactory. This is evident from the learning outcomes of 36 students, only 8 of whom are complete and 28 are below the KKM, with KKM 70 in science learning.

To overcome the problems described above, an interesting learning media is needed that can support learning activities to be more effective and enjoyable. The learning media that will be used in this study is in the form of sparkol video scribe application learning video media developed to meet the needs of students to be more enthusiastic in reading and learning. The previous research supports this research, namely Baroroh & Hasan (2020, pp. 140-155) with the title Development of Arabic Learning Media through Video Scribe Applications in Increasing Student Motivation. The results of this study indicate that video scribe is "Very Feasible" to be used as learning media. Further research was conducted by Firmansah et al (2021, p. 1) entitled Development of Interactive Video Learning Media Based on Sparkol Video scribe Application on Theme 3 Class III. The result of this study is that animated video media is suitable for use in learning science on Theme 7 subtheme 1 Class V.

Based on the above explanation with the problems that have been explained earlier, the researcher wants to develop a product that can help students in carrying out the teaching and learning process in the classroom. Developing learning videos for science subjects, especially in material tangible objects. Utilizing the Sparkol Video Scribe application in making these learning videos. Creating interactive and interesting learning media to help students understand the concept of tangible objects in science. Providing alternative teaching methods for science teachers in grade V elementary school in delivering material in the form of objects.

LITERATURE REVIEW

According to Handayani (2020, p. 5) development is a research method used to produce a certain product and test the practicality of certain products. And to be able to produce a certain product, research is used which is a needs analysis and to test the practicality of the product so that it can function in the wider

community, research is needed to test certain products. (Hamzah, 2019, p. 10). In other words, development research is considered complete if the specifications of the developed product meet user needs. Based on the explanation above, it can be concluded that development research is a research method that produces new products or updates existing products and is tested for product effectiveness by experts then the product can be used for the wider community.

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According to Briggs (Sufri, 2019), learning is a conscious effort of an educator in order to achieve the desired goal in order to teach students and direct can help students in understanding science material. According to Bidayah (in Suwastini et al., 2020, pp. 311-320) Science is an activity or human activity that studies nature and the surrounding environment which is poured into the learning process. Science trains students to think critically and objectively and helps students learn to solve problems related to everyday life. Furthermore, according to Amanda (2021, p. 227) Media can make the learning atmosphere more interesting or fun. One of the learning media developed by visual videos on the material of changes in the form of IPA objects.

According to Apriansyah et al. (2020, pp. 9-18) defines video as digital media that shows an arrangement or sequence of images and provides illustrations, images and fantasies in motion pictures. Video is a video media designed to help learners achieve their learning goals. Furthermore, according to Nuritha & Tsurayya (2021, pp. 48-64) Learning videos are live video recordings intended to convey learning content to help students achieve learning objectives. Specially designed learning videos can be used as an effective learning media media that contains videos, is clearer, easier to remember, and easy to understand learning in students. The scribe video used in this research is designed between one or more learners and learning media. In addition to video scribe media developing critical thinking skills by stimulating students' curiosity and making students more active and motivating through video presentations that combine images, animation and sound, video scribe media is an audio-visual medium that can avoid linguistic domination (Iwan & Rini, 2021, pp. 107-115). The advantage of video scribe media in classroom learning is as a combination that can help students be more active in the material to be more interesting and fun.

METHOD

This research uses Research and Development (R&D) development, a development method used to produce or create a new product and test the feasibility and effectiveness of a product. There are 10 steps in applying the research methodology of potential problem R&D, information collection, design, product, design validation, design improvement, product tester, use testing, product revision and final product (Sugiyono, 2020, pp. 11-13). Furthermore, there is a research procedure, This advanced research method is completed in five stages, especially the stages based on the ADDIE model, namely: Analysis, Design, Development, Implementation, Evaluation. This research was carried out at SD Negeri 13 Palembang in even semesters. The instruments of this study are observation, documentation and questionnaires (questionnaires). Meanwhile, the data analysis carried out was in the form of validity analysis and practicality analysis.

