The Influence of Problem-Based Active Learning on the Student Achievement in Ethics Course

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Abstract

This research was aimed to explore to what the extent of problem-based active learning model can improve student achievement in the subject of ethics at department of christian education, Institut Agama Kristen Negeri Tarutung. As in the proposed hyphothesis, there is a positive and significant influence between active student learning and problem-based learning models among students' achievement on the Ethics courses in the Academic Year of 2019/2020. This research is a correlational study using descriptive and inferential statistical techniques. From 192 students, there were 57 students who participated in this study. In order to determine the number of sample, Random Sampling techniques was used. Furthermore, data was collected by using instrument which as was a closed questionnaire. According to data analysis, it was found that $r_{xy} = 0.510 > r_{table} = 0.226$ and $t_{count} = 3.253 > t_{table} = 2,000$. The findings indicated that there is a positive corellation in active student learning with problem-based learning models and students' Ethics achievement. Moreover, the result of analysis using regresion revealed there is the significance of influence among them. Hypothesis testing reported the $F_{count} = 28.386 > F_{table} = 1.39$. Consequently, H_0 is rejected and H_a is accepted. This concludes that there is a positive and significant influence between students' active learning with a problem-based learning model on the achievement of Christian Education students at 25.96%. According to the results of this study, the author provides some suggestions to improve the implementation of problem-based learning models among christian education students.

Keywords: problem-based learning, student's achievement, ethics

Introduction

Higher education was subjected to prepare students throught learning, especially learning models, that are structured, in order to prepare students become professional that are, resilient, and ready to work. To realize this condition, human resources, especially IAKN students, need to have intellectual capacity and high thinking power and innovation power, also have knowledge, and the habit of implementing good moral attitudes. New ways of thinking and new breakthroughs must be introduced and created to overcome the problems of education in the present and the future.

The learning model applied will affect the quality of student learning, because the model aims to know the suitability of the model with teaching materials and conditions of students and the instructor readiness. Problem-based learning can stimulate the enthusiasm of students to be actively involved in the learning experience and enable the development of students' thinking skills (reasoning, communication, and connections). According to Tan, quoted in Rusman (2011:229), "Problem-based learning is an innovation in learning because it can improve students' thinking ability through systematic group or team work processes, so students can empower, hone, test, and develop the ability to think, continuously.

Definition of active learning

Active learning is a perspective that considers learning as an activity to build the meaning or understanding of experience and information, which is carried out by the learner, not by the teacher. Moroveer, it considers teaching as an activity to create an atmosphere that develops the initiative and learning responsibility of the learner so that he wishes to continue to learn throughout his life and not depend

on the teacher or other people if they learn new things. According to Warsono (2012:8), in the active learning students is required to be active and lecturer role as facilitator. Therefore, lecturer must manage and prepare learning creatively which is suitable for the subjects in order to obtain the process of active learning experience. In addition, definition of Problem-Based Learning According to Tan, as it was quoted in Rusman (2011:232), argued that problem-based learning is the use of various kinds of intelligence needed to carry out confrontation with real-world challenges, the ability to deal with new things and existing complexities.

Additionally, the purpose of Problem-Based Learning According to Suyanto (2013: 176) is to provide basic skills and techniques for students so that they can be able to solve their problems, rather than only checking and momorizing a number of data and information. By this teaching method, educators provide students with the ability to solve problems using scientific methods about techniques and steps for critical and rational thinking. The main characteristics of problem-based learning are to ask some questions or problems, focus on interdisciplinary linkages, authentic inquiry, collaboration and producing work and demonstrations.

