



COMBINATION OF PROBLEM BASED LEARNING MODEL AND INVESTIGATION GROUP FOR ENVIRONMENT SUBJECT

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Abstract

Education has an important role in influencing one's attitudes, including attitudes towards the environment. The purpose of writing is to explain how learning through a combination of Problem Based Learning and Group Investigation models in improving attitudes towards the environment. Investigative activities to find out the surrounding environmental problems followed by the process of solving problems encountered during the investigation are a series of learning processes that will foster concern for environmental problems. Knowledge gained from direct experience of real problems found will affect a person's behavior or attitude.

Keywords: attitude; environment; investigation group; problem based learning model

INTRODUCTION

Education has an important role in influencing one's knowledge, views, and attitudes towards something, including understanding and attitudes towards the environment. According to the Ministry of National Education (2010), the character of caring for the environment is an attitude and action that always tries to prevent damage to the surrounding natural environment and develops efforts to repair the damage. A person who has good knowledge about the environment will generally have a great concern for the environment. This is a proven that students' knowledge of the environment has an impact on attitudes towards their environment. This knowledge is certainly not obtained simply through memorizing concepts, but this knowledge is obtained from contextual learning experiences.

One of the learning models that can facilitate students to learn from direct experience is the combination of the Problem Based Learning model with Group Investigation. Problem Based Learning (PBL) is learning that uses real-world problems as a context for students to learn about critical thinking and problem-solving skills, as well as to acquire essential knowledge and concepts from the subject matter (Nurhadi, et al., et al., 2004; Masek, et al., et al., 2011). In PBL the role of the lecturer or teacher is as a facilitator and guide students, not helping to solve the problem (Kendler and Grove, 2004).

Problem Based Learning refers to the philosophy of constructivism which views education in this case the school should reflect the wider community and the classroom is a laboratory for solving

problems that develop in real life. As an implication, educators should encourage their students to practice and involve themselves in activities related to problem solving.

Group investigation is a cooperative learning method that emphasizes investigative activities so that it can train various student abilities such as the ability to analyze, synthesize and gather information to solve problems. The combination of Problem Based Learning and Group Investigation models will strengthen the stages of the learning process. According to Marhamah (2014) the stages of the combination of the Problem Based Learning model with Group Investigation are as follows: (1) Orienting students and students to problems, (2) Identifying topics and organizing students to study in groups, (3) Planning assignments to be studied, (4) Guiding the implementation of investigations or/investigations in groups, (5) Prepared the final report, (6) Developed and presented the work or presented the final report.

The experience gained during the learning process with the combination of the PBL model with the Group Investigation makes it possible to change views and attitudes towards the environment. This can be explained as in Figure 1 about the conception of attitude. According to Azwar (2010) attitudes can be grown through learning experiences. The process of accommodation and assimilation of knowledge, experience and values will be a reference in responding to objects or subjects in their environment. In changing one's attitudes and behavior, five processes are needed, namely creating openness, advancing understanding, considering new attitudes and behaviors, experimenting, and getting support (Silberman, 2014 in Irfianti, M.D., et al., 2016).

