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IMPROVEMENT STUDY RESULT OF SCIENCE THROUGH VISUAL AUDIO MEDIA IN SDN GUNUNG BUNDER 01 PAMIJAHAN BOGOR

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ABSTRACT

Most of the sixthgrade students at SDN Gunung Bunder 01 Pamijahan Bogor experience difficulties in learning Natural Sciences (IPA), especially in material for adapting living things to their environment. It was found that out of 18 students, only 8 students (44%) achieved KKM scores and those below KKM there were 10 students (66%). Where the KKM value determined by the school is 70. From the fact above, it is necessary to make efforts to further improve student learning outcomes in the material for adapting living things to their environment. One effort is to use audio-visual media in learning science. Research conducted using the Classroom Action Research approach Suharsimi Arikunto (2017: 19) defines Classroom Action Research as "Systemic Inquiry" conducted by teachers, principals, or school counselors to gather information about various schooling practices, including improving student learning outcomes. In the initial conditions (pre-cycle) student learning outcomes were very low, this was evidenced by the number of students who achieved KKM, only 8 students out of 18 students, with the lowest score being 40 and the highest score being 80. In cycle I it was seen that student learning outcomes had increased by 14 students who achieve KKM with the lowest score of 60 and the highest score of 100. In cycle II, student learning outcomes have improved well, this is based on formative test scores at the end of learning. 18 students (100%) experienced an increase in learning outcomes, although there was still 1 student (6%) who scored below the KKM. Using audio-visual media can improve student learning outcomes in science lessons on living things' adaptation to their environment.

Keywords: Classroom Teachers, Learning Media, Classroom Action Research.

INTRODUCTION

It is perfect for learning Natural Science (IPA). The student must achieve mastery of the learning objectives described in the learning assignment. Students must not only obtain comprehension of concepts and mastery of procedures and facts, but also develop process skills in a complete and collaborative form. Furthermore, the 2013 curriculum specifies that SCIENCE within the SD/MI educational unit encompass elements of living and nonliving natural phenomena, in addition to the mentioned objectives. As stated by Kumara (2016), an aspect covered in the curriculum relates to the process by which organisms adjust to their surroundings. Despite the fact that the topic of adaptation has been covered in classes IV and V before this one, the author believed it was necessary to make an effort to enhance students' comprehension and learning outcomes.

It will be challenging for students to comprehend the subsequent material if they have difficulty comprehending the preceding material. This is the source of a student's apprehension towards science, which may eventually turn the science into an embarrassing or a terrifying entity. Furthermore, when educators fail to use innovative approaches when it comes to utilizing media, models, and learning methods, the outcomes ultimately fall short of expectations or fail to reach their full potential.

Natural science is the science that studies natural phenomena, which are systematically organized based on human observations and results of experiments as well as general characteristics. Consider Winarni (2015), analysis, comprehensiveness, and accuracy in observation and study that creates a connection between two phenomena in order to provide a fresh perspective on an object are referred to as IPA learning. Furthermore, scientific methodologies are progressively and expeditiously refined to cater to the needs of elementary school pupils, including the comprehension of fertilization processes and the cultivation of scientific attitudes that empower students in primary schools to become involved in practical experiments that foster child development through a range of experimental phases including observation, classification, analysis, prediction, evaluation of hypotheses, explanation, application, and communication. The majority of the subjects studied in natural science are phenomena or objects that are not obvious throughout the educational journey. The specific characteristics of living organisms and the ways in which they adapt to their environments are two examples.

Understanding natural sciences most effectively requires an attention to product development, methodology, and emotion. IPA education consists of three fundamental components: methods, results, and scientific mental formation. As stated by Sulistyorini (2017). Each of these three components is complementary to the others. To begin, natural science as a product, followed by science as the scientific method and the necessary scientific skills for both students and instructors. The purpose of both is to generate new knowledge in the form of theories, laws, facts, principles, and other discoveries that are referred to collectively as the product of science. Natural science frequently finds its way into exhaustive and methodical textbooks as a result of the efforts of previous scientific pioneers. Teachers must utilize nature as scientific instruction in scientific learning. Nature is the most reliable and boundless source of information.

