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Contributions Cognitive, Motivation, Metacognitive, Curriculum and Learning Environment to English Learning Outcomes and Mathematics in Class XI Students in the State High School in Banten Province



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ABSTRACT: The purpose of this study is to find out how the influence of learning problems on cognitive, metacognitive, motivational, curriculum, and environmental aspects affects the learning outcomes of students in tenth grade at a senior high school in Banten Province. The research method used a quantitative approach to involve learning problems and learning outcomes for tenth grade students. The regression tests using simple linear regression were used to analyze the data. Based on the results of the study, it can be concluded that there is a significant influence based on aspects such as cognitive, motivational, metacognitive, curriculum, and environment on students' learning outcomes, and learning problems of cognitive, motivational, metacognitive, curriculum, and environmental simultaneously affect student learning outcomes. Which means, the lower cognitive abilities, metacognitive and motivation, and the more not the curriculum and learning environment, it will be related to the lower the learning outcomes of English and Mathematics

KEYWORDS: Learning Problems, Learning Outcomes, High School

INTRODUCTION

The learning process is an integral part of student development, especially at the high school level, which is an important foundation for their preparation to enter the world of university or the world of work. However, in reality, many high school students face various obstacles that affect their learning outcomes. This learning problem is often influenced by a number of complex and interrelated factors. Therefore, it is important to identify and understand various factors that affect student learning problems in order to find effective solutions for improving the quality of learning at the high school level (Rahmawati, 2020: 45). One of the aspects that affects the learning process is cognitive. Students' cognitive abilities, such as concept comprehension, memory, and critical thinking skills, play a significant role in their academic achievement. Every student has different cognitive abilities, and these differences can lead to differences in the way they process information and solve problems. This factor is often the main cause of learning difficulties experienced by students, especially in subject matter that requires a deep level of understanding (Hidayat, 2019: 78).

In addition, motivation also plays a very important role in the learning process of students. High motivation encourages students to try harder, be more focused, and be more consistent in learning. Conversely, a lack of motivation can make students feel disinterested or unengaged in learning activities, ultimately negatively impacting their learning outcomes. This motivational factor is not only influenced by students' internal motivations but also by external factors such as family support, teacher expectations, and pressure from the social environment (Putra, 2020: 112). Another aspect that also affects the quality of student learning is metacognition. Metacognition refers to the ability of students to understand and control their own thought processes, such as planning learning strategies, monitoring self-understanding, and evaluating learning outcomes. Students who have good metacognitive skills tend to be more successful in learning because they can adjust their learning strategies according to the challenges they face. On the other hand, students who lack metacognitive skills often have difficulty overcoming learning problems and experience failures in understanding the material (Wahyudi, 2018: 56).

The individual factors, the curriculum implemented in schools is also an important element that affects the quality of learning. A curriculum that is too heavy or irrelevant to students' needs and interests can make them feel pressured and lose

motivation to learn. On the contrary, a well-structured curriculum, in accordance with student development and accommodating diverse learning styles, will support students in achieving their best potential (Setiawan, 2021: 89). The learning environment, both physical and social, also has a significant influence on the student learning process. The physical environment includes the condition of classrooms, school facilities, and available learning aids. Comfortable classrooms, adequate facilities, and the right learning tools will make it easier for students to learn. On the other hand, the social environment, which includes interactions with teachers, peers, and family, also influences students' motivation and attitudes towards learning. Positive social support can increase students' enthusiasm and confidence in facing academic tasks (Kurniawan, 2019: 134). Taking into account these various interacting aspects, it is important to conduct in-depth research on the factors that affect the learning problems of high school students. This study aims to identify and analyze the role of cognitive, motivational, metacognitive, curriculum, and environmental aspects in influencing the student learning process. With a better understanding of these factors, it is hoped that more effective learning strategies and solutions can be found that can help students overcome their learning barriers, so that the quality of education at the high school level can be improved overall (Santoso, 2022: 98).

The formulation of the problem in this study aims to explore and analyze various factors that affect the learning problems of high school students, which include cognitive, motivational, metacognitive, curriculum, and environmental aspects. The formulation of the problems that can be raised in this study is as follows: 1) How does the influence of students' cognitive abilities on the learning problems they face in high school? 2) What is the relationship between students' motivation to learn and their level of academic achievement in high school? 3) To what extent do students' metacognitive skills, such as the ability to plan, monitor, and evaluate learning strategies, affect their learning process? 4) How does the curriculum implemented in schools affect the quality of learning and learning outcomes of high school students? 5) To what extent does the learning environment, both physical and social, affect the learning experience of students in high school? 6. How does the interaction between cognitive, motivational, metacognitive, curriculum, and environmental factors contribute to the learning problems experienced by high school students?

