

The Effectiveness of Collaboration Project Based Learning and Discovery Learning Model in Terms of Critical Thinking Skills in Journalism Subjects

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Abstract: Most students are not used to thinking critically, creatively, and analytically and have a low level of curiosity, which greatly influences learning activities and outcomes. This research aims to analyze the effective role of the project-based learning (PjBL) learning model in collaboration with discovery learning on the learning outcomes of 25 semester 2 students of the Indonesian language and literature education study program Faculty of Teacher Training and Education, University Muria Kudus. This research uses a type of classroom action research. Research with several cycles, starting from pre-cycle, cycle I, cycle II, and cycle III. Each cycle consists of planning, implementing, observing and reflecting. The research results showed an increase in abilities from pre-cycle to cycle III, namely that all students could apply critical thinking skills. This research shows the influence of using the project-based learning (PjBL) learning model in collaboration with discovery learning to improve critical thinking skills in journalism courses.

Keywords: PjBL, discovery learning, learning model, critical thinking, journalism

1. Introduction

The 2013 curriculum is a curriculum that emphasizes student-centered learning processes using active seeking learning patterns and is reinforced with learning models that are appropriate to the learning material (Komalasari & Widyaningsih, 2021). In the 2013 curriculum, students are expected to be able to think at a higher level and be able to create their own thoughts based on critical thinking learning patterns. Efforts to improve learning in the 2013 curriculum are using a scientific approach (Tambunan, 2019). According to Komariah (2016), a scientific approach means a learning process carried out scientifically that forms the skills of observing, asking, trying, reasoning and communicating.

It is hoped that implementing learning using a scientific approach can shape students' ability to think critically. According to Alsaleh (2020), in the 21st century the critical thinking skills needed are critical thinking, creativity, and problem solving. According to Ülger (2016) critical thinking is a skill in thinking by using the process of analyzing and evaluating a problem so as to produce the right decision in solving the problem. The need for critical thinking skills in learning will have an impact on students to face problems in everyday life (Sarigoz, 2012). Cottrell (2017), describe the indicators that students must achieve in critical thinking are: a) being able to ask questions, b) being able to answer questions, c) being able to draw conclusions, d) being able to express opinions or arguments, e) being able to solve problems, and f) able to evaluate and assess the results of critical assessments. Therefore, critical thinking skills are abilities that students should have.

Based on the results of observations made by students in the second semester of the Indonesian language and literature education study program, University Muria Kudus, during the learning process, when the lecturer gives students the opportunity to ask questions about material that they do not yet understand, students are just silent and tend to be passive, so as a result learning tends to be monotonous, resulting in students' critical thinking skills not sharpened. Then during the explanation and at the end of the lesson, students were unable to draw conclusions from the learning carried out. When asked for opinions by lecturers, students were unable to provide opinions. When the lecturer gives questions, students are not able to answer the questions. This is supported by the results of the interview, the lecturer said that during

the learning process the lecturer had provided stimulus to students in the form of questions so that students could quickly accept the learning. However, in reality the method given by the lecturer did not work well. If we look at the test results carried out at the start of the research, the average score obtained was 60. This indicates that students' critical thinking abilities are still low. Some criteria that indicate low critical thinking skills are not being able to evaluate decisions taken, not being able to explain the usefulness of information and the reasons for making decisions that have been made, and not being able to find alternatives or other solutions in solving problems. Based on the research background, a problem formulation can be concluded, namely how is the effectiveness of the collaborative discovery learning and PjBL learning model in terms of critical thinking skills in journalism courses by 25 Indonesian Language and Literature Education students, Faculty of Teacher Training and Education (FKIP) University Muria Kudus (UMK)?

2. Literature Review

Project-Based Learning is an approach to education that is thought to be compliant with government rules and makes use of projects as a teaching tool. Pupils must investigate, evaluate, understand, and synthesize data in order to generate a variety of learning outcomes. Teachers are merely facilitators (Kokotsaki et al., 2016).

A project-based learning approach centers on the core concepts and ideas of a subject, gives students the freedom to design their own learning through other tasks and meaningful problem-solving, and culminates in the production of realistic and useful student work products (Almulla, 2020). In contrast to traditional learning models, which are typically characterized by short-duration, isolated classroom practices, and teacher-centered learning activities, the PjBL model emphasizes learning activities that are relatively lengthy, holistic, interdisciplinary, student-centered, and integrated with real-world practices and issues (Ferreira & Canedo, 2020).

Project-based learning emphasizes active learning in which students formulate strategies, reflect on and assess answers, produce numerous representations of ideas, and extrapolate real-world questions or projects. According to Krajcik & Czerniak (2018), project-based learning is an all-encompassing teaching strategy that can inspire kids to consider their work rather than just concentrate on finishing it. A project is incorporated into the learning process in the project-based learning approach. Students can work on solitary or group projects that need collaboration and are completed within a set time frame to produce a final product that will be showcased or presented (Kean & Kwe, 2014).