Furthermore, with regard to natural science as a process, science is commonly referred to as a scientific process due to the fact that it embodies a methodology or operational system that yields desired outcomes. (produk). "Processes" refers to thought and action methodologies utilized to address or resolve environmental issues. Therefore, natural knowledge necessitates the fundamental abilities that are commonly called "process skills" and are essential for scientific production. The instructor will not instruct students on how to comprehend the subject; rather, they will conduct experiments to develop foundational skills and draw conclusions, thereby enabling students to learn and comprehend concepts.

Thirdly, "attitude" refers to the "scientific attitude toward nature" as it relates to science education at SD/MI. This is mentioned in the section Natural Sciences as a fertilization of Attitudes. At least nine dimensions of scientific attitude can be instilled in elementary school students: inquisitiveness, an inclination towards acquiring new knowledge, a disciplined mindset, reticence, maintaining objectivity, reflective thought, responsible thought, an open-minded attitude, and a gotong royong spirit.

Through discussion, experimentation, simulation, and practical action, students can enhance this kind of scientific thinking. In this context, scientific curiosity manifests as the constant pursuit of accurate explanations for observed phenomena. Children in the SD/MI age range express their

attention by asking questions of themselves, classmates, and teachers. The "wall of ignorance" can be broken down, and knowledge can be acquired through collaboration. Understanding that other people's information may be more complex than their own information will improve students' collaborative skills. As a result, he felt the need to collaborate with others to improve his skills.The fact that innovative approaches to the study of nature are associated with the natural sciences suggests that science is responsible for the process of innovation and the collection of new facts, ideas, or perspectives. The aim of science education is to teach students to recognize themselves, their environment, and how science can be applied to everyday problems. The educational strategy emphasizes giving students hands-on experience to help them acquire the skills they need to investigate and study nature scientifically. The teaching process requires an educational aid or a learning medium that serves to convey teaching material or information in the learning process so that it can be easily accepted and understood by the students. This can be demonstrated by the occurrence of behavioral changes in both knowledge, attitudes, and skills (Singh, 2021). Etymology of the word "media" is derived from Latin and is a shaped form of "medium," which in Arabic means "adult," which literally means a mediator, meaning an intermediary or a means of delivering a message (Arsyad, 2019). Learning media includes tools, means, intermediaries, and connectors to spread, bring, or deliver messages and ideas. There are two components contained in it: the message or teaching material to be delivered (software) and the presentation tool (hardware) that is presented in the learning medium (Ani Cahyadi, 2019). The thoughts, feelings, actions, and attention of students can be loaded in such a way with the learning medium that there is a more meaningful learning process and learning experience in them.

According to Jepri Nugrawiyati (2018), visual audio media is a medium that has elements of sound and image. Visual audio media is a tool or material used in learning situations to help in absorbing information or learning material, including video, tape recorder, cassette, video camera, video recorder, slide, photo, graphics, television, and so on. (Azhar Arzyad, 2019). This type of media has better capabilities because it covers both the auditory (hearing) and visual (seeing) media, so it is able to activate the student's hearing and vision senses in the learning process. Audiovisual media is a technique for presenting educational content through the display of moving images that are projected to resemble the character of the original object. Audiovisual media can be classified into the range of Audiovisual Aids (AVA) media (Andriana Johari, 2014). When good learning materials are used, combined with the use of proper learning media, it encourages learning to run effectively so as to obtain more optimal results. Learning results have a variety of definitions and meanings. Learning results, according to Hamalik (Nurrita, 2018), can be attributed to the positive and active interaction of a person with his environment, which will change his behavior. As a measure of student competence, learning outcomes are an indicator of how student behavior changes from less good to better. Sudjana (2015) is not only oriented to changing attitudes and behaviors; the learning results are a set of competences that students can develop through their participation in learning designed and implemented by teachers in specific classes and schools. As a result of good relationships in learning, learning results are patterns of behavior, values, concepts, attitudes, appreciations, and skills. Based on this and the fact that happened in the field, most of the students in class VI SDN Gunung Bunder 01 Pamijahan Bogor have difficulty learning IPA, especially on the material of adaptation of living creatures to their environment. This is demonstrated by the learning results