Analisis of Validity

Based on media evaluation validation data from media experts and material experts, the effectiveness of the media can be determined by the following steps: Qualitative data obtained from material experts and

educators are placed on the same scale (interval 1-5) to determine the percentage. The expert validation sheet score is calculated using a scale (interval 1-5) for media material experts and educators.

Score Interval 0%-20% criteria "Not Valid", Score Interval 21%-40% criteria "Less" 41%-60% criteria "Quite Valid", 61%-80% criteria "Valid", 81%-100% criteria "Very Valid". In addition to criteria, validation is also determined based on the opinions of equipment experts who are improved based on the product will be declared valid when declared valid the average score can be calculated using the following formula:

$$\text{Nilai persentase yang dicari} = \frac{\text{Skor yang diperoleh}}{\text{Skor maksimal}} \times 100\%$$

Practicality Analysis

Steps to analyze the practicality of learning video media. Based on the percentage score obtained from the results of the students' responses, it is categorized according to the criteria shown in the following table: Score Interval 0%-20% kriterial "Not Practical", 21%-40% "Less Practical", 41%-60% "Practical Enough", 61%-80% kriterial "Practical", 81%-100% kriterial "Very Practical" The video learning media developed is considered to have sufficient practicality value if the minimum standard of partisan application is practical. The average score can be calculated using the following formula:

$$\text{Persentase} = \frac{\text{Total skor jawaban}}{\text{Total skor yang diharapkan}} \times 100\%$$

RESULTS AND DISCUSSION

In this study, the learning video was developed through the Research and Development (R&D) research method using the ADDIE model which consists of 5 stages. As for using the ADDIE model based on the views (Sugiyono, 2019). As follows, analysis (analysis), design (design), development (development), implementation (implementation), and evaluation (evaluation).

Analysis Stage

At this stage of the analysis carried out is a learner needs analysis, curriculum analysis and material analysis.

Design Stage

Furthermore, the planning stage at this stage is carried out planning by making a Storyboard on an animated video with the help of the sparkol video scribe application with the explanation that the Storyboard or called a storyboard that contains planning for making animated videos. Part of the Storyboard in the development of animated videos consisting of front cover with back, material content and cover. The initial design is as follows:



Figure 1. Design Prototype

Development Stage

The third stage is the development stage of a product that has been designed in the previous stage by following a plan that has been made by combining the display design on the video and the content of the material, after analyzing the needs of students, and analyzing the curriculum. Furthermore, conducting the development stage (development) at this stage the research develops the initial video design design, opening, material to closing into an attractive learning animation video. At this stage of development, the research has made prototype 1 with a design that is made as interesting as possible with the help of the sparkol video scribe application. Furthermore, validation of prototype 1 is carried out to experts or experts in their respective fields, namely the fields of material, media and language experts who are shown before the validator. The validators chosen to validate the prototype were.

Table 1. Validator's name

No	Nama	Instansi
1	Dian Mutiara, M.Si	Univ PGRI Palembang
2	LEFUDIN, M.Pd	Univ PGRI Palembang
3	ADRIANUS DEDY, S.Fil., M.Pd	Univ PGRI Palembang

To validate Prototype I, researchers involved experts such as experts in the fields of media, material and language. The validation process is carried out by validators and validation questionnaires to get an assessment of the results of the product revision.



Figure 2. prototype revision results

Validation Data Analysis Results

Media Expert Validation

Media expert validation in this development aims to test the feasibility of the product developed, namely an animated video with sparkol video scribe application from the aspect of product design, the suitability of the material presented and the overall appearance presented in the video developed.