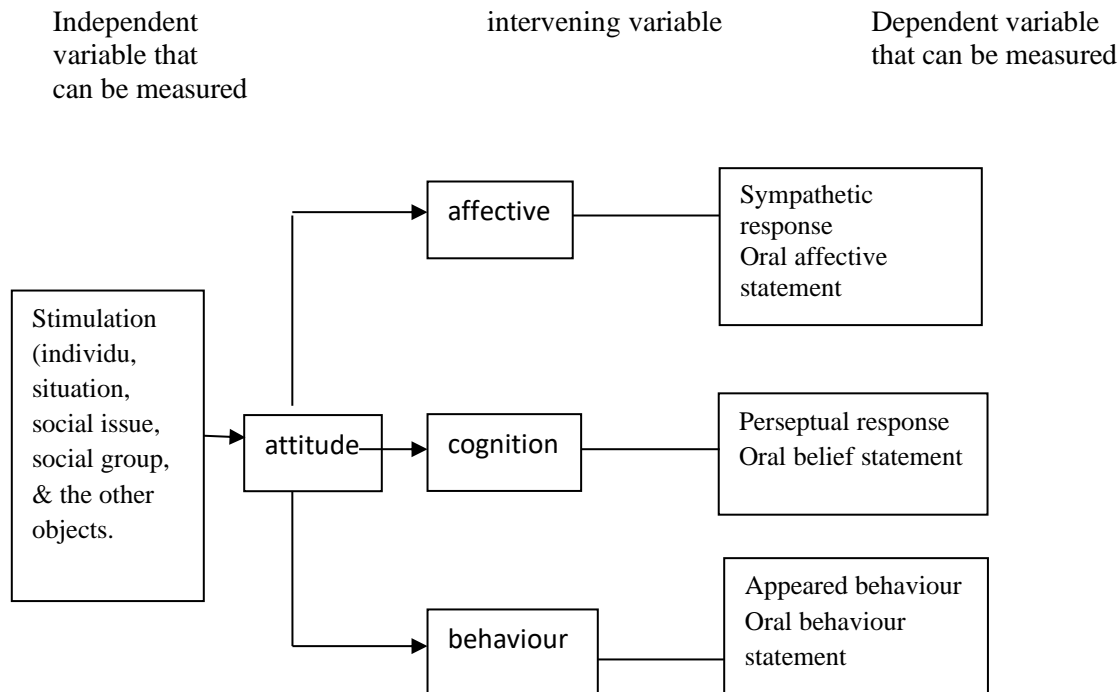


Figure 1. Rosenberg & Hovland's attitude concept scheme about attitude (Source: Fishbein & Ajzen, 1975 in Azwar, 2011: 8)

METHOD

The research method used is descriptive, namely research that describes and explores with the aim of explaining and predicting a symptom, condition, or event that occurs on the basis of data obtained in the field. This presentation describes how learning with Problem Based Learning and Group Investigation models influences attitudes towards the environment.

RESULT AND DISCUSSION

The environmental learning process that involves students and / or students about environmental problems around them will provide valuable experience for them about the environment. This is reflected in each stage of the Problem Based Learning and Group Investigation activities when students start planning activities, conduct investigations on environmental damage, then analyze the problems encountered, how the consequences of environmental damage are caused, to the solutions offered to overcome environmental problems.

The first stage, learning starts from problem orientation, at this stage students are shown videos about environmental issues around them to global issues, such as the impact of global warming. After watching the video, the students gave their arguments and opinions on the issue of global warming and its impacts. The second stage, students are divided into several groups and determine the topic of the problem that will be investigated in groups, in this case the topics are determined such as pumice mining, damage to mangrove forests on the Jerowaru coast, East Lombok, forest damage in the Sambalia area, and environmental pollution.

In the third stage, students plan assignments or develop investigative plans, at this stage students discuss with their group friends about the preparation of tools and materials needed in investigative activities and determine the time and technique of implementation. The fourth stage, carrying out investigative activities in groups. This activity is a very important activity where students are given the opportunity to observe directly the environmental problems around them. Students can find out the damage to mangroves, environmental pollution, deforestation, coastal abrasion, and get direct information about the consequences of this damage for the surrounding community. At this stage, students collect as much data as possible about the environmental problems they encounter.

The fifth stage is to prepare a report on the results of the investigation. At this stage, students compile reports on the results of the investigations based on the data obtained in the field. Based on the data obtained, they analyzed the causes and impacts of the cases encountered. Students also think of solutions to overcome the problem of environmental damage. The sixth stage, developing and presenting the work. At this stage, each group of students presents a report on the results of the investigation that has been carried out in front of other groups. Students discuss the environmental problems found. Discussion activities are expected to stimulate students' creative ideas in solving problems found, in addition to training their thinking skills. This is in line with the opinion of Silberman (2014), in Irfianti, et al., 2016) which states that discussion activities will bring various perspectives and lead to good points of view.

Based on the knowledge and experience gained during the learning process, the combination of Problem Based Learning and Group Investigation models will affect students' attitudes towards their environment. This can be seen from the results of Marhamah's research (2014) which shows an increase in attitude data before and after learning is carried out, attitude changes are caused because students are directly involved in observing and solving environmental problems around them. Attitudes can be grown through learning experiences. The process of accommodation and assimilation of knowledge, experience and values will be a reference in responding to objects or subjects in their environment. If someone has extensive knowledge about the environment, he will become aware of the environmental problems he encounters, this will increase the motivation to respect the environment (Burgess, Harrison, & Filius, 1998, Cottrell, 2003, in Kilinc, 2010).

CONCLUSION

Based on the results and discussion, it can be concluded that the application of a combination of Problem Based Learning and Group Investigation models in the environmental learning process will facilitate students and/or students in solving environmental problems around them, as well as training in finding solutions to overcome these problems. This will affect the attitude of students to be more concerned about their environment.

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