carried out in January 2023 in the IPA subjects on material adaptation of living creatures to their environment in the class VI SDN Mount Bunder 01 Pamijahan, which found 18 students only 8 students (44%) that reached the KKM score and that below KKM there are 10 students (66%). The grade of KKM determined by the school is 70. From the above fact, it is necessary to make an effort to further improve the learning results of students on the material of adaptation of living beings to their environment. One attempt was to use visual audio media.

METHOD

This study is an example of class action research. The objective of this research is to evaluate the impact of applying visual audio media to enhance the learning outcomes of sixth-grade students studying in science courses at SDN Gunung Bunder 01 Pamijahan Bogor between September 2022 and February 2023. The research was carried out using purposive sampling on a sample of 18 sixth graders, selected with the knowledge that the majority of them have the ability to communicate effectively and actively with their teachers and peers. The sixth grade is the final level of the primary school curriculum.

The research activity, in all its aspects, is divided into two cycles. There are phases of planning, action implementation, observation, and reflection within each cycle. The study employed tests as data collection methods. For data analysis, a detail analysis of the subject matter was conducted, including an evaluation of the instruments' validity and reliability, an assessment of their difficulty and differential strength, and an examination of both individual and classical hardness.

The teacher provides the data in the form of results from formative assessments at the conclusion of the instructional cycle. The acquired data can be classified into two categories: qualitative and quantitative. Through descriptive analysis, quantitative data will be processed in this study by calculating the quantity of data pertaining to students' formative test outcomes, determining the class average, computing percentage values, and generating graphs in order to ascertain the degree of success and precision of students' learning outcomes in each cycle.

RESULT AND DISCUSSION

The research was conducted for four weeks from January 30 to February 28, 2023. As for its implementation as follows:

Table 1. Schedule Implementation of Learning Improvement Research

No	Date	Type of Activities	Materials	Cycle
1	Monday, 30 January 2023	RPP 1 Implementation of Learning Process	Adaptation of living creatures to their surroundings using visual media (picture) and lecture methods.	Pre-cycle
2	Monday, 06 and 13	RPP 2 Improvement of	Adaptation of living creatures to their environment (plants) using	Cycle I

	February 2023		Learning Process	visual audio media (video learning) and methods of discussion, recitation, and presentation.	
3	Monday, and February 2023	20 27	RPP 3 Improvement of Learning Process	Adaptation of living creatures to their environment (Animals) using visual audio media (video learning) and methods of discussion, recitation, and presentation.	Cycle II

The research was conducted using the class action research approach. Suharsimi Arikunto (2017) defines class action as "systemic inquiry" carried out by teachers, school leaders, or school advisers to gather information, design, implement, observe, and describe actions over several cycles collaboratively and participatively about various school practices, including improving student learning outcomes. Thus, it can be concluded that the understanding of class action research adapted from the above understanding is the research carried out by the teacher in his own class through self-reflection with the aim of improving his performance, thus improving student learning outcomes. As for the design of the research, it is as follows:

Table 2. Learning Improvement Research Design

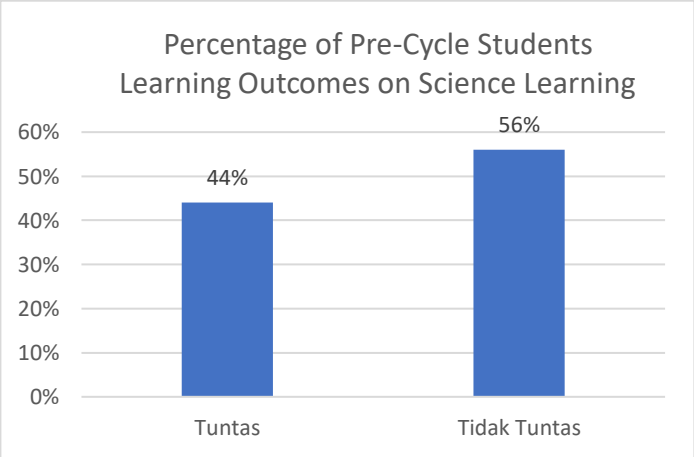
Activity	Time	Activities Plan
Pre-cycle	Monday, 30 January 2023	. Planning Learning Implementation Plan . Doing first learning practice . Reflection of the implementation of the learning that has been carried out . Planning Learning Improvement Plans on Cycle One
Cycle I	Monday, 06 and 13 February 2023	Preparing the first cycle Learning Improvement Plan and discussing the concept of PTK reporting Doing one-cycle learning improvement practice Reflecting the implementation of one learning improvement Planning a learning improvement plan for the second cycle
Cycle II	Senin, 20 and 27 February 2023	. Preparing the Second Learning Improvement Plan and discussing the preparation of the PTK report . Doing second learning improvement practice and have drafted the PTK report

Description of Learning Improvement Research Results

In regard to the improvement schedule, learning improvement research is conducted in two cycles, beginning with the pre-cycle, whichs primary objective is problem identification. A formative assessment value has been calculated from the data collected at the conclusion of each cycle. The resulting cycle results come from the research conducted in class VI SDN Mount Bunder 01 regarding the material adaptation of living organisms to their surroundings: Pre-cycle comes first. Early in the planning process, based on the findings of the conducted observations, it became obvious in the pre-cycle phase that the instructor was inadequately preparing for the learning process, as evidenced by the unclear depiction of the learning procedure on the learning planning. In addition to the lecture approach, which is followed by the instructor and results in the following: a lack of student motivation to attend lessons, a lack of interest among students to continue learning, a limited number of students participating actively in the learning process, and a significant proportion of students failing to comprehend the information presented by the instructor, the efficacy of the implementation activities appears to be reduced.

The assessment of pre-cycle learning outcomes involved the administration of self-formative tests to determine the proficiency level of the students. The known scores from these tests were utilized to evaluate the learning progress of the students. Out of a total of 38 students, only 6 (16%) met the Minimum Maturity Criteria (KKM), whereas 32 (84%) remained below the KKM. Students' learning outcomes at the pre-cycle stage are detailed in the table below:

A omparison of the student's strict and non-strict learning outcomes can be seen through the following graph:



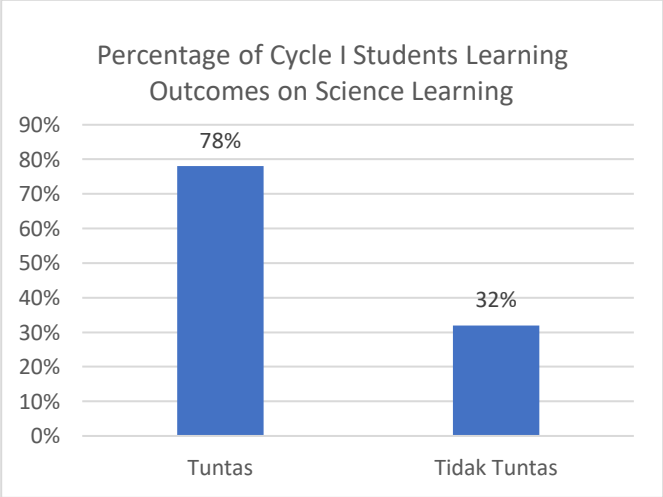
Picture 3. Percentage of Pre-Cycle Students Learning Outcomes on Science Learning

