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The Development of Science Learning Video Media to Increase Elementary School Students' Interest in Learning

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Abstract: This study aims to develop based learning video for students of interest learning in class IV SDN Karawang Kulon 1 Kab. Karawang. The main data from this study are (a) knowing the facilities owned by the school based on the results of interviews with the Principal, (b) the teaching media used by the teacher during learning based on interviews with classroom teachers, (c) the interest in learning that students have based on observations in the classroom when learning takes place. This research uses research and development (R&D) methods. The development model used is the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). These results showed that (a) the facilities owned by the school could be used properly, and (b) the developed media were feasible to use in class, this was seen from the results of 98% media expert validation and 96.2% material expert validation with very feasible categories (c) student learning interest increases when learning uses video learning media, this is seen from the results of the N-Gain Test of 0.7 in the high category.

Keywords: ADDIE Model; Development; Interest of learning

Introduction

The development of the times influences aspects of human life which are increasingly developing rapidly, this cannot be separated from the development of science and technology which is growing rapidly (Felt et al., 2016; Grigoriev et al., 2020). This makes people's work easier because various kinds of information that humans need can be searched and found easily. Apart from that, it can also make people think more advanced and more innovative. The field that has had a big influence and significant impact on the development of science and technology is the education sector (Bucchi & Trench, 2021) because it has elements of educators as sources of information, media as a means of conveying messages from learning materials, and students as recipients of messages from learning materials (Rahim et al., 2022).

Education is seen as an important aspect of improving the quality of human resources (Tanjung, 2020). If the problem of education is addressed optimally, it will produce a lot of human resources who can compete in the world of work amidst advances in science and technology. Education is also a process of mobilizing several components directed by educators toward students to achieve educational goals (Flores, 2018).

The teacher's success in delivering material is dependent on the smooth communication interaction between the teacher and the students (Kalina & Powell, 2009). When educators are not fluent in communication, it can cause the message to be conveyed to not be absorbed properly by the individual. So that the communication conveyed can be on target, media is needed as a liaison between teachers and students. One way is to use learning media that is right on target and appropriate to the material to be taught (Hanif, 2020).

Regarding the use of learning media during classroom learning, it is relevant to the research results from (Moto, 2019). In this research, it was stated that teachers must be able to create interesting learning in the classroom so that students are able to concentrate and take an interest in the learning

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process (Marwiyati & Istiningsih, 2021; Nissa, 2021).

Measuring student interest in learning in this research used the n-gain test. The n-gain test results show a result of 0.7 which is categorized as high. Learning media is a tool or form of stimulus that functions to convey learning messages. The use of learning media that is on target and contains appropriate explanations of the material can support the success of the learning carried out. Learning media is anything that can be used to convey messages (learning materials) so that it can stimulate attention, interest, thoughts, and students' feelings in learning activities to achieve certain learning goals (Agam., 2020; Andriyani & Suniasih, 2021).

Learning media can be applied using various learning theories (Bower, 2019). One of them is the behavioral theory. According to behavioristic theory, learning is observable behavior that is caused by external stimulus. Providing stimulus to individuals is very important and can be used as a benchmark for the success of the learning carried out. One way to provide external stimulus is to use learning media that is right on target and appropriate to the material to be taught.

Based on observations at SDN Karawang Kulon 1 Kab. Karawang on Saturday 15 March 2023, it was discovered that the school already had three projector units and several speakers that could be used to support the learning process. Because the numbers are limited, they are used alternately between one teacher and another.

However, not all teachers use these facilities during the learning process. From the results of the interview with the Principal, he stated that the majority of teachers still use conventional learning patterns.

The second observation was carried out in class on March 17, 2023. This observation was carried out to observe the ongoing learning process in class IV. It turned out that when observed, learning was still conventional, and not all students paid attention when the teacher explained. When the teacher asked questions related to the material being taught, only a few students responded. Some other students were engrossed in their own activities, such as drawing in notebooks that were supposed to be used for doing assignments, there were also students who were daydreaming because they were bored. Apart from observing the condition of the class, interviews were also conducted with the class teacher. The class teacher said that learning had used media in the form of learning videos which were around thirty minutes long, and it turned out that with this duration the students were not able to enjoy the video because the duration was too long and made the students' concentration disappear when they were given an explanation about the content of the video after the video was finished played (Hidayati et al., 2019).

Based on the results of these observations, it can be concluded that the use of learning media is important to increase individual interest so that students are interested in seeing and understanding the material being taught. Because by using learning media, you can make the learning process more innovative and can balance the conventional learning process. Although not all teachers are able to operate a laptop. Apart from that, learning media in the form of videos must have different durations, it would be better if the duration used is only around seven minutes and then interspersed with explanations. So, after seeing the video shown plus explanations from the teacher, apart from increasing interest, it can also improve students' memory. Meanwhile, learning videos that are approximately thirty minutes long can influence students' interest in learning. Because this duration can make students bored and when they are bored they will not pay attention to the video.

