

The Influence of PBL Based on a Pedagogical Approach on Improving the Critical Thinking Ability of MA NW Lenek Lauk Students

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Abstract: This study aims to find out whether the Problem Based Learning learning model based on the reflective pedagogy approach has an effect on improving students' critical thinking skills in economic learning in class X students at MA NW Lenek Lauk. This study is a *Quasi Experiment* research with a control group design of *random sampling*. The research sample is 23 students for the experimental class and 25 students for the control class. The data collection technique uses tests in the form of *Pretest* and *Posttest* questions and uses questionnaires or questionnaires. The hypothesis proposed in this study is that there is an influence of the *Problem Based Learning* (PBL) learning model based on a reflective pedagogical approach on improving the critical thinking ability of grade X students in the independent curriculum for economics subjects at MA NW Lenek Lauk. Data analysis using an independent *t test* with a significant value of 5 % (0.05) can be obtained with a sig.(2-tailed) by $0.000 < 0.05$. It can be concluded that H_a is accepted and H_0 is rejected, so the *Problem Based Learning (PBL) Learning Model Based on a Reflective Pedagogy Approach has an effect on improving the critical thinking skills of class X students in the Independent Curriculum for Economics Subjects at MA NW Lenek Lauk*.

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Introduction

Education is one of the planned efforts to form intelligent human beings with personality, thoughts, and willpower. According to Law No. 20 of 2003, education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble morals, and skills needed by themselves, society, nation and state. According to Mantiri (2019) states that the "essence" of education is to humanize humans, which is a process that sees humans as a whole in their existence. The government continues to strive to improve the quality of education, several efforts have been made by the government by changing and improving the curriculum and several quality improvement projects, including

quality improvement projects, namely school-based quality improvement management. Education always takes place dynamically, namely in the sense of change. Both the overall change and for him the development of knowledge result in the meeting of theories and methods in the learning process. In the learning process, there is an interaction between teachers and students or students (Subhi, M. M., & Widodo, J. 2016). Etymologically, education comes from the Greek word "*peadagogike*". It is a compound word consisting of the word "*pais*" which means "child" and the word "*ago*" which means "I guide". So *peadagogike* means I guide children. People whose job is to guide children with the intention of taking them to the place of study, in Greek are called "*peadagogos*" (Hadi, S. A 2008) so education is an effort to guide children. Education has a very decisive role for the role and self-realization of individuals, especially for the development of the nation and state. The progress of a nation depends on the way the nation recognizes, appreciates, and utilizes human resources (HR), so this is closely related to the quality of education provided to members of society, namely students.

The independent curriculum not only gives freedom to students in developing their potential, but also gives freedom to educational units to process the curriculum based on regional autonomy and provides freedom for teachers to design learning, learning implementation plans that have been complained about because of the detailed and rigid arrangement and requiring teachers to follow the learning stages that have been made, resulting in teachers spending more time to Administrative affairs, with the implementation of the Independent Learning Curriculum, all designs and learning plans are made more concise by containing important components so that teachers have a lot of time to evaluate learning (Arifin, 2009).

The reflective pedagogical paradigm approach is a learning procedure that contains the interaction of students with the material they are learning with the teacher as a facilitator. The learning process is designed in such a way that students who are at the center of the learning process are able to find themselves in their consciousness to explore knowledge and values responsibly. Through this learning activity, the learning results obtained by students are not only in the form of knowledge, but it is hoped that they can develop their ability to think and act (*competence*), conscience, and their will in compassion for others (*compassion*). Education is considered successful if the students themselves find knowledge, knowledge, skills, and values, and the task of the educator is as a facilitator (Suparno, 2015). Basically, PPR is an ignatian pedagogical paradigm, which Ignatius began to introduce through a religious group called the Society of Jesus since 1540. Because the main core of the ignatian pedagogical paradigm is reflection, this paradigm is also known as the reflective pedagogical paradigm (Wahana, P. 2016).

