Improving Learning Achievement through Group Investigation Method with eLDirU

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Abstract

This study aimed to improve learning achievement through the Group Investigation Method with eLDirU (e-learning of Jenderal Soedirman University). This study used a Classroom Action Research (CAR) approach. Classroom Action Research was carried out in a series of steps with 2 cycles. The research targets were students of Economic Education in the third semester of Jenderal Soedirman University in the Education Management course. The data collection techniques used observation, interview, test and documentation. The use of the Group Investigation Method and ELDirU was proven to improve learning achievement. The minimum completeness criteria set was 60 while the achievement target set was 80%. In the pre-cycle stage before the implementation of the Group Investigation Method with ELDirU, students who scored more than 60 were only 14 students or 29.78% with a class average score of 56.7. After the implementation of the Group Investigation Method with ELDirU, students who completed and had a score of more than 60 increased significantly to 37 students or 80.43% with a class average score of 72.2 in the first cycle. In the second cycle the students who completed increased again to 43 students or 93.47% with an average grade score of 86.96. The results of this study are expected to provide additional scientific references on the importance of improving the quality of e-learning in order to achieve good learning achievement.

How to Cite

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INTRODUCTION

Indonesia has now entered the era of digitizing the industrial revolution 4.0. This is marked by the development of the Internet of or for Things (IoT) followed by new technologies in data science, artificial intelligence, robotics, cloud, three-dimensional printing, and nanotechnology (Ghufron, 2018). One of those affected by the industrial revolution 4.0 is education. Education is one aspect that plays an important role in preparing human resources as an effort to develop the nation (Rahmawati, Jaenudin & Fitriyanti, 2015).

There are five abilities that students must have to face the 21st century, namely critical thinking and problem solving, creativity and innovation, communication skills, collaboration, and confidence (building self-confidence) (Miftahudi, 2018; Siswati, 2019). To build these five abilities in order to grow into the character of students, learning activities are needed that can build the creation of these abilities. Educators are one of the keys so that learning activities can run well.

Learning is an activity to gain knowledge and result in changes in behavior due to increased experience. According to Slameto (2003: 2), learning is a series of mental and physical activities to obtain a change in behavior as a result of individual experiences in interaction with their environment. Furthermore, Abdurrahman and Mulyono (2009: 207) emphasized that learning is a form of growth or change in a person which is expressed in new ways of behaving as a result of having experienced and having gone through training. The purpose of teaching and learning activities is the achievement of a good learning achievement.

The Educational Management course is a subject that is full of theories. In the pre-cycle stage before the implementation of the Group Investigation Method and ELDirU, there were only 14 students who scored more than 60 or 29.78% with a class average score of 56.7. This was still far from the Minimum Completeness Criteria (KKM) which is set at 60 with an achievement target of 80%. Therefore it is necessary, efforts to improve student learning achievement. Pane & Dasopang (2017) suggested that one of the components in learning is the learning method. Selection of learning methods that are tailored to the characteristics of students and learning materials

is very important for educators. The success of the teaching and learning process in the classroom is very dependent on the teacher in choosing and using learning methods.

According to Simanjuntak and Siregar (2014), the cooperative learning model of the group investigation (GI) is a model that does not require students to memorize facts, formulas but a model that guides students to identify topics, plan investigations in groups, carries out investigations, report, and presents the results of the investigation. Learning without direct experience will make students easily feel bored in learning. The results of the research by Simanjuntak and Siregar (2014) showed that there was a significant effect of cooperative learning model of the group investigation (GI) on student learning outcomes.

Anita, Karyasa & Tika (2013) stated that the group investigation learning model has three main concepts, namely inquiry, knowledge, and dynamics of learning group. Direct experience investigating learning resources is expected to motivate students to achieve and participate more actively in learning. Rahmawati's research results (2012) showed that the activeness and learning outcomes of students' sociology after applying the cooperative learning model of GI on deviant behavior and social control had increased. In line with Wayan (2013) who stated that student learning outcomes from cycle I to cycle II with the application of the group investigation (GI) increased.

According to Sulasti (2013), the cooperative learning model of Group Investigation (GI) is a method that can stimulate students to think critically and be able to analyze a problem, so that students can solve the problem. "The use of the lecture method in education management courses makes students easily bored and does not know what the realities are like in everyday life. Unwittingly, students have not received learning activities with the formation of meaningful experiences. Students are only required to know (knowing) in theory without being accompanied by an understanding of the problems that occur in the field.

