



# The Role of Teachers in Implementing Environmentally Based Learning Media through Animated Videos in Elementary Schools

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## Abstracts

*Environmental-based learning media through animated videos in Elementary Schools is an effective innovation in improving students' understanding of the material being taught. By utilizing animation technology, abstract concepts in learning can be presented more interestingly and easily understood. The purpose of the study was to determine the role of teachers in implementing environmental-based learning media through animated videos. This study is a qualitative study with a descriptive approach that aims to understand and describe the role of teachers in implementing environmental-based learning media through animated videos. The results of the study show that teachers have an important role in implementing environmental-based learning media through animated videos at Kaobula 2 Elementary School. As a media designer, teachers must adjust and select videos that are relevant to the curriculum and the environment around the students. In addition, teachers also act as a liaison between concepts and reality, inviting students to discuss and make direct observations after watching the video. In classroom management, teachers create an interactive learning atmosphere by encouraging discussion and collaboration between students. With this role, learning becomes more effective and meaningful.*

**Keywords:** *Role of Teachers, Learning Media, Environment, Animated Videos*

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## 1. Introduction

The use of learning media has an important role in improving students' understanding and interest in learning. Learning media can be in the form of visual, audio, or interactive aids that help teachers deliver material more interestingly and effectively (Prameswari & Astutik, 2023) (Jumaheni et al., 2021) (Oya et al., 2023). With the use of appropriate media, abstract concepts can be more easily understood by students, especially at the elementary education level which requires a concrete approach in learning (Dibtasari et al., 2022).

Teachers must be able to choose and manage learning media wisely to suit the conditions and facilities available at school. The use of media should not just be an addition, but must be integrated with a systematic learning strategy (Muftah, 2023). Teachers also need to consider accessibility factors, student diversity, and the effectiveness of the media used so that learning runs optimally and does not cause gaps in student understanding (Tafonao & Ditakristi, 2022). Evaluation of the implementation of learning media is also an important aspect in ensuring its effectiveness. Teachers need to reflect on the use of media that has been implemented,

evaluate student responses, and make adjustments if necessary (Tafonao & Purba, 2021) (Abdel-Salam et al., 2022) (Wirahayu et al., 2022). With continuous evaluation, learning media can continue to be developed so that it is always relevant to student needs and the development of increasingly advanced educational technology (Putriati, 2020).

The use of animated videos in environmental-based learning can help students understand the importance of preserving nature, getting to know ecosystems, and understanding the impacts of various human activities on the environment. Through animation, abstract concepts such as the water cycle, photosynthesis, and global warming can be explained in a more concrete and interesting way (Rambe et al., 2023) (Marta et al., 2023) (Rahmi et al., 2019). Thus, students not only get theory, but also see direct simulations of various natural phenomena that occur around them. This learning media can be adjusted to the characteristics of elementary school students who tend to be more interested in visual and interactive learning (Majid & Usman, 2021). With the presence of animated characters playing a role in the video, students will find it easier to understand the message being conveyed. Animated videos also allow teachers to present material in a more varied and creative way, so that students do not get bored easily (D. A. Dewi et al., 2022).

The use of environmental-based animation videos is expected to not only provide students with knowledge, but also foster awareness and concern for the environment from an early age (Rahman et al., 2022). They can better understand their role in preserving nature and implementing good habits in everyday life (Mouni, 2022). Thus, the development of environmental-based learning media through animated videos is one of the most important innovations in improving the quality of learning, especially in Islamic Religious Education and morals that emphasize the values of caring for God's creation (Jannah & Asmara, 2023). Environmental-based learning media through animated videos in Elementary Schools is an effective innovation in improving students' understanding of the material being taught (Arthur et al., 2021). By utilizing animation technology, abstract concepts in learning can be presented more interestingly and easily understood (Yusup et al., 2022). In addition, animated videos that raise the theme of the surrounding environment can help students recognize, understand, and love the environment in which they live (Karakolidis et al., 2021). For example, videos that describe the water cycle, forest ecosystems, or how to maintain environmental cleanliness will attract more students' attention than conventional methods such as lectures or textbooks alone (He, 2023).

