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Improving Science Learning Outcomes Through Audiovisual Media at Grade V SDN 011 Pondok Gelugur

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ABSTRACT

Background: The problem that occurs at SD Negeri 011 Pondok Gelugur is the lack of interest and attention of students in participating in learning, so that students' initial learning results do not reach the predetermined KKM limits.

Objective: This research is Classroom Action Research (PTK) which aims to determine whether the application of audio-visual media in learning about food digestive organs in humans can improve learning outcomes for class V students at SD Negeri 011 Pondok Gelugur.

Methods: Classroom action research conducted in 2 cycles consists of four main research components, namely: planning; implementation; data collection; and reflection. The research subjects were class V (Fifth) students with 4 male and 6 female students for the 2024/2025 academic year. Data analysis was conducted using learning mastery percentage. The success indicator was defined as a minimum of 80% of students achieving the KKM score.

Results: In cycle I, the learning outcomes of students were known to be 5 students who achieved a score above the KKM with an average class score of 71.5. Furthermore, in cycle II improvement activities, student learning outcomes increased to 9 students achieving scores above the KKM with an average class score of 76.5.

Conclusion: The conclusion is that the use of audio-visual media makes learning more interesting and can increase students' interest and learning outcomes in science subjects, and learning objectives can be achieved well as evidenced by the significant increase in student learning outcomes.

INTRODUCTION

The background of this research focuses on the importance of improving student learning outcomes in Natural Sciences (IPA), particularly on the topic of the human digestive system in fifth grade students at SDN 011 Pondok Gelugur. Based on initial observations, it was found that student learning outcomes in IPA are still relatively low. One contributing factor is the lack of variety in learning methods and the tendency to use conventional approaches

such as lectures. This results in students being less enthusiastic in participating in learning, resulting in low conceptual understanding (Harahap, 2020).

Furthermore, students often struggle to understand abstract material, such as the workings of organs in the digestive system. This difficulty can impact their ability to apply science concepts in everyday life. To address these challenges, innovations in the use of learning media are needed to simplify abstract concepts into more concrete and understandable concepts (Fatmawati et al., 2021).

Audiovisual media is considered an effective solution for improving student learning outcomes. This media combines visual and audio elements to provide a more interactive and engaging learning experience. Using audiovisual media, material on the human digestive system can be presented in the form of animations or educational videos that depict the digestive process in detail and dynamically. This is expected to facilitate student understanding and increase their interest in science learning (Christian et al., 2022).

The use of audiovisual media also aligns with the needs of students in today's digital era, where technology has become an essential part of everyday life. Therefore, this study aims to examine the extent to which audiovisual media can improve student learning outcomes in science subjects in grade V of SDN 011 Pondok Gelugur in the 2024/2025 academic year. Therefore, it is hoped that this research can make a positive contribution to the development of more effective and innovative learning methods (Bungalangan, 2020).

Menurut Iskandar (1996) Science is a subject that studies natural phenomena. The science material in fifth-grade elementary schools is extensive, so the presentation must be engaging and engaging so students can better understand the material (Wisudawati & Sulistyowati, 2014). Science lessons at SD Negeri 011 Pondok Gelugur in the 2023/2024 academic year have not met expectations. Students are not interested and do not pay attention to teacher explanations. Consequently, the initial test results obtained show that out of 10 fifth-grade students, 7 students experienced incomplete learning, while the remaining 3 students experienced incomplete learning with a KKM (Minimum Completeness Criteria) score of 70 (Tegeh & Dwipayana, 2019).

From the results of the observation, it was found that the low learning outcomes of science on the human digestive system material for class V students at SDN 011 Pondok Gelugur were caused by several factors that influenced the learning process. Factors that influenced the science learning process included (1) the learning methods used by teachers were not varied,

(2) students' low willingness to learn science, (3) environmental conditions that did not support students in learning, and (4) the lack of use of learning media (Ode, 2023).