The rapid development of science and technology has made all aspects of life, including the field of education, shift to digitization. One example of digitization in education is the emergence of a Learning Management System (LMS). The emergence of a Learning Management System that can be connected to the internet has made learning possible

outside the classroom. According to Subiyantoro and Ismail (2017), a learning management system is a platform or software application for online learning activities, or virtual classes.

Meanwhile, according to Trisnaningsih (2016), Learning Management System is a learning management that has a function to provide material, support collaboration, assess student performance, record student data, and produce reports that are useful for maximizing the effectiveness of learning. The use of multimedia technology in education is not new. The facts show that, there are many studies that prove multimedia elements can help students to do the visualization process. Ali's research (2011) stated that multimedia applications in the Learning Management System were able to support the interaction process and also help group interactions in active student learning, especially in distance learning systems.

Based on these problems, this study aims to improve learning achievement in the Education Management course through the Group Investigation Method with the Learning Management System of eLDirU (e-learning of Jenderal Soedirman University). The application of the Group Investigation Method with the Learning Management System of eLDirU is expected to further motivate students to excel and create meaningful experiences for students.

METHODS

This research was conducted by using the Classroom Action Research (CAR) approach. Research activities departed from the real problems faced by lecturers in the teaching and learning process then reflected on alternative solutions to the problem and was followed up with real actions that were planned and measured. Arikunto, Suhardjono, & Supardi (2006) and Arikunto (2008), in general, there are four main activities that exist in each cycle, namely (a) planning, (b) action, (c) observation, and (d) reflection. This research was conducted for approximately 6 months. The subjects in this study were active students of Economic Education, Faculty of Economics and Business, Universitas Jenderal Soedirman, class of 2019, totaling 47 students in the Education Management course.

The success indicator is seen from the number of students who can achieve the minimum completeness criteria. Meanwhile, the minimum completeness criteria (KKM) set was 60 with the target of achieving 80%. The level of learning achievement is seen from the average score of the students. If there is an increase in the student's average score in each area that has been implemented. Data collection techniques were carried out through observation, interviews, evaluation techniques or tests and documentation. The data analysis technique used descriptive statistical analysis.

Observations were made to measure individual behavior or the process of an activity that could be observed, both in actual and artificial situations. Observation activities were carried out before, during and after the research took place. The interview activity was closely related to the observation process. This activity was also carried out to find out information about the difficulties and obstacles in the learning process as well as students' responses about the teaching methods used.

Tests and assignments were used to determine the implications of the actions that had been taken, namely to: (1) Obtain data on learning achievement by students after the learning process through the Group Investigation Method with the Learning Management System of eLDirU (e-learning at Jenderal Soedirman University), (2) Know the level of success or progress of the implementation of the actions that had been taken. The next data collection technique was documentation, which was to obtain data and a list of students' scores and photos of the classroom action research process.

RESULTS AND DISCUSSION

In this study, researchers combined eLDirU as e-learning provided by Universitas Jenderal Soedirman, media zoom meetings, and Group Investigation learning methods. Based on the results of the implementation of classroom action research in pre-cycle, cycle I and cycle II in the Education Management course, data is obtained as shown in table 1.

Table 1. Details of Student Achievement Descriptions (Individual Evaluation Results)

Aspect	Pre-cycle	Cycle I	Cycle II
The highest score	80	95	100
The lowest score	30	50	50
Class average score	56,7	72,2	86,96
Learning achievement criteria (Completed)	29,78%	80,4%	93,47%
Learning achievement criteria (Not Completed)	70,22%	19,6%	6,53%

Source: primary data processed, 2020

From table 1 it can be seen that during the pre-cycle the highest score was 80 and the lowest score was 30. The class average score was only 56.7 with the number of students who completed or met the minimum completeness criteria only 29.78%. Meanwhile, 70.22% of students did not meet the predetermined minimum completeness criteria. In the first cycle the highest score was 95 and the lowest score was 50. The class average score increased to 72.2, with the number of students who had completed or met the minimum completeness criteria significantly increasing to 80.4%. Meanwhile, 19.6% of students did not meet the predetermined minimum completeness criteria.