Another problem is that during thematic learning, the schools being observed are schools that have used the 2013 Curriculum. So, there are no longer separate subjects like the previous Curriculum. Thematic learning is learning that combines various subjects or fields of study using certain themes, these themes are then reviewed or elaborated from various points of view from social sciences, natural sciences, humanities, and religion, thus providing meaningful experiences for students. When thematic learning enters material from a natural science perspective, students' interest and interest in learning decreases. This is based on the results of interviews with class teachers. When learning Science it is difficult for them to clearly imagine the images described in the textbook, apart from that there are also images of objects that are completely foreign and they have never seen them at all so they cannot imagine them. When students have difficulty imagining it, their interest in paying attention to learning also decreases.

Based on the description of the problem above, a solution can emerge, namely the use of learning media in the form of videos which can increase students' interest in learning and can make students understand the material being taught better. The duration of the learning video also needs to be adjusted to the material being studied. Sparkol Video Scribe is an application that can create learning media in the form of animated video displays consisting of a series of images arranged into a complete video (Fitria, 2014). Apart from that, Sparkol Video Scribe also has various content such as images, sound, and

various worksheet displays to make it easier for users to design learning media according to their needs. Video scribe can be said to be an application that can visualize material through images and text, and its use can be done offline so it does not depend on internet services. Users only need to download and install the application on their laptop.

Method

This type of research uses research and development (R&D) methods. Research and development (R&D) was chosen because this research method is a scientific way to research, design, produce, and test the validity of products that have been produced (Kristanto, 2018). Development research, known as the R&D research method, is a research method used to validate and develop products (Sugiyono, 2018) This method is considered appropriate to use in this research because this research aims to produce learning media in the field of education, especially in this research to produce media learning videos using Sparkol video scribe which are used to increase students' interest in learning.

This research took place at SDN Karawang Kulon 1 Kab. Karawang. Researchers chose this subject for the reason of students' low interest in learning and the lack of teachers who use learning media in the teaching and learning process. Data collection starts from February – May 2023.

The research subjects included fourth-grade students. Researchers chose this subject for the reason of students' low interest in learning and the lack of teachers who use learning media in the teaching and learning process. The media expert in this research is Mrs. Yulistina Nur, M.Pd. a lecturer in the PGSD study program. The material expert in this research is Mr. Basuki Rahmad, S.Pd a class IV teacher at SDN Karawang Kulon 1 Kab. Karawang, and several students in the class totaling 26 students.

The production process is divided into three stages, namely pre-production, production, and post-production (Sofyan et al., 2019). The pre-production stage is the stage for preparing all the equipment needed when developing learning media, both in the form of software and hardware.

Results and Discussion

This learning media is used during science learning and is expected to increase students' interest in learning in class IV at SDN Karawang Kulon 1 Kab. Karawang. The development model used is the ADDIE model. The ADDIE model consists of five stages, namely; analysis, design, development, implementation, and evaluation (Andi Rustandi & Rismayanti, 2021).

Based on the results of observations and interviews conducted at SDN Karawang Wetan 1 Kab. Karawang, the obstacle found when learning science is that students' interest and interest in learning has decreased, so a solution can be provided to this problem by developing video scribe-based learning media. This learning media was chosen because it can combine images, sound/audio, and attractive design so that students can enjoy and understand the material taught during learning. The media development stage is made based on the media script/storyboard that has been prepared at the design stage. After all the components in the media script/storyboard have been carried out, the learning media will then be validated by media experts and material experts so that the media is suitable for use during the learning process.

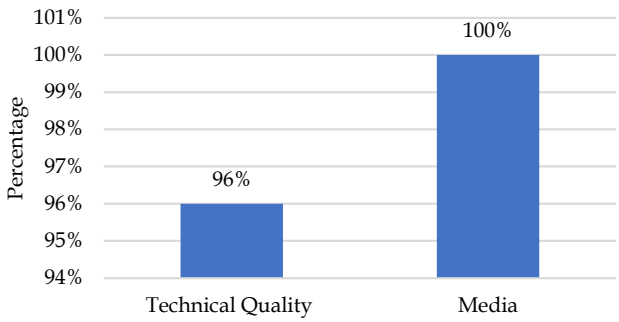

Figure 1. Media Validation Level

Based on the results from the media experts above, the assessment results for the technical quality aspect were 96% and the media aspect was 100%. If it is matched with the product feasibility category table, then the assessment is included in the very feasible category and does not need revision.

