

MOTIVATIONAL AND EMOTIONAL DRIVERS OF CRITICAL THINKING: A STUDY AT DARUSSALAM GONTOR

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Abstract

This study aims to analyze the influence of learning motivation, learning atmosphere, and emotional conditions on students' critical thinking skills at Darussalam Gontor University in the 2024/2025 academic year. The method used is quantitative descriptive with variable measurement through questionnaires to 69 students randomly from various study programs. The questionnaire was designed using a Likert scale of 1-5 with predetermined categories. Respondents are expected to fill out the questionnaire honestly and attentively. The results of data analysis using Ordinal Logistic Regression (RLO) showed that learning motivation and students' emotional conditions have a significant positive effect on students' critical thinking skills. However, the learning atmosphere did not show a significant positive impact on critical thinking skills. This study focuses on the importance of attention to motivation and emotional management of students, in this case, to improve their critical thinking skills. The recommendation that can be proposed is an effort to be more creative in choosing teaching methods so that learning becomes more effective. The hope is that a more conducive and enjoyable learning environment will be formed so that it supports the development of student's critical thinking skills in the future. The results of this study are expected to be useful for the development of learning strategies in the academic environment.

Keywords: Learning Motivation, Learning Atmosphere, Emotional Condition, Critical Thinking Ability.

INTRODUCTION

Education is one of the efforts made by humans to consciously develop themselves (Undang-Undang No. 20 Tahun 2003 Tentang Sistem Pendidikan Nasional Bab VI Pasal 15, n.d.), and this is done to support all forms of life they will eventually lead. As time progresses, the existing knowledge and technology also continue to advance. The development of these two aspects has an impact on various existing aspects, including the field of education itself (Salsabila et al., 2023). Moreover, both the field of education and the development of these two areas are directly proportional to the increasing needs of humans themselves. One of the requirements for someone to meet all their needs is to have critical thinking skills to solve any problems they face; this is done to survive and develop further. This is proven by (Syafitri et al., 2021) in their research, which states that critical thinking skills can have an impact on a person in carrying out daily life more effectively. This means that critical thinking

Research Article

skills play a crucial role in determining a person's quality of life and success, so in this case, the development of critical thinking skills in the field of education needs to be carried out (Kusumawati et al., 2022).

However, unfortunately, the facts on the ground show otherwise. Based on the available data, it is recorded that the critical thinking skills possessed by students in Indonesia are still classified as low. This is evidenced by data stated by the Programme for International Student Assessment (PISA), which shows that based on the results of the trials conducted, students in Indonesia are only able to complete levels 1-2 out of a total of 6 levels of questions. Therefore, the conclusion drawn is that the critical thinking skills possessed by students in Indonesia are still classified as very low. They also state that this situation is largely influenced by the low desire and effort in literacy among students in Indonesia, a statement supported by research conducted by (Soraya et al., 2023) which states that literacy affects students' achievement and learning outcomes. Similarly, (Manubey et al., 2022) and (Mailani et al., 2019) also made similar statements in their research on university students. Thus, the condition of Indonesian students can be said to be ironic, and certainly, this becomes a challenge and obligation for education in Indonesia as well as policymakers to address this issue promptly.

Gontor is one of the largest Islamic educational institutions in Indonesia, with a unique and comprehensive learning model that produces high-quality graduates, including Universitas Darussalam as one of its educational branches. This is evidenced by research conducted by (Yunitasari, 2019) which states that the existence of KMI Gontor has an impact on the world of education. In the study of critical thinking skills, KMI Gontor always strives to encourage its students to have competence in mastering these skills. This can be seen in several studies that indicate the presence of critical thinking skills among the students there, such as (Abyan, 2020) in his research on Media Literacy and Prevention of Hoax Issues or (Imron et al., 2024) in their research on the Imla Istima'i Method. From this, the researcher became interested in making Gontor the object of study.

Still related to this matter and based on existing theoretical studies, learning motivation is one of the factors that can influence critical thinking skills. In this case, motivation plays an important role in driving the desire that is the foundation for achieving the set goals (Rahman, 2022). In line with this, (Azizah et al., 2023) also state the same. The researcher understands motivation as a part of intention, as we know that intention is the foundation and basic factor that influences people to do something. Thus, the researcher understands that having good learning motivation from students can significantly impact their critical thinking abilities, as evidenced by previous research conducted by (Kurniati & Ain, 2023) with H_{13} , which shows that learning motivation can influence students' critical thinking abilities with a significance value of < 0.05 . More clearly, (Dayanti et al., 2024) in their research state that there is a fairly strong relationship between learning motivation and critical thinking ability, as evidenced by a significance value of 0.004. Furthermore, based on several data findings, it is stated that the learning environment also impacts the interest in supporting critical thinking skills (Suriani et al., 2023). A comfortable learning atmosphere certainly yields different results in the outcomes of the learning

