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Application of Learning Model *Peer Tutoring* with Module to Improve the Effectiveness of Learning in Primary Teacher School Study Program in Trilogi University

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Abstract

This study aims to improve the effectiveness of learning in Classroom Action Research courses by applying learning models peer tutoring using modules. This research is a Classroom Action Research conducted in two cycles. Each cycle consists of planning, implementing, observing and reflecting. The subjects of this study were the eighth-semester students of the 36 Trilogy University Primary School Teacher Education Study Program. Data sources came from students and lecturers. Data collection techniques are done by tests, interviews, documentation, observation and literature study. Data analysis uses descriptive qualitative analysis techniques. The results showed that the application of the model peer teaching with modules could improve the effectiveness of learning as evidenced by, (1) the activeness of students during discussions in the learning process in cycle one reached 50% and increased to 90% in the second cycle, (2) attainment of attitude indicators positive students in the first cycle reached 40% and rose to 90% in the second cycle, and (3) the achievement of the completion of the task from cycle one by 50% increased to 100% in the second cycle. It can be concluded that the application of the model peer tutoring with modules can increase the effectiveness of learning in cycle one to cycle two on three aspects namely, (1) student activeness in discussion increases by 40%, (2) an increase in positive student attitudes increases by 50% and (3) achievement of learning outcomes increased by 50%.

Keywords: *Peer Tutoring, Module Media, Effectiveness of Learning*

Introduction

Education is one of the important aspects of determining the progress of a nation. Education in Indonesia is carried out from the elementary level to tertiary education. The purpose of education includes the development of three aspects, namely knowledge, skills, and attitudes. Education is the responsibility of the tri education center, namely family, school, and community. Educational progress is strongly influenced by the achievement of learning objectives, and several aspects support the achievement of these objectives, namely, (1) teacher quality, (2) students, (3) learning resources, (4) facilities and infrastructure, and (5) types evaluation used.

Learning is a core activity in the implementation of education. In this activity, there are two types of approaches, namely (1) *teacher centered* where the lecturer acts as the main actor in learning activities and is usually dominated by lecture activities, and (2) *student centered* namely students as the main actor in learning activities and the lecturer acts as a planner, facilitator, and motivator. In essence, both approaches have positive and negative aspects, but based on learning theory it can be concluded that learning with a student centered will be more effective in achieving learning objectives. The output produced is not only about students knowing what, but rather on students understanding what, and being able and willing to do what.

This research was conducted to students of the University of PGSD trilogy study program in the odd semester 2019/2020. This is based on the results of observations, interviews and literature study. Based on observations made by researchers during the first and second-week lectures on Wednesday, September 26, 2019, and October 2, 2019 at 09.35-11.15 in the morning, data were obtained that, (1) when the lecturer explained the material with learning models *direct instructional* namely lectures and questions and answers, 80% of students look bored and can only concentrate on the initial minutes of learning, (2) 70% of students cannot answer questions correctly after the lecturer explains the material and conducts questions and answers, and (3) 30% of students who sit in a row in the back and corner looks fun playing mobile and lecturers must be reprimanded in the learning process.

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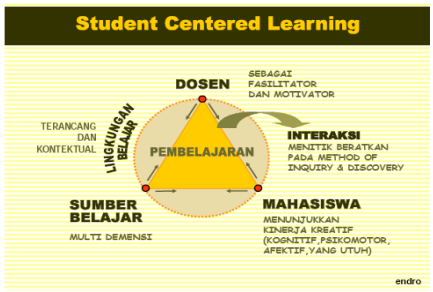
Data on the ineffectiveness of the learning process is also supported by the results of interviews with six random students who stated that (1) class action research courses including subjects they find difficult, (2) sometimes students experience confusion if the lecturer explains a lot of material, (3) 75% of students stated that they did not like learning with the model *direct instruction,* and they wanted to learn activities where they were more actively involved in the preparation of material, not just listening to explanations from lecturers, (4) students expressed embarrassment and were somewhat afraid if ask the lecturer when they have not understood the material substantively, and (5) 100% of students said they would prefer if learning is done in practice and they are actively involved in the process of group discussion to construct their knowledge. The data is also supported by the results of the literature study in the form of work deposits (assignments) that have been collected by students at the end of the lecture session showing that only 35% of students can understand and do the assignment correctly. Some of the descriptions above indicate that the implementation of models *instructional learning* based on *teacher-centered* makes the learning process less effective.

This is supported by the opinion expressed by Rukmana, Nana in an oral presentation in 2019 namely, "students will not learn much just by sitting in class listening to the instructor, memorizing, and answering questions", students must talk about what they learn, connect with experience, then apply it. Students must make what they learn as part of themselves ". In the implementation of face-to-face learning, interpersonal communication is very important. Effective communication can be characterized by understanding, pleasure, influence on attitude change, the creation of good relationships and implemented in the form of action.