From the graph above, it can be seen that in the learning of IPA about the adaptation of living creatures to their environment, the percentage of accuracy only reached 44%, and 56% was not accurate. It is realized by the author that the student's learning outcome is still a long way from being accurate because of the learning method that uses only lectures and image media, which makes the author only focused on himself. Besides, the author has not used the learning medium sufficiently accurately, so the students are understanding of the material submitted is not optimal. The data from the evaluation results of the pre-cycle showed that it is necessary to make improvements in the class so that the student's learning results on the learning of IPA about adaptation of living beings to their environment can increase according to the expected value (KKM = 70), whereas from the overall observation results together with the observer, some weaknesses were reflected that were used as improvement materials, namely: lack of learning preparation that depicts effective learning, lack of motivation of the teacher to the student, the use of visual media (picture) and lecture methods caused students to be inactive and not interested in following the learning process. so we need to proceed to the next cycle.

Second, in Cycle I, the initial phase of planning, from the observations of learning planning, there is an improvement with the inclusion of the learning process in detail in the learning planning and using visual audio media (video learning). Further in the implementation phase, the observation shows that in the implementation of learning improvement, this cycle has been improved, as demonstrated by increased student activity and enthusiasm in following the learning process. This is presumed because of the use of visual audio mediums to keep students active and interact well.

The learning results of the first cycle are measured by conducting a formative test to determine the student's learning progress, and from the test results obtained, all students have improved. Students who scored above KKM increased to 14 students (78%), and those who were still below KKM decreased to 4 students (32%). Here's a table of students' learning outcomes at stage I of the cycle.

A comparison of the results of strict and non-strict students in cycle I can be seen through the following graph:



Picture 4. Accuracy Data Students Learning Outcomes on IPA Learning of Cycle I

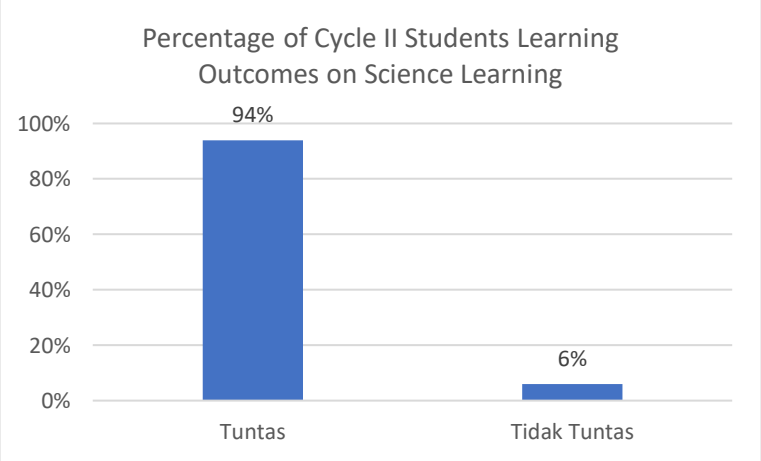
From the above chart, it can be seen that science is learning about the adaptation of living creatures to their environment; the percentage of adaptation has increased to 78%, and 32% have not yet reached the level of adaptability. The increase in the percentage of accuracy of student learning results is due to the fact that in the implementation of the learning process, IPA has used visual audio media in the form of video learning, and the author has begun to focus student activity through discussion. From the results of the analysis, discussion, and reflection with the observer, it can be concluded that in this cycle I have generally experienced improvements in both the planning and implementation as well as the learning outcomes of students. However, the improvement in the accuracy of learning results has not reached the expected percentage (80%), because there are still 32% of the 18 students who have not achieved KKM. Then the learning improvement continued in cycle II.