The use of environmental-based animated videos can also foster ecological awareness and an attitude of caring for nature from an early age (F. S. Dewi, 2022). By seeing direct visualizations of the impacts of pollution, deforestation, or climate change in the form of interesting animations, students will be more motivated to take real action in preserving the environment (Avidov-Ungar & Tsybulsky, 2021) (Motsoeneng et al., 2021) (Zheng et al., 2023). In addition, this approach is in line with the principle of contextual learning, where students learn from things that are close to their lives (Sahri, 2021) (Kristina, 2022) (Tzovla & Kedraka, 2023). Thus, environmental-based animated videos not only improve students' academic understanding but also shape their character as individuals who care about nature and their surroundings (Rasmini & Berngacha, 2023).

The gap in the implementation of environmental-based learning media through animated videos at State Elementary School 2 Kaobula lies in the minimal use of technology in the teaching and learning process. Many teachers still rely on conventional methods such as lectures and textbooks, so that students do not get an interactive and contextual learning experience. In fact, animated videos can help students understand environmental concepts more visually and attractively, but limited facilities and lack of teacher skills in operating technology are the main obstacles in its implementation. The main problem in the implementation of environmental-based learning media through animated videos is the lack of training for teachers in creating and using digital-based media. In addition, not all schools have adequate infrastructure, such as computer devices or a stable internet network, so teachers have difficulty accessing or developing animated videos as learning media. As a result, environmental-based learning that should provide direct and interesting experiences for students is less than optimal, and students tend to have difficulty understanding abstract concepts.

The solution to the gap and problem is the need for training and mentoring for teachers in developing and utilizing animated videos as environmental-based learning media. Schools also need to collaborate with related parties, such as the education office or educational technology institutions, to provide adequate facilities and the resources needed. Thus, teachers can be more creative in teaching environmental concepts through interesting media, so that students are more actively involved in learning and are able to understand the material better. Support in the form of training and provision of adequate facilities is needed so that teachers can be more creative in teaching environmental-based materials. With this media, learning not only becomes more interesting, but is also able to instill awareness of the importance of protecting the environment from an early age.

## **2. Research methods**

This study is a qualitative study with a descriptive approach that aims to understand and describe the role of teachers in implementing environmental-based learning media through animated videos at Kaobula 2 Elementary School. Through observation, interview, and documentation methods, this study explores how teachers design, use, and overcome obstacles in implementing environmental-based learning media. This qualitative approach allows researchers to gain an in-depth understanding of the strategies, challenges, and effectiveness of using animated videos in improving students' understanding of environmental concepts. The data sources in this study consist of primary and secondary data (Hasan et al., 2023) (Muttaqien & Febri, 2022) (Fathy & Fahmy, 2020). Primary data were obtained through direct interviews with teachers at Kaobula 2 Elementary School who were involved in the use of environmental-based learning media through animated videos, as well as observations of the learning process in the classroom (Kartikasari & Suryarini, 2023) (Chanda & Mafugu, 2022) (Jantakoon & Thanaphatchottiwat, 2019). Meanwhile, secondary data were obtained from related documents, such as curriculum, teaching materials, and previous research results that are relevant to the use of technology-based media in environmental education. The combination of these two data sources aims to provide a comprehensive picture of the implementation of animated videos as environmental-based learning media at the school.

Data collection techniques in this research were carried out through three main methods, namely observation, interviews and documentation. Observations were carried out directly in class to see how teachers implemented animated videos in environment-based learning and how students responded to this media (Jang & Yoo, 2021). Interviews were conducted with teachers to understand the strategies, obstacles and effectiveness of using animated videos in the learning process. Meanwhile, documentation techniques are used to collect data from various written sources, such as learning tools, curricula and academic reports that support research analysis. It is hoped that the combination of these three techniques can provide valid and in-depth data regarding the role of teachers in implementing environment-based learning media through animated videos at the Kaobula 2 Elementary School.

Data analysis in this research was carried out using qualitative data analysis techniques which included three main stages, namely data reduction, data presentation, and drawing conclusions (Widiyono et al., 2022) (Ayoub et al., 2020) (Pollock et al., 2019). At the data reduction stage, information obtained from observations, interviews and documentation was selected, simplified and categorized according to the research focus, namely the role of teachers in implementing environment-based learning media through animated videos (Sebatana & Dudu, 2022). Next, at the data presentation stage, the results of the analysis are arranged in the form of a descriptive narrative that describes the patterns that emerge from the research findings. Finally, the conclusion drawing stage is carried out by interpreting the data in depth to understand how teachers design, use and overcome challenges in implementing animated videos as learning media. With this approach, research can provide a clear picture of the effectiveness and obstacles in implementing environment-based learning media at State Elementary School 2 Kaobula.

