

Improvement of Activities of Science Practicum Results Through Use of SAVI Learning Model for Students

Umayah U
Universitas Negeri Semarang
uripumayah@gmail.com

Supriyadi
Universitas Negeri Semarang
supriyadi@mail.unnes.ac.id

Mulyono, E.S
Universitas Negeri Semarang
Sungkowo.edy@mail.unnes.ac.id

Abstract---This study aims to improve the activities of the practicum results through the use of SAVI learning models in grade 4 elementary school students. The research method used was a quasi experiment with a nonequivalent pretest-posttest control group research design. The study period was 3 days in the control class and 3 days in the experimental class. As a subject with 66 fourth grade students. Based on research on practical work through the SAVI learning model, the final meeting results reached ≥ 75 . In addition, based on the findings of observers, the number of students actively involved in practical activities reached 96.96%. The teaching aids used during the practicum are very interesting, thus helping students practice skills so that they can improve the results of the lab can be improved by using the SAVI learning model.

Keywords: *results of practicum, SAVI model*

I. INTRODUCTION

Learning methods that can train competency, one of which is science learning in elementary schools, is practicum activities which developed with SETS vision. Practicum activities are an integral part of science learning that provides reinforcement of mastery of concepts. The theory conveyed in learning can be tested through practicum, so that students have better understanding the concepts conveyed.

Based on the experience of teacher when teaching science in Class IV of Gayamsari 01 Elementary School Semarang and Gayamsari 02 Elementary School Semarang. If viewed from the acquisition of student learning outcomes the assessment carried out is still oriented to the cognitive domain only. The assessment of the psychology of the domain in practicum learning has not been well implemented. This turned out to have an impact on the final value of the report. The average final score is 65 while the expected value is 75. The average values are enough to illustrate that the process of learning is still needed to be improved in quality.

The results of the identification of the causes of the low problem of the results of practicum activities that most students turned out to be less active in practicum activities because so far have not involved all students in the group without using teaching aids and appropriate learning models. There are several reasons for practicum activities, according to [1] Suryawan *et al.*, (2015), namely: (1) practicum generate motivation to learn science; (2) practicum developing basic skills in carrying out experiments; (3) practicum becomes a vehicle for learning scientific approaches, and fourth, practicums support the understanding of subject matter.

Practicum activities with SETS vision can provide experiences for students in the cognitive, affective, and psychomotor domains. The cognitive domain, students will gain an understanding of the material being taught. In the affective domain, the scientific attitude of trained students in practicum activities is SETS vision. In the psychomotor realm, train the skills of students in working using practicum tools and materials.

Science learning is an effort to understand the nature of science as a product, process and develop a scientific attitude (Sugiyono *et al.*, 2017) [2]. [3] Pratama, and Kasmadi (2014) argue that process skills are also able to provide students with experience so, it will increased their ability to take responsibility for their own learning. moreover life in a modern era depends on science and technology. The education system must certainly require learning that always cultivates scientific activities. Thanks to the scientific culture that is carried out requires a scientific skill for daily needs (Aydin; 2013) [4]. Technology and science are also very closely related to scientific product breakthroughs by scientists. [5] Adolphus (2012), agrees with [6] Krich (2007) that science process skills make students able to ask questions and generate ideas and explain the results of lab work in the learning process.

If the learning approach used involves the active role of students in the learning process, then it can improve student learning outcomes. One learning approach that can be used is the SAVI approach. [7] Mulyono (2014) states that the SAVI model is one learning model that is able to activate physical movements with intellectual activity and the use of all senses in students.

The advantages of the SAVI model according to [8] Samoko *et al.*, (2016), include (a) fully awakening students' integrated intelligence through the incorporation of physical motion with intellectual activity, (b) creating a better, interesting and effective learning atmosphere, (c) being able to generate creativity and improving psychomotor abilities of students, (d) maximizing the sharpness of students' concentration through visual, auditory and intellectual learning, (e) the approach offered is not rigid but varies greatly depending on the subject matter, and learning itself, and (f) can create positive environment.

In addition to the SAVI model, the learning methods that can be applied in science learning activities are methods of practicum activities. Practicum comes from the practicum word which means the actual implementation of what is called in theory. Practicum is very important in science learning to achieve science learning goals (Rustaman in Surtikanti *et al.*, 2001) [9].

The three forms of skills are cognitive, affective and psychomotor skills (Utomo in Surtikanti *et al.*, 2001). With cognitive skills, students can understand the theory more deeply. [10] Khery *et al.*, (2014) explained that cognitive science involves emotions, the whole body, all senses and respect for people learning in different ways. Affective skills, students encourage them to be able to learn in working together and independent learning, while psychomotor skills, encourage participants to learn to be able to work in an experiment.

Based on the description above it can be concluded that the increase in practicum results can be increased by using the SAVI learning model. Increasing the activities of the results of the IPA practicum through the use of the SAVI learning model aims to help the learning process become active and enjoyable. Practicum activities have a very big role for the success of improving the learning process, followed by the quality of learning outcomes.

II. METHODS

The study was conducted at Gayamsari 01 Elementary School Semarang and at Gayamsari 02 Semarang Elementary School Gayamsari District, Central Java. The study was conducted in the even semester of the 2018/2019 academic year. The research period is 8 days. The research subjects were fourth grade students of SDN Gayamsari 01 Semarang as a control class and fourth grade students of SDN Gayamsari 02 Semarang as an experimental class of 66 students. In this study the aspects investigated included: 1) assessment of practicum reports, 2) student activities during practicum activities, and 3) teacher activities / teacher performance.

