

Developing The Lesson Plan Of An Outdoor Learning Of Natural Science

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Abstract: The purpose of the research is to develop the lesson plan of an outdoor learning of natural science in Taman Dewasa Junior High School Yogyakarta. The research uses research and development approach, namely, a one-year study with a qualitative research design. Informants in this research, principals, classroom teachers and students of Taman Dewasa Junior High School Yogyakarta. Data are collected by using observation, in-depth interviews, and documentation. The data are analyzed by using qualitative analysis of flow method. Data validity is examined by using methods and sources triangulations. Result: Planning learning is poured into forms RPP. Writing lesson plans in advance is started with the designing (1) learning objectives based on the analysis of SK and KD, (2) the problem situation created by the students, (3) techniques and procedures assessment process and the learning outcomes that will be applied, and (4) operational measures learning. Implementation of learning consists of introductory, core and cover. Preparation of assessment of learning, namely the evaluation process and evaluation of learning outcomes is done authentically based on the cognitive, psychomotor, religious, and social. Assessment process undertaken to assess the participation of students during the learning process. Assessment is based on the work of students in solving problems worksheets, controlled exercise, exercise self-reliant, and independent tasks

Keywords: development, plan, natural-science

Introduction

Learning of Natural Science in Taman Dewasa Junior High School Yogyakarta, is still largely centered on the teacher. This is called teaching activities, not a learning activity. The dominance of teachers in learning looks very clear. Judging from the methods used, teachers tend to use the lecture method, protests, tasks, exercises. Associated with the dominance of teaching activities, the question arises whether the activity of learning science in Taman Dewasa Junior High School Yogyakarta effective?.utama (2011: 28) says, learning ineffective because (1) the teacher is less gain a better understanding Content Standards, (2) learning tends text book oriented and less related to the daily life of students, and (3) the teacher in teaching tend to be less the capability of beginning students.

Based on the above reasoning, the teacher should also focus on learning strategies that suit the need of developing a learning management that can lead students to understand

and experience the process of Natural science. One of them is the management of Natural science-based learning outside the classroom (outdoor). Outdoor learning is one way to enhance the learning capacity. Students can study in more depth through the objects encountered in the environment, than if learning in the classroom which has many limitations. Furthermore, learning outside the classroom can help students to apply their knowledge. In addition, learning outside the classroom is more challenging for students and bridge the gap between theory in the books and the reality on the ground. The quality of learning in a real situation will provide increased capacity learning achievements through the object being learned and can build social and personal skills are better with early advances in scientific attitude. Outdoor learning can be done at any time in accordance with the draft program prepared by the teacher. The purpose of the research is to develop the lesson plan of an outdoor learning of natural science in Taman Dewasa Junior High School Yogyakarta.

Research Methods

The research uses research and development approach, namely, a one-year study with a qualitative research design. Informants in this research, principals, classroom teachers and students of Taman Dewasa Junior High School Yogyakarta. Data are collected by using observation, in-depth interviews, and documentation. The data are analyzed by using qualitative analysis of flow method. Data validity is examined by using methods and sources triangulations.

Results and Discussion

a. Research Result

Natural science lesson plans (RPP) relating to the initial plan of learning, classroom management, media management, management science teaching materials, teaching materials IPA management and interaction management. The result of the development of lesson plan of an outdoor learning of natural science in Taman Dewasa Junior High School Yogyakarta are outlined below.

Lesson plan natural science writing outdoor learning contains Identity: school, class / semester, the subjects, the number of meetings; I. Standard of Competence; II. Basic Competencies; III. Indikacors; IV. Purposes, V. Character of students is expected. VII. Learning materials; VIII. Learning methods; IX. Lesson: Introduction, Core Activities, Closing; X. Learning Resources; XI. Learning Outcomes Assessment: Assessment of performance and learning outcomes. Here are the steps of outdoor learning:

