

Online cooperative learning in communication and teamwork skills development

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Abstract – The findings of several references reveal that most unemployed social science graduates have poor communication skills and collaborative skills. A revolutionary and visionary learning process is needed to improve the ability of graduates through vocational education that emphasizes practice rather than theory. A constructive learning environment with the application of cooperative learning strategies provides an active learning experience for students and simultaneously studies subjects. The group investigation-based learning structure is accompanied by the support of a learning management system (LMS) which aims to increase the effectiveness of learning and improve communication and collaborative skills. The implementation of online learning is improved by referring to the principles of e-learning. Learning management system interactive tools and other applications are provided for the needs of students in learning activities. This article also discusses the online learning syntax that supports the process of interaction and communication in the implementation of cooperative learning.

Keywords: cooperative learning, group investigation methods, learning management system, principles of online learning

1. Introduction

The National Education System (Law No. 20/2003) states that the nation's education efforts continue to develop individual potential from all aspects, especially their contribution to national development. Educational efforts also cover all educational activities in Indonesia, including higher education (Permendikbud No. 3/2020). Success in graduating is not an indicator of true educational success, but the question that must be asked is whether the educational process that students go through can be applied to real life in the future (Thompson, 2006). Likewise, academic excellence does not fully guarantee that graduates will get the desired job, because the current state of work does not only depend on academic excellence (Cecep et al, 2021).

However, some university graduates, both public and private, are less successful in entering the job market in accordance with their field of study in higher education (Ratna & Suryadi, 2020). According to Sudhirta (2016) Indonesian higher education graduates are experiencing a dilemma, because the higher education diplomas they achieve are no longer an easy guarantee to get a job. Their difficulty in being absorbed in the world of work is getting worse, because they also have to compete with foreign workers from ASEAN countries as a result of the implementation of the Asean Economic Community (AEC).

The difficulty for local university graduates to find work is evident from the number of educated Indonesian unemployment rates which are increasing every year. Based on data from the Central Statistics Agency (BPS) in August 2014, in Indonesia there were 9.5 percent (688,660 people) of the total unemployed who are college alumni. They have a three-year diploma or a bachelor's degree (S-1). Of that number, the highest unemployed are university graduates with S-1 degrees as many as 495,143 people. The educated unemployment rate in 2014 increased compared to the unemployed college graduates in 2013 which was only 8.36 percent (619,288 people) and in 2012 it was 8.79 percent (645,866 people). According to some education experts, Indonesia's open unemployment rate based on the education completed is quite dangerous.

Therefore, it is recommended that the Indonesian government redesign the concept of higher education so that its graduates are easily absorbed by the industry. The highest unemployed are university graduates with an undergraduate degree as many as 495,143 people. The educated unemployment rate in 2014 increased compared to the unemployed college graduates in 2013 which was only 8.36 percent (619,288 people) and in 2012 it was 8.79 percent (645,866 people). According to some education experts, Indonesia's open unemployment rate based on the education completed is quite dangerous.

According to the results of the study, companies should not find it difficult to find workers, because the growth rate of university graduates in Indonesia is always increasing every year. Meanwhile, the company's demand for labor is always lower than the number of graduates. It is difficult to absorb Indonesian university graduates because they do not have the skills needed by companies and do not have critical skills (Simanjuntak, 2016). Skill is the main step to enter the world of work, after that you must have critical skills if you want to develop and enter the ranks of company management (Bairizki, 2020). Haryatmoko (2020) said that in the current digital era, university graduates must have digital skills, namely knowing and mastering the digital world. Agile thinking ability - able to think many scenarios - as well as interpersonal and communication skills - communication skills so that they dare to argue. Finally, Haryatmoko stated that graduates must also have global skills. These skills include foreign language skills, being able to integrate and integrate with foreigners from different cultures, and have sensitivity to cultural values. Therefore, a solid synergy is needed among Indonesian education experts. Nawati et al (2021) say that the quality of university graduates who do not match the needs of the industrial world is the result of errors in the Indonesian education system over the past 20 years. According to Nawati et al (2021) so far students have only been told to study to graduate as a bachelor. They only pursue status not the process to become a scholar.