As for some important things that must be considered by a teacher based on Permenristekdikti No. 44 of 2015 related to national education standards, namely (1) graduate competency standards, (2) content standards, (3) learning process standards, (4) learning assessment standards, (5) lecturer and education staff standards, and (6) facility standards and learning infrastructure.

Based on the national education standards above, it is very important for lecturers to have pedagogical, professional, social and personality competencies, and understand the characteristics and development of students, examine the contents and standards of achievement, process and evaluation of learning. The learning process is very influential on the results of learning outcomes. Based on several studies conducted by Satriyani (2015-2019), it was found that *student-centered* learning is an effective learning process in achieving learning objectives.

Characteristics of learning strategies *student-centered* according to Endritomo (2019) namely, (1) learning focuses on the activeness of students, (2) learning activities carried out critically and analytically, (3) students' learning motivation is relatively high, (4) instructors play a role as facilitators, and (5) requires relatively more time long compared to *teacher-centered learning*. The pictures of the process *student-centered learning* are as follows:



Gambar 7. Skema Student Centered Learning.

Things that facilitate students in learning according to Endritomo (2019) namely, (1) associated with something they already know, (2) step by step, (3) *learning by doing*, practice, (4) repetition and application of concepts that have been learned, (5) get motivation from the environment (lecturers, parents, friends), and (6) feedback. The effectiveness of based learning *student-centered* according to Endritomo (2019), namely:

The description above shows that with the implementation of based learning *student-centered* by positioning students to actively construct their own knowledge through meaningful learning activities with the lecturer acting as a facilitator and motivator. The learning models with approach *student-centered* according to Sumantri (2017) namely, (1) *small group discussion*, (2) *role play and simulation*, (3) *case study*, (4) *discovery learning*, (5) *self-directed learning* (SDL), (6) *cooperative learning*, (7) *contextual teaching and learning*, (8) *problem-based learning*, (9) *inquiry discovery learning* and (11) *peer tutoring*.

The task of the lecturer in the approach *student centered learning* is (1) the planner of learning activities by taking into account the learning objectives, student characteristics, lecturer abilities, material, time allocation, and available infrastructure, (2) facilitator, (3) motivator, (4) giving a good tutorial or example, and (5) giving feedback and reinforcement to students with positive appreciation.

In this study, the researchers chose the *peer tutoring* model as a model that was applied in the Classroom Action Research course. The selection of this learning model is based on (1) from several research journals that researchers have read and observed in class, students look more comfortable learning and discussing with their friends, they can express their feelings and confusion without shame and fear, and (2) there are some potential students to become group leaders who can be tutors to their group members.

Learning model *Peer tutoring* or peer tutors according to Maheady and Gard, 2010 is a procedure of students teaching other students. A peer tutor is a person or several students who are appointed by the teacher as a teacher's assistant in conducting guidance to classmates. So, the peer tutoring system will help students who are less able or less quickly accept lessons from their teacher. To reduce the impression of tension in learning, researchers also support group activities with modules that can be used as reference material in discussions and work on assignments. This makes the learning model study *peer tutoring* deemed capable of overcoming problems in the seventh semester of PGSDprogram students.

According to some experts (Dobos *et al*., 1999; Biggs, 1999; Bruffee, 1999; and Boud *et al*. 2001) the benefits of this learning peer *teaching are*, (1) increasing motivation, namely to improve the quality of the learning process and 'products' teaching, (2) as outcome cognitive and social learning, that is, to increase the level of deepening or higher-order *thinking*, and to develop collaborative *skills*, (3) as an increase in one's sense of responsibility for learning efforts, namely improving the mastery of the teaching-learning process and the learning process and knowledge construct; and (4) improving meta-cognitive skills that enable students to better reflect their teaching and learning more critically. In turn, students can better appreciate their learning experiences. The process of applying this model can be done outside the classroom environment in all learning and teaching contexts.

One of the advantages of the model *peer tutoring* is that students will be assisted precisely in their shortcomings, weak students can frankly tell their tutors (peers) about what they have not understood without shame or fear. The application of the peer tutoring learning model is complemented by supporting media in the form of modules made by lecturers in the form of material summaries presented in *power points* and examples. This media serves to help the tutor's role in explaining the material to his friends. So that it is expected to increase curiosity, learning achievement and student cooperation in completing group assignments.

