Improving Student's Critical Thinking Ability In Entrepreneurship Course with Project Based Learning

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Abstract. The education for today and tomorrow must set new goals for itself, focusing on developing the identity of responsible and effective national and global citizens with all the necessary knowledge, skills and attitudes.. This study aims to carry out project-based learning on entrepreneurship subjects with the aim of improving students' critical thinking ability.This study is a pre-experimental, the design used to measure critical thinking abilitys is a one-shot case study. Study data were analyzed using quantitative descriptive analysis. Research analysis shows that students improve their critical thinking skills due to project-based learning. Students' critical thinking skills improved by an average of 81.86% in the first meeting, 83.12% in the second meeting, and 86% in the third meeting. This means that the category goes from good to very good.

Keywords: PjBL, Critical Thinking, Independent learning

1 Introduction

Education for today and tomorrow must set new goals, focusing on developing the character of national and global citizens who are responsible and effective with all the knowledge and skills. And the necessary relationships for this [1]. The role of educational institutions, including universities, plays an important role in preparing human resources, namely by increasing the competence of graduates who have abilitys according to the 21st century (learning and innovation skills) in addition to mastering science and technology according to their fields. In this case, the learning process at the Merdeka Belajar Kampus Merdeka (MBKM) is a manifestation of essential learning and innovation skills. Learning at the independent Campus is a challenge and opportunity to develop innovation, provide creativity, develop students' abilities, character and needs, as well as independence, in finding and seeking knowledge through the realities and dynamics of the field, such as needs, real-world problems, social interactions, cooperation, self-government, productivity, and goals. and culture. Through self-learning programs that are well designed and implemented, students' hard skills and soft skills will be formed strongly [2]. One of the skills to master in the 21st century is the ability to think critically. Critical thinking skills include the ability to access, analyze,

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and synthesize information that can be researched, taught, and assimilated [3]. A study by Trilling and Fadel found that high school, graduate, and college graduates were still less competent in (1) oral and written communication, (2) critical thinking and problem solving, (3) work ethic and professionalism, and (4). Teamwork and collaboration, (5) multi-group work, (6) technology use, (7) project management and leadership [4].

In entrepreneurship courses, critical thinking skills are one of the learning outcomes of these courses. The goal of this course is to understand the concepts of entrepreneurship, develop critical thinking skills, and equip students with entrepreneurial skills. Thus, the entrepreneurship process is not only about acquiring a set of knowledge in the form of facts, concepts or principles, but also about the process of discovery. Entrepreneurship courses are expected to serve as a means for students to learn about themselves and their social skills and the potential for further development of their applications in everyday life. Particular attention is paid to providing hands-on experiences for developing competencies in the learning process. The project-based learning model was chosen to improve students' critical thinking skills. This is because the model can be applied to all disciplines and can be applied to students with different intellectual abilities. Project-based learning is student-centred learning that aims to conduct in-depth research on a topic and constructively deepen learning through an exploratory approach to serious, real, and current problems and problems. It is also based on Saripudin's research. A. et al. concluded that the environmental management project-based character learning model developed in this study was shown to improve students' critical thinking ability. Additionally, although this study successfully developed the skills that accompany students' learning processes, there was no evidence to support improvements in these abilities [5].

2 Method

This research is a pre-experimental research. Pre-experimental studies were characterized by the absence of a comparison group and randomization.[6] The research design used to measure critical thinking abilitys is a one-shot case study. Where in this research design there is a group that is treated and then the results are observed (treatment is the independent variable and the result is the dependent variable). The subjects in this study were 6th semester students of the Unimed Civics Department. The selection of research subjects used the census method, which involved all subjects in the study. Data was collected by using documentation, questionnaire, and interview methods. Documentation method of collecting research population data in the form of names and grades of students as well as evidence of the implementation of the action is through the collection of audiovisual recording data during the learning process. Questionnaire method was used in the research for critical thinking abilitys and student response. And the interview method was used to collect data to complete the questionnaire data. Data analysis was carried out in the form quantitative descriptive, to analyze students' critical thinking abilitys.