According to Tindangen (2020), economics is a study of human behavior as the relationship between the goals faced with the availability of resources to achieve their goals. According to Somantri (2021), economics subjects are to develop students' ability to do economics, by getting to know various economic realities and events, understanding concepts and theories. Economics as one of the subjects that plays an important role in shaping students to be qualified, because economics is one of the basic sciences to train critical, systematic, logical, creative thinking and have the ability to work together effectively.

According to Wahyuni (2017), the problem-based learning model is a learning model that is based on many problems that require authentic investigation, namely investigations that require real solutions to real problems. Problem-based learning is a learning strategy that involves students in solving problems by integrating various concepts and skills from various disciplines as affirmed by (Supiandi, 2016). Problem-based *learning* is one of the learning models associated with contextual learning. Learning means being faced with a problem, which then through solving the problem students learn more basic skills (Nugraha, 2019). Problem-based learning (PBL) is one of the learning approaches designed to help students develop thinking skills, problem-solving skills, and intellectual skills (Arends, 2009). According to Lidyasari (2016), the advantages of the *Problem Based Learning* (PBL) model are loaded with characters as follows: a). Problem solving is a fairly good technique to better understand the content of the lesson. b). Problem solving can challenge students' abilities, thus giving them the power to determine new knowledge for students. c). Problem solving can increase student learning activities. d). Problem solving can help learners how to transfer their knowledge to understand real-life problems. e). Problem solving can help students to develop their new knowledge and be responsible for the learning carried out. f). Students are able to solve problems with an active and fun learning atmosphere. g). Problem solving can develop students' ability to think critically and develop their knowledge to adapt to new knowledge. h). Problem solving can provide opportunities for students to apply the knowledge they have in the real world. Meanwhile, the disadvantages of *Problem Based Learning* are as follows: a). When students do not have high interest, or do not have confidence that they are able to solve the problems they are learning, then they tend to be reluctant to try because they are afraid of being wrong. b). Without an understanding of "why they are trying" to solve the problem being studied, then they will not learn what they are learning.

According to Purwanto (2016) Critical thinking is a human personal activity that results in discoveries that are directed towards a goal. We think to find the understanding we want. According to Pratiwi (2015), critical thinking emphasizes more on the purpose of thinking, namely thinking is to lay down the relationship between parts of our knowledge. In the student learning process, of course, teachers have an important role to participate in shaping the character of students who are critical in facing various situations. The ability to think critically cannot be obtained instantly, of course, but must be habituated and instilled properly. There are various ways that can be done to build the habit of critical thinking for students, especially high school students who will face the world next. According to Syafitri (2021), critical thinking is a reasonable and relatively focused thought, in determining what is believed or what is done. In reasoning, it is indeed necessary to have the ability to think critically or in other words, critical intelligence means that part of it comes from reasoning. The existence of defense in each nation is useful for winning competition in seizing opportunities in various aspects of life so that it can be said that competitive attitudes between students, communities, workers and between nations are growing and getting tighter (Saputro, 2019). Learning to think critically is not an easy task. Those who can maintain their ability to do this task will be motivated by extrinsic and intrinsic impulses that start from the hope that progress will be achieved by critical thinking (Bayu Saputro, 2019). According to Paradesa (2015) that indicators of critical thinking skills are derived from students' critical activities that students

must master in critical thinking, as follows: 1) looking for a clear statement of each role; 2) looking for excuses; 3) try to know the information well; 4) using credible sources and mentioning them; 5) try to stay related with the main idea; 6) remembering the original and fundamental interests; 7) looking for alternatives; 8) be open and think; 9) taking a position when there is sufficient evidence to do something; 10) seek as many explanations as possible; and 11) be systematic and orderly with the parts of the whole problem. An indicator of critical thinking skills derived from critical activities. According to Syaribudin (2016) the benefits of critical thinking are as follows: a) having a better ability to solve a problem, b) being able to make quick and appropriate decisions, c) being able to analyze problems from various perspectives, d) easier to find new opportunities and ideas more creatively.

