



Application of Audio Visual Learning Media to Improve Learning Outcomes of Nutritious Eating Materials in Grade VIII F SMPN 8 Banjarbaru Students

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Abstract

This research against the background of low student learning outcomes on nutritious food materials shows the need to implement more interesting and meaningful learning strategies. Although audio-visual media has been widely used in learning, classroom action research examining its use in nutritious food materials by integrating problem-based LKPD, group discussions, and collaborative learning activities is still limited. This study aims to describe the improvement of student learning outcomes through the application of learning that utilizes audio-visual media on nutritious food materials. This study uses the Classroom Action Research (PTK) method which is carried out in two cycles with 25 research subjects in class VIII F SMP Negeri 8 Banjarbaru. Data was collected through learning outcome tests, observation sheets of learning activities, and learning motivation questionnaires. The data was analyzed in a quantitative descriptive manner by calculating the percentage of learning completeness, learning activities, and learning motivation of students in each cycle. The results showed that the learning completion percentage increased from 40% in the pre-cycle, to 68% in the first cycle, and 88% in the second cycle. The average grade point of the class also increased from 71 pre-cycle, to 76 in cycle I and 80 in cycle II. Students' learning activities have increased, which is marked by an increase in the percentage of students in the good and excellent categories from 20% in the pre-cycle to 48% in Cycle I and 80% in Cycle II. Learning motivation as supporting data also increased from 38.00% in pre-cycle to 56.00% in Cycle I and 71.33% in Cycle II. The findings of the study indicate that the use of audio-visual media supported by problem-based LKPD, group discussions, interactive quizzes, and teacher assistance during the learning process contributes to improving students' learning outcomes, motivation, and learning activities on nutritious food materials.

Keywords: Audio Visual Media; Learning Outcomes; Nutritious Food; Classroom Action Research.

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INTRODUCTION

21st century education emphasizes meaningful, student-centered learning, so students are expected not only to master knowledge theoretically, but also to have the ability to understand, relate and apply that knowledge in daily life. In the context of learning Physical Education, Sports, and Health (PJOK), students are expected to be able to understand the concept of a healthy lifestyle, including the importance of consuming nutritious food, and apply it in daily life habits. Meaningful learning is also in line with the deep learning approach, which is learning that emphasizes understanding concepts as a whole and the interconnectedness between concepts, not just memorizing facts (Biggs, 2011)

However, the reality is that students' understanding of the importance of nutritious food is still low. Adolescents tend to eat fast food and do less physical activity so that it has an impact on their health and fitness (Sudiarti et al., 2024). This condition was also found in grade VIII students of SMPN 8 Banjarbaru based on the results of initial observations during PPL activities. Of the 25 students, only 10 students (40%) have achieved the Minimum Completeness Criteria (KKM) of 75, while the other 15 students (60%) have not achieved completeness. In addition, students show behaviors that do not reflect a healthy lifestyle, such as low consumption of vegetables and fruits and lack of activity in physical activity.

The low learning outcomes are influenced by several factors, including lack of motivation to learn, low student involvement in the learning process, and the use of learning media that has not been able to help students understand the material contextually (Hidayat et al., 2025). In PJOK learning, nutritious eating materials are not sufficiently understood through theoretical explanations, but need to be supported by concrete visualizations so that students can more easily understand the relationship between healthy food and body health.

One alternative that can be used is audiovisual learning media. Audiovisual media combines elements of images and sounds so that they are able to present material in a more concrete, interesting, and easy-to-understand way for students. Previous research has shown that the use of audiovisual media in PJOK learning can increase student motivation, attention, and learning outcomes (Arham, 2023). In addition, video-based media can also help students understand the relationship between a healthy diet and physical activity (Iswahyudi, Sugiharto Akip, 2025). Other research shows that the use of learning videos can improve students' understanding of concepts and involvement in the learning process (Purbarani et al., 2018).

However, previous research generally only focused on the use of audiovisual media to improve PJOK learning outcomes in general and has not studied its application specifically to nutritious eating materials. In addition, previous research assessed more aspects of cognitive learning outcomes, while student motivation and involvement have not been analyzed simultaneously in the context of PJOK learning. Therefore, research that integrates audiovisual media with problem-based worksheets and group discussion activities is still needed to improve learning outcomes, motivation, and student engagement more comprehensively.