Third, Cycle I. The initial phase of planning, from the observations of the teaching preparation has improved, in the planning has been well depicted the process of KKM to be implemented. At the implementation stage, observations showed that in this second cycle, students were more motivated in learning activities; more than 50% of students asked and interacted with other teachers and students, and all students were seen to be more active.

At the end of the II cycle of learning improvement, a formative test was carried out to measure the progress of the learning process. And from the test results obtained, only 1 student (6%) still got a score below KKM, and 17 students (94%) already got a rating above KKM.

The following is a table of students' learning outcomes at the stage of cycle II. The comparison of data on students' and non-students' learning results at the second cycle can be seen through the following graph:

Picture 5. Accuracy Data of Students' Learning Outcomes of Cycle II on Science Learning



Picture 5. Accuracy Data of Students' Learning Outcomes of Cycle II on Science Learning

From the above graph, it can be concluded that the learning of the IPA on the "adaptation of living creatures to their environment" percentage of accuracy has reached 94%. This shows that as many as 17 students have achieved the desired and satisfactory accuracy score. Thus, if the increase in the accuracy of learning results has even exceeded the expected percentage (80%), then the improvement in learning is sufficient until the second cycle.

Discussing Learning Improvement Research Results

The results of the study of learning improvement conducted in pre-cycles, cycles I, and cycles II show that students' learning outcomes have improved. This is in line with the goal of Classroom Action Research (PTK), which is to improve student learning outcomes. Which can be seen in the following table:

Table 6. Access Learning Results on Each Cycle

No	**Students' Name**	**Score (KKM 70)**		
		Pre-Cycle	Cycle I	Cycle II
1	Alfrizzi Basith	60	90	90
2	Dafinda Raisya	50	80	90
3	Delia	75	90	90
4	Fauzia Rahma	75	90	90
5	Gadiza Nur Husna	75	80	80
6	Kalilah Nurhasanah	50	70	90
7	Mohammad Rizky Farhan Maulana	80	80	90
8	Muhamad Al-Fatih	80	80	90
9	Muhamad Farhan Akbar	80	100	100
10	Muhamad Pudoli	60	60	80
11	Muhammad Riki Irawan	50	60	70
12	Putri Nirmala Sari	80	90	100
13	Rafaell Gerardy	60	80	90
14	Rani Juliani	50	60	80
15	Rudi Awaludin	50	90	90
16	Sabrina Ayu Pradiya	80	100	100
17	Sovi Agil	40	60	60
18	Sri Wahyuni	50	80	90

Based on the overall results of the above cycle, the author outlines the evolution of the average student learning outcomes from the pre-cycle cycles, cycle I and cycle II as presented in the summary table below:

Table 7. Student Learning Outcome Summary Data

Data	Pre-Cycle	Cycle I	Cycle II
Final Test Average	63,6	80	87,2
Total Students Passed	8	14	17
Percentage Students Passed	44%	78%	94%

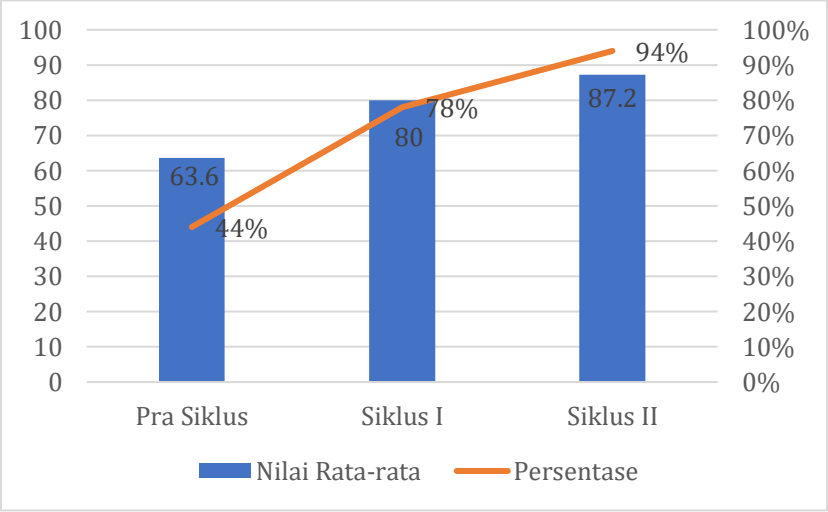
The table mentioned above shows how the learning outcomes of students in class VI at SDN Gunung Bunder 01 developed in relation to the learning responsibilities of science. The average grade for science re-learning was 63.6 (pre-cycle), with only 8 students (44%), or 44%, achieving the KKM score. This is very troubling, as the KKM is significantly off, indicating the need for learning improvement. Following an improvement in learning, the class average rose to 80 in cycle I, with 14 students' (78%) proficiency increasing. Cycle II of enhanced learning is implemented since the anticipated proficiencies (80%) have not been obtained. Furthermore, during Cycle II, students' learning has improved, as evidenced by the fact that 17 students have achieved KKM, representing a 94% improvement in their performance on the science regarding the adaptation of living organisms to their environment.