In the end, they do not have any understanding of the educational process that has been passed. Therefore, it is necessary to have the awareness of parents, teachers and lecturers to teach the younger generation not to be afraid of change. Criticism of people who are against changes in the educational curriculum needs to be done (Wahyudi & Lufti, 2019). There should be no feeling of fear if the education curriculum changes, because the changes are also to adapt to the needs of the industry and the dynamic world. Many education experts hope that the government and universities can invite the private sector to develop the right curriculum for universities. The curriculum must also be formed by stakeholders from industry, because experience in the field from the industry will provide the latest information so that the curriculum is not outdated (Retnaningsih, 2019).

The purpose of national education based on the 1945 Constitution is to build the nation by providing a balanced workforce from the physical, emotional, spiritual and intellectual aspects. However, some graduates fail to enter the job market due to various factors and the main factor is the failure to master work-related skills. Based on the problems raised, it is necessary to conduct research on online cooperative learning in developing communication skills and teamwork as a solution to make graduates more confident and competitive in the world of work.

2. Method

This research examines and designs online cooperative learning in developing communication and teamwork skills to develop student learning activities. The aims of this study are

- (1) Produce a conceptual model of cooperative learning in developing communication and teamwork skills to develop student learning activities using online learning.
- (2) Produce online cooperative learning procedure models in developing communication and teamwork skills to develop student learning activities that can be applied using online learning.
- (3) Produce online learning components that apply online cooperative learning methods in developing communication skills and teamwork to develop student learning activities.

3. Results and Discussion

3.1 Concept of Cooperative Learning

The term "Cooperative" means working together in achieving a common goal. Johnson and Johnson (in Nisrina & Harjono, 2017) state that cooperative learning is small group learning so that students work together to maximize their own and each other's learning. Cooperative learning is a set of teaching models in which students work in mixed ability groups to achieve group goals and certain social interactions (Hermansyah, 2016). Cooperative learning activities that are built on fair cooperation and mutual understanding help each other. There is a difference in group learning with cooperative learning, namely in the interaction between students.

Cooperative learning is a learning model that encourages students to actively construct their own knowledge. Students learn in small groups whose abilities are heterogeneous. During group work, the task of group members is to achieve material mastery and help each other to achieve mastery in the group. Learning media can help students when communicating ideas and thoughts to others. The learning media in question are PowerPoint learning media and question cards. PowerPoint media serves to help students to visualize three-dimensional space objects into their understanding. While the question card contains the problems that must be understood and solved by students. This media is part of a learning tool that helps lecturers in carrying out learning. This learning media is the right solution or strategy and is planned in learning activities so that the expected basic competencies can be achieved. In such circumstances, it is necessary to have appropriate learning strategies so that learning is more effective. With effective learning, it is expected that student learning outcomes will be completed.

Cooperative learning activities provide an ideal way of setting up an environment for interaction between students and provide the guidance and support students need in developing students' social and emotional skills and understanding (Gillies & Ashman, 2003). Collaborative activities in learning occur with each other, communicate and interact with structures and arrangements that have been designed by educators. This learning activity is in the form of cooperative activities naturally in the sense of helping each other. The goal to be achieved in learning is not only academic ability in terms of mastery of learning material, but the formation of cooperative abilities in understanding or mastering the learning material. To form cooperative abilities for students,

There are 5 (five) basic elements in cooperative learning, namely: 1) positive interdependence, 2) individual accountability, 3) face-to-face promotion interactions, 4) social skills, 5) group processing (Gillies et al, 2008). Arends (Arends, 2004) wrote the syntax of cooperative learning, with the following stages: 1) Delivering learning objectives; 2) Delivering presentations; 3) Divide students into cooperative groups; 4) Guiding group work; 5) Conduct evaluation and stage 6) Give awards.

