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## **THE INFLUENCE OF GROUP INVESTIGATION LEARNING MODEL ON COLLEGE STUDENTS LEARNING MOTIVATION TOWARDS ENVIRONMENT EDUCATION**

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### **ABSTRACT**

This study aims to analyze the influence of group investigation (GI) model on learning motivation of Student Environmental Education. This type of research is quasi experiment with non equivalent control group posttest only design. Research subjects consist of 2 semester students (2 classes) selected based on the value of Middle Semester Exam (UTS) odd semester of academic year 2017-2018 which has the average value is almost the same (homogeneous). The control class uses lecture and discussion models, while the experimental class uses the GI model. The instrument used to measure learning motivation is A Manual for the Use of the Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich et al. Further data obtained were analyzed by using Independent Sample T-Test Test with the help of SPSS 16.0 for Windows program. The results of this study indicate that there is a significant influence of GI model on the motivation to learn the environment of mahMahasiswa. It was based on the analysis results of the Independent Sample T-Test Test that showed the p-level 0.000. The p-level value is less than 0.05 ( $p < 0.05$ ).

Key words: Group Investigation model, motivation to learn Environmental Education Student

### **INTRODUCTION**

Learning model has several advantages. According to Slavin (2005: 5) the Group Investigation (GI) model has several advantages for students, among others "can develop intergroup relations, acceptance of weak classmates in the academic field, increase self-

esteem, the growth of awareness of thinking, problem solving, integrate and apply knowledge skills ". GI learning will help students who are academically weak and embarrassed when asking lecturers directly. Students usually feel more comfortable and free to ask with friends. It can help lecturers to membelajarkan Students who do not understand the material.

GI learning model also membelajarkan Students to become researchers. This is in accordance with Sharan's opinion (2014: 130) Group Investigation model has advantages that the class becomes a community of researchers who answer questions from a problem that comes from the environment. The existence of the research community demands that all students participate to be involved in research. Therefore, the formation of a small group of five Students will make everything active in the study and reduce the likelihood of Students not working in groups.

Mushodik Research (2013) found that "Group Investigation model influences the critical thinking skills of Madrasah Aliyah Negeri 6 Jakarta Students". The study has similarities and differences with this study. The similarity with this research is the use of GI model and the material of environmental conservation, whereas the difference of this study measures the learning motivation of Environmental Education, and Mushodik research measures critical thinking ability.

Ulfah research findings (2014) "Study Group Investigation model influences student learning outcomes N 1 Banjarbaru". The study has similarities and differences with this study. The equation with this research is the use of Group Investigation model, while the difference among others is measuring the motivation of learning Environmental Education and Ulfah research measuring the learning result of Environmental Education.

Learning motivation is a must-have for students. According to Uno (2008: 23) learning motivation is "internal and external impulses in a person to make changes in behavior". Internal encouragement comes from the Student self, while the external encouragement comes from the Student neighborhood. These two impulses must be owned by the Student in learning.

Model Group Investigation affect student's motivation to learn. This is in accordance with the results of research Tan (2004), Yulianto et al (2004), and Widiarsa et al (2014). The results of this study proves that the motivation to learn Students who use the GI model is higher than students who use conventional learning methods. The learning motivation is very important for the learning process.

Tan (2004) showed that GI model has an effect on student's learning motivation. Tan's research equation with this research is using GI model on Environmental Education

subject. Research also has differences with Tan's research. The subjects of this study are students of class XI, while the subject of research Tan is a student of SMP class VIII.

The results of Yulianto et al (2013) obtained cooperative learning type GI experimental inquiry-based influential on student learning motivation. The research equation of Yulianto et al with this research lies in the use of GI model. The study also has differences with this study. The difference, the subject of research Yulianto et al namely Student junior high school class VIII, while the subject of this study is a student class XI. The study material of this research is environmental conservation, while the learning material in research Yulianto et al namely refraction light (physics subject).

The results of Widiarsa et al (2014) obtained GI type cooperative learning influential on student learning motivation. The research equation of Widiarsa et al with this research lies in the use of GI model. The study also has differences with this study. The difference, the subject of research Widiarsa et al ie Student class X high school, while the subject of this study is a student class XI SMA. Widiarsa et al study was conducted on biology subjects, while the research was conducted on the subjects of Environmental Education.

The results of this study obtained the GI model has an effect on student learning motivation. This is in accordance with Sharan's opinion (134: 2014) "group investigations motivate students to take an active role in determining what they learn and how they learn." Motivation Students have is essential for effective and efficient learning. Motivation is also easier for students to achieve learning objectives.

Group Investigation also affect the motivation to learn because of the cooperation among students. This is in accordance with Zingaro's opinion (2008: 2) "It has also been found that GI improves positive inter-ethnic relations and intrinsic motivation enhancement". Students will begin to cooperate after the formation of the group. The form of cooperation in the form of division of tasks that are evenly distributed among the group members. This will prevent the emergence of envy and dependence in the group. The lack of envy and dependency in the group will make the students motivated in learning.