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activities conducted. This is proven by the research conducted by (Novitasari & Suneki, 2022) which shows that learning activities that include a good learning atmosphere can influence students' thinking abilities. This can be seen from the result $Y = 5.809 + 0.920X$ with a regression coefficient of X 0.920, leading to the conclusion that each one unit increase in X will enhance critical thinking ability by 0.920. Additionally, (Mahkota et al., 2014) also stated that a good learning environment impacts critical thinking skills with an average N-gain of 0.74. However, in this case, several studies state that emotional intelligence has a greater impact than the other two factors. For example, (Fahrati & Pramukty, 2023) states that the ability to regulate emotions can significantly enhance critical thinking skills. More clearly, (Urbaningkrum, 2023) in his research states that there is an influence and significance on the relationship between emotional intelligence conditions and critical thinking abilities with a significance value of < 0.05 , R Square 47.2%, and a strong relationship level with R 0.687. In addition, his research also states similarly that self-efficacy and emotional intelligence influence critical thinking skills with a percentage of 28.6%. Based on the analysis of several theoretical studies and previous research data above, it can be understood that the role of critical thinking skills is considered very crucial in real life. However, data shows that students in Indonesia still have very minimal critical thinking skills, therefore efforts are needed to address this issue. In this regard, it has been proven through previous research that both learning motivation, learning environment, and emotional intelligence conditions influence critical thinking skills. As for Gontor, specifically Universitas Darussalam Gontor, it has been proven to consistently make efforts so that its graduates can possess adequate critical thinking skills. Therefore, in this study, the researcher is interested in further examining and testing variable x, which includes learning motivation, learning atmosphere, and emotional condition, on variable y, which is critical thinking ability at Universitas Darussalam Gontor.

METHOD

In this study, the researcher used a descriptive quantitative research type aimed at measuring certain variables on other variables through questionnaires. Then, for the sample, the researcher used students with random subjects at Darussalam Gontor in the 2024/2025 academic year, with a total of 69 students being used as subjects. For the selection of the test structure in the questionnaire, the researchers used a statement model with a Likert scale from 1-5, where the categories include 1 meaning strongly agree, 2 meaning agree, 3 meaning neutral, 4 meaning disagree, and 5 meaning strongly disagree. All of that must be filled out honestly, attentively, and sincerely by the respondents. Based on the results of the distributed questionnaire, 69 target respondents among the students were recorded as having completed the questionnaire thoroughly. The responses from that number then became the basis for us to measure and analyze the research variables being studied. In this study, we used data analysis type using Ordinal Logistic Regression (OLR) with the SPSS-26 application. The analysis was classified into measurement model assessment (validity and Wald test of research items) and overall structural model assessment.

Research Article

RESULT

The following are the results of the data analysis in numerical figures and the researcher's description of the previously distributed questionnaire.

1. Example Data

The researcher conducted the data collection process in this study from November 21 to December 9, 2024, using quantitative logistic regression analysis techniques. The results obtained in this study are based on questionnaire data distributed to 69 respondents from students at Darussalam Gontor for the 2024/2025 academic year in the form of a questionnaire using a 15 Likert scale.