Table 2. Hasil Validasi Media

NO	Aspek yang ditanyakan	Validator		
		1	2	3
	Media			
1	Apakah desain video animasi yang di tampilkan menarik?	4	4	4
2	Apakah gambar pada video animasi yang di tampilkan penari	4	4	5
3	Apakah pemilihan warna pada video animasi yang ditampilkan menarik?	4	4	4
4	Apakah tampilan layar video animasi jelas?	5	4	4
5	Apakah tampilan video animasi menarik?	4	4	4
6	Apakah tampilan video animasi sudah sesuai dengan materi?	5	4	5
7	Apakah video animasi mudah digunakan?	5	4	5
8	Apakah <i>dubbing</i> suara sesuai dengan video animasi?	5	4	4
9	Apakah pemilihan <i>background</i> pada video sudah Sesuai?	4	4	4

10	Apakah pemilihan kata <i>background</i> pada video sudah sesuai?	5	4	4
	Jumlah Skor yang didapat	45	40	43
	Persentase validitas	90%	80%	86%
	Rata-Rata total persentase Kriteria		85%	
			Sangat Valid	

Based on the results of table 2, the score obtained from the assessment given by the expert is then used in the form of a percentage, in order to determine the criticality of the learning video assisted by the sparkol video scribe application. The results of this material expert validation can get an average total percentage of 85% with the criteria "Very Valid".

Material Expert

Material Expert Validation in this development aims to test the feasibility or suitability of the material developed, namely a learning video assisted by the sparkol video scribe application on the material form of objects in grade V elementary school presented in the animated video developed.

Table 3. Material expert validation results

NO	Aspek yang ditanyakan	Validator		
		1	2	3
	Media			
1	Apakah materi sudah sesuai dengan KD?	4	4	5
2	Materi sesuai dengan tujuan pembelajaran?	4	4	5
3	Keterkaitan materi dengan tujuan pembelajaran?	4	4	5
4	Kelengkapan materi yang sesuai dengan perkembangan peserta didik?	5	4	4
5	Apakah materi yang disampaikan mudah di pahami?	4	4	4
6	Apakah materi sesuai dengan kurikulum?	3	4	5
7	Apakah materi yang disampaikan jelas?	5	4	4
8	Apakah materi yang disampaikan mudah untuk mengerti?	4	4	4
9	Apakah video animasi bisa menumbuhkan semangat peserta didik dalam memahami materi?	4	4	4
10	Apakah materi video animasi sesuai dengan wujud benda di SDN 13 Palembang?	4	4	5
	Jumlah Skor yang didapat	41	40	45
	Persentase validitas	82%	80%	90%
	Rata-Rata total persentase Kriteria		84%	
			Sangat Valid	

Based on the results of table 3, the score obtained from the research given by the material expert is then in the form of a percentage, in order to find out the criticality of the animated video material on the form of objects assisted by the sparkol video scribe application for grade v elementary school. The results of the material expert validation get 84% with "Very Valid" criteria.

Language Expert Validation

This linguist validation was carried out with the aim of knowing the feasibility and suitability of the language used in the animated video media assisted by the sparkol video scribe application developed from the aspect of using clear language and easily understood by users of this animated video later.

Table.4. Linguist validation results

NO	Aspek yang ditanyakan	Validator		
		1	2	3
	Media			
1	Apakah Bahasa yang digunakann dapat dipahami dengan mudah?	4	4	4
2	Apakah Bahasa yang digunakan sesuai dengan EYD?	5	4	4
3	Apakah cara penulisan sudah menggunakan Bahasa yang baik dan benar?	5	4	4
4	Apakah kalimat yang digunakan sudah efektif?	4	4	4
5	Apakah Bahasa yang digunakan bisa membangun semangat peserta didik?	4	4	4
6	Apakah Bahasa yang digunakan sudah efektif?	4	4	4
7	Kejelasan pengucapan kata pada video animasi?	5	4	4
8	Apakah Bahasa yang digunakan sesuai dengan kemampuan peserta didik	5	4	4
9	Apakah Bahasa yang digunakan sesuai dengan pemahaman peserta didik?	4	4	4
10	Apakah penyampaian materi sudah menggunakan Bahasa yang baik dan baik?	4	4	4
	Jumlah Skor yang didapat	44	40	40
	Persentase validitas	88%	80%	80%
	Rata-Rata total persentase		82%	
	Kriteria		Sangat Valid	

From table 6, it can be seen that the score obtained from the assessment given by the linguist is then used as a percentage to determine the criticality of the animated video material on the form of objects assisted by the sparkol video scribe application for grade V elementary school that has been obtained. The results of this linguist validation get an average total percentage of 82% with "Very Valid" criteria.

