

Application: Learning Rare Animal Diversity Through Audio Visual Media

Titik Setyo Endang, Wahyu Sukartiningsih and Nasution
State University of Surabaya, Surabaya, Indonesia

Key words: Learning model, problem based learning, ability, critical thinking

Corresponding Author:

Titik Setyo Endang
State University of Surabaya, Surabaya, Indonesia

Page No.: 99-104
Volume: 17, Issue 2, 2020
ISSN: 1683-8831
Pakistan Journal of Social Sciences
Copy Right: Medwell Publications

Abstract: This study aims to improve students' understanding through audio visual media on the material of rare animal diversity. This research uses classroom action research using descriptive quantitative research design. The results of the study include student activity in cycle 1 reaches percentage 68% while in cycle 2 reaches 87.25%, student's understanding on cycle 1 reaches average with student learning mastery is 54.05% and in cycle 2 reaches average 83.78 with student's learning mastery reaches 81.0%. It can be concluded that there is an increase from cycle 1 and 2. This indicates that there is an increase in student's understanding of the diversity of rare animals through audio visual media in grade 4 elementary school students.

INTRODUCTION

Indonesia is a country with an extraordinary diversity resources. One of the diversity is animals and plants. Through learning in school, students are taught to recognize and maintain the diversity. However, the fundamental problem in learning lies in media selection. Not many teachers use learning media during classroom learning.

Learning as an activity that students do with the purpose of obtaining added value to the skills, attitudes and understanding of knowledge. Understanding is the ability of a person to understand or understand something after something is known and remembered^[1]. Also in the form of student learning^[2].

The most influential factor in creating a fun learning atmosphere is the teacher. In addition, teachers should also be able to motivate students to be active in learning. Teachers need a simple but innovative and creative learning medium.

Audio visual media is a media that has elements of sound and image elements. This type of media has better capabilities as it covers both types of audio visual media.

Audiovisual media is an audiovisual aids with materials or tools used in learning situations to aid writing and spoken words in transmitting knowledge, attitudes and ideas.

The use of audio visual is a means to attract interest, cultivate motivation and concentration of students in following the material of rare animal diversity. Because by using audio visual media can attract attention to students, so that, students can focus on the material conveyed by the teacher. The availability of moving effects, video and sound combined simultaneously have an effect that attracts student's attention. Students will be motivated to learn in an interesting and fun atmosphere. It is this reason that makes the basis of choosing audio-visual media to be used in this research. Audio-visual media makes learning varied, interesting and fun, so that, it can enhance the understanding of the material of rare animal diversity in grade 4 elementary school students.

The formulation of the problem in this research is whether audio-visual media can improve the understanding of the diversity of rare animals in grade 4 students of primary school. In general, the results of this

study are expected to contribute in increasing the knowledge of teachers that there is still a learning media that is practical but innovative for elementary school students.

Literature review

Audio visual media: The word Media comes from the Latin word which is a form of the word “medium” which literally means intermediary or introduction^[3]. Need to apply it in addition to other techniques. It also recommended the enhancement of the video with direct focusing to improve its effectiveness.

The benefits of the media are: tools for realizing an effective teaching and learning situation; an integral part of the whole teaching situation; laying the concrete foundations of the abstract concept, so as to reduce the verbalism understanding; generate motivation learners and enhancing the quality of teaching and learning^[4].

Learning media is more interesting for students to foster motivation in learning. Audio-visual media make the teaching materials will be clear more meaning that can be understood and mastered by students. The use of media can also improve learning outcomes relating to the student’s thinking levels ranging from the concrete to the extract or from simple to the complex.

Audio-visual media is the type of media used in learning activities involving hearing and vision at the same time in one process or activity. Audio visual equipment is a device used in the classroom to increase the teaching-learning process and to make the learning process more attractive because it is the best device to make the learning process more effective in the of the knowledge distribution^[5]. Audiovisual media is capable of stimulating the senses of sight and senses of hearing together because it consists of Sound elements and image elements^[6]. Audio-visual media combines audio and visual media^[7].

