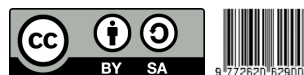


## CRITICAL THINKING ABILITY IN ISLAMIC EDUCATION THROUGH KURIKULUM MERDEKA CHARACTER LEARNING

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### Abstract

The empowerment of disaster preparedness so far has not been able to answer the community's needs and Critical thinking skills in the 21st century is needed in Indonesia. In fact, students still need to improve critical thinking ability, especially in Islamic education learning. Using appropriate methods of learning based on the Kurikulum Merdeka is one way to develop critical thinking abilities. That is by using Problem Based Learning method and Project Based Learning Method in their learning activities. This study aims to know student's critical thinking abilities by learning with Kurikulum Merdeka's character with model learning based on gender. The method used quasi experiment through two-way ANOVA test. This study was conducted at a Junior High School in Majalengka, with a sample size of 63 students from three classes. Class VIII is made up of 21 students who are studying Islamic religious education utilizing the Project Based Learning model. The Problem Based Learning model was used by class VIII B (20 people), and the conventional model was used by class VIII C (22 people). The results show that there is the differences between student's critical thinking ability based on learning model. 1) Problem Based Learning and Project Based Learning learning models affect the critical thinking skills of Majalengka Junior High School students. 2) Gender influences students' critical thinking skills. 3) Interaction between the learning model and gender factors in determining students' critical thinking abilities has no effect.

**Keywords:** *Critical Thinking Ability, Islamic Education, Kurikulum Merdeka.*

## **INTRODUCTION**

The educational system has evolved over time. This evolution is to address various contemporary concerns and the educational curriculum is one of the developments made in education to meet the problems especially of the 21st century (Abdurrahmansyah et al., 2022). The curriculum serves as a framework for implementing the learning process at all levels of education to fulfill the educational aim of improving student quality (Hudson et al., 2023). Previously, the educational system in Indonesia initially implemented the 2013 curriculum but nowadays switched to the Kurikulum Merdeka. The Kurikulum Merdeka continues the previous curriculum development's holistic, competency-based approach, which is customized to the circumstances and needs of students. Moreover, it is focuses on student-centred which aims to develop students' skills (Jufriadi et al., 2022). The skills that students must have in the 21st century are the development of critical thinking, creativity, communication, and collaboration skills (Aulia, 2022). These skills are required of students in every field of study, including Islamic education. This article focuses on students' critical thinking ability in learning Islamic education.

However, making students have critical abilities to learn Islamic education takes time and effort. It is because critical thinking is a skill that is expected of students in both their personal and professional lives (Bezanilla et al., 2019). Because of, teachers must be capable of creating learning experiences that encourage students to think critically (Kwangmuang et al., 2021). In the process of that, teachers or students may experience several obstacles. One of these obstacles occurred at a school in Majalengka. Based on a preliminary study at one of the Junior High Schools in Majalengka on 25 Mei, 2023, the teacher needed help increasing their students' critical thinking ability. The challenge teachers frequently confront in the learning process is students' inactivity in engaging in the learning process in class. Learning appears less appealing since students only accommodate the material the teacher supplies rather than taking an active role and thinking critically during the learning process (Yustina et al., 2020). Otherwise, some students needed help because they were primarily concerned with listening to and memorizing the material provided by the teacher. The teachers also still use conventional models for teaching Islamic education to students. As a result, students' critical abilities are less developed, and they need to be more engaged in studying (Ramdani et al., 2021). In this case, teachers must be professional educators who can adapt learning to their students' characteristics and needs through the appropriate learning model (Alhashmi & Moussa, 2021).

For this reason, there is a need for models and methods from teachers to increase critical thinking ability, especially in learning Islamic education (Rusdiana et al., 2020). The learning model employed should be consistent with the learning characteristics of the Kurikulum Merdeka (Tarjiah et al., 2023). Regarding learning with the characteristics of a Kurikulum Merdeka, these are critical thinking, creative, independent, collaboration or cooperation, communication, diversity, and noble character (Islam et al., 2022). Critical thinking ability is needed in Islamic education because it can enhance understanding of concepts and develop students' problem-solving skills (Razak et al., 2022). In line with this, Abd et al. (2022) argue that the benefits of critical thinking make students able to look at a problem from various perspectives and be able to solve the problem. Based on the problems described and the Kurikulum Merdeka learning character, which emphasizes students' critical thinking skills, the teacher tries to apply model problem-based learning (PBL) and project-based learning (PJBL), apart from traditional learning models.