Based on the description above, the researcher is interested in conducting a study entitled, "**Application of Learning Model *Peer Tutoring* with Modules to Improve the Effectiveness of Learning in Classroom Action Research Courses at PGSD Trilogy University in Jakarta".**

Research Method

In this study, researchers used a type of(CAR) or *classroom action research* that is research intended to provide information on how to carry out appropriate actions to improve the competence of teachers and students (Hendriana, Heris, and Aprilianto, 2017). This makes the research more focused on actions as an appropriate effort to improve professional, pedagogical, social and personal competence of lecturers as well as to increase the activeness, enthusiasm and learning outcomes of seventh-semester students at the PGSD Study Program at the Trilogy University in Jakarta, especially in the Classroom Action Research course.

The location of this research is at Trilogi University, which is located on Jl. Kalibata Heroes Cemetery 1 Jakarta. The reason the researchers researched in the Trilogy University Study Program was that research in the Trilogy University PGSD Study Program had never been held related to the application of the model *peer tutoring* with modules to improve the effectiveness of learning in the classroom action research courses.

The research subjects were seventh semester students at PGSD Trilogy University Study Program with 36 students presented in Appendix 1. The Observer consisted of one person, Mr. Agung Cahya Karyadi, who helped researchers record the learning process. The procedure to be carried out in this class action research is two cycles. Each cycle consists of 4 stages (Kemmis and Taggart, 1998) which include: 1) planning, 2) implementing actions, 3) observation (observation), and 4) reflection. The implementation of the second cycle is planned to be carried out so that the aim of increasing the effectiveness of learning can be achieved optimally. Data collection techniques carried out by the method of observation, interviews, documentation, literature study and tests (taking scores).

Analyzing data is done by searching and compiling data systematically. The data is obtained from interviews, field notes, documentation, literature studies and tests (scores) which are then organized by organizing data into categories, translating into units, synthesizing, compiling patterns, sorting, and making conclusions so that they are easily understood (Sugiyono, 2010: 335). Researchers used descriptive qualitative data analysis techniques and used Miles and Huberman's (1992: 18) model of data analysis consisting of 3 stages namely, (1) data reduction, (2) data display, and (3) data verification.

Data reduction is an important and inseparable part of data analysis. This was done to make it easier to get a picture of the results of observations related to the effectiveness of learning by sorting out the main points in accordance with the focus of the study. Miles and Huberman (1992: 16) explain "data reduction is a form of analysis that sharpens, classifies, directs, discards unnecessary, and organizes data in such a way that final conclusions can be drawn and verified". Data reduction is based on the objectives to be achieved. When reduced,

the data will be analyzed by sorting and choosing what is feasible for the next will be presented.

The next step after reducing the data is display data. The display is done by presenting data that has been sorted into the matrix, *network, chart* or graph so that researchers can better master the data. The purpose of the data display is to make it easier for researchers to understand what is happening and plan the next steps. Data display is done to combine various information obtained so that the analyzer can see what is happening and can determine the next steps.

Verification of data is needed because the initial data obtained is sometimes still vague or insignificant. Then the more data collected, the clearer it will become because it completes the initial data. Verification is done by collecting new data briefly so that conclusions can be obtained. This step is expected to answer the problem formulation.

Checking the validity of the findings is done to obtain valid and accountable data. In this study, researchers used triangulation techniques. Triangulation is done by checking data from various sources in various ways. Triangulation conducted in this study uses three ways namely, source triangulation, technique triangulation, and time triangulation. Source triangulation is done by checking the data obtained through several sources, namely lecturers and students.

Technical triangulation is done by checking the data to the same source with different techniques, such as interviews, observations, and documentation. Whereas triangulation of time is checking with the same technique at different times or situations before the *peer tutoring treatment* and after the model was applied *peer tutoring*. Each focus of the research was given treatment in three ways (Sugiyono, 2010: 366).

Results and Discussion

Teaching and learning activities are interactions between lecturers and students who aim to achieve learning objectives that are focused on three aspects of competence, namely knowledge, attitudes, and skills. The expected output is increasing student competency from not knowing to know, cannot being able and not wanting to be willing. Learning is said to be effective if learning objectives are achieved.

This research is a classroom action research using modules as one of the media and learning resources for students. Lecturers play a role as planners, facilitators, and motivators in learning. The data obtained in this study are in the form of results from the learning process such as student attitudes, skills, and knowledge. The study was conducted in two cycles and will be explained in the next paragraphs.