3 Result and Discussion

Conceptually, the utility of impartial studying is synonymous with the autonom of absolutely each person to study from numerous reassets without being confined through area and time. So that there are numerous studying fashions that prioritize the usage of literacy from numerous studying reassets. The studying version is intently associated with the types of college students and educators. Through the studying version, educators can assist college students to get data, abilitys, methods of questioning, and explicit their ideas. The studying steps in undertaking-primarily based totally studying consist of: (a) begin with the important question, b) layout a plan for the undertaking, c) create a agenda, d) screen the scholars and the development of the undertaking, e) investigate the outcome, and f) evaluate the experience [7].

a) Start with the important question, studying starts offevolved with important questions, specifically questions which can assign college students to perform an activity. Taking subjects which might be according with the realities of the actual international and beginning with an in-intensity investigation, the lecture attempts to make the subjects applicable to college students. In this case, the subject raised is the exercise of easy entrepreneurship. b) Design a plan for the undertaking, making plans is completed collaboratively among lectures and college students. Thus, college students are anticipated to experience possession of the undertaking. Planning includes the policies of the game, the choice of sports which can help answering important questions, through integrating numerous viable topics, and understanding the gear and substances which might be accessed to assist whole the undertaking. In this case, the undertaking selected is catfish farming in groups. c) Making a agenda, instructors and college students collaboratively set up a agenda of sports in finishing the undertaking. The sports at this level are as follows: (1) creating a timeline for finishing the undertaking, (2) creating a cut-off date for undertaking completion, (3) bringing college students to plot new methods, (4) guiding college students whilst making methods that aren't corresponding. associated with the undertaking, and (5) asking college students to make a proof or motive for deciding on approach. d) Monitor college students and undertaking development, the trainer is chargeable for tracking scholar sports all through undertaking completion. To simplify the tracking method, a rubric became created to report all critical ability. e) Assessing effects, tests are performed to help instructors in measuring wellknown achievement, play a function in comparing the development of every scholar, offer remarks on the extent of knowledge that scholars have achieved, help instructors in getting ready in addition studying techniques. f) evaluate the experience, on the quit of the lesson the trainer and college students replicate at the activity and undertaking effects which have been implemented. The reflection method is performed each in self view and in groups. During the studying method, the rising critical abilitys had been determined to gain statistics on critical abilitys thru a questionnaire. The evaluation is primarily based totally on critical signs in critical abilitys, specifically interpretation, cappotential to look at or examine, discover applicable and inappropriate reassets or Inference, discover and compare assumptions, practice numerous techniques to make suitable selections or explanation, conclude and self-regulate [8]. The results of students' critical thinking abilitys scores for three meetings are shown as follows in table 1.

The effect of project-based learning on improving the critical ability of the evaluation questionnaire showed an improvement in the critical ability of students from all meeting sessions. This can be seen in the last table row which shows an improvement in critical

thinking ability from the first meeting to the third meeting with an average score of 81.86% critical thinking abilitys at the first, 83.12% at the second, and 86% at the third meeting. Therefore, it can be said that after receiving treatment, the overall critical thinking ability of students improvement.

Table. 1. Critical thinking abilitys score for each indicator.

No	Indicator	Meeting 1	Meeting 2	Meeting 3
1	Interpretation	83.20	84.52	87.06
2	Analyze	82.34	82.40	85.34
3	Inference	81.05	82.20	84.23
4	Evaluate	82.34	84.78	88.80
5	Explanation	80.23	80.68	83.04
6	Self Regulation	82.05	84.20	87.50
	Average score	81.86	83.12	86.00
	Category	Good	Good	Very good

To describe the critical ability of each indicator, the following is a discussion of indicator of students' critical thinking ability [8] :(1) Interpretation is a person's ability to understand and redefine the meaning of the conditions, information or messages he receives. Result of indicator analysis. The interpretations for the three meetings are shown in Figure 1.

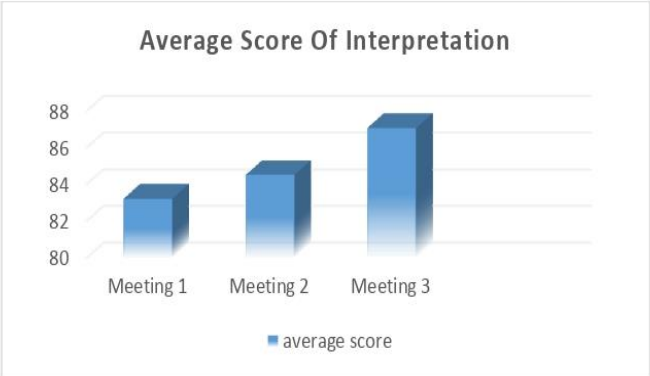

Fig 1. Average score of interpretation.