According to Pramestika et al. (2020), teachers need to use the PBL model to help students improve critical thinking ability. The problem-based learning model is a learning strategy that requires students to work on actual problems to build their knowledge while developing inquiry and higher thinking abilities, independence, and self-confidence (Sutarto et al., 2022). Applying the problem-based learning model can be developed by asking questions the teacher raises so that students can get information and develop about topics, compile a problem framework, collect and analyze, and compile facts and opinions about a problem in problem-solving it (Wang et al., 2021). While, the project-based learning model is an educational model designed to allow students to create a product using the learning materials they have gained (Almazroi, 2023). As a result, implementing project-based learning models is expected to promote creativity and critical thinking in Islamic education learning, and students are supposed to understand the lessons the teacher teaches (Umam & Fauziah, 2022). The PBL and PJBL models have the same goal of developing students' skills, particularly critical thinking, and creativity.

There are several previous studies related to this study. First is research Asfiah (2021) that the implementation of HOTS based assessments in improving students critical and creative thinking skills in Islamic education is effective. Second, Susilowati (2022) research about implementation of the Kurikulum Merdeka in learning Islamic education subjects. Third, study by Hamidah et, al (2023) is to analysis of critical thinking in class XI teaching books of Islamic education. Then, Karlina and Wirdawati (2023) research about PBL model planning in improving students' critical thinking ability in Islamic education subjects. This study is difference from the previous study. This study aims to determine students' critical thinking skills through the Kurikulum Merdeka character lessons.

## METHOD

This research used a quasi-experiment with a quantitative method. This study was conducted at a Junior High School in Majalengka on 25 Mei, 2023, with a sample size of 63 students from three classes of VIII A, B, dan C. In class A, 21 students are studying Islamic education using the PBL method; in class VIII B, 20 students are using the PJBL method; and in class VIII C, 22 students are studying using the traditional method. The data on students' critical thinking abilities regarding gender factors are female and male. The data collection technique are observation and documentation. The data collection technique is by giving students several statements and questions by rubric and also by the active students in the class by analyzing the picture to see their critical thinking abilities. To analyze the data that has been obtained by using a two-way ANOVA test.

**Tabel 3.1 Research Designed**

Measured Ability		Critical Thinking Ability in Islamic Education (CTAIE)		
Learning Model		PBL	PJBL	CON
Gender	Male (M)	CTAIE-PBL-L	CTAIE-PJBL	CTAIE-CON
	Female (F)	CTAIE-PBL-P	CTAIE-PJBL	CTAIE-CON
Total		CTAIE-PBL	CTAIE-PJBL	CTAIE-CON

Data processing is carried out according to the problem. The main stages of data processing for a problem in this study, that is testing the normality and homogeneity of the data distribution then ANOVA two-way.

## **RESULT AND DISCUSSION**

Based on the Test of Normality table, the Residual Standard value for the two methods, namely Kolmogorov-Smirnov, is 0,20 and Shapiro-Wilk is 0,24, both of greater than 0,05. Thus, the Residual Standard values are normally distributed. Then, Levene's Test of Equality of Error Variance table shows that the Sig based on the mean value is 0,28. This value is more significant than 0.05 ( $> 0.05$ ), so it can be concluded that the variance in the value of the student's critical thinking ability variable is homogeneous.

### **1. Students' Critical Thinking Abilities Based on Learning Models**

Based on result from ANOVA two-way, the Sig value is 0,00 and because  $0.000 < 0.05$  then  $H_0$  is rejected or  $H_1$  is accepted, so it can be concluded that there are differences in students' critical thinking abilities based on the learning model (PBL, PJBL, and CON). It because the learning model is an important component of the learning process. By using an interesting and varied learning model, learning will run well. According to Zainuri, (2021) that if the learning process can run well and efficiently, then the learning objectives will also be obtained properly. The learning model can also aim to improve students' critical thinking abilities. While, the lack of varied learning models can make students less motivated in learning and thinking critically (Ganefiyanto, et al. 2022).

It is evidenced by changes in critical thinking abilities in Islamic education lessons using Problem-Based Learning, Project-Based Learning, and Conventional methods. The three learning models are used in learning, but the PBL and PJBL models are more effective in improving students' critical thinking skills (Novita & Hadi, 2019). The two methods stimulate students to solve problems, while the conventional method allows students to listen to the teacher's explanation. To see the response from students in learning conventional and PBL it can be seen from the pictures bellow.



Picture 1. Model Conventional



Picture 2. Model PBL

It can be seen from the two pictures above, that there is a difference in student responses to learning. However, more responsive students learn using the Project Based Learning learning model. Students with developing critical thinking abilities have a thorough comprehension of an issue, analyze the causes, and supply the remedies proposed. The implication is that students are expected to be able to assess and pose problem-solving questions (Sugiharto, 2021).