The novelty of this research lies in the integration of audiovisual media with problem-based student worksheets and group discussion activities in learning nutritious eating materials in PJOK subjects. Through this integration, students not only obtain information through visual impressions, but also actively engage in discussions, problem-solving, and reflection on the application of a healthy lifestyle in daily life. Based on this description, the researcher is interested in conducting Classroom Action Research (PTK) with the title *"The Application of Audiovisual Learning Media to Improve the Learning Outcomes of Nutritious Eating Materials in Grade VIII Students of SMPN 8 Banjarbaru."* This research is expected to improve student learning outcomes while increasing student motivation and involvement in the PJOK learning process in a more meaningful way.

METHOD

Research Design

This study employed a collaborative and participatory classroom action research design. Classroom action research is a systematic inquiry conducted during the teaching and learning process to identify classroom problems, implement appropriate instructional actions, and improve the quality of both the learning process and student learning outcomes (Kurniah, 2019). The term classroom action research consists of three essential components: research, action, and classroom. Research refers to a systematic process of collecting and analyzing data, action refers to a planned intervention intended to produce improvement, and classroom refers to the learning setting in which the action is implemented (Arikunto, 2013, as cited in Machali, 2022). Therefore, classroom action research enables teachers and researchers to collaboratively test alternative instructional strategies and address practical problems encountered during classroom learning (Solehan & Oktafiana, 2023).

Research Setting

The research was conducted at SMPN 8 Banjarbaru, located in Guntung Manggis, Landasan Ulin District, Banjarbaru City, South Kalimantan, postal code 70721. The study was carried out from March to May 2026 during the even semester of the 2025/2026 academic year.

Research Subject

The research subjects were 25 students of Grade VIII F, consisting of 13 male and 12 female students. The class was selected based on the results of preliminary observations showing that students' learning outcomes on nutritious food material were relatively low. Of the 25 students, only 10 students, or 40%, achieved the Minimum Completeness Criteria of 75, while 15 students, or 60%, had not achieved learning completeness.

Research Procedure

The classroom action research was conducted in two cycles using Kurt Lewin's model. Each cycle included planning, acting, observing, and reflecting stages.

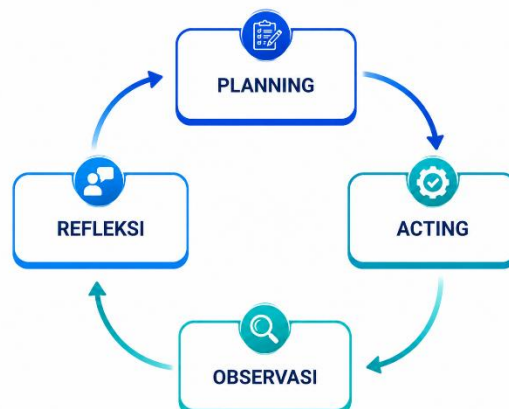


Figure 1. Kurt Lewin's Model PTK Cycle

Cycle I

Planning

At the planning stage, the researcher prepared the learning materials and research instruments required for implementing audio-visual learning media. The activities included:

1. compiling teaching modules, lesson plans, and learning steps;
2. preparing a learning video about balanced nutrition and physical activity with a duration of approximately 10 minutes;
3. preparing learning media in the form of laptops, LCD projectors, and speakers;
4. preparing group discussion sheets and research instruments consisting of 30 complex multiple-choice questions, learning motivation questionnaires, observation sheets, and documentation; and
5. determining the Minimum Completeness Criteria at 75.

Acting

The Cycle I action was conducted in one meeting for 3 × 40 minutes. The learning process consisted of introductory, core, and closing activities. During the introductory activity, the teacher opened the learning process, provided an introduction to healthy lifestyles, conveyed the learning objectives, and related the material to students' daily lives.

During the core activity, the teacher showed a video about balanced nutrition and physical activity for approximately 10 minutes. Students watched the video and recorded important information. The teacher subsequently explained and reinforced the material presented in the video. Students were divided into small groups to discuss the benefits of nutritious food and the importance of physical activity. Representatives of each group then presented the results of their discussion. During the closing activity, the teacher and students concluded the material. Students were subsequently given an evaluation consisting of 30 complex multiple-choice questions.