Characteristics of audio-visual media: Arsyad^[8] suggests that audio-visual media has the following characteristics:

- Linear
- Dynamic
- Designed according to the designer/manufacture
- Physical representation of a real idea

The factors that influence the learning outcomes: Learning outcomes achieved by students in the learning process cannot be separated from the factors that can influence it. Munadi^[9] describes the factors that affect student learning outcomes are:

- Internal factor consists of:
 - Psychic factor (physical). The general physical condition that marks can affect the spirit and intensity of the child in following the lesson
 - External factor includes psychological factors (psychological). Factors that include psychological aspects that can affect the quality of learning outcomes
- External factors consists of:
 - Social environment factors such as teachers, the nature of teachers, administrative staff and classmates
 - Non-social environmental factors such as school facilities and infrastructure, the location of family homes, weather conditions and study time used by children
 - Factors approach to learning, namely the way teachers teach teachers as well as methods, models and learning media used

MATERIALS AND METHODS

Research design: This research is a classroom action research. This research is carried out by teachers to solve the problems faced in carrying out the main task of managing the implementation of teaching and learning activities.

The design of this study is based on the classroom action research model by Kemmis and Taggart^[10]. In its plan, Kemmis uses a spiral system of reflection from which begins with the plan, action, observation, reflection and re-planning which is the basis of problem solving.

The general purpose of the classroom action research is to improve the implementation of teaching and learning activities. The subject of this research is the fourth graders of elementary school which runs 37 students. The researcher will act as a teacher and be accompanied by two teachers as observers (Fig. 1).



Fig. 1: The spiral action research

Data collection techniques: Data is raw data that must be processed, so as to produce information or information, both qualitative and quantitative facts show. Sources of data in this study are teachers and students. Techniques to solve the data used by the author are the tests and observations that will be incorporated as follows:

Test: The test is a series of questions or other exercises used to measure the skills, knowledge of intelligence, abilities or talents possessed by individuals or groups^[11]. This test is very diverse, from simple tests known as quizzes, to complete test forms. The test can be done in writing, orally or.

The tests given to students either individually or in groups at the end of the learning which of the two results will be averaged as follows. About the written test given in accordance with the material conveyed via video about the diversity of animals and plants of Candrawasih birds and examine how human behavior toward step animals. This test is a description. This test is used to determine student learning outcomes as well as the understanding of the diversity of animals and human interaction with the natural environment.

Observation: Observation is a conscious effort to collect data that is run systematically with standardized procedures^[11].

RESULTS AND DISCUSSION

Students learning activity: The researcher acts as a classroom teacher while the observation is done by the

peer teacher. Activities to be observed by peer teachers are the activities of teachers and students at the time of learning. In this study, the researcher uses three stages of learning, the initial activity for ± 10 min, core activities for ± 55 min, end activity ± 5 min.

The teacher performs apperception by asking about basic knowledge about animal diversity in Indonesia in the form of giving question to the student in the form of past material and directing the student to the material to be studied. The teacher displays a picture of various kinds of step animals then the teacher presents a stepping video of a step animal that is bird of paradise as well as human interaction with bird of paradise, the second video about male and female birds. Teacher gives oral questions about material that has been conveyed through pictures and video. One of the students there is answering questions from the teacher. Once considered sufficient, the teacher gives the students the opportunity to ask questions that are less clear.

The teacher gives each student self-discourse to each student for 5 min after they answered their own answers in a discussion with the group for 10 min. They discussed afterwards the result of the discussion presented in front of the class is represented from each group.

After the students do the presentation in front of the class. The teacher together with the students together concludes the discussion. Teachers reflect on learning the next day the teacher gives students the opportunity to ask if they do not understand about the material today (Table 1).