Based on the observation results, the critical thinking ability of MA NW Lenek Lauk students is still relatively low. Students find it difficult to explain from the answers they make up when the teacher gives them the assignment, most students are still confused about the task they have done themselves when the teacher asks the reason why they chose the concept. And when teachers give assignments that require them to look for information outside of school, students have not been able to find or provide good information, there are even 8 to 10 out of 25 students in the class who are reluctant to do it because they have not been able to find good ideas and cannot speak well and almost 5 to 7 students do assignments but are still wrong with the assignments they make. Because the teachers there still use the lecture learning model, not in an individual approach, do not reflect and evaluate and this causes students to not be able to solve problems and find good ideas. This is based on observations and interviews with teachers of class X students and the Deputy Head of Madrasah for curriculum.

Research Methods

The type of research used in this study is quantitative descriptive, as explained by (Sugiyono, 2012) the quantitative research method can be interpreted as a research method based on positivism philosophy, used to research on a specific population or sample, sampling techniques are generally carried out randomly, data collection uses research instruments, data analysis is quantitative or static with The purpose is to test the hypothesis that has been established. According to Ningsih (2015), the experimental method is a method that provides opportunities for individual or group students to practice doing a process or experiment. Through this method, students are expected to be fully involved in experiments, conduct experiments, and solve problems they face in real life. The research design used in this study is a post test only control design with two types of treatments. In this design, the experimental group was given treatment (X) and the control group was not given treatment. The group that was given treatment was called the experimental group and the group that was not given treatment was called the control group. In this design, both the experimental group and the control group were subjected to O1 and O2 but only the experimental group received X treatment. According to Margono (2004), population is all data that is of concern to researchers in a predetermined scope and time. This population is also related to the data. If humans provide data, then the number of population will be in accordance with the number of humans (Rizema, 2013).

The population of this study is all students of Phase E MA NW Lenek Lauk, Lenek District, East Lombok Regency for the 2024/2025 Academic Year.

Table 1. The population of the students and the N.N. Lenek Lauk

With lenek lauk			
Phase E	Population state		Number of Students
	Man	Woman	
Phase E 1	11	12	23
Phase E 2	12	13	25
Total Number of Students			48

Source: Data processed in 2024

The sample is part of the number and characteristics possessed by the population (Sugiyono, 2012). The sampling technique uses *the Cluster Random Sampling* technique. This technique is used because the sample unit does not consist of individuals but is in a randomly selected cluster (class). From 2 (two) classes in Phase E class at MA NW Lenek Lauk, 2 classes were selected as samples for this study, namely class X Phase E 1 as the experimental class and class X Phase E 2 as the control class.

Table 2. Sample state of Phase E class X MA NW Lenek Side Dishes

Phase E	Academic Year 2024/2025		
	Population Status		Sum
	Man	Woman	
Eksperimen	11	12	23
Control	12	13	25
Total number of students			48

Source: Data processed in 2024

Data collection techniques are one of the ways that researchers can use to collect data (Arikunto, 2010). The following ways to collect data in this study are tests and questionnaires as follows:

Quantitative analysis for the purposes of this research, each statement will be given a scale of strongly agree to a scale of strongly disagree where the scale has the following points:

Table 3. Likert Scale Assessment Weight

Statement	Score
Strongly Agree	5
Agree	4
Disagree	3
Disagree	2
Strongly disagree	1

The data calculation that will be analyzed using the percentage analysis technique is as follows:

$$\text{Percentage} = \frac{\text{Total score}}{\text{Maximum Score}} \times 100$$

Results and discussion

Result

1. Descriptive Data Analysis

a. Pretest Scores

In this study, the data processed is the level of critical thinking of students from the sample class. Before the data is processed by the t-test, the data from the research results are first carried out with data analysis requirements, namely:

Table 4. Results of Descriptive Data Analysis Statistics

N	Valid	Statistics	
		Pre-test experiments	Pretest Control
	Missing	23	25
Mean		72.17	49.20
Median		70.00	50.00
Mode		70	30a
Std. Deviation		13.469	14.697
Variance		181.423	216.000
Range		40	40
Minimum		50	30
Maximum		90	70
Sum		1660	1230