Observing

Observation was conducted during the learning process to record students' attention to the teacher's explanation, focus while watching the video, participation in group discussions, willingness to answer and ask questions, and enthusiasm for learning. The observations were conducted using a structured student activity observation sheet.

Reflecting

The results of the action and observation were analyzed collaboratively by the researcher and the observer. The reflection results showed that audio-visual media had begun to increase students' interest in learning. However, several students remained unfocused and were not actively involved in discussions. Some students had also not achieved the Minimum Completeness Criteria. Therefore, improvements were prepared for Cycle II by using a more interactive video, providing additional assistance, and increasing teacher–student interaction.

Cycle II

Planning

The planning stage in Cycle II was based on the results of the Cycle I reflection. The improvements included:

1. revising the learning materials and instructional steps to make the learning process more interactive;
2. preparing a more interesting and communicative learning video with a duration of approximately 12 minutes;
3. adding question-and-answer activities while the video was being played;
4. preparing an evaluation consisting of 30 complex multiple-choice questions adjusted to the Cycle I reflection results; and
5. preparing an assistance strategy for students experiencing learning difficulties.

Acting

The implementation of Cycle II was carried out by improving several aspects of the Cycle I learning process. During the introductory activity, the teacher motivated the students and related the material to their daily food choices and healthy lifestyle practices.

During the core activity, the teacher showed a more interactive video of approximately 12 minutes about healthy menus and the effects of fast-food consumption. The teacher presented stimulus questions while the video was being played. Students then discussed healthy lifestyle solutions in heterogeneous groups. The teacher provided guidance to less-active students and reinforced the essential learning material.

During the closing activity, the teacher and students concluded the lesson. Students subsequently completed an evaluation consisting of 30 complex multiple-choice questions.

Observing

The observation in Cycle II focused on the same aspects used in Cycle I. The observers recorded students' attention, focus, participation, willingness to ask and answer questions, cooperation, and learning enthusiasm. The observation results were compared with the Cycle I results to identify changes in students' learning activities.

Reflecting

The Cycle II reflection was conducted by analyzing students' learning outcomes, learning activities, and motivation. The reflection results showed that students became more focused, active, and enthusiastic during the learning process. Most students had achieved the Minimum Completeness Criteria, and student activities had reached the predetermined success category. Therefore, the classroom action research was concluded in Cycle II.

Data Collection Techniques

In this study, the researcher used three data collection techniques, namely observation, question tests, motivational questionnaires and documentation which are described as follows:

Observations

Observations are carried out to observe student activities and involvement during the learning process. The instrument used is in the form of student observation sheets containing six aspects observed, namely:

- Students pay attention to the teacher.
- Students focus on looking at audio-visual media.
- Students take notes on important material.
- Students answered the teacher's questions.
- Students actively ask questions.
- Students show enthusiasm for learning.

The assessment is carried out by giving a score on each aspect observed. If students meet 5–6 aspects, they get a score of 4 (very good), 4 aspects get a score of 3 (good), 3 aspects get a score of 2 (adequate), and 1–2 aspects get a score of 1 (less). The results of the observation are then checked according to the aspects obtained by the students and then given a score and categorized according to the predetermined assessment criteria.

Observations were carried out directly during learning activities to obtain data on students' activeness, attention, cooperation, and response to the learning provided. The

observation data is used as evaluation and reflection material to determine the development of student activities in each research cycle.

According to (Sugiyono, 2016) "Observation is a data collection technique that has specific characteristics when compared to other techniques." Observation techniques allow researchers to obtain more tangible data about student activities during learning. In addition, (Saádi, 2025) Explaining observation is a systematic process of recording patterns of human behavior, objects and events without using questions or communicating with the subject. The process turns facts into data. The term observation is directed at the activity of paying attention accurately, recording the phenomenon that arises, and considering the relationship between aspects in the phenomenon. With observation, researchers can determine the increase in student activity and involvement in each learning cycle.

The observation instrument in this study uses an observation sheet in the form of a checklist to assess student activities during the learning process. The data obtained from the observation results is used as a reflection material to determine the success of the actions carried out in each research cycle.

Test Questions

The question test is used to determine the level of students' understanding of healthy lifestyle materials, especially about balanced nutrition and physical activity. The test instrument used was in the form of multiple-choice questions as many as 30 questions consisting of balanced nutrition materials and physical activity. Tests were given at the pre-cycle, cycle I, and cycle II stages to determine the improvement of student learning outcomes after the implementation of the audio-visual learning model.