Table 1. Steps Natural Science Outdoor learning

Activities	Steps
INTRODUCTION	a. Teacher greetings, presence of students, reminding students sit up and take notice of activities that will be discussed in study b. Delivering apersepsi teachers to rise to the phenomena or events in everyday life that has to do with the material to be studied c. Teachers deliver the learning objectives before discussing the material to be studied. d. Teacher gives Student Worksheet e. Teacher explains the rules of learning and sharing groups
CORE ACTIVITIES	a. Teachers invite students together in an orderly out of the classroom to the school grounds. b. Students make observations and experiments by using all five senses and put it in the Student Worksheet c. Teachers assist students and a facilitator in the learning process. d. Students reconvened to present the results of observation and discussion groups in front of the other group. e. Teachers evaluate students' results presentation.
CLOSING ACTIVITIES	a. Teachers together with students back into the classroom. b. Teachers with students to reflect and make conclusions. c. Teachers give awards to a group that works well. d. To train the sensitivity and scientific attitude, teachers provide follow-up assigning students to make observations and experiments in the environment around the house. e. Teachers submit plans for next meeting

Preparation of an evaluation instrument on outdoor learning of natural science starts from defining the purpose of the evaluation is summarized in basic competency achievement goals and indicators studied. Furthermore, the restrictions on the material to be evaluated. This is done so that in the test instrument there are no materials outside the goal. This restriction leads to a basic competency. Preparation of an evaluation-based science learning outside the classroom, which is the performance evaluation and the evaluation of learning outcomes is done authentically based on aspects of cognitive, affective, psychomotor, and social. Authentic assessment is a form of behavioral assessment / performance of students during the learning process comprehensively in real situations.

Assessment of natural science outdoor learning is done through several stages. The first stage of the test instrument use measurements of the results of the study in the form of a score. The next score generated on assessment activities entered the stage of decision outcomes assessment in accordance with the specified criteria. The assessment process was conducted simultaneously at a time when students do

a performance, observation, experimentation, discussion and presentation, namely engagement and activity of students in groups or individual or student participation during the learning process. During the process of group work, the teacher can perform assessment of social aspects. In this activity students are required to work together. Affective and psychomotor aspects of the assessment made at the time the students do activities and observed by using the observation sheet. Involvement and activity of students in a group is assessed using the guidelines of the observation. The participation of students is seen in present observations and experimentation of the group as well as in providing feedback or a question in the discussion results of the group work.

Assessment results are based on the student's work such as solving problems student worksheets, sheets tasks or exercises that include controlled exercise, exercise self-contained (daily test) and the task independently. Especially for independent exercises, contains three types of matter, namely the type of questions that have been discussed thoroughly, type of questions that have been awarded but not yet fully covered, and the type of questions that have not been granted. Chores relating to the application of scientific attitude of students, ie assigning students to make observations and experiments in the environment around the house is related teaching materials.

b. Discussion

Development of lesson plan Natural science is based on Content Standards (SI), which contains the syllabus and adapted to the conditions of the school and students. Preparation of the implementation plan is a planning stage. Writing lesson plans in advance is started with the designing (1) learning objectives based on the analysis of SK and KD, (2) the problem situation created by the students, (3) organization of resources and logistics, (4) techniques and procedures authentic assessment process and learning outcomes will be applied, and (5) steps in learning activities.

Learning steps preceded the introduction, the core activities and closing activity. Preliminary activities are activities of conditioning students to be ready for learning. The activities include: (a) deliver learning objectives, and basic materials that will be studied as well as the learning procedure, (b) Apperception, namely through the question and answer recalls the previous material and rise to the phenomena or events in everyday life, (c) provide motivation that will

stimulate the curiosity of students. This is in accordance with the opinion of Lynch and Dorothy (2003: 1-4), that learning is not only to transfer knowledge, but the process of constructing knowledge. Learning is a process not just memorizing a concept that is so, but learning must experience. Wandenberg (2016) also said that "the education provided in this century must go beyond humanism to make the student fully develop their potential benefit themselves and society by improving the quality of life and environment (Ibid) more and more".