Source: Data processed in 2024

Based on the data obtained in table 4.3 above, it can be seen that the results of statistical descriptive data analysis are that, There is N (Total number of students), namely in the experimental class there are 23 people, while in the control class there are 25 people, The mean value of the experimental class that applied *the problem-based learning* model based on the reflective pedagogy approach was 72.17, while the control class that applied conventional learning was 49.20, The median value in the experimental class was 70.00, while the median value in the control class was 50.00, The mode value in the experimental class was 70, while the control class mode value was 30, The highest score of the experimental class was 90, while the highest score of the control class was 70, The lowest score of the experimental class was 50, while the lowest score of the control class was 30, The standard deviation value of the experimental class was 13.469, while the standard deviation of the control class was 14.697.

b. Posttest Values

The results of the posttest of the experimental class and the control class can be seen in the table below:

Table 5. Results of Statistical Descriptive Data Analysis

		Statistics		
N	Valid Missing	A post- experiment		Posttest Control
		23	2	25
Mean		85.22		62.00
Median		90.00		60.00
Mode		95		70
Std. Deviation		11.229		13.540
Variance		126.087		183.333
Range		35		40
Minimum		60		40
Maximum		95		80
Sum		1960		1550

Source: Data processed in 2024

Based on the data obtained in table 4.4 above, it can be seen that the results of statistical descriptive data analysis that:

There is N (Total number of students), namely in the experimental class there are 23 people, while in the control class there are 25 people. The mean value in the experimental class was 85.22, while the mean value in the control class was 62.00. The median value in the experimental class was 90.00, while the median value in the control class was 60.00. The mode value in the experimental class was 95, while the mode value in the control class was 70. The highest score in the experimental class was 95, while the highest score in the control class was 80. The lowest score in the experimental class was 60, while the lowest score in the control class was 40.

Uji Hipotesis

This hypothesis test is used to determine the influence of *the problem-based learning model* based on the pedagogical approach on improving students' critical thinking skills. The hypothesis test in this study uses an independent t test with the help of the SPSS version 22 application. The decision making of the t-test is if the value of sig. (2-tailed) < 0.05 then H_a is accepted and H_0 is rejected, if the value is sig. (2-tailed) > 0.05 then H_a was rejected and H_0 was accepted. The results of the t test (*independent t test*) can be seen in the following table:

Table 6. Hypothesis Test Results

Independent Samples Test		
Levene's Test for Equality of Variances		t-test for Equality of Means

	F	Mr.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Student t	1.759	.191	6.435	46	.000	23.217	3.608	15.955	30.480
Grades assumed									
Equal variances not assumed			6.486	45.535	.000	23.217	3.580	16.010	30.425