Cycle I

Table 4.1 Achievements in Cycle I

Aspects of	Activity	Achievement	Targets	Criteria
Cognitive	Student activeness during a discussion	50%	80%	Not Yet Achieved been achieved
Affective Affective	Students positive attitude	40%	80%	Not Yet Achieved Motorized
Psychomotor	Completion of assignments	50%	80%	Not Achieved

In the first cycle, a learning model has applied *peer tutoring* by forming heterogeneous groups. After the group is formed the lecturer gives direction for the assignment and then the student is allowed to ask if there are things that are not yet understood. Furthermore, students work together with group members and lecturers go around from one group to another. The lecturer acts as a facilitator and motivator in the learning process. Based on the results of the observation, it is obtained that only 50% of 39 students are actively involved in the discussion process, the rest is cool to talk about things outside the context of the task, and play gadgets. Other observations also showed students' positive attitudes such as the level of enthusiasm, enthusiasm, and interest in doing assignments, communicating with groupmates and lecturers, the level of achievement in the first cycle reached 40%. In the process of completing the task that is the completion of a research proposal only 50% of the group can finish on time.

Based on table 4.1 there are still aspects that have not to achieve the target, namely cognitive, affective and psychomotor aspects so that action is carried out in cycle II to meet the expected target.

Cycle II

In cycle II a learning model has applied *peer tutoring* by forming heterogeneous groups. After the group is formed the lecturer gives direction for the assignment and then the student is allowed to ask if there are things that are not yet understood. Furthermore, students work together with group members and lecturers go around from one group to another. The lecturer acts as a facilitator and motivator in the learning process. Based on the observation results obtained data that 90% of 39 students who are actively involved in the discussion process, the rest they sometimes still play gadgets and chat with friends.

Table 4.2 Achievements in Cycle II

Aspects of	Activity	Achievement	Target	Criteria
Psychomotor	Student activity during the discussion	90%	80%	Achieved
Affective	Student positive attitude	90%	80%	Achieved
Cognitive	Completion of the task	100%	80%	Achieved

Table 3 Comparison between Cycle I and II

Aspect	Activities	Achievement		Improvement Cycle I-Cycle II	Criteria
		Cycle I	Cycle II		
Psychomotor	The activity of students during discussions	50%	90%	40%	achieved
Affective	the positive attitude of students	40%	90%	50%	Achieved
Cognitive	completion of tasks	50%	100%	50%	Achieved

The following is an increase in achievement data from cycle I to cycle II:

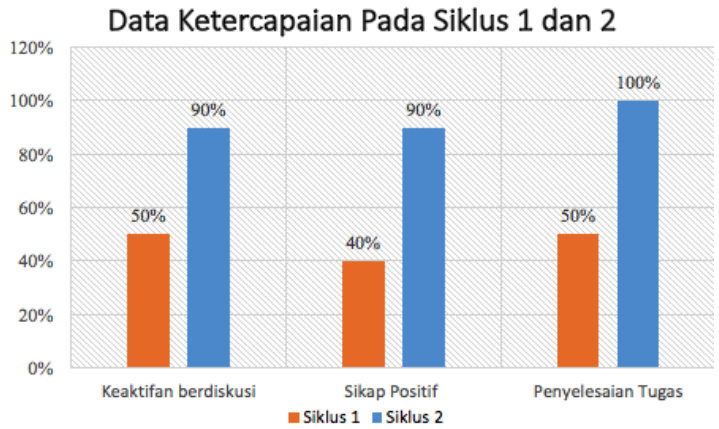


Diagram 4.1 Results of Implementation of Cycle I and Cycle II

Other observations also showed students' positive attitudes such as the level of enthusiasm and their interest in doing assignments, communicating with classmates and lecturers, the level of achievement of positive attitudes of students in the second cycle reached 90%. In the process of completing the task that is the completion of a research proposal 100% of the group can complete it on time.

Based on table 4.2 all aspects have reached the target, namely aspects cognitive, affective and psychomotor reach percentage above 80%, so researchers feel no need to do the third cycle.

Comparison between Cycle I and II

In learning the classroom action research subjects in semester VII odd semester 2019/2020 by applying the peer tutoring model there is an increase in results from cycle I to cycle II on cognitive, affective and psychomotor aspects as clearly illustrated in Table 3 and diagram 1 above.

Conclusions and Suggestions

Based on the results of this study, it can be concluded that the application of *peer tutoring* using modules can improve student learning outcomes of three main competencies namely cognitive, affective and psychomotor. In the psychomotor domain that is specific to the aspect of student activity during the discussion there was an increase from cycle I to cycle II by 40%, in the affective domain that is having a positive attitude by students when learning activities increased from cycle I to cycle II by 50%, and in the realm of cognitive cycle increased from cycle I to cycle II by 50%. Based on the description it can be concluded that applying the *peer* teaching model using the most effective model can increase the effectiveness of learning so that the learning outcomes of the VII semester students in the Classroom Action Research course are achieved.

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