Learning strategy is an activity to sequence the learning process that will be used with learning materials to produce certain learning outcomes. So, the concept of cooperative learning is a form of learning activity with mutual assistance activities between group members so that joint work occurs.

3.2 Cooperative Learning Design using Online

Learning is a natural process that leads to changes in what is known, what can be done and how to behave (Gagné et al, 2005). For that reason, more resources do not automatically mean better learning outcomes. In this context, Clark in Sitepu (2014) confirms from the results of his research that the media does not have a direct impact on learning outcomes, but the learning materials and methods used can affect learning outcomes. The use of various kinds of information technology can encourage maximum achievement of learning outcomes if managed with appropriate learning materials and strategies. To structure learning, there are five components of learning strategies, namely: (1) pre-learning activities which consist of building students' attention and motivation, explaining learning objectives, explaining prerequisite skills, (2) presenting information consisting of: teaching materials and tutoring, (3) student participation consisting of: exercises and feedback, (4) tests consisting of: initial skills tests, pre-tests, posttest, and (5) follow-up consisting of: repetition for reinforcement and transfer consideration (Dick et al., 2015). The same thing was stated by Arends in good learning planning must be able to involve allocating the use of time, choosing learning methods, creating student interest, and building a productive learning environment (Arends, 2004). initial skill test, pre-test, post-test, and (5) follow-up consisting of: repetition for reinforcement and transfer consideration (Dick et al., 2015). The same thing was stated by Arends in good learning planning must be able to involve allocating the use of time, choosing learning methods, creating student interest, and building a productive learning environment (Arends, 2004). initial skill test, pre-test, post-test, and (5) follow-up consisting of: repetition for reinforcement and transfer consideration (Dick et al., 2015). The same thing was stated by Arends in good learning planning must be able to involve allocating the use of time, choosing learning methods, creating student interest, and building a productive learning environment (Arends, 2004).

Eggen and Kaucha (2012) stated that to prepare and organize learning activities involves the following process steps: 1) identification of topic components, concepts, principles and relationships that must be built between students; 2) the order of components; 3) prepare examples to build students' knowledge; 4) present examples from the most concrete first (Eggen & Kaucha, 2012). In preparing cooperative learning plans using online means that you have to be familiar with online learning. The online learning system (on the network) is a learning system without face to face directly but is carried out online using the internet network.

In the learning carried out, the lecturer must ensure that teaching and learning activities continue to run well. Online learning is carried out using a computer or laptop device that is

connected to the internet network. Online learning is carried out at the same time between lecturers and students using social media such as WhatsApp (WA), Instagram, zoom applications or other media as learning media. To design and design good and effective online learning, it is necessary to consider the objectives and other learning components such as materials, learning strategies, methods and timing.

Utilization of appropriate online devices or media in accordance with the material being taught to support learning objectives. The use of online for learning needs to be considered in order to make teaching and learning activities effective. For this reason, learning strategies are one of the important things to pay attention to in addition to other components that support effective learning. Cooperative learning strategy as an option to support effective online learning. There are things that need to be understood in designing cooperative learning using online. The following compares the concept of online cooperative learning in developing communication and teamwork skills with other cooperative models so that researchers will determine the formula for designing cooperative learning.

The following is described in the table 1 analysis to determine the elements in cooperative learning.

Table 1 Analysis of Cooperative Learning Elements

Num	Kauchak & Eggen (2016)	Dick et al (2015)	Researcher Analysis
1	Delivering goals and motivating students	Simple academic information	Stage of conveying goals and motivating students
2	Submit information	Group work and collaboration	Material presentation stage
3	Organizing students into study groups	Group work and collaboration	Exploration stage through group work
4	Helping group members work and study	Students study the material in expert groups and then help members of the home group learn the material	Conclusion and reinforcement stage
5	Evaluate	Varies can be weekly test	Evaluation stage
6	Giving recognition or appreciation	Other publications	Group award stage

Based on the conceptual description of cooperative learning and learning analysis, the syntax of the cooperative learning concept proposed by the researcher can be carried out. Table 4.2 below describes the steps of online cooperative learning in developing communication and teamwork skills to develop student learning activities.

