DEVELOPMENT OF ANIMATION VIDEO-BASED SCIENCE LEARNING MEDIA ON NATURAL DISASTER MATERIAL AT SD-IT HAFIZUL ILMI

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ABSTRACT

The purpose of this research and development is to create an animated video learning media that is theoretically valid and effective for achieving learning objectives. The subjects tested were students of class VI SD. This research includes development research using the development model from Borg & Gall, which is adjusted based on 6 stages as follows: 1) potential problems, 2) data collection, 3) product design, 4) design improvements, 5) design revisions, and 6) product trials. The instrument used is a questionnaire and the data analysis used is a Likert scale and uses a Gutman scale. Education is currently constructed and utilizes information and communication technology. Therefore, teachers are required to be creative and innovative in creating technology-based learning models. Using the Canva application is considered more effective and efficient for teachers. Based on relevant research on using the video editing application of canva, then the canva is the only solution for making learning videos. because currently all teachers are registered with Dapodik and all have learning accounts, with Vidoe-based learning students seem more enthusiastic about learning, so enthusiastic that they don't feel that class is over. When the learning process took place, the children were very calm, and the center of attention was all focused on the learning videos. The results of learning conducted at SD-IT Hafizul Ilmi about video-based learning was completely successful both individually and classically because it can increase children's interest in learning, increase creativity, and can improve children's thinking power. Because children can already use their sense of sight and hearing.

Keywords: *Learning, Video, Animation, Media, Science.*

1.   INTRODUCTION

The development of science and technology demands more advanced learning in order to achieve learning objectives. The application of science and technology to education naturally creates a technology-oriented learning system, especially learning media (Budiman, 2017). Learning media directs the message of learning material in such a way that it can involve the attention, interests, thoughts and feelings of students in learning activities aimed at achieving certain learning goals. The learning process can be improved by using learning media. The use of learning media aims to make learning acceptable and well-understood so that it can achieve learning objectives. Learning success is supported by learning media, teaching materials, educational procedures, and others.

This is supported by the opinion of Rahmatullah et al. (2020), namely that there are several reasons why instructional media can improve the student learning process as follows: 1) Learning will attract more students' attention so that it can foster more motivation to learn, 2) Materials learning will have a clearer meaning so that it is more understandable to students and allows students to master learning objectives better, 3) Diversity of teaching methods, 4) Students do more learning activities because they don't just listen to the teacher's explanation, they are more involved in learning activities. Carrying out activities such as observing and demonstrating can be done using learning media through technology, namely animated video media. In addition, the role of technology can increase the effectiveness and efficiency of the teaching and learning process, facilitating the achievement of educational goals (Salsabila et al., 2020).

The results of observations and interviews conducted by researchers of class VI educators at SD-IT Hafizul Ilmi show that the learning outcomes of students in the Natural Disaster subject are not optimal. In some cases, educational media have not been utilized in teaching and learning activities, making the process monotonous and boring. In addition, the results of interviews with teachers showed that 30 students in class VI experienced a decrease in learning outcomes in science subjects on the causes of natural disasters. The results of interviews with students also show that most students are less enthusiastic and less enthusiastic when the learning process takes place. So that there are obstacles in the application of educators in the teaching and learning process, namely the lack of use of learning.

Natural science (IPA) is born and develops through scientific methods such as observation and experimentation, and requires a scientific attitude such as curiosity, openness, and honesty. This is supported by preliminary researchers who show that problems exist in online learning or distance learning (Anugrahana, 2020). The knowledge gained is because learning has not run optimally in terms of learning processes and resources. Optimal learning outcomes are achieved when the learning process goes well according to the characteristics of the students and is carried out in a meaningful way.

Most people prefer learning natural science using animated video learning because it provides visual lessons that are more interesting and easier to learn so they are very useful for helping us learn natural science (Imamah, 2012). As an effort to improve science learning, especially in the material that causes natural disasters, one of them is by using the help of animation-based learning video media to make it easier for students to learn the properties of light more clearly which is complemented by pictures that can add

understanding and be able to attract students. students' attention to follow the learning presented by the teaching staff, so that they are motivated to study with good concentration, and make active learning.

Learning media is able to visualize students' thoughts and is interesting so that students are able to overcome the limitations of space regarding the material properties of light by developing animation-based learning video media (Hanafi & Zulkifli, 2018). In line with this, Isti (2020) found that animation in a multimedia application can present something more dynamic and attractive to students because it allows something that is impossible or complex in real life to be realized in the application.

The use of animated video media in science learning is a unique idea for instilling concepts in students who have the ability to move from the abstract to the concrete (Mashuri & Budiyono, 2020). The use of solution technology to create animated video learning media has the advantage of changing students' perceptions of science which are considered boring to be fun. Video is used to visualize material that is difficult for the teacher to explain orally. Animated videos can share moving photos accompanied by sounds so that learning becomes livelier and more interactive with the willingness to know from students in class (Prasetyo, 2015). The previous explanation shows that complementary teaching materials are needed to compensate for the shortcomings of the existing collection of sources, develop learning so that it is easier for students to understand conducting experiments on science learning so as to increase students' imagination. Therefore, it is necessary to develop media that has never been developed before in the school so that it can be used as a learning resource.