Learning media are tools, means, intermediaries, and connectors for disseminating, carrying, or conveying messages and ideas, so that they can stimulate the thoughts, feelings, actions, interests, and attention of students in such a way that the teaching and learning process occurs within the students. This is especially true for Natural Sciences (IPA) lessons, which develop deductive analytical thinking skills by using various concepts with IPA principles to explain various natural phenomena (Firmansyah, 2020).

Based on research results (S. M. Iskandar, 1996) that audiovisual media can arouse students' enthusiasm for learning so that the material taught by teachers can be accepted by students so that student learning outcomes can improve. The use of technology in audiovisual at SD Negeri 011 Pondok Gelugur is expected to be able to increase focus and interest, this is because audiovisual is accompanied by interesting images and sounds.

Teachers are able to deliver lessons using the internet and clearly and in detail present the digestive system to students, thereby improving student learning outcomes. Learning outcomes are behavioral changes that occur in a person after participating in the teaching and learning process. These changes encompass cognitive, affective, and psychomotor aspects. Learning outcomes also serve as the basis for measuring and reporting student academic achievement (Nurcahyanti & Tirtoni, 2023).

Natural science is a translation of the English word "natural science." Translated literally, science is the study of nature. Literally, it is scientific knowledge that is rational and objective. Natural science, on the other hand, refers to the study of all phenomena in nature, both living and nonliving (Sulfemi, 2018). Audio-Visual Media The word media comes from the Latin medius, which literally means 'middle', 'intermediary', or 'messenger'. In Arabic, media is an intermediary or messenger from the sender to the recipient.

Dale stated in (Cahyadi, 2019), that audio-visual materials can provide many benefits as long as the teacher plays an active role in the learning process. Some practical benefits of using teaching media in the teaching and learning process are as follows: (1) Learning will attract more attention from students so that it can foster learning motivation, (2) Learning materials will have clearer meaning so that it is easier for students to understand and enable them to master and achieve learning objectives, (3) Teaching methods will be more varied, not just verbal communication through words spoken by the

teacher, so that students do not feel bored and teachers do not run out of energy (J. Iskandar & Suprianto, 2019).

Students can do more learning activities because they not only listen to the teacher's explanation, but also other activities such as observing, doing, demonstrating, acting, and so on (Taqiya & Reffiane, 2019). The novelty of this research lies in the systematic application of audiovisual media through a Classroom Action Research (CAR) design at SDN 011 Pondok Gelugur, an elementary school in a remote area of Lubuk Batu Jaya District, Indragiri Hulu Regency, which has never received similar interventions before.

Unlike previous research, which has generally been conducted in urban schools with complete facilities, this study examines the effectiveness of audiovisual media in the context of limited digital infrastructure in rural schools. Therefore, the findings of this study are expected to provide an empirical contribution to the development of adaptive and contextual science learning strategies in areas with limited access to technology.

RESEARCH METHOD

The research subjects were fifth-grade students in the 2024/2025 academic year, consisting of 4 male students and 6 female students. The research location was the location used to conduct the research to obtain the desired data. This research took place at SD Negeri 011 Pondok Gelugur, Lubuk Batu Jaya District, Indragiri Hulu Regency. The research time was the time the research took place (Sugiyono, 2019).

Observations were conducted by colleagues Juharni, S.Pd., SD, and Delfi Lisari, S.Pd., teachers at SD Negeri 011 Pondok Gelugur, to observe the learning process using observation sheets. Supervisor 1, who was tasked with guiding the implementation of PKP for students in the PKP guidance class, and the Principal of SD Negeri 011 Pondok Gelugur, were also involved. The classroom action research procedure consisted of four main components: planning; implementation; data collection; and reflection.

The planning stage included the following steps: Creating a lesson plan (RPP) for improving science subjects with the sub-title "The Human Digestive System and Functions," Preparing audiovisual media in the form of a projector, and preparing test questions after the lesson (Ahyar et al., 2020). Data collection in this study used tests. Tests are a measurement tool for ability, consisting of a set of questions used to determine whether the material presented has been mastered. Therefore, the researcher used tests in this study to determine the extent of students' mathematical conceptual understanding of the material they had learned. At this stage, the researcher reflected on why students' learning outcomes had not yet reached completion.