Result data of students understanding: Out of 37 students, there are 20 students completed in the learning

Table 1: Results of student activity observation

Aspects	Average score in cycle 1	Average score in cycle 2
Preliminary activities		
The learners give greeting before the lesson begins	4.00	4.00
Students pray according to their own religion and belief (to begin the learning activities)	3.50	3.50
Students raise their hands when they hear on the student attendance list	2.50	3.00
Students answer questions from teachers	2.50	3.00
Students listen to today's learning objectives delivered by the teacher	2.50	3.00
Main activities		
Students pay attention to the teacher's explanation	2.75	3.00
Students read the textbook on the student's book page 23	2.00	3.00
Students listen to the teacher's explanation	3.50	3.75
Students pay attention to the video displayed by the teacher in front of the class	2.75	3.50
Students answer questions from teachers	2.25	3.50
Students verbally create questions they want to know more about	2.00	3.75
Students listen to teacher explanations and form groups according to what the teacher says	2.00	3.75
Students answer the student's sheet independently first (think) 5 min	2.00	3.50
Students discuss their answers with the group	2.25	3.50
Students are guided by teachers when conducting group discussions	2.50	3.50
One representative student from the group made a presentation	3.00	3.25
One student representative from the group made a presentation. Students responded to the appearance of other groups who presented their group work	2.00	3.75
Together with the teacher the student concludes the discussion result	2.25	3.50
Students listen to reflection from the teacher	3.00	3.50
Students ask about the material that has not been understood	2.00	3.25
Students receive rewards in groups in the class	3.00	3.25
Students make a summary of the material	2.25	3.50

Table 1: Continue

Aspects	Average score in cycle 1	Average score in cycle 2
End activities		
Students listen to the moral message that the teacher conveyed	3.50	4.00
Students pray according to their religion and belief	4.00	4.00
Students answer the closing greetings from the teacher	4.00	4.00
Emerged indicators	68.00	87.25
Percentage of students activity	68.00%	87.25%

with percentage reach 54.05% while the unfinished students in the learning as many as 17 students with the percentage reach 45.95%. The average of student's comprehension test reached 74.32. In cycle 1 there is a shortage in the implementation of learning. These shortcomings include: students are less active in asking questions during presentation; most students are reluctant to ask questions that are poorly understood; too long and fast duration in the video; less conducive of class at the time of group division of many busy students; lack of allocation of time required to work on student worksheets and presentations, so that teachers need to increase the time; the teacher difficulties in dividing the allocation of time in learning. This is due to the many students in the group who have not completed the task; during the presentation there were some group representatives who were less clear in explaining the group's answers so crowded.

From the results of the discussion, it was decided that the learning in cycle 1 is still a lot of shortcomings, therefore, researchers must develop improvement plans for the next cycle. Any shortcomings in learning in cycle 1 will be studied by the researcher and try to suppress the deficiency in cycle 2. In addition, in this stage the researchers also prepare a lesson plan that will be continued at the planning stage in cycle 2.

In the second cycle there is an increase in student understanding. There are 30 complete students in learning with percentage reach 81.08%, meanwhile student unfinished in learning as many as 7 student with percentage reach 18.92%. The average of students' comprehension test reached 83.78.

From the results of the discussion, it was decided that the learning in cycle 2 already reached the success indicators in this study. Therefore, it is not necessary to make improvement plans for the next cycle. So, the study stop learning in cycle 2 because it decides that the learning has achieved success.

Increase of the students learning activity: The activity in this research is the activity of students during the learning on the material of the diversity of rare animals by using audio visual media, measured by using the observation sheet. To assess the student activity, this observation is assisted by 2 observers to observe the student activity in learning. Student activity observation is done in 2 cycles. In the first cycle Students activity in

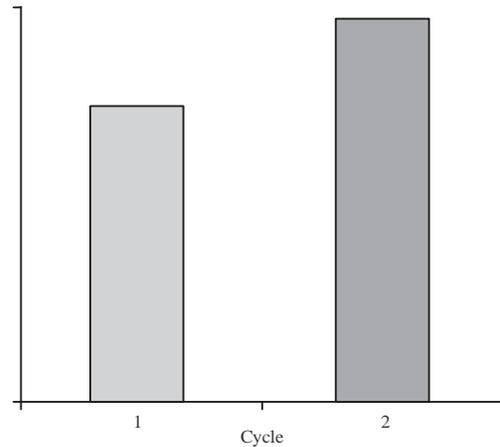


Fig. 2: Students activity graph

this study has been running in accordance with the implementation of learning plans are prepared based on the syntax of audio visual media-based learning. Student activity is one of the things used as a reference for the process of teaching and learning. Even student activity become one of indicator in success of a learning.