According to (Kadir, 2015) Learning outcome tests are used to determine the level of students' mastery of the material that has been taught. Therefore, the test technique was chosen because it was able to provide objective data about students' abilities after the learning process took place. In addition, (Dahlia et al., 2025) states that "data collection techniques are an important step in obtaining accurate information in educational research. Based on this opinion, the use of the test in this study aims to obtain data on student learning outcomes in a measurable and systematic manner. The assessment of test results refers to the Minimum Completeness Criteria (KKM) that have been set by the school, which is 75. Students who obtain a score of ≥ 75 are declared "Complete", while students who obtain a score of < 75 are declared "Incomplete". The percentage of learning completeness is used to determine the success of classical learning. The following is the formula for the percentage of learning completion:

$$\text{Persentase Ketuntasan} = \frac{\text{Jumlah Siswa Tuntas}}{\text{Jumlah Seluruh Siswa}} \times 100\%$$

According to (Hutagalung, 2020) that "learning completeness is determined based on the achievement of student scores against the Minimum Completeness Criteria (KKM) that have been set by the school." Therefore, the use of KKM in this study is used as a reference to determine the success of student learning both individually and classically.

Learning Motivation Questionnaire

The learning motivation questionnaire was used to determine the level of students' motivation towards learning nutritious eating materials using audio-visual learning media. A questionnaire is given to students at the end of each cycle to find out the change in learning motivation after the action is given. The questionnaire instrument uses the Likert scale with four answer choices, namely:

- Strongly Agree (SS)
- Agree (S)
- Disagree (TS)
- Strongly Disagree (STS)

Each statement in the questionnaire is prepared based on indicators of student learning motivation, such as interest in learning, motivation and enthusiasm for learning, focus and attention, use of audio-visual media, student activeness, and cooperation in learning. To obtain good learning outcomes. Scoring on the learning motivation questionnaire uses the following conditions:

Table 1. Learning Motivation Scale Criteria

Criteria	Score
Strongly Agree (SS)	4
Agree (S)	3
Disagree (TS)	2
Strongly Disagree (STS)	1

The research instruments in the form of learning outcome tests, observation sheets for learning activities, and learning motivation questionnaires were validated by two validators consisting of supervisors and pamong teachers. Validation was carried out on aspects of indicator suitability, material content, instrument construction, and language clarity. Based on the validation results, the instrument was declared feasible to use after revision was made according to the validator's suggestion. The reliability test of the learning motivation questionnaire using Cronbach's Alpha obtained a value of 0.82 which indicates a reliable category. Observation of learning activities was carried out by two observers to improve the consistency of assessment during the implementation of the action.

Table 2. Results of the Feasibility Test of Learning Motivation Instruments

Reliability Statistics	
Cronbach's Alpha	N of Items
.828	30

To find out the level of student motivation during learning, data from the learning motivation questionnaire was analyzed and then categorized into very high, high, low, and very low categories. According to (Sugiyono, 2018) The Likert scale is used to measure a person's attitudes, opinions, and perceptions of a social phenomenon. According to (Kurniawati & Judisseno, 2022) The Likert scale has been proven to be able to assess the effectiveness of the registration stages carried out in more detail and accurately. Therefore, the use of the Likert scale questionnaire in this study aims to obtain data on students' learning motivation in a systematic and measurable manner. In addition, the learning motivation questionnaire was used as supporting data to determine the effect of the application of the audio-visual learning model on increasing the learning motivation of grade VIII F students at SMP Negeri 8 Banjarbaru.

Table 3. Reference criteria for categorization intervals

Number	Interval	Categories of Learning Motivation
1	$M_i + 1.5 SD_i < X$	Very High
2	$M_i + 0.5 SD_i < X \leq M_i + 1.5 SD_i$	Height
3	$M_i - 0.5 SD_i < X \leq M_i + 0.5 SD_i$	Low
4	$X \leq M_i - 0.5 SD_i$	Very Low

Documentation

Documentation is used to obtain supporting data related to the research process. The documentation data in this study includes a list of student names, a list of student attendance, learning outcome scores, photos of learning activities, and other documents related to the implementation of classroom action research.