Steps in Problem Based Learning

According to Suyanto (2013:177), the steps of Problem-Based Learning consist of (a) student orientation to problems. Students need to understand that the purpose of Problem Based Learning is not to obtain large amounts of new information, but to investigate important issues and to become independent students. A good way to present a problem for a lesson in Problem Based Learning is to use an astounding event that raises a mystery and a desire to solve the problem; (b) organizing students to study, the Problem-Based Learning model requires the development of cooperative skills among students so that they can help each other to investigate problems gatherly. In this regard, students need the help of lecturers to plan investigative assistance and report assignments. (c) Assist to be independent and group investigations, the lecturers help students in gathering information from various sources, students are given questions that make them think about problems and the types of information needed for problem solving. Students are taught to be active investigators and can use methods that are appropriate for the problem at hand. The lecturer encourages the free exchange of ideas and the full acceptance of ideas is very important in the investigation stage of problem-based learning. During the investigation phase the lecturer gives the help needed without disturbing the students. The highlight of problem-based learning tasks is the creation and demonstration of works such as reports, posters, physical models and videotapes.

According to Fogarty quoted in Rusman (2011:243) the steps taken by students in a Problem Based Learning process are: finding a problem, defining the problems, gathering the facts using KND, making a hypothesis, rephrasing research problem, presenting alternatives, proposing a solution. Furthermore, according to Aris Shoimi (2016:131) the steps of problem-based learning include, namely (a) the lecturer explains the learning objectives. Explain the logistics required. Motivate students to engage in selected problem solving activities. (b) lecturer helps students define and organize learning tasks related to the problem. (c) lecturer encourages students to gather appropriate information, experiments to get explanations and problem solving, data collection, hypotheses, and problem solving. (d) lecturer helps students in planning and preparing appropriate work such as reports and helps them share assignments with friends; (e) lecturers help students to reflect or evaluate their investigations and the processes they use.

Strengths of the Problem-Based Learning Model

Problem-Based Learning model has several advantages. According to Aris Shoimin (2016:132) the problem-based learning model has some impacts, namely: (1) students are encouraged to have the ability to solve problems in real situations.; (2) students have the ability to build their own knowledge through learning activities; (3) learning focuses on problems so that material that is not related does not need to be studied by students. This reduces the burden on students by memorizing or storing information; (4) there is scientific activity among students through group work; (5) students are used to using sources of knowledge, both from

the library, the internet, interviews, and observation; (6) students have the ability to assess their own learning progress; (7) students have the ability to carry out scientific communication in discussion activities or the percentage of their work; (8) student learning difficulties individually can be overcome through group work in the form of Peer Teaching.

Learning Achievement

Learning achievement is the result achieved by students through a learning or activity. Mulyasa (2013:189) stated that "Learning achievement is the result obtained by students after taking learning activities, while learning in its essence is a conscious effort made by someone to meet their needs. Every learning activity carried out by students will result in learning achievement. "This achievement can be seen in the form of expertise, knowledge and skills that are described by the values achieved after making an effort. Learning achievement of the Christian ethics is a level of achievement or results obtained by a person after studying the ethics of Christian. In student learning achievements, especially Christian ethics can not only be seen from their achievements based on the values written in numbers, but also from students' behaviour.

Theories proposed some steps in the implementation of Problem-Based Learning models, as it can be concluded as indicators, namely: 1) explaining the learning objectives, 2) orientation to the problem, 3) help to define and organize learning tasks, 4) encourage to collect information, 5) help in planning and preparing appropriate work such as reports, 6) making hypotheses, 7) presenting alternatives, 8) proposing solutions, and 9) reflecting and evaluating.

Results and Discussion

Based on the results of research conducted among students at IAKN Tarutung, it is provided a discussion in this part. According to the distribution of student answers on the aspect of problem-based active learning models, it can be found that the item with the highest score is at 24 with a score of 162 and an average value of 2.84, namely that many students answer that the solutions provided by the lecturer can be useful for students to follow learning process. Whereas, the lowest value of the other items is number 15 with a score of 133 and an average value of 2.33, namely some students answerrd that sometimes facilitates students in completing their work in the form of video tapes. Overall achievement of active learning of students with a problem-based learning model is 2.65 meaning that in teaching and learning activities on campus, lecturers apply problem-based learning models well to foster student learning activities.