Second, the core activity is the stage of the creation of meaning, is divided into three activities, namely exploration, elaboration, and confirmation. Teachers encourage students together outside the classroom to make observations and experiments were then poured into students' worksheets. Through observation and experimentation, pupils use all five senses the ability to gather information, ask questions and process the data, then analyze, reason, and conclude. Through outdoor learning process will stimulate the curiosity of students, trained to think critically, analytically, to train sensitivity, openness, cooperation, and objective, so that it will form a scientific attitude of students and in the end product will be obtained in the form of scientific knowledge. This is in accordance with the opinion of Kuslan, L. I., and Stone, A.H (1968: 2) "Real science is both product and process, inseparably joined". Whereas, as a product of science can not be separated from the essence as a process. Product knowledge includes facts, concepts, principles, theories and laws. This process includes ways to acquire, develop and apply knowledge, including how to work, how to think, how to solve problems, and how to behave. Science systematically formulated, based primarily on observations and experiments. It is strengthened with the opinion of Carin, A. A & Sund, R.B (1980: 4) "Science is the system of knowing about the universe through the data collected by observation and controlled experimentation. As the data are collected, are advanced to explain and account for what has been observed ". Science is a system that knows about the universe through the data collected by observation and controlled experiments. The data collected is used to explain and take into account to what has been observed. So it is clear that the knowledge acquired and developed based on the results of observations and experiments. In making observations through the scientific method and scientific attitude. All this will be successful, if the learning is also done in a way as to which knowledge is acquired and grown, through observation and experimentation, as happened in the outdoor learning.

After that the teacher provides questions related to basic competency that has been studied earlier. Thus it can be seen the extent to which the student has to make efforts to solve the problems faced. Finding is important in the learning process, because with finding a solution to their own problems, students have their own satisfaction and not easily forgotten. This is in accordance with the opinion of Suherman (2012: 11-54), that the finding, the ability to think independently to be trained and become accustomed.

Third, Closing Activities. This stage is an activity to analyze and evaluate the problem solving process includes: (a) personal reflections by asking the students about things that have been mastered, the material is not well understood, the root cause has not mastered, and alternative solutions to the next action, (b) students are given tasks related to daily life by making observations and experiments in the environment around the house. Teachers and students of reflection with to conduct a discussion, about the things that had just learned. Teachers and students together make a summary.

Teachers strengthening or suppression of material that has been taught, so students have the same understanding. The results of a study show that effective classroom management that one way is to use reinforcement to students. Ummu H.A. (2012: 87-100) stated that in order to manage the activities in the classroom in order to be effective, as follows shows how far the teachers to follow the ongoing activities in the classroom, to overcome overlap situation effectively, maintaining the smoothness and continuity of teaching, involving students in a variety of exciting activities, shows the attitude catch, dividing attention, focus, clear instructions and reprimands and provide reinforcement.

Teachers hold a judgment properly, including the assessment process and outcome assessment. Assessment is not only done at the end of the semester, the end of the year or the final exam but also executed when the assessment of the learning process takes. This is in accordance with the results of Sri Budiyati, Sutarna and Sabar N (2013) which stated that the assessment is not only assess the end result, but also to assess the process. Teachers make an assessment when students work together in making observations and experiments as well as group work and student activity in asking was also assessed by teachers. As for the evaluation of science teaching is done authentically based on the cognitive, psychomotor, religious, and social. Assessment process undertaken to assess the participation of students during the learning process. Assessment is based on the work of students in solving problems worksheets, controlled exercise, exercise self-reliant, and independent tasks.

Instructional media used by teachers from their own teacher-made, from the school, and the environment around the school. Learning media created by the creativity of teachers. Preparation of teaching materials and refers attention Competence Standard and Basic Competence established by National Education Minister Regulation No. 22 of 2006 on the Content Standards. Furthermore, determining the form of teaching materials, any material that will be taught require instructional materials vary. To teach the material sometimes accordance with demonstrations, textbook or worksheet. For the foresight in the analysis required. Lesson plan attached with teaching materials in the form of students' worksheets.

Conclusion

The development of lesson plan an outdoor learning of natural science in Taman Dewasa Junior High School Yogyakarta, namely stage 1: student orientation on circumstances problems, phase 2: organize students to learn outside of the classroom, stage 3: guiding individual and group investigations, stage 4: presenting the results of observation and discussion groups, and stage 5: analyzing and evaluating the process that has been done in learning.

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