Figure 1 shows that the students' interpretation ability increased, with a score of 83.20 at the first, 84.52 at the second, and 87.06% at the third meeting. The next indicator is Analyze, which is observing and describing the information received in detail for further study. The results of the analyze for three meetings indicators are shown in Figure 2.

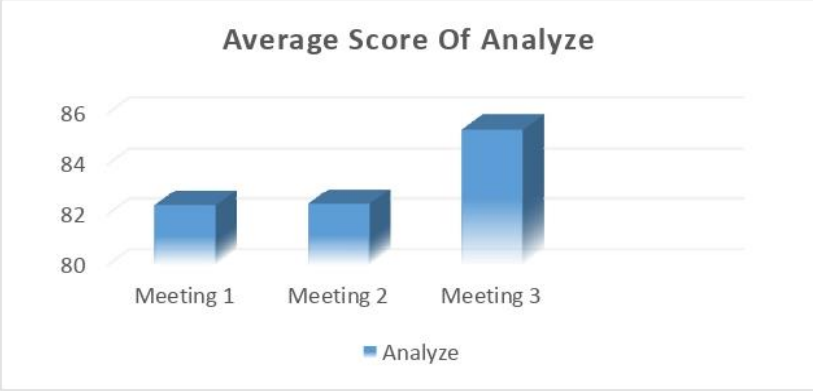

Fig 2. Average score of analyze.

Figure 2 shows that at the first and second meetings there was no increase in students' analytical abilitys, namely, 82.34% at the first and 82.40% at the second, however, the students' abilities increased by a score of 84.23% at the third meeting. Next is Inference, which is the ability to make generalitation based on the elements. The effect of the inference indicator analyze for three meetings are shown in Figure 3.

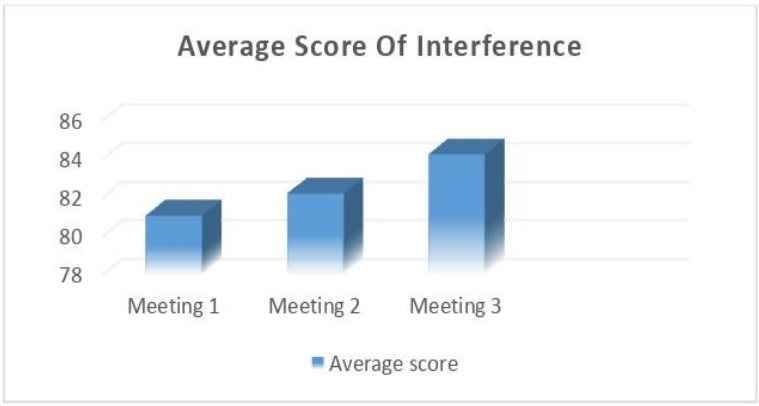

Fig 3. Average score of inference.

Figure 3 shows that the students' inference ability increased, with a score of 81.05 at the first, 82.20% at the second, and 84.23% at the third meeting. Likewise, the next indicator is the evaluate indicator. Evaluate is an assessment by measuring or comparing. The results of the analysis of the evaluate for three meetings indicators are shown in Figure 4.

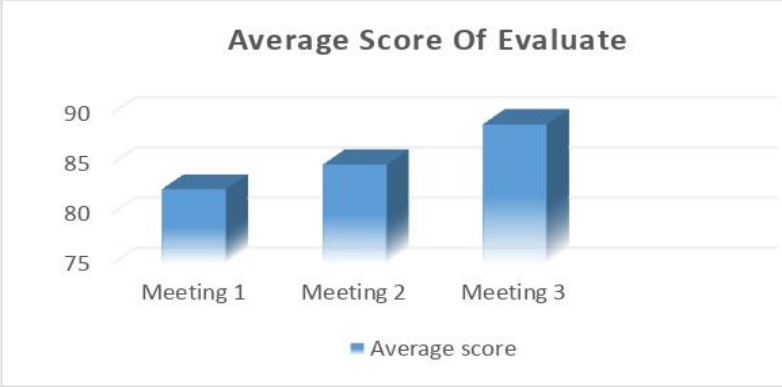

Fig 4. Average score of evaluate.