This research aims to identify and analyze various aspects that affect the learning problems of high school students, which include cognitive, motivational, metacognitive, curriculum, and environmental factors. The specific objectives of this study are as follows: 1) To analyze the influence of students' cognitive abilities on learning problems faced in high school. 2) To find out the relationship between students' learning motivation and their academic achievement. 3) To explore the role of metacognitive skills in overcoming students' learning problems in high school. 4) To assess the influence of the curriculum applied in schools on the quality of learning and the achievement of student learning outcomes. 5) To examine the influence of the learning environment, both physical and social, on student motivation and learning outcomes. 6) To analyze the interaction between cognitive, motivational, metacognitive, curriculum, and environmental factors in influencing students' learning problems. By achieving these goals, this research is expected to provide deeper insights into various factors that affect the learning problems of high school students.

This research is expected to provide benefits both for the development of science and the world of education and for parties directly involved in the learning process at the high school level. The benefits of this research can add insight and enrich existing theories in the field of educational psychology and pedagogy, especially those related to factors that affect the student learning process. By analyzing cognitive, motivational, metacognitive, curriculum, and environmental aspects, this research is expected to provide a more comprehensive understanding of student learning dynamics at the high school level. This research can enrich also for learning theory by exploring the interaction between various factors that affect students' learning difficulties and success. The findings of these 4 studies can be a reference for further research in the field of education, especially related to learning problems faced by students.

This research can provide useful information for teachers and educators in designing more effective learning methods and strategies according to the characteristics and needs of students. Understanding the factors that affect student learning problems can help teachers pay more attention to students who are experiencing difficulties, both in terms of cognitive, motivational, metacognitive, and learning environment. b. For Schools and Education Managers: The results of this study can be considered for schools and education managers in improving the curriculum and creating a more supportive learning environment. By understanding the factors that affect learning problems, schools can develop better policies in support of students' academic achievement. c. For Students: This research is expected to provide insight into the importance of aspects such as motivation, metacognitive skills, and appropriate learning strategies. With this information, students can better understand the challenges they face in learning and develop strategies to improve their learning outcomes. 3. Social Benefits a. Improving the Quality of Education: This research is expected to contribute to efforts to improve the quality of education at the high school level. By understanding the factors that affect students' learning problems, it is hoped that more effective measures can be

implemented in overcoming learning barriers so that students can reach their full potential and improve overall academic achievement. b. Assisting in Education Policy Making: The findings of this study can be input for education policymakers, both at the 5 local and national levels, in designing policies that are more adaptive to the needs of students.

THEORETICAL FRAMEWORK

In the learning process, students face various challenges that can hinder the achievement of optimal academic results. Various factors both from within and the surrounding environment play a role in influencing the effectiveness of learning, including cognitive aspects, motivation, metacognitive abilities, curriculum, and learning environment. Understanding the theories underlying this aspect is very important to get a comprehensive picture of the learning problems experienced by students, especially at the high school level, which is the focus of this research. There are several main theories that support aspects of learning problems that are often experienced by high school students in this study, which focus on cognitive, motivational, metacognitive, curriculum, and learning environment aspects, including: 1) Cognitive aspect theory includes students' understanding of processing complex information and critical thinking skills. The cognitive difficulties that students often experience involve understanding abstract concepts as well as logical abilities in certain areas, such as math and science. This theory is supported by Sugiyanto (2022:78), who emphasizes that critical thinking skills are very important in learning. More interactive and relevant learning approaches to daily life, such as problem-based learning, are recommended to make it easier for students to understand the concepts taught. 2) Metacognitive aspect theory: this theory relates to the ability of students to plan, control, and evaluate their own learning process.

Nuryanti (2021:45) explained that metacognitive skills help students identify learning problems and find the right solutions. In this study, students showed difficulties in choosing appropriate learning strategies, which resulted in passive learning. The application of metacognition-based learning strategies is recommended to teach students effective ways to manage independent learning and improve self-regulation skills. 3) Theory of curriculum aspects and learning environment also plays an important role in student learning problems. A dense curriculum and lack of 10 adaptive skills often create stress for students, causing fatigue and lowering motivation to learn.