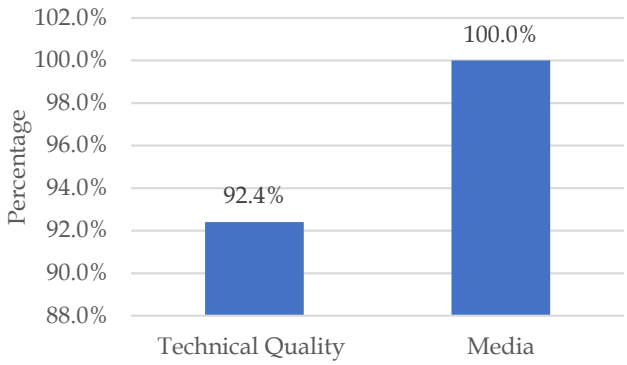

Figure 2. Level of Material Validation

Based on the results from the media experts above. The assessment results obtained for the technical quality aspect were 92.4% and the media aspect was 100%. If it is matched with the product feasibility category table, then the assessment is included in the very feasible criteria and does not need revision. Based on the results of large group trials tested on 26 students, an average assessment was obtained of 98.3%. If checked with the product feasibility category table, then the assessment is included in the very feasible category and does not need revision.

The implementation stage is the stage of using Sparkol video scribe-based learning media during classroom learning (Kristiawan & Aminudin, 2021). To be precise, during class IV science learning at SDN Karawang Kulon 1, the material was on the life cycle. The final stage in this development model is evaluating the learning media that has been implemented. Evaluating the media is intended to clarify the extent to which the use of Sparkol video scribe-based learning media has been successful in increasing students' learning interest in science learning life cycle material. Measuring student interest in learning was carried out using a guideline given to class IV students at SDN Karawang Kulon 1, totaling 26 people, twice, the first questionnaire was given before using the media (pretest), then the second questionnaire was given after using the media (Post-test). Apart from being given to students, the questionnaire was also given to a teacher, that is Mr. Basuki Rahmad a class IV teacher at SDN Karawang Kulon 1. Calculating student interest in learning uses the n-gain test to find out how much the student's interest in learning has increased before using it and after using it using Sparkol video scribe-based learning media.

Based on research result, researchers found that the interest in learning that class IV students at SDN Karawang Kulon 1 have so that the expected learning objectives are difficult to achieve optimally. Seeing these problems, the researchers provided a solution in the form of developing learning videos based on Sparkol Videoribe (Anjelia et al., 2022). Researchers chose learning videos or media that are included in the audio-visual media type because by the audio-visual media is essentially a representation (presentation of reality, especially through the sense of sight) (Abdulhak & Darmawan, 2017; Zaini et al., 2022), which aims to show real educational experiences to students. Learning videos have three main functions, namely; motivate interest or action, present information, and give instructions (Puspitarini & Hanif, 2019). So, through learning videos, the main senses used by students are sight and hearing, through these senses, students can experience real education through Sparkol Videoribe-based learning video shows which are presented through a projector lens, and learning videos function to motivate interest or action (Pranata & Jayanta, 2021; Widiari & Astawan, 2021).

Apart from that, Sparkol Videoribe-based learning videos are also used as a stimulus to get student responses when the teacher explains the learning material presented in the video again (Putra et al., 2021). The development Sparkol video scribe-based learning videos were developed using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation) (Herawan et al., 2022). The researcher chose to use the ADDIE model because this model focuses on solving learning problems through learning media so that learning objectives can be achieved. Apart from that, the ADDIE model is a model that is structured systematically so that the development process becomes instructional. This is by the theory of (Sudjana, 2019) which believes that design Instruction is a systematic, effective, and efficient process of creating an instructional system to solve learning problems or improve student performance through a series of problem identification, development, and evaluation activities.

Conclusion

Based on the results of the research and discussion that have been described in this research, it can be concluded that: (1) Stages of developing Sparkol-based Natural Science (IPA) learning videos. Video scribe based on the ADDIE model, namely Analysis, Design, Development, Implementation, and Evaluation; (2) Sparkol Video scribe-based learning video media designed using the ADDIE model is suitable for use for science learning. This can be seen from the validation results provided by media experts which produce a percentage of 98% according to the product feasibility category table, including in the very feasible category. Material experts produced a percentage of 96.2% according to the product feasibility category table, including in the very feasible category; (3) Sparkol-based science learning video media. Video scribe can increase students' interest in learning. This is based on the results of the N-Gain test, increasing student interest in learning according to the gain value of 0.7. Meanwhile, according to the teacher, the gain test results showed a gain value of 0.8. The N-Gain test results for teachers and students are in the high category. The increase in students' interest in learning can also be seen from the increase in student learning outcomes using UTS questions, the average score

before using the media was 63.9, while the average student score after using the media increased by 79.3. Meanwhile, according to the teacher, the gain test results showed a gain value of 0.8. The N-Gain test results for teachers and students are in the high category. The increase in students' interest in learning can also be seen from the increase in student learning outcomes using UTS questions, the average score before using the media was 63.9, while the average student score after using the media increased by 79.3.

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The authors declare no conflict of interest.

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