Figure 4 shows that the students' evaluation ability increased, with a score of 82.34% at the first, 84.78% at the second and 88.80% at the third meeting. Furthermore, the explanation indicator, which is the ability to explain/explain a process/ information/ phenomenon. The results of the analysis of the explanation for three meetings indicators are shown in Figure 5.

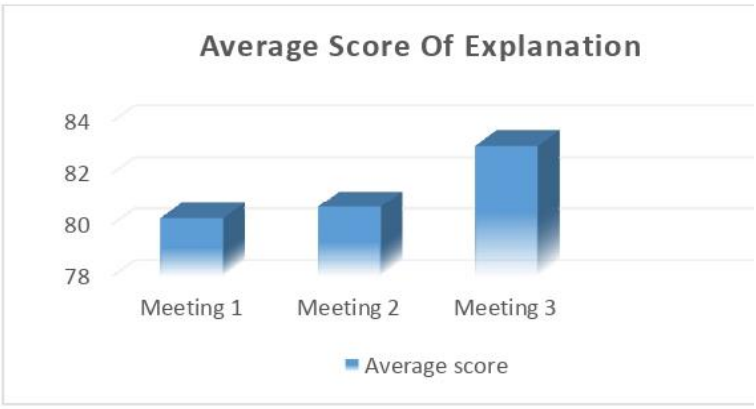

Fig 5. Average score of explanation.

Figure 5 shows that at meetings one and two there was no increase in students' explanatory abilities, namely, 80.23% at the first and 80.68% at the second, however, the students' abilities increased by a score and 83.04% at the third meeting. And then Self-regulation indicator means having the ability to manage yourself, for example observing what is around one's cognitive, the components used in obtaining results, especially by applying abilitys in analysis and evaluation for their own assessment. The results of the analysis of the self-regulation indicators for three meetings are shown in Figure 6.

Fig 6. Average score of self-regulation.

Figure 5 show that the students' self-regulation ability increased, with a score of 82.05% at the first, 84.20% at the second, and 87.50% at the third meeting.

Project-based learning helps learning focus on discipline concepts and principles and help students explore, solve, and create specific products, student-centric problems, and other meaningful issues. Therefore, students can strengthen their important skills. Project learning encourages students to learn more actively. The leturer acts as a facilitator, teaching the product of the student's performance including the results shown from the results of the projects they are working on. This learning environment is active student learning, group (collaborative), and authentic evaluation techniques (authentic assessment).

Then based on the results of questionnaires and interviews, student responses to project-based entrepreneurship courses are also very good. as many as 62% of students responded very good, 23% responded good, and students who responded fair were 15% of the total number of subjects. Based on interviews, students responded very well, because for them Project-based entrepreneurship course learning is very interesting, they can collaborate cooperatively to complete projects as good as possible, with the project learning system opening opportunities for group discussions, making it easier for students to solve problems and obstacles that arise. encountered during the project. Likewise, students with good responses explained that the learning project they were doing was a new thing so that they were challenged to complete it well. On the other hand, some students who have a poor response think that project-based entrepreneurship courses have weaknesses. The downside is that it takes a lot of time to complete a project and some friends are difficult to work with. Project based learning does have many advantages, but on the other hand project-based learning like this also has weaknesses. Weaknesses in project-based learning include: it takes a lot of time to solve problems, requires quite a lot of money, many educators feel comfortable with traditional classes, where educators play the main role in the classroom, lots of equipment that must be provided, students who have Weaknesses in experiments and gathering information will have difficulty, different topics in each group can lead to students who are not active in group work and may not be able to understand the entire topic [10].

4 Conclusion

Based on the research conducted, it can be concluded that project-based learning can improve critical thinking skills. Project-based learning managed to do the learning more interesting and challenging, as well as being able to build creativity and critical thinking about the relationship between lecture material and everyday life. Student responses to project-based entrepreneurship courses are also very good.

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