Putri (2023:65) highlighted that a curriculum that is tailored to students' interests is more effective in maintaining learning motivation. Meanwhile, an unconducive learning environment, such as noisy classroomsNuryanti (2021:45) explained that metacognitive skills help students identify learning problems and find the right solutions. In this study, students showed difficulties in choosing appropriate learning strategies, which resulted in passive learning. The application of metacognition-based learning strategies is recommended to teach students effective ways to manage independent learning and improve self-regulation skills. 3) Theory of curriculum aspects and learning environment also plays an important role in student learning problems. A dense curriculum and lack of 10 adaptive skills often create stress for students, causing fatigue and lowering motivation to learn. or lack of emotional support, also hampers the student learning process. This shows that a comfortable learning environment and an adaptive curriculum are essential to supporting student learning success. Based on the above theory, it can be concluded that various theories that support aspects of high school students' learning problems show that cognitive understanding, metacognitive skills, curriculum, and learning environment have a significant role in determining the effectiveness of the learning process. Cognitive theory emphasizes the importance of critical thinking skills, especially in complex subjects, while metacognitive theory highlights the importance of students having effective independent learning strategies. In addition, a less flexible curriculum and an unsupportive learning environment can reduce student motivation and performance. Therefore, the application of relevant learning approaches, learning strategies that support independence, and the development of an adaptive curriculum and a conducive environment are needed to overcome the learning problems faced by students.

RESEARCH METHOD

The research used a quantitative approach because it produces objective and measurable data, allowing generalization of results to a larger population (Creswell, 2014:50) by using standardized instruments such as questionnaires. The researchers can collect data systematically and consistently (Neuman, 2014:200). The presentation of data in the form of tables and graphs facilitates interpretation (Field, 2013: 270). The aims approach is used to describe and measure various learning problems faced by high school students based on cognitive, motivational, metacognitive, curriculum, and environmental aspects. Quantitative data was collected through a questionnaire that included 45 statements responded by 205 students from three different schools in Serang City and Pandeglang Regency. So that it can provide a statistical overview of the level of learning problems in each aspect, as well as prepare recommendations for improving the quality of education.

The statistical overview of the level of learning problems in each aspect, as well as prepare recommendations for

improving the quality of education using numerical data. In this research design, the researcher collects data through questionnaires which are then statistically analyzed to provide a clear picture of the conditions being studied. This design does not to test hypotheses, but rather to provide a better understanding of existing data, such as the frequency, mean, and distribution of the variables studied (Sugiono, 2019:53).

The data collected by using a questionnaire consists of 45 statements covering five main aspects that affect the learning problems of high school students, such as cognitive, motivational, metacognitive, curriculum, and environment. The respondents of this research were 114 students from three schools, and the results of the data analysis were presented in the form of a diagram that shows the average learning problems in each aspect. The research was conducted at three high schools in Banten Province: 1) Public Senior High School 1 Ciruas, 2) Public Senior High School 1 Serang City, and 3) Public Senior High School 1 Pandeglang. The selection of this location is based on the diversity of student characteristics and learning environments that can provide different perspectives on learning problems Public Senior High School 1 Ciruas and Public Senior High School 1 Serang City have similar conditions and challenges, while Public Senior High School 1 Pandeglang offers different contexts that can enrich the analysis. The relevance of this location to the study is very important because the results are expected to comprehensively describe the factors that affect the learning process of students at the high school level, as well as provide more targeted recommendations for improving the quality of education in each of these schools.

Respondents This study involved 114 grade XI students from three high schools in Banten Province as a sample, such as Public Senior High School 1 Ciruas (38 students), Public Senior High School 1 Serang City (38 students), and Public Senior High School 1 Pandeglang (38 students). The sampling technique used was purposive sampling, which was chosen to ensure that participants came from schools that represented the diversity of the characteristics of the learning environment in the region. This technique helps to obtain a more comprehensive picture of the factors that affect learning problems at the high school level, so that the results of the study can reflect the general condition of students in the area.

The instruments of the research were collected using a questionnaire consisting of 45 statements related to five aspects of learning problems, such as cognitive, motivational, metacognitive, curriculum, and environment. This questionnaire was distributed to 114 students from three schools studied to measure the level of difficulty experienced by students in each of these aspects. Each statement in the questionnaire is designed to capture students' perceptions and experiences related to their learning challenges, such as the ability to understand the material, motivational drive, learning strategies, the curriculum faced, and the influence of the learning environment in school.