Table 2 Results of Online Cooperative Learning Design

Num	Activity Step	Learning Activity	Time
1	Stage of conveying goals and motivating students (online)	The lecturer conveys the learning objectives. It should be understood that in delivering the objectives to be reminded that it is important to study the material. Lecturers motivate students by expressing the benefits of studying the teaching material.	5'
2	Material presentation stage (online)	Lecturers convey information on teaching materials. Delivering assignments to cooperative groups. Lecturers convey task information as material to be studied for group discussion work. The lecturer informs that the assignment material can be done well in groups. Assignment materials are given to develop knowledge and cooperation skills in accordance with the subject made.	15'
3	Exploration stage through group work (online)	Lecturers divide study groups and work together (cooperative groups). Each material is given in 1 cooperative group in turn discussing the given theme.	30'

		<p>Each cooperative group divides students into cooperative groups (groups of 4-5 people according to differences in abilities based on GPA)</p> <p>The lecturer explained again about the role of each individual in the cooperative group.</p> <p>From each discussion group to divide themselves, who is the group leader who is considered an expert, 1 person records it as a discussion resume, the others play an active role in the discussion group. This group will be a permanent group during the learning activities.</p> <p>Each group set a time and set a time for discussion in the chat forum. Ask students to conduct group discussions and cooperation in the chat forums provided.</p> <p>Other students can attend and participate in the discussion process in the chat forum conducted by the group, but do not provide feedback.</p> <p>Group members do not understand, then their group mates are required to provide an explanation again.</p> <p>Lecturers only function to facilitate and monitor activities carried out in groups.</p>	
4	Conclusion and reinforcement stage (online)	<p>Lecturers guide study groups when students do their assignments:</p> <p>Remind participants to record the information discussed in the discussion forum.</p> <p>Provide reinforcement by conveying ideas or ideas in discussion forums.</p> <p>Guiding in making joint conclusions from the discussion problems discussed in the group.</p> <p>Ask the group to make a resume of the discussion material with each permanent group.</p>	10'
5	Evaluation stage (online)	<p>Lecturers evaluate learning outcomes through presentations of student work.</p> <p>The lecturer asks students to actively give feedback in the chat forum discussions of each group.</p> <p>Lecturers evaluate group activities during their discussions. Assessment using a rubric.</p> <p>Remind students in groups to participate in discussion forums according to the time limit given.</p> <p>Assessing the results of the discussion using the group work result checklist.</p>	20'
6	Group award stage (online)	<p>Lecturers give awards from individual and group learning outcomes at the end of the presentation.</p> <p>The form of appreciation is in the form of positive responses and supports the group for the results of the discussions given.</p>	10'

Based on the analysis of the conceptual study, cooperative learning is a group learning activity in order to work together. Cooperative learning is carried out to facilitate student learning and can support effective learning. This is stated in the results of the assessment of the ability to apply the On-line Course Applicability Assessment (OCCA) course to assist students in the selection of courses (Sardiman, 2016). This finding provides reinforcement that the use of online tools to support learning or training activities. The application of cooperative learning in online and mixed environments is carried out using online discussions, blogs and learning experiences (Johnson, 2013).

4. Conclusion

An active learning approach using cooperative learning strategies has been identified as being able to help students improve their group communication and collaboration skills. The use of online learning management systems helps to increase the effectiveness of teaching and learning. The use of online social media if designed properly will foster active and fun learning. The design of cooperative learning using online is carried out in 6 (six) stages, namely the stage of conveying goals and motivating; delivering material, exploring group work, concluding and strengthening, evaluation and group award stages.

Many solutions can be offered, such as the use of learning methods that can make the teaching and learning process on campus the best approach to help students improve their skills as needed, and further reduce the problem of graduate unemployment.

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