Meanwhile, for students to think critically, teachers must have creativity in learning, one of which is by using an interesting learning model and providing HOTS-based questions (Pillawaty, et al. 2022). In order for pupils to be able to think critically, they require processes and support. The usage of PBL and PJBL learning models affects students' critical thinking skills, according to the findings of this study. Another way this learning model is successful and may be used to accomplish this goal.

## 2. Students' Critical Thinking Abilities Based on Gender

Based on the result ANOVA two-way, the Sig value is 0.036. Because  $0.036 < 0.05$  then  $H_0$  is rejected or  $H_1$  is accepted so it can be concluded that there are the differences in critical thinking skills in terms of gender (male, female). It shows that gender significantly affects the level of critical thinking

skills. The analysis in this study shows that female students' critical thinking skills are higher than male students based on scoring from rubric (Sugiharto, et al. 2021).

**Table 1. Percentage Critical Thinking Skills of Female and Male Students**

Criteria	Male		Female	
	Total of Students	Percent	Total of Students	Percent
Starting to develop or growing well	37	64%	26	36%

Group of female students showing critical thinking ability is higher than male students. Women's scores are 64% higher than men's scores 36% in terms of analytical critical thinking skills. These findings show that the percentage of female students beginning to develop is more significant than half of the sample size, and they also show that the number of male students who meet the criteria has yet to appear or still needs to be developed (Sugiharto, et al. 2021).

Women were also rated higher than men in ability make a conclusion. According to Athifah (2022), in women, the associated brain areas with the language function work harder, resulting in higher women's language skills than men. Language is a tool used to convey thoughts. Ability the use language with good grammar is an indicator of high-level thinking skills



Picture 3. Male



Picture 4. Female

From the two pictures above, it can be seen the difference between the responses of male and female students. Women's response is more than that of men. Nonetheless, neither the physique nor the skin tone of female or male students indicate gendered critical thinking (Toyibah & Riyani, 2022). Differences in students' critical thinking can be seen from several factors, such as daring to give opinions and how students answer questions, solve problems and think creatively.

In conclusion, female pupils have better critical thinking skills than male classmates. As a result, to provide optimal critical thinking resources to students, it is vital to investigate more extensively how students' critical thinking processes are evaluated in light of gender inequalities.

### 3. Interaction between The Learning Model and Gender Factors in Determining Students' Critical Thinking Abilities

The Sig value is 0.114, because  $0.114 > 0.05$  then  $H_0$  is accepted or  $H_1$  is rejected, so it can be concluded that there is no interaction between the Learning Model and Gender Factors in determining students' critical thinking skills.

The result from ANOVA two-way

### Tests of Between-Subjects Effects

Dependent Variable: Critical\_Thinking\_Ability\_In\_Islamic\_Education

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2008,690 <sup>a</sup>	5	401,738	6,104	,000
Intercept	307849,113	1	307849,113	4677,158	,000
Code_Learning Model	1167,270	2	583,635	8,867	,000
Code_Gender	232,446	1	232,446	3,532	,036
Code_Learning Model * Code_Gender	*610,774	2	305,387	4,640	,114
Error	3751,722	57	65,820		
Total	315862,000	63			
Corrected Total	5760,413	62			

a. R Squared = ,349 (Adjusted R Squared = ,292)

Because there are differences in students' critical thinking abilities based on learning models (PBL, PJBL, CON), a Post Hoc Test is carried out.

### Multiple Comparisons

Dependent Variable: Critical\_Thinking\_Abilities\_In\_Islamic\_Education

Bonferroni

(I)	(J)	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Code_Model_Learning	PJBL	-10,6238*	2,53481	,248	-16,8764	-4,3712
	CON	-3,7511	2,47509	,005	-9,8564	2,3542
PjBL	PBL	10,6238*	2,53481	,000	4,3712	16,8764
	CON	6,8727*	2,50655	,001	,6899	13,0556
CON	PBL	3,7511	2,47509	,405	-2,3542	9,8564
	PJBL	-6,8727*	2,50655	,024	-13,0556	-,6899

Based on observed means.

The error term is Mean Square(Error) = 65,820.

\*. The mean difference is significant at the ,05 level.

#### a. PBL VS PJBL

It can be seen that the probability value is 0.248 because this probability value is greater than 0.05 or  $0.248 > 0.05$ , then  $H_0$  is accepted and  $H_1$  is rejected, so it is concluded that:

There is no difference in the ability to think critically between students who study with the PBL learning model and students who learn with the PJBL learning model.