### **3. Results and Discussion**

#### **3.1 Results**

The role of teachers in implementing environmental-based learning media through animated videos in Elementary Schools is very important to ensure effective and meaningful learning. Here are some of the main roles of teachers:

##### **Learning Media Designer**

The instructional media designer at Kaobula 2 Elementary School has an important role in adapting animated videos to students' needs and the applicable curriculum. Teachers at this school strive to create interesting and effective learning by using interactive visual media. Animated videos are chosen as one of the aids because they can improve students' understanding of the material being taught. In addition, the use of animated videos that are in accordance with the curriculum helps students achieve the targeted competencies in the learning process. In addition to adapting to the curriculum, teachers also ensure that the animated videos used are relevant to students' needs. This includes selecting materials that are appropriate to their level of cognitive development and learning interests. By using interesting and easy-to-understand animated videos, students can be more active in following lessons and understand the concepts being taught more quickly. Teachers also consider students' learning styles so that the videos presented can meet the various needs of individuals in the classroom.

**Table 1.** Interview with Grade IV Teachers

No	Question	Answer
1	How do you adapt animated videos to students' needs and the applicable curriculum?	I always ensure that the animated videos used are in accordance with the Basic Competencies in the applicable curriculum. In addition, I also consider the level of understanding of fourth grade students, so that the videos chosen are not too difficult or too easy for them. I often look for references from various sources or make my own simple videos that are more in line with the characteristics of students in my class.
2	What factors do you consider when choosing or creating animated videos for learning?	Some of the main factors that I consider are the suitability of the material to the curriculum, the level of student understanding, and the relevance to their daily lives.
3	How can the use of animated videos help improve students' understanding of the subject matter?	Animated videos make learning more interesting and easier to understand, especially for students who learn faster through images and sound than text alone. With animation, abstract concepts can be explained in a more concrete way, for example in science lessons, a video about the water cycle will be easier to understand than just reading a book.
4	To what extent does the relevance of animated videos to the students' environment affect the effectiveness of learning?	It is very influential, because if the animated video shows something close to the students' lives, they will find it easier to connect the material with everyday experiences. For example, if in social studies lessons I use a video about the livelihoods of local people, students will understand more quickly because they see it directly around them.
5	What are the biggest challenges in using animated videos as a learning medium, and how do you overcome them?	One of the biggest challenges is limited access to technology, such as adequate internet networks or devices at school. To overcome this, I usually download the video first so that it can be used offline. If possible, I also create simple animations with available tools or use interactive images to replace the video if there are technical difficulties.

Based on the results of interviews with fourth grade teachers at Kaobula 2 Elementary School, it can be concluded that the use of animated videos in learning has a positive impact on student understanding, especially if it is adjusted to the curriculum and their needs. Teachers consider various factors in choosing or making videos, such as the suitability of the material, the level of student understanding, and relevance to the surrounding environment. Animated videos help students understand abstract concepts more concretely and interestingly. However, in its implementation, there are challenges such as limited access to technology and internet networks. To overcome this, teachers use strategies such as downloading videos first or making simple animations that are easier to access. This shows that teacher creativity in designing learning media plays a very important role in increasing the effectiveness of learning in the classroom.

**Table 2.** Interview of Grade V Teachers

No	Question	Answer
1	How do you adapt animated videos to students' needs and the applicable curriculum?	I adjust the animated video by ensuring that the material presented is in accordance with the Basic Competencies in the fifth grade curriculum. In addition, I also consider the level of student understanding, so that the video used is not too difficult or too easy. If necessary, I make modifications or add explanations so that the video content is more in line with students' needs.