Documentation is carried out during the learning process starting from pre-cycle, cycle I, to cycle II. Documentation in the form of photos is used to strengthen evidence that learning activities with audio-visual models are actually carried out in the classroom. In addition, student score data is also used as part of the analysis to determine the improvement in student learning outcomes after actions are given. According to (Sugiyono, 2018), "A document is a record of events that have passed, can be in the form of writings, drawings, or monumental works of a person." Therefore, documentation techniques are used as a complement to research data so that research results become more accurate and reliable.

According to Bogdan and Biklen (2007) in the book (Abrar, 2024) mentioning that a document is a record of events that have passed, it can be in the form of writing, drawings, monumental works of a person. Therefore, it can be concluded that documents can be in the form of writings, drawings, and works. This document is very closely related to one of the data collection techniques called documentation. With documentation, researchers can strengthen

the results of the research because the data obtained is not only derived from tests, but also supported by real evidence during the learning process.

Research Instruments

This research instrument uses observation sheets, test questions, and motivational questionnaires as supporting data. To measure how well students understand nutritious food material, complex multiple-choice questions are given. The observation sheet is in the form of a checklist with scores for each element observed. If students meet 5–6 aspects, they get a score of 4 (very good), 4 aspects get a score of 3 (good), 3 aspects get a score of 2 (adequate), and 1–2 aspects get a score of 1 (less). In addition, this study also uses a learning motivation questionnaire with a Likert scale as supporting data to determine the level of student learning motivation during the learning process. The Likert scale used consists of four answer choices, namely Strongly Agree (SS), Agree (S), Disagree (TS), and Strongly Disagree (STS).

Success Indicators

This research is declared successful if 80% of students achieve a KKM/KKTP score of 75 and student activity reaches the "Good" category.

RESULTS AND DISCUSSION

RESULTS

This classroom action research was carried out in two cycles with the aim of improving students' learning outcomes about nutritious food by using audio-visual learning media. Before the research action was carried out, learning about nutritious eating in class VIII F still showed a low understanding of students on the importance of a healthy and nutritious diet and the importance of physical activity related to body health. During the learning process, some students were seen to be less active in participating in learning activities. Teachers still use the lecture method so that students easily feel bored and pay less attention to the material presented. In addition, the use of less interesting learning media causes students to have difficulty understanding the benefits of nutritious food for body health.

Based on the results of initial observation and pre-cycle tests conducted on 25 students of class VIII F, the results were obtained that as many as 60% or 15 students obtained a score below the Minimum Completeness Criterion (KKM) which was 75, while 40% or 10 students obtained a score above the Minimum Completeness Criterion (KKM) which was 75. The average grade of the class at the Pre-Cycle stage was 71.

Table 4. Pre-Cycle Learning Outcomes of Grade VIII F Students

Mastery Achieved	Not Achieving Mastery	Number of Students	Class Average Grade
10 students 40%	15 students 60%	25 students 100%	71

Then, based on the results of observation of student activities in the pre-cycle stage, it is known that student learning activities are still not optimal. Most students only pay attention to the teacher's explanations and look at visual media, but are still not active in asking questions, answering questions, and showing enthusiasm for learning during the learning process. In addition, there are still some students who lack focus and have not been actively involved in learning activities.

The results of observations show that the majority of students are in the "Sufficient" category. Of the 25 students, there were 28% or 7 students in the "Less" category, 52% or 13 students in the "Sufficient" category, 20% or 5 students in the "Good" category, and 0% or no students who reached the "Excellent" category. This condition shows that students' learning activities still need to be improved through the implementation of a more interesting and interactive learning model so that students are more active and enthusiastic in participating in learning.

Table 5. Percentage of Pre-Cycle Observation Score Criteria for Grade VIII F Students

Excellent	Good	Enough	Less	Number of Students
0 Students 0 %	5 Students 20 %	13 Students 52 %	7 Students 28 %	25 Students 100 %

The results of the pre-cycle learning motivation questionnaire showed that most students were in the low or very low category on almost all indicators of learning motivation. This condition shows that students do not have ideal learning motivation, especially in terms of focus and attention, student activeness, and cooperation in learning. As a result, additional actions are needed to increase the motivation and involvement of students in the learning process. One example is using audio-visual media in learning to improve student learning outcomes about nutritious food.