The lack of success in pre-cycle learning can be attributed to the lack of variability in learning methods, as instructors exclusively employ lectures and assignments that incorporate visual aids such as textbook illustrations to present material. This diminishes students' enthusiasm and engagement in the learning process. In such situations, educators refrain from employing learning media that have the capacity to captivate and inspire students, resulting in diminished student interest in the subject matter being presented. Educators ought to employ diverse and suitable models and methods, bolstered by visual and auditory media.

During the first phase of the cycle, I employed audio and visual media through video instruction concerning the subject matter of living organisms' environmental adaptation. On the other hand, the first cycle's percentage of 78% represented an important improvement over the pre-cycle percentage of 44%. The instructor's inadequate use of visual and auditory tools, as well as their inadequate direction of class discussions, prevented the second cycle's learning objective (80%) from being met. Students are encouraged to be more interested and active in learning because, in addition to seeing images of living things that have been adapted, they can also hear animated sounds of living things that have been adapted, along with background music and affective messages through the video delivered.

This allows the student to reach accuracy in the first cycle of science learning, which is facilitated by audiovisual media combined with methods of discussion, recitation, and presentation. This works; the formative test results at the conclusion of learning cycle II show that students' learning outcomes increased to the point where they traditionally reached KKM (70).

The diagram below shows the percentage increase in accuracy from pre-cycle, cycle I, and cycle II:



Picture 4. Increased Average Student Value and Percentage of Completion in Science Learning in Class VI SDN Mount Bunder 01

From the above graph, it is clear that with the use of visual audio media, there is a rather significant increase in the average siwa values, which are 63.6 in the pre-cycle, 80 in cycle I, and 87.2 in the second cycle. While the percentage of students learning the IPA about the adaptation of living creatures to their environment is improving (44% in the pre-cycle, 78% in the first cycle, and 94% in the last cycle II).

CONCLUSION

The following conclusions can be drawn from the research findings: Initially, the utilization of visual and auditory media can enhance the efficacy of the learning process, therefore enhancing students' performance in science courses regarding the material adaptation of living organisms to their surroundings. Secondly, research has demonstrated that the utilization of visual audio mediums improves students' learning outcomes. Initially, only eight students (44 percent of the eighteen students who achieved KKM) could do so; by the end of the study, seventeen students (94 percent) had achieved KKM. To improve student learning outcomes on the Science of Nature (IPA) learning load related to the adaptation of living organisms to their surroundings, the researcher suggests the following: first, instructors should carefully prepare the learning process before its execution. Secondly, the instructor selects instructional materials that match the students' individual learning environments. Thirdly, the instructor chooses the learning model that corresponds to the attributes of the students with primary school. Fourth, the instructor utilizes active learning methods to engage students in the learning process. Fifth, in light of the encouraging progress recorded in this research, it is recommended that educators introduce visual and audio stimulation into the educational experience.

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