Data collection tools used in this study are: 1) assessment instruments for the final report on practicum activities, 2) observation sheets of student activities during practicum activities, and 3) observation sheets of teacher performance activities.

This research is quantitative research quasi experimental design. The quasi experimental design used in this study was the pretest-posttest nonequivalent control group design according to Sugiyono (2016: 116).

The research consists of three stages, namely the preparation, implementation and analysis of data. The following is an explanation of the three stages.

1. The preparation phase of the researcher begins with the preparation of learning tools consisting of syllabus, lesson plans, teaching materials, worksheets, and preparation of learning instruments, namely test instruments.
2. The stage of data collection, previously tested the test instrument to determine the level of accuracy and determination of a test instrument. Then the pretest was given to determine the students' initial abilities. In the learning process, students are treated by using the SAVI learning model through practical activities in the experimental class while the control class is treated using the expository model. At the end of learning, students are given a posttest to measure the dependent variable.
3. The next stage is data analysis for the control group and the experimental group then concludes based on the research data.

The practicum report of students in this study is assessed based on the assessment sheet for the next calculated number of reports that get a score of 70. The value of the lab report, is analyzed by counting; percentage value of report with category; very good, good, enough, and lacking. The data

obtained were analyzed using a percentage formula, namely the final value = $\frac{\text{value obtained}}{\text{maximum value}} \times 100$. The success indicators set out in this study include: the number of students the ability to deduce the results of practicum activities and compile a final report on practicum activities well reaching 70%.

III. RESULTS AND DISCUSSION

Research data collection was conducted at each practicum activity meeting through the use of the SAVI learning model. Somatis which is a body movement that requires learning by experiencing and doing. Auditory emphasizes the learning process through listening, listening, speaking, presentation, debating and responding. Visual means learning by using the sensory meta through observing, drawing, showing, reading, using media and teaching aids. Learning is intellectual by emphasizing the ability to think.

The learning outcomes of practicum activities at the first meeting can use an observer sheet instrument approved by the observer at each learning meeting. Increased practicum activities through the use of the SAVI learning model are presented in Table 1.

Table 1 Recapitulation of Results of Meeting 1 Practicum Activity.

Category	Total	(Presentation)
Very good	(80-100)	2 (33,3%)
Good	(70-79)	2 (33,3%)
Moderate	(50-69)	2 (33,3%)
Deficient	(40-49)	-
Average		67%
Total		6 (100%)

The report was assessed to be 6 groups at the first meeting. From the assessment sheet that was filled in by the teacher, it showed that 2 groups in the practicum were very good, 2 groups were good, 2 groups were sufficient. Indicators that have been implemented that students are able to carry out practicum activities well reaching 75%. While the acquisition of the average practicum value in the first meeting was 67%. From the acquisition of this value, the first meeting of success has not been achieved. The results of the observer's findings have not yet reached an indicator because students have not been actively involved in practicum activities.

Learning outcomes of practicum activities at the second meeting can use an observer sheet instrument approved by the observer at each learning

meeting. Increased practicum activities through the use of the SAVI learning model are presented in Table 2.

Table 2 Recapitulation of Results of Meeting Practicum Activity 2.

Category	Total	(Presentation)
Very good	(80-100)	2 (33,3%)
Good	(70-79)	3 (50%)
Moderate	(50-69)	1 (16,7%)
deficience	(40-49)	-
Average		83%
Total		6 (100%)

The report was assessed to be 6 groups at the first meeting. From the assessment sheet that was filled in by the teacher, it showed that 2 groups in the practicum were very good, 3 groups were good, 1 group was enough. Indicators that have been implemented that students are able to carry out practicum activities well reaching 75%. Whereas the average score of practicum activities at the second meeting was 83%. From the acquisition of the value, the second meeting of success has been reached and has experienced a percentage increase.

Learning outcomes of practicum activities at the third meeting can use an observer sheet instrument approved by the observer at each learning meeting. Increased practicum activities through the use of the SAVI learning model are presented in Table 3.

Table 3 Recapitulation of Results of Meeting Practicum Activities 3.

Category	Total	(Presentation)
Very good	(80-100)	3 (50%)
Good	(70-79)	2 (33,33%)
Moderate	(50-69)	1 (16,7%)
Deficience	(40-49)	-
Average		83%
Total		6 (100%)

The report was assessed to be 6 groups at the first meeting. From the assessment sheet that was filled in by the teacher, it showed that 3 groups in the practicum were very good, 2 groups were good, 1 group was enough. Indicators that have been implemented that students are able to carry out practical activities well reaching 75%. Whereas the average score of practical activities at the second meeting was 83%. From the acquisition of this value, the third meeting of success has been reached.

The student activity observation sheet that has been filled in by the observer, the average

condition of the three discussion meetings of the research results from 33 students is presented in Table 4.

Table 4 Student Learning Activities in Practicum Activities

Category	Total	(Persentation)
Very avtive	7	(21.21%)
Active	25	(75,75%)
Less active	1	(3.03%)
Average achievement pencapaian	96.96%	Active students
Total	33 (100%)	

Practicum activities through the use of SAVI learning models conducted in groups can provide an opportunity to develop scientific skills and joint learning among students which creates confidence to actively ask questions.

IV. CONCLUSION

The results of the research and discussion that have been carried out, then conclusions can be taken regarding the increase in the activities of the results of science lab work through the SAVI learning model. The research method used was Quasi Experimental with nonequivalent control group pretest-posttest research design. Based on the description above it can be concluded that students are more active in learning and students experience increased learning outcomes.

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