### b. PBL VS CON

The probability value is 0.005. This probability value is less than 0.05 or then  $H_0$  is rejected, or  $H_1$  is accepted, so it is concluded that:

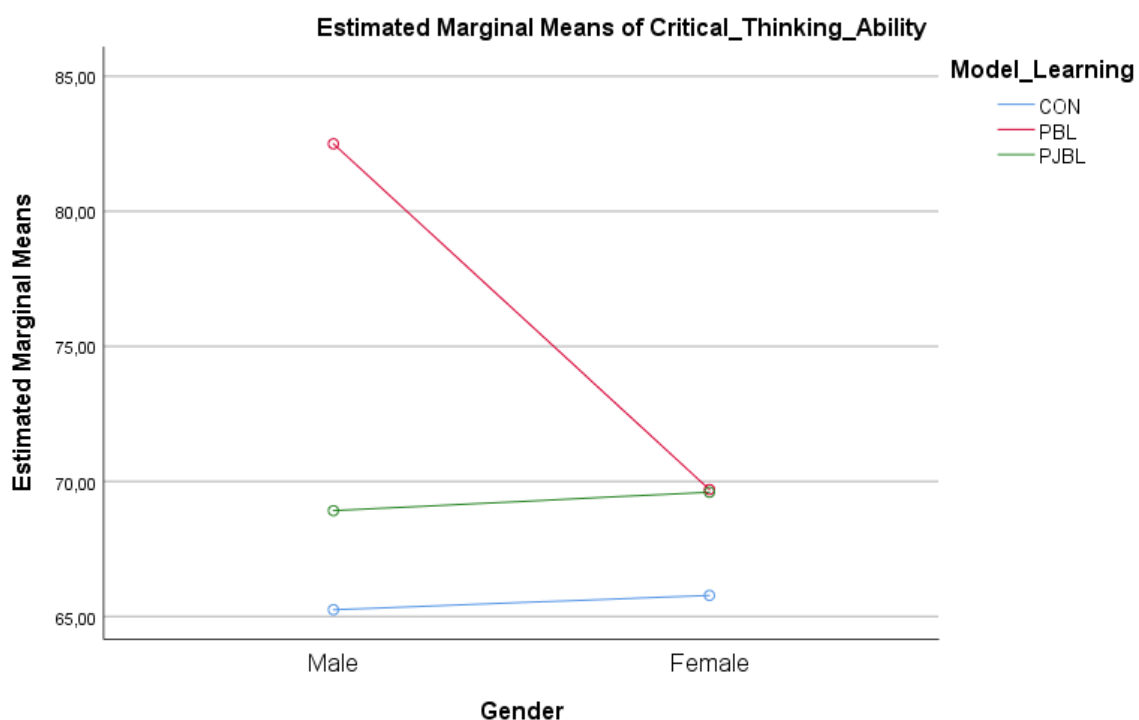
There are differences in the ability to think critically between students who study with the PBL learning model and students who learn with the CON learning model.

### c. PJBL VS CON

It can be seen that the probability value is 0.001. This probability value is less than 0.05 or then  $H_0$  is rejected, or  $H_1$  is accepted, so it is concluded that:

There are differences in the ability to think critically between students who study with the PJBL learning model and students who learn with the CON learning model.

To see the interaction between the learning model and gender factors in determining students' critical thinking ability can be seen in the Profile Plot output:



In the Profile Plot, there is a Learning Model variable and a Gender Factor variable

Information on the Profile Plot:

- The blue line is the CON learning model

- The red line is the PBL learning model
- The green line is the PJBL learning model
- On the lower axis there is a Gender Factor (Male, Female)

#### Interpretation of the Profile Plot

- There are fewer male students in the CON learning model class compared to male students in the PBL and PJBL learning model classes.
- The male students in the PBL model class performed better than the male students in the CON and PJBL model classes.
- The female students in the PBL model class performed better than the male students in the CON class.
- The female students in the PBL model class are the same as the female students in the PJBL class.

## CONCLUSION

Based on the research and discussion results, the conclusions can be described as follows. Islamic education learning uses a model based on the Kurikulum Merdeka to increase students' critical thinking ability, that is Problem Based Learning and Project Based Learning learning models affect of Majalengka Junior High School students. This influence is seen from gender, and female students are more developed in their critical thinking than male students. This can be seen from the results of the score for women, which is 64%, while for men it is only 36%. But there is no interaction between the learning model and gender factors in determining students' critical thinking abilities. As a result, these two learning methods can help students enhance their critical thinking skills.

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