The data collection process of this research: 1) Preparation includes the preparation of a questionnaire with 45 statements that focus on the cognitive, motivational, metacognitive, curriculum, and learning environment aspects of the students. Each statement is carefully crafted to accurately capture the learning challenges faced by high school students. This stage also includes the selection of research subjects, such as grade XI students at Public Senior High School 1 Ciruas, Public Senior High School 1 Serang City, and Public Senior High School 1 Pandeglang. 2) Data collection distributed questionnaires to 114 students in the three schools studied. The questionnaire is distributed directly in the school environment at a time that has been agreed upon with the school to ensure that students can fill out the questionnaire properly and without interruption. Each student is asked to fill out a questionnaire according to their personal experience and condition in the learning aspect that has been researched through the Google Form that has been provided. 3) After the questionnaire is collected, the data is processed to get an average score on each aspect studied. This data processing was carried out by examining each answer given by 14 students, then calculating the average of all answers for each statement. The data that has been processed is then presented in the form of a diagram to facilitate comparative analysis of the level of learning problems in certain aspects among students from the three different schools.

The data analysis techniques used were: First, descriptive statistics to describe students' learning problems based on certain aspects such as cognitive, motivational, metacognitive, curriculum, and environment. The results are presented in the form of diagrams and percentages for each aspect. Second, Inferential Statistics: Includes assumption tests (normality, multicollinearity, and heteroscedasticity) to ensure that the data meets the requirements of regression analysis and Multiple Linear Regression Test: It was conducted to test the relationship of five independent variables (cognitive, motivational, metacognitive, curriculum, and environment) to dependent variables (student learning outcomes), and the results showed that all independent variables had a significant influence on student learning outcomes. Third, hypothesis tests such as Hypothesis Null (H_o) state that there is no significant influence of independent variables on learning outcomes, while Alternative Hypothesis (H_a) states otherwise, and the results showed the acceptance of H_a, which means there was a significant influence of cognitive, motivational, metacognitive, curriculum, and environment on English and Mathematics subjects at the tenth grade high school level in Banten province.

RESULTS AND DISCUSSION

a. Inferential Statistics; **1)** Assumption Tes, **2)** The assumption tests carried out include normality tests, multicollinearity tests, and heteroscedasticity tests. The description of the test results is as follows: **3)** Normality Test ; The requirement in parametric analysis is that the distribution of data must be normal. The normality probability test seen in the regression output is presented as follows:



Figure 1. The Scatterplot Normality Test

Based on figure 1, it appears that the data spreads around the diagonal line and follows the diagonal direction, so the data is distributed normally and the regression model meets the assumption of normality.

b. Multicollinearity Test ; A good Regression model implies the absence of multicollinearity problems.

Туре	Collinearity	
	Statistics	
	Tolerance	VIF
Cognitive (X1)	.630	1.588
Motivation (X2)	.714	1.400
Metacognitive (X3)	.618	1.619
Curriculum (X4)	.674	1.484
Environment (X5)	.696	1.437

Table 1. Multicollinearity Test Results

Based on Table 1, it appears that the tolerance value of the five independent variables is more than 0.1 and the VIF is less than 10, so it can be concluded that in the regression model there is no multicollinearity.

c. Hypothesis Test ; The research hypothesis test was carried out by a multiple linear regression test of five independent variables with the regression equation as follows:

Hypothesis Null (H_0):

There is no significant influence on learning problems based on cognitive, motivational, metacognitive, curriculum, and environmental aspects on students' learning outcomes.

Alternative Hypothesis (H_a):

There is a significant influence on learning problems based on cognitive, motivational, metacognitive, curriculum, and environmental aspects on students' learning outcomes. The results of the regression test processing are as follows:

Coefficients								
	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics		
			Std.					
Туре		В	Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	177.395	2.627		67.532	.000		
	Cognitive (X1)	-1.211	.111	331	-10.867	.000	.630	1.588
	Motivation (X2)	-1.269	.116	313	-10.967	.000	.714	1.400
	Metacognitive (X3)	877	.126	214	-6.965	.000	.618	1.619
	Curriculum (X4)	-1.056	.115	271	-9.208	.000	.674	1.484
	Environment (X5)	-1.001	.120	243	-8.379	.000	.696	1.437

Table 2. Multiple Linear Regression Test Results (Partial t-Test)

Based on Table 2, the estimator value on the Coefficients output section is obtained, so that the regression line equation is as follows: Y-1=177,39-1,211,X-1.-1,269,X-2.-8,77,X-3.-1,056,X-4.-1,001,X-5.

