

**IMPLEMENTATION OF THE PROBLEM BASED LEARNING MODEL IN
IMPROVING STUDENTS' CRITICAL THINKING ABILITIES IN ECONOMICS
SUBJECTS IN GRADE X OF SMA NEGERI 4 PRAYA IN THE 2023/2024 ACADEMIC
YEAR**

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Abstract

This study aims to test the improvement of critical thinking of class X students at SMA Negeri 4 Praya using the Problem Based Learning (PBL) learning model. This type of research is quantitative with 75 students as research subjects. The data collection technique uses tests and questionnaires. Data analysis techniques are Normality Test, Homogeneity Test, T Test, N Gain Test. The research approach uses experiments. The results of this study were obtained using the Problem Based Learning learning model, there was a significant and positive difference in students' critical thinking skills before and after using the Problem Based Learning learning model with a mean value of the experimental class of 72.85 or 73% and a mean value of the control class of 61.59 or 62%. So it can be said that the critical thinking skills of students in the experimental class are better than those in the control class. So the application of the Problem Based Learning (PBL) learning model has been proven to improve students' critical thinking skills at SMA Negeri 4 Praya.

Keyword: *learning model; problem based learning; ability; critical thinking; economics lessons*

Introduction

Changes in various areas of social life are a result of the increasingly rapid development of technology and science. This is especially true in the field of education, which is a process of learning attitudes and behavior for an individual or group of people, acquired through the smallest environments such as family, community, and educational institutions. In this sense, education is one of the most important factors in preparing for future success in the era of globalization. This education also has an important role in advancing life nation and state, so that the government always pays great attention to education sector (Paratiwi & Ramadhan, 2023).

Meanwhile, according to Abdul Rahman (2022), education is a conscious effort to realize the cultural inheritance from one generation to the next. Problem-Based Learning (PBL) is a learning process that begins by presenting a problem and motivating students to engage in problem-solving activities so that they actively participate in constructing their knowledge, Wayan Suryanto (2020:214).

Problem-Based Learning (PBL) helps students develop problem-solving skills, improve understanding and knowledge, and actively engage in acquiring knowledge, according to Saputri A. (2022:93). By solving problems, students can gain knowledge while developing critical thinking skills and taking responsibility for solving problems. Meanwhile, according to Dermawan et al. (2021), Vygotsky's theory explains that social relationships carried out with other friends can give rise to new concepts and lead to the development of students' intellectual ideas. State that the problem-based learning model is a form of learning based on the constructivism paradigm, which prioritizes student learning and focuses on the learning process. According to Wulandari & Suparno (2020), Problem-Based Learning (PBL) can stimulate students' cooperative character at school.

Critical thinking is characterized by individuals who are rational, capable of reflective thinking, and able to make decisions based on careful consideration (Sani, 2019). Reflective thinking is a thought process that involves critical and creative thinking skills in solving problems. Critical thinking is the activity of analyzing ideas in a specific direction, sharply distinguishing between things, selecting and identifying them. John Dewey (2012) defines critical thinking as the active, persistent, and careful consideration of a belief or form of knowledge taken for granted, along with supporting reasons and rational conclusions. Thus, critical thinking skills are considered essential in the learning process because they provide students with the opportunity to learn through discovery. Critical thinking skills are at the heart of the future of all societies worldwide (Redana, 2019). Critical thinking is thinking in a reasoned and reflective manner, emphasizing decision-making about what to believe or do.

Based on the author's experience conducting Field Experience Practice at State Senior High School 4 Praya, in the economics subject, the author/researcher found many issues related to learning methods for improving students' critical thinking skills, as well as a lack of student

participation in discussions and collaborative problem-solving. When students were given daily tests or group assignments, many were still unable to solve the problems assigned by the teacher. Furthermore, the teaching model used mostly used lectures rather than other methods, resulting in students' lack of critical thinking skills.

One key to success in learning economics lies in the use of learning methods or models provided by teachers. As demonstrated in the first interview with several Grade 11 students, they found the Economics learning process rigid and inflexible, involving memorization and boredom. This is undoubtedly due to teachers' lack of knowledge in implementing learning methods that motivate students to improve their thinking skills. Furthermore, more learning models should be implemented to make lessons more enjoyable, and students will be more creative and motivated to learn about Economics.