GI learning model has an effect on student's motivation to learn because student have to socialize with friend of group having different cognitive ability. In the opinion of Joyce and Showers (2002: 53) "the" socially advantaged "students learned more also through group investigation". The differences in cognitive ability make students help each other. Students who do not understand the material will ask with the theme of the group without any sense of

shy and embarrassed. The lack of embarrassment asks students to be more motivated in learning.

The use of the GI model by utilizing the surrounding environment as a Learning Source is done on environmental assessment materials in relation to sustainable development Student Motivation is expected to increase with that learning. This is supported by the opinion of Sharan (2014: 130) who writes that "GI has a unique character in the integration of four basic features such as: investigation, interaction, interpretation, and intrinsic motivation". Based on the above problems, the researchers plan to conduct research entitled "Influence of Model Group Investigation Against Motivation Learning Education Student Environment".

## METHODS

The type of research is the quasi-experimental study with nonequivalent control group posttest only design.

Experiment Group	X	O <sub>1</sub>
Control Group	-	O <sub>2</sub>

(Jacksen, 2011:153)

The subject of research consists of the 2nd semester students selected based on the Middle Semester Examination (UTS) score for the academic year 2017-2018 which has almost the same average (homogeneous). The control class uses lecture and discussion models, while the experimental class uses the GI model. The instrument used to measure learning motivation is A Manual for the Use of the Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich et al. Furthermore, the data obtained were analyzed by using the Independent Sample T-Test Test with the help of SPSS 16.0 for Windows program.

Data of learning motivation score of Environmental Education was analyzed by t test. Data analysis was performed using SPSS 16.0 for windows application at 0.05 significance level. The following is the formulation of the null hypothesis and the working hypothesis.

a. If the significance of  $<0.05$  and the average learning motivation score of the experimental class is higher than the control class then  $H_0$  is rejected. This means that there is a significant

influence of the Group Investigation model on the motivation to learn Environmental Education Student.

b. If significance  $> 0.05$  and average experimental grade motivation score is lower than control class then  $H_0$  is accepted. This means that there is no significant influence of the Group Investigation model on the motivation to learn Environmental Education Student.

## RESULTS AND DISCUSSION

### 1. Results

Motivation to learn Environmental Education Students in this study are determined based on the average value of motivation to learn Environmental Education Student class experiment and control. The average value of learning motivation Student Environmental Education is obtained by filling out the questionnaire. The average value will be used for data analysis and hypothesis testing. The following is the average value of learning motivation of Environmental Education Student of experiment and control class.

Furthermore, hypothesis test with parametric statistic test is t test (t test). The result of t-test test with SPSS 16.0 is P-value for t-test is 0,000 (Appendix 13). Judging from the 95% confidence level, the Sig 0.000 score is less than 0.05. This means  $0.000 < 0.05$ , then  $H_0$  is rejected so it can be concluded that the group investigation model has a significant effect on the learning motivation of Student Environmental Education.

The findings in this study indicate that the group investigation model has a significant effect on learning motivation of Student Environmental Education. The result of t-test test with SPSS 16.0 is P-value for t-test is 0,000 (Appendix 13). Judging from the 95% confidence level, the Sig 0.000 score is less than 0.05.

Other findings in this study include: (1) Students look happy to observe the surroundings, (2) Students who had been quiet and embarrassed to ask, become more often asked mainly to his group friends, (3) Students feel more challenged by the task of formulating the questions given by lecturers, (4) Different sub themes make the Student's curiosity high.

Additional findings in this study include serious work groups because their work will be evaluated by other groups and all students are more active in learning. It is caused by the investigation is done outside the campus, the lecturer only convey the problem at the beginning of learning, and often interaction between students at the time of learning. These three factors make GI learning different from other cooperative learning.

## 2. Discussion

The results of this study indicate that the group investigation model has a significant effect on the learning motivation of Student Environmental Education. This is evidenced by hypothesis testing. The result of hypothesis test shows P-value for t-test of 0.000 (0,000 <0,05). The average grade of the experimental class motivation is 208, while the mean value of control class motivation is 177. The results are in accordance with Sharan's opinion (134: 2014) "group investigation motivates Students to take an active role in determining what they learn and how they learn".

The results of this study also supported by previous research results, including research conducted by Tan (2004). The equation of this research with previous research that the GI model has an effect on the learning motivation of Student Environmental Education. This study also has differences with previous research. This study uses Student class of 2nd semester students as the subject of research, whereas previous research using grade VIII SMP students as research subjects. The study material of this research is environmental conservation, while the learning material in Tan research that is natural resources.

The results of Yulianto et al (2013) support the results of this study. Yulianto et al research results obtained cooperative learning type GI experimental inquiry experimental influence on student learning motivation. The research equation of Yulianto et al with this research lies in the GI model having an effect on student learning motivation. The study also has differences with this study. The research subject of Yulianto et al is the students of SMP class VIII, while the subject of this research is Student of semester 2. The study material of this research is environmental conservation, while the learning material in Yulianto et al research is refraction of light (physics subject).