Based on the relationship above, it can be concluded that the coefficients of cognitive, motivational, metacognitive, curriculum, and environmental aspects are negative, means that there is a negative relationship between cognitive, motivational, metacognitive, curriculum, and environmental aspects and student learning outcomes. The greater the student's learning problems in cognitive, motivational, metacognitive, curriculum, and environmental aspects, the lower the learning outcomes obtained by students.

Metacognitive variables have the greatest impact on learning outcomes because the coefficient (-8.77) has the largest absolute value. All learning problems in cognitive, motivational, metacognitive, curriculum, and environmental aspects contribute to decreasing student learning outcomes, but the effects vary according to the value of each coefficient. The conclusions based on significance values are presented at Table 3 bellows:

Туре	t	Sig.	Conclusion
(constant)	67.532	.000	Significant influence
Cognitive (X1)	-10.867	.000	Significant influence
Motivation (X2)	-10.967	.000	Significant influence
Metacognitive (X3)	-6.965	.000	Significant influence
Curriculum (X4)	-9.208	.000	Significant influence
Environment (X5)	-8.379	.000	Significant influence

Table 3. Conclusions Based on Significance Values

Based on table 3, it is obtained that the value of Sig. < α = 0.05, then H_o is rejected and H_a is accepted, means that there is a significant influence based on aspects (cognitive, motivational, metacognitive, curriculum, and environment) on student learning outcomes. Based on data processing, it was obtained that the cognitive Sig. value < 0.05, so that learning problems in the cognitive aspect (X1) had an effect on student learning outcomes. The motivation Sig. value < 0.05, so that the learning problem in the motivation aspect (X2) affects student learning outcomes. The value of Sig. metacognitive < 0.05, so that learning problems in the metacognitive aspect (X3) have an effect on student learning outcomes. The Sig. value of the curriculum < 0.05, so that learning problems in the curriculum aspect (X4) affect student learning outcomes. The environmental Sig. value is < 0.05. It can be concluded that learning problems in the environmental aspect (X5) have an effect on English and Metamicts students' learning outcomes.

Table 4. Multiple Linear Regression Test Results (Simultaneous F Test)

ANOVAa								
Туре		Sum of Squares	Df	Mean Square	F	Sig.		
1	Regression	16341.111	5	3268.222	321.245	.000b		
	Residual	1098.749	108	10.174				

	Total	17439.860	113				
a. Dependent Variable: Mathematics Learning Outcomes (Y)							
b. Predictors: (Constant), Environment (X5), Cognitive (X1), Motivation (X2),							
Curriculum (X4), Metacognitive (X3)							

Based on Table 4, the Sig value is <0.05, and the learning problems of cognitive aspects (X1), motivation aspects (X2), metacognitive aspects (X3), curriculum aspects (X4), and environmental aspects (X5) simultaneously effect on English and Metamicts students' learning outcomes (Y).

The results of this research show that the learning problem component is the biggest challenge for high school students in the learning process. Cognitive difficulties include problems in processing complex data, a lack of critical thinking skills, and an inability to understand basic concepts. Sugiyanto (2022: 78) states that logical and critical thinking are essential in the fields of mathematics and science, but many students fail to master these abilities well. This shows that learning approaches such as problem-based learning and exploratory approaches that are more in line with students' daily lives should be used.

Motivation is still an important component for academic success. Sari (2023:32) said that students have higher levels of motivation, especially intrinsic, which helps them deal with learning difficulties. However, many students are motivated by encouragement from outside sources, such as parents' values and expectations, rather than encouragement from within themselves. This shows how important it is to build students' intrinsic drive through approaches that match their interests so that students can learn better and be more excited.

Learning problems related to the metacognitive aspect show that students face difficulties in controlling and tracking how they learn. A deeper understanding relies on metacognitive abilities, which include learning strategies such as planning, monitoring, and reflection. Nuryanti (2021: 88) stated that students with good metacognitive skills have a greater tendency to find their learning problems and find the right solutions. However, many high school students do not have this ability. As a result, students learn passively and only use memorization. Metacognitive-based learning is essential for teaching students better strategies for managing self-paced learning.