Meanwhile, discovery activities are a more effective way to cultivate a notion than having the teacher present the information verbally. Discovery learning, according to Druckman & Ebner (2018), is the process of discovering the truth via one's own experience. It may also be used to identify concepts and provide solutions to issues. There is a connection between student involvement and the use of the discovery learning approach. According to Nurcahyo & Djono (2018), the discovery learning model has the following implications for students: it increases their intellectual capacity, giving them newfound optimism for success; additionally, students will learn how to organize, handle, and solve problems independently. The existence of diverse benefits and drawbacks is something that educators must take into account while implementing the discovery learning approach. It must therefore be in line with the traits of the learner. The presented discovery learning paradigm has a number of benefits and drawbacks (Andayani, 2020). In order to ensure that the results acquired are retained for a long period in memory, the Discovery Learning model requires student participation in learning through problem-solving and investigation (Prasetya & Harjanto, 2020).

For journalism students to advance professionally, critical thinking instruction is crucial. According to Huang & Yeh (2017), there is a suggestion that critical thinking (CT), informal logic training, and fallacies training are crucial elements of journalism education that support the goal of democracy in the media. It is feasible to improve CT aptitudes and attitudes in a single, well-crafted course (Bowe et al., 2020). Long-term practice is necessary to help journalism students go from closed-minded to open-minded and become accustomed to CT. Put another way, improving a journalism student's CT does not end with a training course. A reliable tool is necessary to support the development of more professional journalists with high CT, enabling them to apply what they learn in the classroom to real-world situations.

3. Methodology

This research method applies to classroom action research. Classroom action research uses Kurt Lewin's model, a model that refers to the main types of action research. Kurt Lewin was the first person to introduce action research or action research. This model of action not only helps people and organizations behave globally but helps change and reflect on the system itself. In this model, there are four stages of research, namely planning, action, observation and reflection (Mahmud et al., 2022). These four stages are interconnected to produce a cycle in the form of a series of activities that always return to the initial step. According to Logan (2012) that action research is a form of self-reflective inquiry undertaken by participant (teacher, student or principals, for example) in social (including educational) situations in order to improve the rationality and justice of: 1) their own social or educational practice, 2) their understanding of these practices, and 3) the situations (and institutional) in which the practice is carried out. Meanwhile Nelson & Gilbert (2020) convey that classroom action research is an investigation systematic inquiry carried out by teachers, heads schools to find out their learning practices. Clarke & Bautista (2017) said that action research is research that aims to develop new skills, new strategies or new approaches to solving problems with direct application in the world of work or other actual worlds. Stern opinion (2013) state that action research is also action research are concrete steps in finding the best way suitable

for improving conditions, the environment, and improving understanding of the circumstances and/or environment Classroom Action Research (CAR) is closely related to problems daily learning practices faced by teachers. Classroom action research is a form of research that is reflective by carrying out certain actions in order to be able to improve or improve learning practices in class in a more professional manner.

4. Results

The results of using the PjBL collaborative discovery learning method in terms of critical thinking skills in journalism courses by 25 students of Indonesian Language and Literature Education, FKIP UMK in the first cycle of action show that students have reached the specified Minimum Completeness Criteria (KKM), namely a score of 75 obtained by 20 students (90%) who were able to write well, while 5 students (10%) still needed to make improvements. This is compared with the results of student achievement from before the first cycle of action, namely the pre-cycle which had achieved learning completeness by exceeding the KKM, only 10 students (65%) then increased to 20 students (90%). The results of the learning actions in cycle I can be said to have gone quite well, although from the results of observations of the teaching and learning process activities there were still many weaknesses, students were passive, not yet active, and lecturers had not taught the Padlet application optimally, and managed students optimally. These findings will be reflected in cycle II actions.

The results of the critical thinking skills test in cycle II showed that 22 students (95%) had reached the Minimum Completeness Criteria (KKM) limit of 70. The weaknesses that lecturers had in the first cycle of action were able to be resolved well in the second cycle of action. Then in the implementation of cycle II actions, the lecturer was able to manage the class well so that relatively no weaknesses were found. The results of the writing skills test using the Padlet application in cycle III showed that 25 students (100%) completed it, this is a form of the lecturer's efforts to give awards to students in the form of praise and prizes.

The initial stage is for researchers to conduct classroom action research (PTK) using the demonstration method. Before starting the research, the researcher made initial observations by conducting a pre-cycle to identify problems during the learning process in the UMK Indonesian language and literature education study program. Observations were carried out by paying attention to lecturers teaching, student activity and student learning outcomes. Initial findings on student learning outcomes in learning can be seen in Table 1.