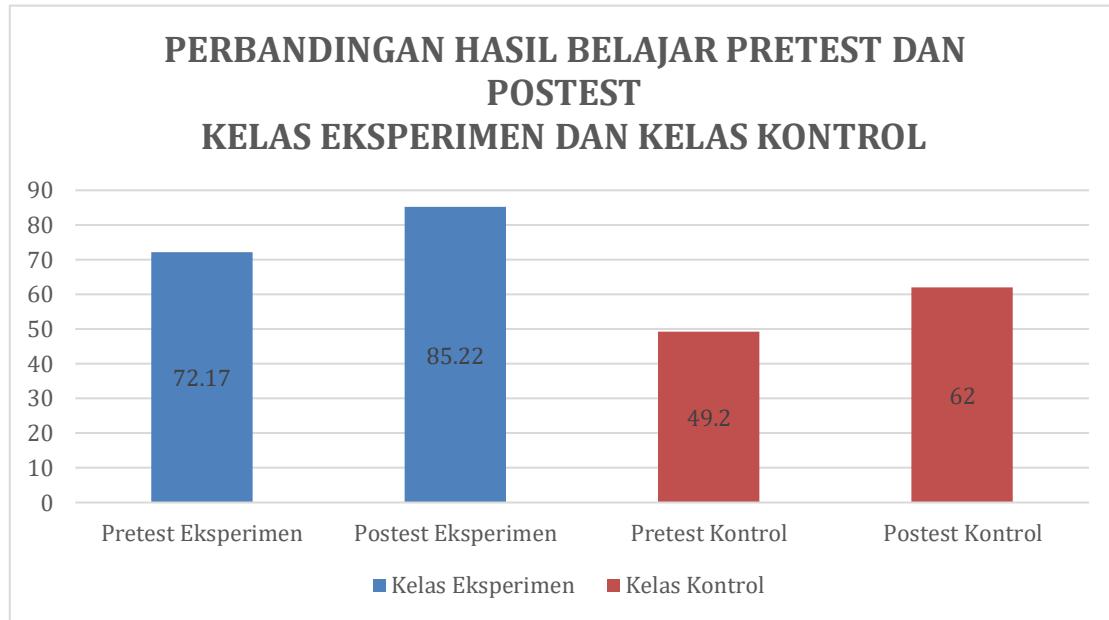
Source: Data processed in 2024

Based on table 4.6 above, it is known that the result of the value of sig. (2-tailed) by 0.000 < 0.05 . It can be concluded that H_a is accepted and H_0 is rejected, so the *Problem Based Learning Model* Based on a Reflective Pedagogy Approach has an effect on improving the critical thinking skills of class X students of Economics in the Independent Curriculum at MA NW Lenek Lauk.

Discussion

The research, which was conducted in class X of the independent curriculum at MA NW Lenek Lauk for the 2024/2025 Academic Year, began with the discovery of several problems faced by MA NW Lenek Lauk in the era of the independent learning curriculum in the implementation of the teaching and learning process in the classroom. As for the core of the problem referred to by the researcher, in the teaching and learning process, of course, there is a target in learning that is in accordance with the curriculum at that time. The passage of time certainly makes the current curriculum very different from the previous curriculum, because the needs of education have changed according to the needs of the times. Teaching materials and methods that are widely available in the curriculum now make it easier for teachers to deliver learning materials. The selection of learning methods and models is an important element in the implementation of learning, the amount of teaching materials that are more than the available time makes educators have to complete the material taught because of the lessons that are required to achieve the learning targets. There are many obstacles encountered by students in economics lessons, especially in critical thinking skills such as expressing opinions, coming up with new ideas, giving arguments, and daring to present and present learning results. Therefore, educators need a method that is suitable for economic lessons (Purwati, 2016).

As for the results of *the* posttest learning value hypothesis test of the experimental class, the value of sig.(2-tailed) of $0.000 < 0.05$ with a significance level of 5%, so it can be concluded that H_a was accepted and H_0 was rejected. Therefore, the results of the Hypothesis Test stated that there was a positive and significant influence of the use of *the Problem Based Learning Model* Based on a Reflective Pedagogical Approach on the improvement of critical thinking skills of class X students in the Independent Curriculum for Economics subjects at MA NW Lenek Lauk.



(Figure 1 Comparison of Pretest and Posttest Learning Outcomes of Experimental and Control Classes)

Conclusion

Based on the results of research in class X in the Independent Curriculum at MA NW Lenek Lauk for the 2024/2025 school year using *a problem based learning* (PBL) learning model based on a reflective pedagogical approach to students' critical thinking skills in economics subjects, based on the data from the research results and the discussion of the data above shows that The value of sig. (2-tailed) of 0.000 with a significant level of 5% or 0.05, so the value of sig. (2-tailed) $0.000 < 0.05$ then H_a is accepted. This means that there is an influence of the problem based learning (PBL) learning model based on a reflective pedagogical approach on improving the critical thinking skills of class X students in the independent curriculum at MA NW Lenek Lauk. Thus, it can be concluded that the *problem based learning* (PBL) learning model based on the reflective pedagogy approach has an effect on improving the critical thinking ability of class X students in the independent curriculum at MA NW Lenek Lauk. This is evidenced by the difference in learning outcomes between the experimental class and the control class.

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