2	What factors do you consider when choosing or creating animated videos for learning?	I consider several important factors, such as the relevance of the material to the curriculum, the level of student understanding, and the relevance to their daily lives.
3	How can the use of animated videos help improve students' understanding of the subject matter?	Animated videos can make learning more interesting and help students understand the material more easily. With interactive visualization, students can see the concepts being taught directly, so they understand faster.
4	To what extent does the relevance of animated videos to the students' environment affect the effectiveness of learning?	It is very influential, because students will find it easier to understand the material if it is related to their surroundings. For example, in a social studies lesson about natural resources, I choose a video that shows examples of natural resources in their area, such as agriculture or fisheries. That way, students can understand the concept better because they see for themselves its application in everyday life.
5	What are the biggest challenges in using animated videos as a learning medium, and how do you overcome them?	The biggest challenge is the limited access to technology, both in terms of devices and internet networks. To overcome this, I usually download the video first so that it can be used offline.

Based on the results of interviews with fifth grade teachers at Kaobula 2 Elementary School, the use of animated videos in learning has been proven to improve student understanding by presenting material in a more interesting and interactive way. Teachers ensure that the videos used are in accordance with the curriculum and the level of student understanding in order to be effective in the learning process. In addition, the relevance of the video to the surrounding environment is an important factor in helping students connect theory with real life. However, the main obstacle in implementing this media is limited access to technology and internet networks. To overcome this, teachers use various strategies, such as downloading videos first or using other alternatives such as pictures and illustrations. With teacher creativity and innovation, these challenges can be minimized so that learning continues to run optimally.

The relevance of animated videos to the students' surrounding environment is also a major concern in its design. Teachers at State Elementary School 2 Kaobula try to choose or create animated videos that reflect students' daily lives so that they can more easily connect the subject matter with real experiences. Thus, learning becomes more contextual and meaningful for students. For example, in science subjects, videos that show local flora and fauna will be more interesting and easier for students to understand than materials that are far from their environment. Overall, the use of animated videos in learning at State Elementary School 2 Kaobula is an innovative strategy that helps improve the quality of education. By adapting videos to the curriculum, students' needs, and the surrounding environment, teachers can create a more enjoyable and interactive learning atmosphere. This approach not only improves students' understanding of the subject matter, but also fosters their curiosity and enthusiasm for learning.

### **Connecting Concepts with Reality**

Teachers invite students to relate the information they have seen to their daily lives. For example, if the video discusses the importance of maintaining environmental

cleanliness, the teacher will ask students how they maintain cleanliness at home and at school. In this way, students can understand that the concepts learned are not just theories, but also have a real impact on their lives. This interactive discussion also encourages students to be more critical in relating learning to their personal experiences. As a follow-up step, teachers invite students to conduct direct observations in the environment around their school or home. For example, after watching a video about the ecosystem, students are asked to observe various living things around them and note how they interact with each other. Through this activity, students can see directly how the concepts in the video actually occur in reality. This approach not only improves students' understanding, but also trains them to be more sensitive to the surrounding environment.

**Table 3.** Interview with Grade IV Teachers

No	Question	Answer
1	How do you encourage students to connect the information in the learning video to their daily lives?	I usually start by asking students if they have ever experienced or seen something similar to what is shown in the video. For example, if the video discusses the importance of maintaining environmental cleanliness, I will ask how they maintain cleanliness at home or at school.
2	What benefits do you see when students make direct observations after watching the animated video?	Students become more active and critical in observing their surroundings. They not only hear or watch the material, but also experience and see its application directly.
3	What are the biggest challenges in implementing this observation-based learning method?	One of the challenges is the limited time in the lesson schedule. Sometimes, not all students can immediately understand what they have to observe. In addition, environmental conditions can also be an obstacle, especially if the weather does not support observations outside the classroom.
4	How do you assess students' understanding after they connect the concepts in the video to the reality around them?	I use several methods, such as group discussions, questions and answers, and observation sheets that they fill out after making observations. From their answers, I can see how far they understand the concepts taught. If there are still those who are confused, I will provide additional examples or invite them to discuss further.
5	What strategies do you use to make students more active and enthusiastic in observing and understanding their environment?	I try to make learning fun and interactive. For example, I give assignments in the form of games or challenges, such as finding and recording as many interactions of living things as possible around the school. I also give small awards to students who are active in sharing the results of their observations.