This prompted the researcher to further increase student engagement, along with the use of engaging audiovisual learning media, to ensure that students' interest and learning outcomes at SD Negeri 011 Pondok Gelugur meet expectations. To support the research results and assessment, data collection was conducted. The author used two types of data collection techniques: quantitative and qualitative (Yuliawan, 2021).

Data analysis in this study was conducted quantitatively and qualitatively. Quantitatively, data were analyzed using the learning completion percentage with the formula: P = (Number of students who completed / Total number of students) x 100%. The indicator of success in this study was determined if at least 80% of students achieved the Minimum Completion Score (KKM) (≥70). Qualitatively, learning activity data were analyzed based on observation sheets filled out by observers during the learning process.

RESULT AND DISCUSSION

In this study, the researcher acted as the teacher. At the beginning of the lesson, the teacher opened the lesson with a greeting, followed by attendance checks and inquired about the class situation to determine if any students were absent and the reasons for their absence. The teacher conveyed the learning objectives to be achieved in this first meeting, including an explanation of the human digestive organs. After this lesson, students were expected to achieve the desired learning objectives (Taqiya & Reffiane, 2019).

The next step is for the teacher to motivate students by showing them a learning video entitled "The Human Digestive System and Functions." After that, the teacher explains the learning material using audiovisual media based on the material that has been prepared previously. Next, the teacher evaluates the activities that have been carried out by reviewing material that has not been understood by the students. Then, the teacher gives students worksheets to determine their absorption of the material that has been taught. The teacher corrects the students' worksheets. Next, the teacher conveys the learning objectives to be achieved in the second meeting, including the human circulatory system (Ramadhani, 2021).

In the action process in cycle II, the researcher still acted as the teacher. As in cycle I, the teacher first opened the lesson with a greeting. Then, the teacher took attendance and prepared the classroom for the learning process. The activities in cycle II remained the same as in the first meeting. Next, the teacher conveyed the learning objectives to be achieved, including the human digestive system and organs, by improving the learning in cycle I (Lubis & Mavianti, 2022).

The core learning activity in cycle II, meeting two, involves the teacher dividing students into groups and asking them to observe a video presented to the class. Students respond to the video. The teacher guides students in a positive group discussion. In the final activity, the teacher summarizes the learning material and provides a post-test for students (Jubaedah & Rahim, 2022).

From the results of the study, out of 10 students in the learning activities. After learning in cycle I, the learning outcomes of students were known to be 5 students who achieved scores above the KKM with an average class score of 71.5. Furthermore, in the improvement activities of cycle II, the learning outcomes of students increased to 9 students achieving scores above the KKM with an average class score of 76.5. For more details, the increase in student learning outcomes from cycle I activities to cycle II improvement activities can be seen in the following graph:

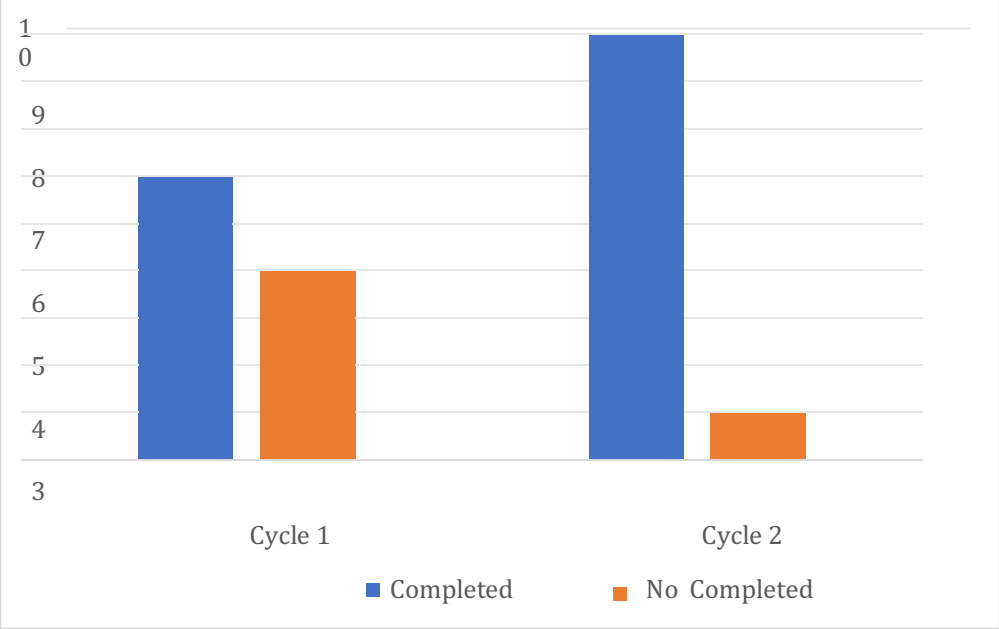

Figure 1. Student Learning Completion

The learning process is a continuous transformation of behavior experienced by a person through experience, practice, and interaction with the surrounding environment (Kharis, 2019). Overall, learning is organized to optimize attitudes and provide the knowledge and skills needed to adapt to society. Furthermore, learning also aims to shape students' personalities, fostering attitudes, values, norms, and morals that emerge within them (Heo & Toomey, 2020).

Changes in students after carrying out learning activities include changes in cognitive, affective, and psychomotor aspects, and these results are referred

to as student learning outcomes. Learning achievement, which is the result of the teaching and learning process, includes changes and the formation of a person's behavior (Darmawan et al., 2021).

Based on previous research, the use of audio-visual media can improve students' grades, this is in accordance with what Sulfemi (2018) stated, that using audio-visual media can make: 1) Learning more interesting for students so that it can foster learning motivation; 2) Learning becomes clearer and more meaningful, so that it can be understood by students, 3) Students in learning activities, not only listen to the teacher's explanation, but also other activities such as observing, doing, acting, and demonstrating, and 4) Teaching models or methods will be more varied, not only verbal communication or lectures by the teacher, so that students do not feel bored, tired, and teachers do not run out of energy.

The use of learning media, such as audio-visual media, is an external form used by teachers as a tool to convey learning materials. The main purpose of using audio-visual media is to facilitate students' understanding of learning materials, while increasing their interest and motivation to learn. Audio-visual media, which involves the senses of hearing and sight simultaneously, such as in the form of videos, can provide an interesting and effective learning experience for students (Nurhana, 2022).

The significant improvement in learning outcomes from cycle I to cycle II in this study can be specifically attributed to the characteristics of the audiovisual media features used. First, the use of dynamic animation depicting the movement of a food bolus from the mouth to the large intestine helps students visualize abstract processes that cannot be directly observed. Second, the audio narration that accompanies each visual display reinforces conceptual understanding through the auditory channel simultaneously (dual coding theory). Third, the contrasting color display of each digestive organ makes it easier for students to visually distinguish the function of each organ. These three features collectively contributed to an increase in the average class score from 71.5 (cycle I) to 76.5 (cycle II), as well as an increase in the number of students achieving the Minimum Competency (KKM) from 5 to 9 students (50% to 90%).

CONCLUSION

Using audiovisual media makes learning more engaging and can increase students' interest and learning outcomes in science subjects, and learning objectives can be achieved well, as evidenced by the significant improvement in student learning outcomes. Based on these conclusions, there are several things teachers should do to improve the quality of learning, including the

following: (1) Teachers should use animated videos of the digestive system at the beginning of the lesson as apperception to activate students' prior knowledge and at the end of the lesson as reinforcement to strengthen material retention;

(2) Teachers should design discussion questions based on audiovisual displays so that students do not simply watch the video passively but are actively involved in analyzing the digestive process displayed; (3) In the context of schools with limited facilities, teachers can utilize a simple projector and download quality educational videos offline so that learning does not depend on an internet connection; and (4) Teachers need to conduct focused reflection after each CAR cycle by comparing learning completion percentage data to identify aspects of media use that still need improvement.

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