2. LITERATURE REVIEW
1.1 Definition of Learning Video Media

Etymologically media comes from Latin, which is the plural form of the word medium which means middle, intermediary, or introduction (Asyhar, 2011). Sadiman et al. (2014) put forward the literal meaning of the media that the media is an intermediary or introduction. Many media and education experts have also provided terminological definitions of media. The Association for Education Communication and Technology (Asyhar 2011) states that media is anything that is used to convey information. Meanwhile, according to (Asyhar 2011) media is a tool used to channel messages and information from the sender of the message to the recipient of the message. states that media are various types of components in the student environment that can present messages and stimulate students to learn. Meanwhile, Briggs (1970 quoted in Sadiman et al, 2014) argues that media are all physical tools that can present messages and stimulate students to learn. Books, films, tapes, and frame films are examples.

Sadiman et al. (2014) argues that the National Education Association (NEA) has a different meaning. Media is a form of communication both printed and audiovisual and its equipment. Media should be manipulated, can be seen, heard, and read. Based on the definitions of the experts above, it can be concluded that the media is an intermediary that can be used to provide information or messages to the recipient so that good communication occurs between the sender and the recipient.

Asyhar (2011) says that the media has a very important role, namely a means or device that functions as an intermediary or channel in a communication process between communicators and communicants. Asyhar (2011) that the communication process involves at least three main components, namely the sender or source of the message (source), intermediary (media), and receiver (receiver).

2.1 Development of Science Learning Videos

IPA is a science that discusses everything about natural phenomena, both animate and inanimate objects. In practicing skills in science lessons and a scientific attitude, learning is needed where students do not only act as recipients of information but also as providers of information about what they are experiencing or their personal experiences. Therefore, it is necessary to modify the latest media, namely video media, which is expected to be able to make the teaching and learning process more effective. According to Yudianto (2007) learning video media is media that presents audio and visuals that contain learning messages both containing concepts, principles, procedures, and theory of knowledge application to assist understanding of learning material. Video is an audible learning material (audio visual) that can be used to convey messages/subject matter. It is said to be visible because the hearing (audio) and visual/video (visible) elements can be presented simultaneously. Video is learning material packaged via video tape and can be viewed through a video/VCD player connected to a television monitor (Sungkono 2003). Learning video media can be classified into audio-visual aids (AVA) media types or media that can be seen and heard. Usually, this media is stored in the form of discs or ribbons. VCD media is media with a storage system and video recorder where the audio-visual signal is recorded on a plastic disk, not on magnetic tape (Asyhar, 2011). Instructional video media as teaching material aims to: 1) Clarify and simplify the delivery of messages so that they are not too verbalistic, 2) Overcoming the limitations of time, space, and sensory power of students and instructors, 3) Can be used effectively precise and varied.

3. METHODS

The method is an effort that can be carried out by researchers in disclosing data and seeking the truth of the problem under study, which is a matter of methods that can be used in research, according to (Sugiyono, 2019) stating that: "The way to find truth that is seen scientifically is through investigative.

The research approach taken is in the form of research and development using Research and Development. The selection of this type of research in the form of development is based on the objectives to be achieved by research, namely to produce products in the form of learning media. This research and development are more focused on the product produced. The resulting product can be a new product or a product that is being developed again. The result of this research and development is a learning media product animated video material for the properties of light in science learning in elementary schools through research and development (R&D) adapted from the development stage by (Sugiyono, 2019).

This research method refers to the Borg and Gall model (Sugiyono, 2019) which explains 10 implementation steps, based on product validation and trials, researchers have developed valid and effective products to achieve learning objectives as supporting media, so it is simplified into 6 steps as follows: The stages are 1) potential

problems, 2) data collection, 3) product design, 4) design improvements, 5) design revisions, and 6) product trials.

4. RESULTS & DISCUSSION

1. Learning using animated video media in the form of text, color images, sound, and animation is presented in one unit and is designed to provide a special attraction for students to learn through the presentation of audio-visual material which is very effective in supporting students in the learning process. Plays an important role in abstract concepts with examples of concrete implementation in the form of animation. The use of animated video media for materials that cause natural disasters in science learning in class VI SD-IT Hafizul Ilmi is one of the supporting media that students like and is expected to be meaningful learning so that it can facilitate students in learning. Understanding of the material being taught. Video-based learning at SD-IT Hafizul Ilmi, Aceh Besar District consists of planning, implementation and evaluation. Lesson plan is an important stage in the implementation of learning. The researcher will describe each lesson plan at SD-IT Hafizul Ilmi, Aceh Besar District which is related to video-based learning. Figure 1 is an implementation of video-based learning using the Canva application which is effective for learning

science on material that causes natural disasters at SD-IT Hafizul Ilmi.

Figure 1. Several Animation Video-Based Science Learning Media on Natural Disaster Material.

5. CONCLUSION

Education is currently constructed and utilizes information and communication technology. Teachers are required to be creative and innovative in creating technology-based learning models. Video-based learning works perfectly both individually and classically because it can increase children's interest in learning, increase creativity, and can improve children's thinking power. Because children can already use the senses of sight and hearing. Video-based learning at SD-IT Hafizul Ilmi Aceh Besar consists of planning, implementation, and evaluation. RPP is an important stage in the implementation of learning. so Canva is the only solution for creating learning videos. So that students will be interested and easy to understand. The purpose of this study is to describe the media in the form of innovative learning videos using the Canva application in science learning materials exploring outer space. Video depends on the teacher's creativity in choosing features and designs that suit the needs of the material.

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