Table 1. Critical thinking skills learning results

Mark	Numbers of student				Description
	Pre-cycle	Cycle I	Cycle II	Cycle III	
>70	15	5	3	0	Incomplete
70-85	9	17	10	5	Complete
86-95	1	2	11	7	Complete
96-100	0	1	1	13	Complete

Based on Table 1, the actions taken by the lecturer by implementing learning using PjBL collaborative discovery learning were successful and able to improve students' abilities in critical thinking skills. Apart from that, the lecturer's ability to master the class during learning increases and to carry out effective and interesting learning in class. The success of applying this method in improving students' writing skills during the learning process and students' ability to think critically can be seen from the following indicators.

Table 2. Observation results of student activeness in learning

No.	Indicator	Accomplished presentation			
		Pre-cycle	Cycle I	Cycle II	Cycle III
1	Student activity during apperception	35%	40%	57%	88%
2	Student activity in paying attention to the lecturer's explanation of the material	50%	55%	62%	85%
3	Students' courage in expressing opinions (writing)	30%	55%	78%	95%
4	Student activity in discussions	25%	35%	47%	98%
5	Completeness of writing learning outcomes	30%	45%	65%	100%

Based on Table 2, the application of learning methods is also able to increase student activity, cooperation and learning outcomes in the writing skills learning process. This is because all students in the learning method have a role in writing in groups. Implementing learning during discussions, students are required to convey the material to their friends to increase students' activeness in mastering the material, being active in discussions, and being able to speak in

groups or other groups. Using this application method can increase student activity during the learning process so that the results of their speaking practice also increase. Apart from that, the use of enthusiasm and interest can be seen from the number of students who actively respond to the apperception given by the lecturer, pay attention to the explanation of the material given by the lecturer, and are active in group discussions. Increasing the quality of the results of learning speaking skills using this method based on the results of implementing actions in cycles I, II, III can be said to have increased the quality of learning critical thinking skills. Based on this, the lecturer has completed learning speaking skills in cycles I, II, III, carrying out actions using this method and also being able to develop optimal learning processes, activeness and results. Based on the results, it can be said that the actions taken were quite successful as seen from the following indicators: (a) researcher observations, increasing student activity. Increasing this aspect of student activity can: a) increase student responses during apperception, b) Student activity in learning is the main thing in the learning process. Apperception is the first step in learning that lecturers must take to activate students. Lecturers conduct apperception through schemes related to important topics before coordinating lesson material. The lecturer at this apperception always starts with questions according to the topic of the lesson that will be studied at that time. Students in responding to apperception carried out by lecturers always experience an increase from cycle I to cycle II and cycle III.

5. Discussion

The importance of student focus and attention in the learning process, with lecturers being able to foster this attention, must motivate students by implementing new methods used in the learning process. In their learning, lecturers are required to be able to foster attention to learning to write in a fun way (Nielsen, 2015). So, in this research the lecturer used the Padlet application method which resulted in students being more focused on learning. Students' attention in the process of learning writing skills increased after this action was carried out (Suteja & Setiawan, 2020). The increasing attention of students towards learning writing skills is also evidenced by the creation of a pleasant learning atmosphere for students (Amogne, 2013). In this case, students get a new atmosphere in learning activities.

A person's critical thinking ability can be seen from several indicators of critical thinking characteristics (Butler et al., 2017; Zetriuslita et al., 2016). Indicators of critical thinking include a) formulating problems, including recognizing the problem and formulating questions that lead to investigation, b) providing arguments, including arguments according to needs, showing similarities and differences, c) carrying out deductions, including deducing logically and interpreting logically. appropriate, d) carrying out induction, including analyzing data, making generalizations and drawing conclusions, e) carrying out evaluation, including evaluating based on facts and providing other alternatives, f) taking decisions and actions, including determining the solution and choosing the possibilities that will be implemented.

6. Conclusion

Journalism learning through project-based learning, collaborative discovery learning, is able to effectively improve critical thinking competence and student learning outcomes. In critical thinking skills, there were 25 students who experienced change and development.

It is hoped that this research will be able to provide an illustration for teachers to prepare, plan and carry out Journalism learning better in the future. Apart from that, journalism organizing institutions are expected to be able to capture maximum opportunities by realizing future challenges. For readers, researchers hope that this study can be followed up into a study of solutions to the impact of difficulties in critical thinking skills in the industry 4.0 era. And there is a need for follow-up in terms of developing learning media based on project-based learning, collaborative discovery learning which is able to accommodate the needs of learners and facilitate the Journalism learning process.

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Conflict of Interest

The authors declare no conflicts of interest.

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