From the results of observations on the learning activities of cycle 1, the activities undertaken by students at the time of learning by using audio visual media is still less. This is seen from the percentage of overall student activity reaches an average score of 68%. For learning done well in accordance with the procedure Appropriate, then the activity of teachers and students who are interconnected and directly involved. The involvement is not only limited to two-way interaction, but occurs in continuity and mutual self-actualization of teachers as mentors with students as learners. As stated by Rusman^[7], learning is a process of interaction between teachers and students, either direct interaction such as face-to-face or indirect activities, using various learning media.

In the second cycle of student activity has increased to reach 87.25%. Because on the second cycle teachers repeat the learning in cycle 1 where using the audiovisual media students more understand the material, so that, student activity is also increased. The average of observation result of student activity in this research reach 77.62%. If shown in graph form, it will be seen in Fig. 2.

From the results of Fig. 2 can be concluded that the student activity in learning cycle 1 and 2 has increased by 19.25%. Thus, learning in cycle 2 can be said to achieve success. This is shown success in student activity in cycle 2 reaches value above 80% that is 87.25%.

Relation of the understanding and the learning outcome: According to Sujana^[2] understanding is the result of learning. Therefore, a student who understands the taught material is definitely influential on their learning result because by understanding the material they will be able to explain what is read or heard by using his own sentence. Understanding is related and directly related to learning.

Understanding is also referred to as a reference of success rate. If a person understands a material automatically gets a good achievement, then it can be said to have success in learning, otherwise if someone gets a bad achievement means they have not understood the material taught, it can be said that has failed in learning. Understanding the material cannot be separated from the results of student learning. Students can be said to understand the material if it has increased in learning outcomes. In this study, the student's understanding that will be used as a measure in the success indicator of research is included in the learning outcomes. Success in material understanding can be seen from improvements in learning outcomes.

Learning outcomes are behavioral changes in a broader sense including the cognitive, affective and psychomotor fields^[1]. The result of learning as the object of assessment essentially assess the students 'mastery of instructional goals because the content of the instructional objective formula describes the learning outcomes that must be mastered by students in the form of student's abilities after receiving or completing their learning experiences.

The learning outcomes of the cognitive domain are obtained from the test results in the form of evaluation sheet. The students 'learning outcomes measured are the students' cognitive abilities on learning. In this study, using learning outcomes is focused on the cognitive aspect. This assessment is carried out at the end of the lesson at the second meeting at every cycle. About the students' understanding tests that are given in each cycle in the form of a description, as many as 10 questions. Where the previous question instrument has been validated by the validator.

The results of the student's comprehension test in this study showed that in cycle 1, the total number of students who completed the study in cycle 1 reached 20 students with a percentage of 54.05% while the number of students who are not complete in learning as many as 16 students with a percentage of 45.95%. This means that student's understanding in cycle 1 is still lacking because my

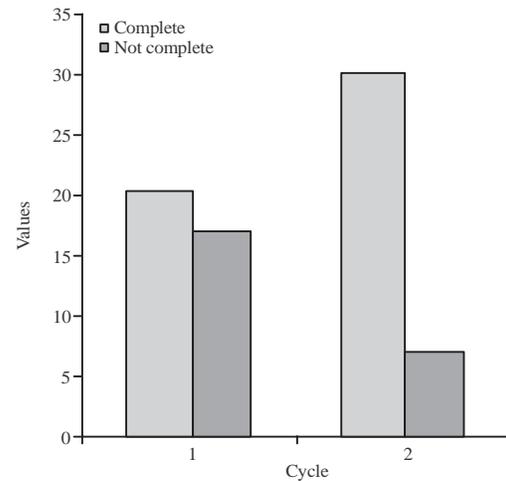


Fig. 3: Students learning mastery graph

students understand the material presented by the teacher. In the second cycle, the number of students who complete the learning cycle 2 reached 30 students with the percentage of completeness reached 81.0% while the unfinished in learning as many as 7 students with a percentage of 19.0%.