Based on the results of interviews with Grade IV Teachers, it can be concluded that connecting concepts in learning videos with real life is very effective in improving student understanding. Teachers use various methods, such as interactive discussions and direct observations, so that students can see for themselves how the concepts being learned occur around them. Despite challenges, such as time constraints and environmental conditions, teachers still try to overcome them by providing clear guidance and making learning more interesting through games and small awards. With this approach, students become more active, critical, and enthusiastic in learning, so that learning is not only theoretical, but also applicable in everyday life.



**Table 4.** Interview with Grade V Teachers

No	Question	Answer
1	How do you encourage students to connect the information in the learning video to their daily lives?	I always start with a discussion after watching the video, where I ask students if they have ever experienced a similar situation to the one in the video. I also ask them to give examples from their surroundings that relate to the material being studied.
2	What benefits do you see when students make direct observations after watching the animated video?	Through direct observation, students can see the concepts they have learned in the video in real terms. For example, after watching a video about the water cycle, they can observe how rainwater flows into the gutter or seeps into the ground.
3	What are the biggest challenges in implementing this observation-based learning method?	One of the challenges I face is ensuring that all students are really focused on making observations. Some students sometimes only glance at the video without understanding what they are actually observing.
4	How do you assess students' understanding after they connect the concepts in the video to the reality around them?	I assess students' understanding through a discussion after the observation, where they are asked to convey what they saw and how it relates to the material being studied.
5	What strategies do you use to make students more active and enthusiastic in observing and understanding their environment?	I use a fun and hands-on learning approach. For example, I create small exploration activities around the school, where students have to look for and record things that are in accordance with the subject matter. I also use a question and answer method that encourages their curiosity.

Based on the results of interviews with Grade V Teachers, it can be concluded that connecting information in learning videos with real life really helps students understand concepts more concretely. Teachers use various strategies, such as discussions, direct observations, and environmental exploration, so that students can see for themselves how the theories they learn occur around them. Although there are challenges, such as students' lack of focus during observations, teachers overcome them by providing clear guidance and directed tasks. Evaluation of understanding is carried out through discussions, written assignments, and presentations, so that students can express their understanding in a more active way. This interesting and experience-based approach has been shown to increase students' enthusiasm and motivation in learning.

### **Interactive Classroom Manager**

Kaobula 2 Elementary School implements interactive classroom management by creating an active and enjoyable learning atmosphere. One way is by inviting students to discuss after watching learning videos. Through this discussion, students not only understand the material more deeply, but also learn to express opinions, listen to friends' views, and develop critical thinking skills. In addition, this school also facilitates collaboration between students to develop ideas from environmental-based learning. By working together on projects related to the surrounding environment, students can connect the theories they learn with real practices. This approach not only improves students' understanding of the material, but also fosters awareness of the importance of protecting the environment from an early age.



**Table 5.** Interview with Grade IV Teachers

No	Question	Answer
1	What strategies do you implement to create an active learning atmosphere in the classroom?	I use interesting learning media, such as educational videos and games, and encourage discussions to increase student participation.
2	What benefits do you see from the discussion method after watching the learning video?	Students understand the material more easily, dare to express their opinions, and learn to think critically and respect the opinions of friends.
3	How do you facilitate collaboration between students in environment-based learning?	I divide students into small groups to observe the surrounding environment, discuss their findings, and create simple, relevant projects.
4	What challenges do you face in implementing interactive classroom management, and how do you overcome them?	The main challenge is the difference in students' levels of understanding. I overcome this by providing additional guidance for those who need it.
5	How do students respond to the learning methods you implement, and is there a change in their participation?	Students become more enthusiastic, actively ask questions, and are more confident in expressing their opinions, so that the classroom atmosphere becomes more lively and enjoyable.

Based on the results of interviews with Grade IV Teachers, interactive classroom management at Elementary School 2 Kaobula is carried out with various strategies, such as the use of interesting learning media and discussions after watching videos. This method has proven effective in improving student understanding and training them to think critically and dare to express their opinions. In addition, environment-based learning is facilitated through group work that encourages collaboration and active student involvement. Although there are challenges in the differences in students' levels of understanding, teachers overcome them by providing additional guidance. Students' positive responses can be seen from their increased participation in learning, creating a more lively and enjoyable classroom atmosphere.