Economics lessons are aimed at encouraging individuals to learn throughout their lives and to create a learning society. From this definition, it is clear that economics lessons are considered an effort by students to learn the material with the goal of achieving success. Economics education is also considered a foundation for moral education, helping to lay the foundations for correct economic behavior. Overall, economics lessons are considered to have a broader impact, not only in the context of economic knowledge, but also in shaping positive economic character and behavior in students.

Research methods

A research method is the steps taken by researchers to collect information or data. The approach used is a quantitative experimental approach (Experimental Research), which aims to determine the comparison of students' critical thinking through the application of the Problem-Based Learning model. An experiment is an action taken to examine the cause-and-effect relationship of a study by comparing one or more control groups that do not receive the treatment. This study used a non-equivalent pretest-posttest design. This design is typically used by selecting classes that have similar circumstances or conditions.

The population in this study was all 440 10th-grade students of SMA Negeri 4 Praya in the 2023/2024 academic year. The sample in this study was class X6, consisting of 37 students as the experimental class, and class X1, consisting of 38 students as the control class. The sampling technique used in this study was purposive sampling. Class X6 was chosen as the experimental class and X1 as the control class because the students' initial level of activity in class and learning outcomes were nearly identical. This was evident in the students' learning outcomes in the End-of-Semester Assessment (PAS). Furthermore, the economics teacher suggested using these classes because the activities of the two classes were not significantly different during learning. Data collection techniques in this study are observation, interviews, and test methods. The data analysis used in this study uses inferential statistics to analyze the data obtained from the sample, and the results are then generalized to the study population.

Results and Discussion

The results of this study indicate that the Problem-Based Learning (PBL) model can improve students' thinking skills. Providing students with opportunities to directly engage in learning will yield better results. By involving students during learning, they gain better concepts and knowledge. This is demonstrated by improved student learning outcomes.

The use of problem-based learning (PBL) models in learning significantly reduces the time teachers spend delivering material to students compared to conventional models. The teacher's delivery of subject matter is crucial in the learning process. Student success in the learning process must focus on improvements in cognitive, psychomotor, and affective aspects. Students in the experimental class demonstrated a superior improvement in critical thinking skills compared to the control class. The application of the problem-based learning (PBL) model can train problem-solving skills by applying the steps of the scientific method.

The analysis results in this study indicate differences between conventional learning models and problem-based learning (PBL). The application of the problem-based learning (PBL) model in lessons showed better results than the conventional model. The use of the problem-based learning (PBL) model resulted in improved students' critical thinking skills on banking products. Statistical analysis was used to provide an overview of the improvement in critical thinking skills in the control and experimental classes. The N-gain test results showed that the experimental class experienced a high improvement, while the control class achieved a moderate improvement.

Based on the analysis, the research data was found to be normally distributed and homogeneous, with a significance value exceeding 0.05. The results obtained from the hypothesis testing in this study indicate that there is a significant (real) difference between the experimental class and the control class for the experimental class, the significance results obtained in the normality test using one sample Kolmogorov-Smirnov are 0.180 and for the control class are 0.200, meaning that both values are > 0.05 and can be said to be normally distributed, and for the results of the homogeneity test using the Test of Homogeneity of Variance on the significance results Based on Mean are 0.380, meaning > 0.05 . So the output obtained is homogeneous.

The results of this study also align with Wardani's (2015) research, which found that learning using problem-based learning (PBL) materials can improve students' critical thinking skills. This was demonstrated by the post-test and N-gain analysis of the control and experimental classes using a t-test, which showed significant differences between the two classes. In this study, the results of the independent sample t-test (correlated) with $\alpha = 3.116$ and $\alpha = 2.028$, with a significance value of less than 0.05 ($P = 0.003 < 0.05$), indicating a significant difference. The analysis showed that α is greater than α , so α is rejected and α is accepted. Therefore, it can be concluded that the critical thinking skills of students in the experimental class are better than those in the control class.

Conclusion

Based on the analysis and discussion, it can be concluded that Problem-Based Learning (PBL) with the topic of banking products can improve the critical thinking skills of students at SMA Negeri 4 Praya. The N-gain score calculation shows that the average (mean) N-gain score for the experimental class was 72.85, or 73%, which is in the high category. The minimum N-gain score is 20% and the maximum is 100%. Meanwhile, the N-gain score calculation for the control class showed an average score of 61.59, or 62%, which falls into the moderate category. With a minimum N-gain score of 30% and a maximum of 100%, the experimental class experienced improvement, falling into the High category, while the control class fell into the Medium category.

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