This means that in the second cycle of student understanding meets the minimum completeness criteria. In cycle 2 students have been able to understand the material presented by the teacher. Average student learning outcomes in cycle 1 reached 74.32. While the average of student's understanding test in cycle 2 reached 83.78. Thus, it can be concluded that audio visual media can improve students 'understanding seen from the students' learning mastery. When shown in graphical form, it will be seen in Fig. 3.

From the results of Fig. 3, it can be concluded that student's understanding seen from the learning on the cycle 1 and 2 is an increase in the achievement of student's learning mastery. In cycle 1 there are as many as 20 students who complete learning or already understand the material while in cycle 2 as many as 30 students. There is an increase of 10 students who experience complete mastery learning. In cycle 1 there are 17 students who do not complete learning while in cycle 2 there are 7 students who are not complete. This is seen there is an increase of 10 students who previously not completed thoroughly in learning.

In addition, the average class also increased, in cycle 1 the average class reached 74.32 while in cycle 2 reached 83.78. Average grade increased by 9.46.

Thus, learning in cycle 2 can be said to achieve success. This is indicated by the increase of students understanding that the completeness reaches the value above 81% and the average understanding of the students reaches 83.78% this means understanding of the material diversity of rare animals in grade 4 has increased and achieved success.

CONCLUSION

The application of audio-visual media to improve the understanding of the material of rare animal diversity in four elementary schools can increase the students understanding in reaching the minimum mastery. The observation result in cycle 1 shows that the activity of the fourth grade students reaches 68% while in cycle 2 reaches 87.25%. This shows that in learning cycle 2 there is an increase of student activity as much as 19.25%. This also can be proved from data showing that ability of student in understanding material, experiencing improvement seen from learning mastery data. In cycle 2, as many as 20 students who experience complete mastery and 17 students who have not complete the study so that the percentage of success reached 54.05%. The average score of student's understanding test in cycle 1 reached 74.32. While in cycle 2 as many as 30 students who experience complete mastery and 7 students who have not complete learning, so that, the percentage of success reached 81.08%. The average score of student learning outcomes in cycle 2 reached 83.78.

Classroom teachers should use appropriate media such as audio visuals as they make it easier for students to understand materials and create enjoyable learning for students, so that, students do not feel bored in the classroom.

REFERENCES

01. Sudijono, A., 2009. [Introduction to Educational Evaluation]. Rajawali Pers, Jakarta, Indonesia, (In Indonesian).
02. Sudjana, N., 2005. [Assessment of the Process of Teaching and Learning]. PT Remaja Rosdakarya, Bandung, Indonesia, (In Indonesian).
03. Sadiman, A.S., R. Rahardjo, A. Haryono and Harjito, 2014. [Educational Media Development and Utilization]. PGSD Fkip Universitas, Indonesia, (In Indonesian).
04. Sumantri, M. and J. Permana, 2001. [Teaching and Learning Strategies]. Remaja Rosdakarya, Bandung, Indonesia, (In Indonesian).
05. Rasul, S., Q. Bukhsh and S. Batool, 2011. A study to analyze the effectiveness of audio visual aids in teaching learning process at uvniversity level. *Procedia-Social Behav. Sci.*, 28: 78-81.
06. Djamarah, S.B. and Z. Aswan, 2006. [Teaching and Learning Strategies]. PT. Rineka Cipta, Jakarta, Indonesia, (In Indonesian).
07. Rusman, D., 2012. [Learning Models]. Raja GafindoPersada, Jakarta, Indonesia, (In Indonesian).
08. Arsyad, A., 2014. [Learning Media]. Raja Gafindo Persada, Jakarta, Indonesia, (In Indonesian).
09. Munadi, Y., 2012. [Learning Media a New Approach]. Gang Persada (GP), Jakarta, Indonesian, (In Indonesian).
10. Kemmis, S. and R.M. Taggart, 1988. *The Action Research Planner*. Deakin University Press, Australia.
11. Suharsimi, A., 2006. [Research Procedure a Practical Approach]. Rineka Cipta, Jakarta, Indonesia, (In Indonesian).