Table 6. Learning Motivation Results

Categories	Interest in learning	Motivation and enthusiasm for learning	Focus and attention	Utilization of audio-visual media	Student activeness	Collaboration in learning
Very high	12%	12%	12%	12%	12%	4%
Height	24%	28%	24%	28%	24%	32%
Low	48%	36%	28%	40%	32%	20%
Very low	16%	24%	36%	20%	32%	44%
Total	100%	100%	100%	100%	100%	100%



Figure 2. Documentation of Pre-Cycle Activities

Cycles I

Based on the results in the first cycle stage, the researcher began to use audio-visual learning media, namely videos that teach about nutritious food. Students become more interested in the lessons and begin to actively participate in learning activities. Learning about nutritious eating and the importance of physical activity that is also related to nutritious eating showed an increase compared to the pre-cycle stage. Students began to actively pay attention to the material, observe the learning media, and answer the questions given by the teacher, although there were still some students who lacked confidence to ask questions and express opinions.

Based on the results of the Cycle I test conducted on 25 students of class VIII F, the results were obtained that as many as 68% or 17 students had achieved scores above the Minimum Completeness Criteria (KKM) which was 75, while 32% or 8 students still obtained scores below the KKM. These results show an increase compared to the pre-cycle, where in the previous stage only 40% or 10 students completed and 60% or 15 students had not completed. Thus, there was an increase in learning completeness by 28% or an increase of 7 students who reached the KKM and the average class score at the pre-cycle stage was 76.

Table 7. Learning Outcomes of Cycle I Students of Grade VIII F

Mastery Achieved	Not Achieving Mastery	Number of Students	Class Average Grade
17 students 68%	8 students 32%	25 students 100%	76

Then, based on the results of observation of student activities in the implementation of Cycle I, student learning activities increased compared to pre-cycle conditions. In the pre-cycle stage, most students are still in the "Sufficient" and "Less" categories. Many students are less focused on paying attention to the teacher's explanations, have not actively asked or answered questions, and still lack confidence in participating in learning activities about nutritious eating and physical activity.

After learning actions were carried out in Cycle I using audio-visual media, there were changes in student activities during the learning process. Students begin to show better attention to the material presented by the teacher. Some students seem more enthusiastic when looking at the learning media, and start engaging in discussions and questions and answers. In addition, the classroom atmosphere becomes more conducive because students are more orderly in participating in learning activities.

The results showed that out of 25 students, 13 (52%) were in the "Good" category, 10 (40%) were in the "Good" category, and 2 (8%) were in the "Very Good" category. The number of students in the "Good" and "Excellent" categories increased when compared to the pre-cycle, while the number of students in the "Less" category decreased until there were no more students in the category. Compared to the pre-cycle stage, students appeared to be more enthusiastic and active during learning. Their learning outcomes also improved. The increase in observation results in Cycle I shows that the use of audio-visual media begins to increase students' understanding, activity, and involvement in learning, although the "Sufficient" category still dominates. However, improvements and strengthening are still needed in Cycle II so that more students can reach the "Good" and "Excellent" categories.

Table 8. Percentage of Observation Score Criteria for Cycle I

Excellent	Good	Enough	Less	Number of Students
2 Students 8 %	10 Students 40 %	13 Students 52 %	0 Students 0 %	25 Students 100 %

Based on the results of the learning motivation questionnaire in Cycle I, students' learning motivation has increased compared to the pre-cycle. Most of the students have been in the high category in the indicators of interest in learning, motivation and enthusiasm for learning, as well as focus and attention. However, student activeness and cooperation in learning still need to be improved because there are still students who are in the low and very low categories. These results show that the application of audio-visual media has begun to have a positive influence on students' learning motivation.

Table 9. Results of learning motivation cycle 1

Categories	Interest in learning	Motivation and enthusiasm for learning	Focus and attention	Utilization of audio-visual media	Student activeness	Collaboration in learning
Very high	4%	24%	20%	16%	16%	16%
Height	60%	36%	48%	36%	32%	28%
Low	12%	24%	12%	32%	28%	32%
Very low	24%	16%	20%	16%	24%	24%
Total	100%	100%	100%	100%	100%	100%



Figure 3. Documentation of Cycle I Activities

Cycle II

Based on the results in the Cycle II stage, learning about nutritious eating and the importance of physical activity related to a healthy lifestyle showed a better improvement than in Cycle I and pre-cycle. The use of the audio-visual learning model makes students more active, focused, and enthusiastic in participating in learning. Students began to dare to ask questions, answer questions, and be more actively involved in discussion activities during the learning process.