In the second cycle, the highest score was 100 and the lowest score was 50. The class average score increased to 86.96, with the number of students who completed or met the minimum completeness criteria increasing to 93.47%. Meanwhile, 6.53% of students did not meet the predetermined minimum completeness criteria.
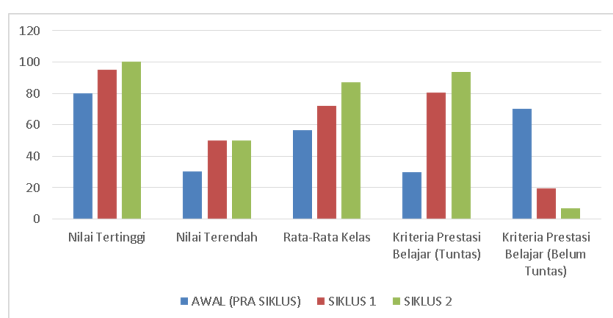

Figure 1. Graph of Classroom Action Research Results in Pre Cycle, Cycle I and Cycle II
Source: primary data processed, 2020

Based on the data in Figure 1, it can be concluded that there was a significant increase in learning achievement from the initial research (pre-cycle) before the implementation of the Group Investigation Method and Learning Management System of eLDirU with a percentage of 29.78% and a class average score of 56.7 and at the first cycle after the implementation of the Group Investigation Method and Learning Management System of eLDirU (E-Learning of Jenderal Soedirman University) increased to 80.4% with a class average score of 72.2. In the second cycle, there was an increase in students who completed again, namely to be 93.47% with an average score of 86.96.

The minimum completeness criteria (KKM) set for the Education Management course is 60, while the percentage of the target is 80%. Based on the previous explanation, it can be concluded that the Group Investigation Method and Learning Management System of eLDirU (E-Learning of Jenderal Soedirman University) was able to improve student achievement in the Education Management course in the Economics Education Study Program of Universitas Jenderal Soedirman.

There were several supporting factors as well as obstacles experienced. An increase in the quality of the eLDirU Learning Management System (E-Learning of Jenderal Soedirman University) has recently made the appearance of the Learning Management System of eLDirU (E-Learning of Jenderal Soedirman University) to be nicer and more comfortable when used. The features provided were also very complete, making it easier for lecturers to manage learning.

The constraints faced were the lack of availability of internet quota and poor network for each student. The use of the Learning Management System of eLDirU (E-Learning of Jenderal Soedirman University) and zoom meeting facilities caused the drain on students' internet quota. In addition, the availability of internet signals for each student had an effect on the smooth acceptance of learning materials.

The results of this study were in line with Lestari (2017) that teacher performance and student activities had met the indicators with the implementation of classroom action research for 2

cycles, while student learning outcomes and the percentage of completeness of 100% were achieved by implementing classroom action research for 3 cycles. So, Group Investigation was recommended because it could improve student achievement and activity. This was in line with the research of Hasan, Rakhman & Ardiana (2011) and Hartoto (2016) which stated that the application of the cooperative learning model of group investigation could improve the learning achievement of students.

Furthermore, Pramuningtyas & Joyoatmojo (2015) emphasized that increasing learning achievement by using cooperative learning model of group investigation with mind mapping could improve student achievement in economic learning. This can be seen from the increase in the average learning achievement and the increase in the percentage of student completeness in each cycle. The increase in the percentage of student completeness has reached the research achievement indicator, namely 80%, with the percentage of completeness of learning outcomes from 74.19% in cycle I to 93.55% in cycle II.

CONCLUSION

Based on the results of the study, it can be concluded that the use of the Group Investigation Method and Learning Management System of eLDirU (E-Learning of Jenderal Soedirman University) in the Education Management courses proved to improve student achievement. In the pre-cycle stage before the implementation of the Group Investigation Method and Learning Management System of eLDirU, students who completed or students who had a score of more than 60 were only 14 students or 29.78% with an average score of 56.7. After the implementation of the Group Investigation Method and Learning Management System of eLDirU, students who scored more than the KKM score of 60 increased significantly to 37 students or 80.4% with an average score of 72.2 in the first cycle. In the second cycle, there was an increase in students who completed, namely to be 93.47% or 43 students with an average score of 86.96%.

Based on the obstacles faced, it was necessary to provide internet quota assistance from universities and the government to maintain the smooth running of online lectures. In addition, students with inadequate internet networks need to find a place that could provide a better internet network. Future research is expected to examine the application of different learning methods in different subjects, so that it can be seen whether the use of different learning methods in different subjects gives the same results when implemented with e-learning media or not. In addition, researchers can use other e-learning to see whether e-learning provides significant results or not.

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