From the distribution of Ethics course achievements obtained by semester V students of Christian Religious Education Study Program at IAKN Tarutung for the 2018/2019 Academic Year, the average overall score was 79.12 and this score was in the Good category (B). From the analysis requirements test that is testing whether there is a positive relationship between variable X with variable Y, obtained from the value of r count = 0.510 compared with the value of rtable for error 5% and confidence interval (IK) = 100% -5% = 95% and for N = 57 which is 0.226. Obtained ratio r count = 0.510> r table = 0.226. Thus it can be seen that there is a positive relationship between active student learning with problem-based learning models with the achievement of Semester V Ethics courses in Christian Religious Education Study Program at IAKN Tarutung for the 2019/2020 Academic Year.

From the analysis requirements test that tests whether there is a significant relationship between the variable X with the variable Y, obtained from the t-count = 3.253 compared to the table value for the two-party test with the numerator dk α = 0.05 and the denominator n-2 = 57 ie 2,000 . Obtained a ratio of t_{count} = 3.253> table = 2,000. Thus it is known that there is a significant relationship between active student learning with problem-based learning models with the achievement of Semester V Ethics courses in the Christian Religious Education Study Program at IAKN Tarutung for the 2019/2020 Academic Year. From the regression test obtained: a) Regression equation is this regression equation shows that in a constant state =

15.88 then for each addition of active student learning with problem-based learning models will increase student achievement by 0.66 of the value of active learning units of students with a model problem based learning.

From the coefficient of determination test obtained value $r2 = 0.2596$ of the value of determination ($r2$) can be known the percentage of influence between active student learning with problem-based learning models on the achievement of Ethics IV Semester IV courses in Christian Religious Education at IAKN Tarutung 2018 Academic Year 2019 are: ($r2$) x 100% = 0.2596 x 100% = 25.96% while 74.04% is influenced by other factors as described in the literature review, namely internal factors including health, intelligence, talent, motivation and External factors which include family environment, school environment and community environment.

From the hypothesis test, the value obtained from the list of variance analysis above obtained Fcount value = 28.386 and this value is greater than Ftable with numerator dk = k = 20 and dk denominator = n-2 = 57-2 = 55, 1.39. Thus Fcount = 28,386> Ftable = 1,39 then H0 is rejected and Ha is accepted. Thus it can be seen that the research hypothesis proposed by the author is accepted, that there is a positive and significant effect of active learning of students with problem-based learning models on the achievement of Semester V Ethics courses in Christian Religious Education Study Program at IAKN Tarutung 2019/2020 Academic Year.

Conclusion

The results of this study prove the correctness of the theory put forward by Aris Shoimin (2016: 129) that the problem-based learning model aims to train and develop the ability to solve problems oriented to authentic problems from the actual lives of students to stimulate higher-order thinking skills so as to increase participant achievement students. Characteristics of active learning are student-centered learning, lecturers guide the occurrence of learning experiences, the purpose of active learning activities is not merely pursuing academic standards for the management of learning and assessment activities. Problem-based learning is the development of curriculum and teaching systems that simultaneously develop problem solving strategies and the basics of knowledge and skills by placing students in active roles as problem solvers.

From the results of the study it is known that from the hypothesis test the value of Fcount = 28.386> Ftable = 1.39 was obtained, the research hypothesis was accepted. So it can be concluded that there is a positive and significant influence of active learning of students with problem-based learning models on the achievement of Semester V Ethics courses in Christian Religious Education Study Program at IAKN Tarutung for the 2019/2020 Academic Year which is 25.96%. Based on theoretical and research results, it can be concluded that with more serious lecturers as educators to apply problem-based learning models to improve student learning activities, it can improve the achievements of students of IAKN Tarutung for the 2019/2020 Academic Year.

Recommendations

In accordance with the results of research that has been done, the authors suggested (1) lecturers at IAKN Tarutung in order to maintain achievements that have been very good in the application of problem-based learning models, namely lecturers provide good solutions so that students have active learning activities.; (2) students are advised to increase their learning activeness both in participating in learning with a problem based learning model, actively completing assignments so students can get maximum achievement.

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