Curriculum as the cause of learning problems. The dense material and lack of curriculum flexibility often put pressure on students. Putri (2023: 65) explained that a curriculum that is not tailored to students' needs and interests can result in fatigue and decreased motivation to learn. Many students feel overwhelmed with the amount of material that must be mastered in a short period of time, and this hinders students' opportunities to understand the material more deeply. Therefore, a more adaptive curriculum approach, with the provision of space for the exploration of interests and the application of relevant learning concepts, is needed to reduce stress and increase learning effectiveness.

In the environmental aspect, learning challenges are often caused by a less supportive learning environment, both at home and at school. Wahyuni (2020: 52) found that a conducive learning environment, which includes emotional support and adequate facilities, is very important for students in achieving optimal achievement. A competitive and less supportive learning environment can reduce student motivation and affect students' ability to develop their potential to the maximum. Therefore, creating a positive and inclusive learning environment, both at school and at home, is essential to supporting students' academic and emotional development.

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CONCLUSSION

This study identifies five key aspects that challenge high school students' learning processes: cognitive, motivational, metacognitive, curricular, and environmental, which interact to influence learning effectiveness. The main issues in the cognitive aspect include difficulties in understanding abstract concepts and critical thinking, particularly in subjects such as mathematics and science, while students' motivation often relies on external factors, such as grade pressure, rather than intrinsic drive. Additionally, the lack of effective learning strategies in the metacognitive aspect, the overloaded curriculum, and unsupportive environmental conditions exacerbate these challenges. This study recommends a holistic approach through problem-based learning, the development of metacognitive skills, curriculum adjustments, and the creation of supportive learning environments to comprehensively enhance the quality of learning, particularly in addressing challenges in subjects like English and Mathematics.

Which means, the lower cognitive abilities, metacognitive and motivation, and the more not the curriculum and learning environment, it will be related to the lower the learning outcomes of English and Mathematics.

REFERENCES

- 1) Gunawan, A. (2021). Learning Strategies and Metacognitive Regulation in Effective Learning. *Journal of Education and Learning*, 13(2), 101-112.
- 2) Hartono, B. (2020). Learning Skills and Understanding of Complex Materials in Students. *Journal of Educational and Teaching Psychology*, 11(4), 67-79.
- 3) Lestari, D. (2019). Metacognitive Awareness and Ineffective Student Learning Habits. *Journal of Education and Culture*, 14(1), 45-58.
- Nuryanti, A. (2021). The Effect of Metacognition in Improving Student Learning Effectiveness. *Journal of Education and Learning*, 12(3), 45-56.Putri, N. (2021). The Influence of Teaching Methods on Student Motivation and Understanding. Journal of Education and Learning, 15(3), 88-99.
- 5) Putri, L. A. (2023). Curriculum Analysis on Motivation and Academic Achievement of High School Students. *Journal of Educational Management*, 15(2), 65-75.
- 6) Prasetyo, H. (2021). The Influence of Classroom Environment on Student Concentration in the Learning Process. *Journal of Education and Psychology*, 14(2), 67-78.
- 7) Santoso, S. (2020). The Importance of Variety of Teaching Methods in Increasing Students' Interest in Learning. *Journal of Education and Teaching*, 12(3), 45-56.
- 8) Sari, M. (2020). The Impact of Teacher Absence on Student Motivation and Learning Experience. *Journal of Education and Learning*, 13(1), 45-54.
- 9) Sari, F. (2023). Intrinsic and Extrinsic Motivation in the Teaching and Learning Process. *Journal of Educational Psychology*, 11(4), 32-40.
- 10) Siswanto, A. (2019). The Effect of Situational Motivation on Students' Long-Term Learning. *Journal of Educational Psychology*, 10(2), 78-89.
- 11) Sugiyanto, H. (2022). Cognitive Factors Affecting Students' Learning Difficulties. *Journal of Educational Sciences*, 13(2), 78-89.
- 12) Wahyuni, D. (2020). The Influence of Learning Environment and Family Support on Student Academic Achievement. *Journal of Primary and Secondary Education*, 9(1), 52-63.

- 13) Wibowo, J. (2020). Mismatch of Subject Matter and Student Ability: Its Impact on Learning Interest. *Journal of Educational Psychology*, 12(1), 56-67.
- 14) Wulandari, R. (2021). The Impact of Teaching Materials and Methods on Students' Learning Interests. *Journal of Education and Culture*, 15(1), 23-34.



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