The results of the Cycle II test conducted on 25 students of grade VIII F, obtained results that as many as 88% or 22 students have achieved scores above the Minimum Completeness Criteria (KKM) which is 75, while 12% or 3 students still obtained scores below the KKM. These results show an increase compared to Cycle I which only reached 68% or 17 students completed. And there was an increase in learning completeness by 20% or an increase of 5 students who reached the KKM. Thus, the average grade of the class at the first cycle stage is 80.

Table 10. Cycle II Learning Outcomes for Grade VIII F Students

Mastery Achieved	Not Achieving Mastery	Number of Students	Class Average Grade
22 students 88%	3 students 12%	25 students 100%	80

Furthermore, based on the results of observation of student activities during Cycle II, it is known that student learning activities have increased significantly. Of the 25 students, none were in the "Less" category (0%), 5 students (20%) were in the "Sufficient" category, 15 students (60%) were in the "Good" category, and 5 students (20%) were in the "Very Good" category. These results show that most students are already active and enthusiastic in participating in learning compared to the previous stage.

Table 11. Percentage of Observation Score Criteria for Cycle II

Excellent	Good	Enough	Less	Number of Students
5 Students 20 %	15 Students 60 %	5 Students 20 %	0 Students 0 %	25 Students 100 %

In addition to learning outcomes and student activities, student learning motivation also increased in Cycle II. Based on the results of the learning motivation questionnaire in Cycle II, most of the students have been in the high and very high category in all learning motivation indicators. The increase can be seen in the aspects of interest in learning, focus and attention, the use of audio-visual media, student activity, and cooperation in learning. In addition, the number of students in the low and very low categories decreased compared to Cycle I. These results show that the application of audio-visual media is effective in increasing students' learning motivation during the learning process.

Table 12. Results of Cycle II Learning Motivation

Categories	Interest in learning	Motivation and enthusiasm for learning	Focus and attention	Utilization of audio-visual media	Student activeness	Collaboration in learning
Very high	28%	28%	28%	28%	20%	28%
Height	44%	40%	44%	52%	52%	36%
Low	16%	20%	20%	4%	16%	24%
Very low	12%	12%	8%	16%	12%	12%
Total	100%	100%	100%	100%	100%	100%

The results in Cycle II show that the use of audio-visual learning media has succeeded in increasing students' understanding, activities, and learning motivation regarding nutritious eating and the importance of physical activity. The completeness of student learning has been classically achieved, and the learning process takes place more actively, effectively, and fun than in the pre-cycle and Cycle I stages.

Thus, based on the results of the learning motivation questionnaire as research supporting data, it shows that there is an increase in student motivation in each cycle consisting of six indicators, namely interest in learning, motivation and enthusiasm for learning, focus and attention, use of audio-visual media, student activeness, and cooperation in learning, the average learning motivation was obtained from 38.00% in the pre-cycle to 56.00% in the first cycle, so that it has increased by 18%. Furthermore, in Cycle II, the average motivation to learn again increased to 71.33%, or an increase of 15.33% compared to Cycle I. Overall, students' learning motivation increased by 33.33% from pre-cycle to Cycle II. This increase shows that the use of audio-visual media is able to increase students' interest,

attention, and participation during the learning process. Thus, increasing learning motivation also supports the improvement of students' learning outcomes in nutritious food materials.

Table 13. Average Learning Motivation of Grade VIII F Students

Stages	Average Motivation (%)	Categories
Pre-Cycle	38,00%	Low
Cycle I	56,00%	Medium
Cycle II	71,33%	Height



Figure 3. Documentation of Cycle II Activities

DISCUSSION

The increase in student learning outcomes on nutritious food materials shows that the actions taken during the research are able to help students understand the material better. The learning completeness that increased from 40% in the pre-cycle to 88% in the second cycle showed that learners not only remembered information, but also began to understand the relationship between nutritious food, physical activity, and health in daily life.