Based on the results of the validation questionnaire analysis conducted by each validator, the learning media in the form of animated video material in the form of objects assisted by sparkol video scribe application for grade v elementary school is declared "Very Valid".

Implementation Stage

After the video is declared valid by the expert, then the Implementation stage is carried out on the animated video in learning activities. The product will be tested in class V SDN 13 Palembang with a research subject of 36 students, the trial was carried out during class hours. At the time of the test, the research animation video was accompanied by the fifth grade homeroom teacher before the trial was carried out to prepare everything needed during the learning process. The data needed at the time of the implemmentation is the data of the practicality assessment sheet or the student response questionnaire after all have prepared the animated video implemment trial is carried out. The following is an explanation of the stages carried out, namely:

One to One

The One to One trial was conducted to see students' responses to the feasibility of animated video learning media. The trial was conducted by 5 students of class V SDN 13 Palembang. The following are the results of the One to One trial conducted by 5 students as follows.

Table 5. One to One Trial

No	Nama Peserta didik	Butir Pertanyaan									
		1	2	3	4	5	6	7	8	9	10
1	MGP	5	5	5	5	5	5	5	5	5	5
2	ATR	5	4	4	5	5	5	4	4	5	4
3	CAV	4	5	5	4	3	3	3	3	5	5
4	ABR	5	5	5	5	5	5	5	5	5	5
5	NAZ	5	5	5	4	4	5	5	4	5	5
Jumlah Skor yang di dapat		2	2	2	2	2	2	2	2	2	2
		4	4	4	3	2	3	2	1	5	4
Rata – Rata skor						23,2%					
Persentase Keseluruhan						92,8%					
Kriterail						Sangat Praktis					

Based on questionnaire research of 5 fifth grade students of SDN 13 Palembang obtained a percentage of 92.8% with the criteria "Very Practical". It can be concluded that from the results of 5 students stated that the animated video assisted by the sparkol video scribe application for science material for Class V Elementary School is feasible to use. The following are activities carried out at SDN 13 Palembang:



Figure 3. One to One Trial

Small Group

Small Group activities are carried out to see students' responses to the feasibility of animated video learning media. This assessment was carried out by 15 students in class V SDN 13 Palembang. The trial was carried out by filling out a student questionnaire. The following are the results of the small group trial conducted on 15 students.

Table 6. Uji Coba Small Group

No	Nama Peserta didik	Butir Pertanyaan									
		1	2	3	4	5	6	7	8	9	10
1	MHN	5	4	3	5	5	5	4	5	4	3
2	SWN	4	5	5	4	3	5	5	5	4	4
3	FSL	5	5	4	5	5	5	5	4	5	5

4	ADB	5	5	5	5	5	5	5	5	5	5
5	MD	4	3	5	4	5	5	5	3	5	4
6	IQL	4	5	5	5	4	3	4	5	5	5
7	RVF	5	5	5	5	4	5	5	4	5	5
8	AQF	5	5	5	4	3	4	4	5	3	4
9	NJ	5	4	4	5	5	4	5	4	4	5
10	KAS	4	4	5	5	5	5	5	4	4	4
11	RA	3	5	5	4	3	5	4	5	3	4
12	UMT	5	4	5	4	3	5	5	4	3	5
14	AJ	5	5	4	4	5	4	5	4	5	5
15	AK	5	5	5	4	4	5	5	4	5	5
Jumlah Skor yang di dapat		6	6	6	6	5	6	6	6	6	6
Rata-Rata Skor		4	4	5	3	9	5	6	1	0	3
Persentase Keseluruhan Kriterial											
		63%									
		84%									
		Sangat Praktis									

From the results of the response questionnaire of 15 fifth grade students of SDN 13 Palembang obtained a score of 63% with a percentage value of 84% with the criteria "Very Practical". It can be concluded that the animated video on the material form of science objects with the Sparkol video Scibe application in grade V elementary school is declared feasible to use in the learning process. The following are activities carried out at SDN 13 Palembang:



Gambar 4. Uji coba *Small Group*

Evaluatuon Stage

At the Evaluation Stage about developing animated video products that begin with analysis (needs analysis, curriculum analysis), after the analysis is continued at the design stage (design) designing an animated video product to be developed, then the depelement stage (Development) is a product that has been previously designed by research, the implementation stage (Implementation) to be able to apply animated video products carried out in the process of teaching and learning activities in the classroom. The results of the prototype are in the form of comments or suggestions given by the validator to find out the advantages and disadvantages of the animated video developed by the research, after making revisions from the validator and filling out the validation sheet, the researcher analyzes the data to determine the validity and practicality of the animated video.

Discussion

After students use the animated video, students are given a student response questionnaire to use the animated video developed by the research. Based on the results of product trials conducted on a limited basis, namely to assess the feasibility and practicality of animated video learning media on the material form of

objects assisted by sparkol video scribe application based on the response of students as the use of media developed. The test was carried out at two stages, namely one to one questionnaire distributed to 5 students in class V SDN 13 Palembang after the trial stage was carried out to get the results of the students' responses. Based on the results of the student response questionnaire at the one to one stage, an average percentage of 92.8% was obtained which included the criteria "Very Feasible / Practical" for use. Furthermore, the small group trial was conducted by 15 fifth grade students of SDN 13 Palembang, which obtained an average percentage value of 84% with the category "Very Feasible / Practical" to use.

Based on the results of the research and discussion, it can be explained that the research conducted by research on the development of learning media through the Scribe Video Application in increasing student learning motivation is related to several previous studies including research conducted by (Hasan & Baroroh, 2020). The development of animated videos was carried out in a group trial of 12 students with an average score of 4.77 with criteria (Very Good) and continued with a large group trial with a total of 38 students with an average score of 4.78 with criteria (Very Good). The results of the questionnaire filled in by students stated that the animated video succeeded in increasing learning motivation and facilitating the learning process. Thus the results of the animation video validation test were declared feasible and in accordance with the planned objectives.

CONCLUSIONS AND RECOMMENDATION

Based on the results of research on the development of learning videos assisted by the Sparkol Video Scribe Application on the Material of Objects Science Class V Elementary School. Which has been carried out, it can be concluded that the development of learning videos assisted by Sparkol Video Scribe Application for Science Objects in Class V Elementary School developed using ADDIE is declared Valid and Practical. Done according to the media expert validation sheet worth 82% with the Criteria "Very Valid" material expert validator worth 84% with Criteria "Very Valid" and Language validator worth 85% with Criteria "Very Valid" therefore animated video media is very feasible to develop.

Furthermore, animated video as a learning media on the material form of objects assisted by Sparkol Video Scribe Application for grade V elementary school has met the criteria "Very Practical" stage one to one conducted by 5 students obtained a percentage of 92.8% Small group 15 students obtained a percentage of 84% can be concluded that the results of the stage one to one and small group meet the criteria "Very Practical". Based on the results of the learning video as a learning media assisted by the sparkol video scribe application on the material form of science objects in grade V elementary school, several suggestions were obtained, among others:

For Educators

The research hopes that the learning video media assisted by the sparkol video scribe application on the material form of science objects that have been developed can be used in teaching and learning activities to support and improve and encourage the enthusiasm of students so that learning objectives are achieved.

For Learners

Research hopes that in using learning video media assisted by sparkol video scribe application on the material form of science objects can provide an interesting experience for students, especially in learning science.

For Further Research

The research hopes to develop learning video media assisted by sparkol video scribe application on the material form of science objects in grade V other elementary schools. Penelitian berharap media video pembelajaran berbantuan aplikasi *sparkol video scribe* pada materi wujud benda IPA yang telah dikembangkan dapat digunakan dalam kegiatan belajar mengajar untuk menungjung dan meningkatkan serta mendorong semangat peserta didik sehingga tercapainya tujuan pembelajaran.

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