The results of Widiarsa et al (2014) also support the results of this study. Result of research of Widiarsa et al got GI type cooperative learning influence to student's learning motivation. The research equation of Widiarsa et al with this research lies the GI model having an effect on student learning motivation. The study also has differences with this study. Widiarsa et al research subjects ie X class high school students, while the subject of this study is Student semester 2. Research Widiarsa et al done on the subject of biology, while the research was conducted on the subjects of Environmental Education.

The GI model influences the motivation to learn the Student Environmental Education because: first, the implementation of the research by the Students is done outside the classroom. Students should conduct research outside the campus. Students examine how to

preserve mangrove forests and the role of communities in preserving them. The learning atmosphere outside the classroom is different from in the classroom. The difference is that learning outside the classroom is more contextual than in the classroom. Students look happy to see the environment. It is in Sharan's opinion (2014: 130) that the Group Investigation model has the advantage that it becomes a research community that answers questions from a problem that comes from the surrounding environment.

Second, there is often an interaction when GI learning is conducted. Students often interact with other Students in one group to compile questions and find answers to those questions. Students who used to be quiet and embarrassed to ask, became more often asked primarily to a group of friends. This happens because the student feels given a place and time enough to ask a friend of his group. This is in line with Slavin's opinion (2005: 5). Group Investigation model has several advantages for Students, among others "can develop relationships between groups, acceptance of weak classmates in the academic field, increase the sense of self-esteem, the growth of awareness of thinking, , integrate and apply knowledge skills ".

Third, lecturers only give problems at the beginning of GI learning. Problems given by lecturers that various kinds of environmental disasters that ever happened. It requires students to analyze the problems that occur. The existence of these demands is able to challenge the Students to think high level about the problems that occur to then be poured in the question and determine the sub theme of the study. According to Huda (2011: 124) the Group Investigation model has several advantages for students, such as "Students engage in high-level thinking activities, such as making synthesis, summary, hypothesis, conclusion, and presenting final report".

Fourth, students are investigating different sub themes. The GI study in this study divided the class into five groups. Two groups investigated mangrove forests from the physical aspect, while three groups investigated groups from the community aspect. Different sub themes make the Student's curiosity high. The group not only focuses on the sub theme it investigates, but also must know the sub theme that is being investigated by other groups. Students' knowledge will be more comprehensive by analyzing several sub themes. It is in accordance with the opinion of Trianto (2007: 60) "the learning activities should involve a wide range of activities and skills and lead the Students to different types of learning resources, both on and off campus".

Additional findings in this study include serious work groups because their work will be evaluated by other groups and all students are more active in learning. These findings

make GI learning in the experimental class work well. Students are easier to supervise and regulate by lecturers in every stage of learning. Each group is serious in doing its job because it will be evaluated by another group. Each group evaluates the clarity, attractiveness, and relevance of the presentation. This is in accordance with the opinion of Pintrich, et al. (1991: 10) "Extrinsic goal orientation complements intrinsic goal orientation, and concerns the degree to which the student perceives herself to be participating in a task for grades such as grades, rewards, performance, evaluation by others, and competition".

The experimental class students also appear to be more active in learning. No more Students sleeping, playing mobile phones, or talking to friends. The opposite occurs in the control class. Some Students in the control class still look passive. This is indicated by students who sleep and talk with friends. The learning of the control class will obviously disturb the lecturer in delivering the material and the passive student will not understand the material that the lecturer convey. This is in accordance with the opinion of Rusman (2012: 222) Group Investigation model has advantages such as "developing the creativity of students, both individually and in groups and is seen as an active learning process, because students will learn more through the process of formation and creation".

The weakness of the GI model in this study is that not all students in the group are actively asking when the presentation stage of the research results. It is in accordance with Sumarmi's opinion (2012: 132) that GI has the following weaknesses.

(1) GI is not supported by special research results; (2) group projects often involve capable students because they are better able to direct their own learning; (3) GI sometimes require different settings of circumstances, different material types, and different teaching styles; (4) classroom conditions do not always provide a good physical environment for small groups because between one group and the other the group is too close so the group discussion can not run well then interfere with each other; and (5) the success of the GI model depends on the ability of the Student to lead the group or to work independently. Constraints in this study is the implementation of research in the area of mangrove forest carried out in the rainy season (February 2015). Students were worried if the rain fell. Such concerns disrupt the concentration of students when conducting research in the field.

## **CONCLUSION**

Based on the result of data analysis and discussion, it can be concluded that learning on environmental conservation materials with Group Investigation model gives positive

influence to the motivation of learning of Student Environmental Education. Average learning motivation score Environmental Education Student experiment class is higher than control class. This is because the GI learning steps that require students to find learning resources and analyze problems independently. Student Activity resulted in the motivation to learn Environmental Education Students become high.

Based on the above conclusions, then the suggestions can be given as follows.

1. For lecturers, in applying the Group Investigation model should (a) appoint students who have not questioned and responded during the presentation stage, (b) conducting field investigations during the dry season.
2. For the next researcher it is suggested to (a) test the influence of the Group Investigation model on other variables of critical thinking and student learning outcomes, (b) compare or combine with other learning models, and (c) apply to Classroom Action Research.

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