The increase is suspected to occur because the use of audio-visual media is able to present information through visual and auditory channels simultaneously. Video shows that contain images, animations, text, and sound help students receive information through more than one sense, making the material easier to understand. Students become more focused on learning and more active in group discussions. This is in line with the opinion (Kristi, 2018) which states that students' attention and understanding of learning materials can be improved through the use of audio-visual media. Nutritious food material that was previously abstract became more concrete because students can see examples of healthy foods, nutritional content, and their impact on body health directly through the media displayed.

In addition to the use of audio-visual media, the improvement in learning outcomes is also likely to be influenced by the use of problem-based LKPD and group discussion activities. Through LKPD, students not only receive information from teachers, but also engage in activities to identify problems, analyze information, and find solutions based on situations related to healthy eating. This activity encourages students to actively process information so that their understanding of concepts becomes more deep. Group discussions also provide opportunities for students to exchange opinions, clarify understanding, and build common knowledge through interaction with peers.

The improvement in learning outcomes in Cycle II is also suspected to be influenced by improvements in learning strategies carried out based on the reflection of Cycle I. Teachers provide clearer instructions in the use of LKPD, increase assistance during group discussions, and provide wider opportunities for students to ask questions and express opinions. In addition, the use of quizzes and interactive activities during learning helps to maintain students' attention so that their involvement in the learning process is better.

The increase in learning outcomes in this study also shows that there is a learning process that leads to the concept of deep learning. Students not only memorize the types of nutritious foods, but also understand their health benefits, relate them to physical activity, and relate them to healthy living habits in daily life. Through learning videos, group discussions, and problem-based LKPD, students are encouraged to analyze information, connect concepts with real experiences, and build more meaningful understanding. Thus, learning not only focuses on mastery of the material, but also on the ability of students to understand and apply the knowledge gained in the context of daily life.

The findings of this study are in line with the research (Arham, 2023) which shows that the use of audio-visual media can increase students' motivation, understanding, and learning activities so that it has an impact on improving learning outcomes. The results of this study also support the opinion (Istiqomah, 2023) which states that learning outcomes reflect the achievement of learning objectives which include aspects of students' knowledge and attitudes. The similarity of these findings can be seen in the increase in student involvement during the learning process which has an impact on improving learning outcomes. However, this study provides additional findings that the improvement of learning outcomes is not only influenced by the use of audio-visual media, but also by a combination of the use of problem-based LKPD, group discussions, interactive quizzes, teacher mentoring, and improvement of learning strategies in each cycle. Thus, the improvement in learning outcomes obtained is the result of the application of various learning components that support each other in creating a more active and meaningful learning experience.

CONCLUSION

Based on the results of the classroom action research that has been carried out in two cycles, it can be concluded that the application of learning that utilizes audio-visual media on nutritious food materials indicates an increase in learning outcomes of students in grade VIII F. The percentage of learning completeness increased from 40% in the pre-cycle to 68% in the first cycle and reached 88% in the second cycle. The average grade point of the class also increased from 71 in the pre-cycle to 76 in the first cycle and 80 in the second cycle. In addition, student learning activities showed an increase marked by an increase in the number of students who were in the good and excellent categories. Learning motivation as supporting data also increased from 38.00% in pre-cycle to 56.00% in Cycle I and 71.33% in Cycle II.

The findings of this study show that improving learning outcomes is not only related to the use of audio-visual media, but is also supported by the implementation of problem-based LKPD, group discussions, interactive quizzes, and teacher assistance during the learning process. The combination of these various strategies helps to create more active, contextual, and meaningful learning so as to support the improvement of student learning outcomes in nutritious food materials.

RECOMMENDATIONS

Based on the results of the research, PJOK teachers are advised to use audio-visual learning media as an alternative in learning activities to improve learning outcomes, motivation, and student involvement. The use of these media can be combined with group discussion activities and student-oriented learning models so that the learning process becomes more active, interesting, and meaningful. Students are expected to be more active in participating in learning, increasing their focus on learning, and understanding the importance of implementing a nutritious diet and physical activity in daily life.

Schools are also expected to be able to support the implementation of innovative learning by providing adequate facilities, such as projectors, speakers, and digital-based learning media. In addition, researchers are further advised to develop similar research using different media or learning models and apply them to other materials and levels of education in order to obtain more in-depth and varied research results.

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