**Table 6.** Interview with Grade V Teachers

No	Question	Answer
1	What strategies do you implement to create an active learning atmosphere in the classroom?	I implement project-based learning and interactive Q&A to encourage students to think more actively and participate.
2	What benefits do you see from the discussion method after watching the learning video?	Students find it easier to understand the material, develop communication skills, and learn to work together in drawing conclusions.
3	How do you facilitate collaboration between students in environment-based learning?	I invite students to make direct observations in the surrounding environment, then they discuss and make reports or presentations.
4	What challenges do you face in implementing interactive classroom management, and how do you overcome them?	Some students lack confidence in speaking, so I try to create a comfortable atmosphere and provide motivation so that they are braver.
5	How do students respond to the learning methods you implement, and is there a change in their participation?	Student participation increases, they are more active in discussions and more enthusiastic about participating in learning because they feel more involved

The results of interviews with Grade V Teachers show that interactive learning strategies at Elementary School 2 Kaobula are carried out through a project-based

approach and questions and answers that encourage students to be more active. Discussions after watching videos help students understand the material, improve communication skills, and build cooperation in drawing conclusions. In environment-based learning, students are invited to conduct direct observations and compile reports, so that they can connect theory with real practice. The main challenge faced is the lack of self-confidence of some students, but teachers try to overcome this by creating a comfortable learning atmosphere and providing motivation. Students' responses are also positive, as seen from the increasing participation and enthusiasm in the learning process.

### **3.2 Discussion**

The use of animated videos as a learning medium has a positive impact on student understanding. Animated videos that are adjusted to the curriculum and the level of student understanding can make learning more interesting, interactive, and easy to understand. In addition, the relevance of the video to the student's environment is also an important factor in increasing the effectiveness of learning, because students find it easier to connect the material to their real experiences. However, there are several challenges in implementing animated videos, especially related to limited access to technology and internet networks. However, teachers at Kaobula 2 Elementary School were able to overcome these obstacles with various strategies, such as downloading videos in advance or using illustrations as an alternative. This shows that teacher creativity and innovation play a very important role in creating effective and enjoyable learning for students. With continued efforts, the use of technology-based learning media can continue to develop and provide greater benefits for the teaching and learning process.

The concept of learning in videos with real life is an effective strategy to improve student understanding. Through interactive discussions and direct observation, students can see for themselves how the theories learned are applied in everyday life. Teachers also provide clear guidance so that students are more focused on observing their environment, so that learning becomes more meaningful and not just memorization. Although there are several challenges, such as time constraints and lack of student focus in observation, teachers have managed to overcome them with various creative strategies, such as giving exploration assignments, group discussions, and awards to increase student motivation. With a fun and experience-based approach, students become more active, enthusiastic, and critical in learning. This shows that learning that is linked to the reality around them can provide a deeper and more applicable understanding.

Interactive classroom management has a positive impact on the learning process. The strategies implemented, such as discussions after watching videos, project-based learning, and environmental observations, can improve students' understanding, communication skills, and courage in expressing opinions. In addition, collaboration in groups helps students learn to work together and connect theory with real practice, so that learning becomes more meaningful. Although there are challenges, such as differences in understanding levels and lack of self-confidence in some students, teachers try to overcome them with additional guidance and create a comfortable learning atmosphere. As a result, students are more enthusiastic, active in discussions, and more confident in participating in class. With the right approach, interactive

classroom management can create a fun and effective learning environment for students' academic and social development.

#### 4. Conclusion

The role of teachers in implementing environmental-based learning media through animated videos at Kaobula 2 Elementary School is very important to ensure effective and meaningful learning. As a designer of learning media, teachers must be able to adjust animated videos to students' needs and the applicable curriculum. The selection or creation of animated videos must also consider the relevance to the students' environment so that the material presented is more contextual and easy to understand. Thus, students can more easily relate learning concepts to real experiences around them. In addition, teachers act as a liaison between the concepts in the video and the reality of everyday life. After watching the animated video, teachers can invite students to discuss and conduct direct observations in the surrounding environment to strengthen their understanding. In the learning process, teachers also function as interactive class managers by creating an active and enjoyable atmosphere. Group discussions and collaboration between students can be facilitated to develop creative ideas related to environmental-based learning. With this approach, students not only understand the material theoretically, but are also able to apply it in real life.

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