2. Respondent Distribution Data

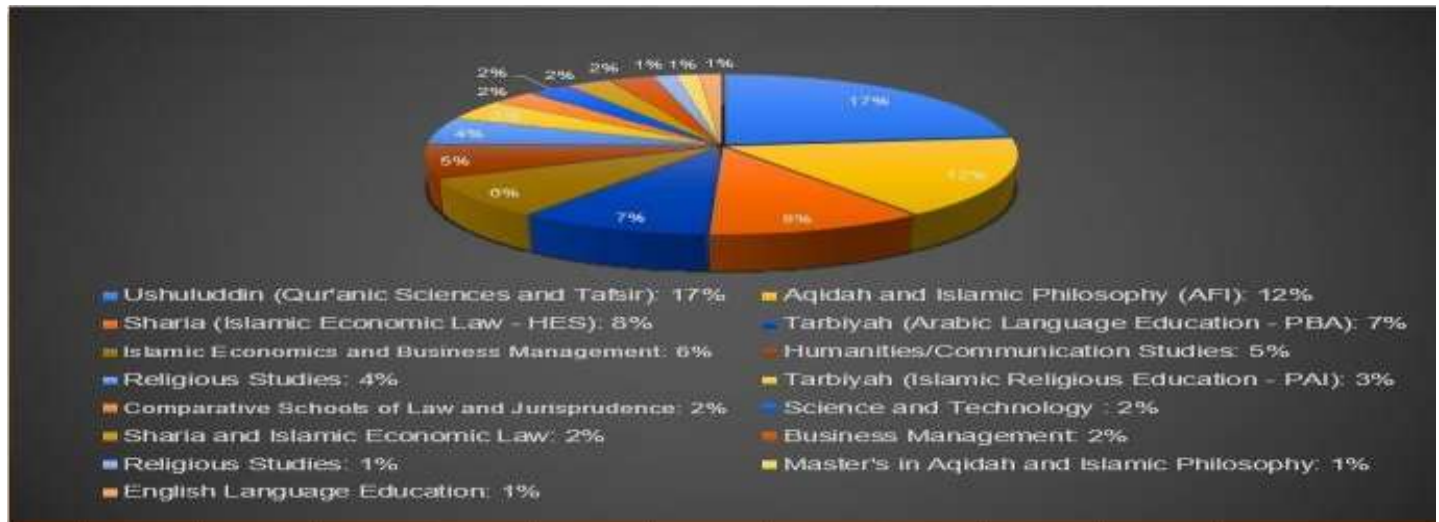


Figure 1 Respondent Distribution

The image above shows the distribution of data from respondents at Darussalam Gontor University, detailed by various study programs as follows: 17 students in Ushuluddin (Qur'an and Tafsir), 12 students in Aqidah and Islamic Philosophy (AFI), 8 students in Sharia (Islamic Economic Law - HES), 7 students in Tarbiyah (Arabic Language Education - PBA), 6 students in Islamic Economics and Business Management, 5 students in Humanities/Communication Science, 4 students in Religious Studies, 3 students in Tarbiyah (Islamic Education - PAI), 2 students in Comparative Religion and Law, 2 students in Science and Technology (Agricultural Industrial Technology), 2 students in Sharia and Islamic Economic Law, 2 students in Business Management, 1 student in Religious Studies, 1 student in English Language Education, and 1 student in Master's in Aqidah and Islamic Philosophy.

3. Valid Respondent Answer Distribution Data

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Table 1: Distribution of Valid Respondents

Case Processing Summary			
		N	Marginal Percentage
y1	1	1	1.4%
	2	1	1.4%
	3	5	7.2%
	4	45	65.2%
	5	17	24.6%
Valid		69	100.0%
Missing		0	
Total		69	

The table above shows that the distribution of answers from 69 respondents is all valid with the following categorization: 1 (Strongly Disagree) by 1 respondent, 2 (Disagree) by 1 respondent, 3 (Neutral/Normal) by 5 respondent, 4 (Agree) by 45 respondents and 5 (Strongly Agree) by 17 respondents. (Sri Harini 2012) Next, a model fit test was conducted using ordinal logistic regression analysis with the obtained data, which can be seen in the model fit and suitability table.

4. Model Feasibility and Fit Table 2 Model Feasibility

Model Fitting Information				
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	100.686			
Final	27.561	73.125	3	.000

Link function: Logit.

From the table above, it can be seen that the Chi-Square value is 73.125 with a significance value of 0.000, which is smaller than 0.05. Therefore, it can be understood that the use of the Ordinal Logistic Regression (OLR) model in this study has been proven to be suitable as a tool for data analysis. This is further supported by the following table.

Table 3: Model Fit

Goodness-of-Fit			
	Chi-Square	df	Sig.
Pearson	46.839	57	.829

Research Article

Deviance	14.504	57	1.000
Link function: Logit.			

Based on the table, it is known that the Chi-Square value decreased from 46.839 to 14.504 with a significance value of 0.829, which is greater than 0.05 ($0.829 > 0.05$). Therefore, it can be understood that the use of the Ordinal Logistic Regression (OLR) model in this study is indeed proven to be suitable for the observational data in the research.

5. Coefficient of Determination Value

To determine the extent of the influence of each variable, it can be seen from the following table.

Table 4: Coefficient of Determination

Pseudo R-Square	
Cox and Snell	.653
Nagelkerke	.772
McFadden	.566
Link function: Logit.	

From the table, it is known that the suitability of the model in the analysis of the coefficient of determination, where the most suitable model to use is Nagelkerke with a value of 0.772. This means that the dependent variables of Learning Motivation, Learning Environment, and Intellectual Condition can influence the independent variable of students' critical thinking ability, with a percentage above 50% falling into the very good category at 77.2%, and the remaining 22.8% being influenced by other variables not used in this study.

6. Wald Test Results Table 5: Wald Test

Parameter Estimates								
		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[Y ₁ = 1]	12.110	11.139	1.182	1	.277	-9.723	33.942
	[Y ₁ = 2]	19.567	4.630	17.858	1	.000	10.492	28.642
	[Y ₁ = 3]	24.558	5.321	21.302	1	.000	14.129	34.987
	[Y ₁ = 4]	32.301	6.465	24.965	1	.000	19.630	44.971
Location	X ₁	2.468	.877	7.916	1	.005	.749	4.187
	X ₂	.321	.581	.305	1	.581	-.818	1.460
	X ₃	3.917	.948	17.070	1	.000	2.059	5.776

Link function: Logit.

The basis of the results of this research analysis is that the obtained Wald Test value provides information indicating a significant influence between the Learning Environment and Emotional Condition on the Critical Thinking Ability of Students at Darussalam Gontor. The obtained values can be seen in the table (Wald Test) below in the significance column. The results of the Wald Test can be seen in the table below. Table (Wald Test). It is a Parameter Estimation Test that statistically constitutes the core part of the results of a research study that has been conducted. The results of the Wald Test are formulated with the results of the logistic regression function, which can be mathematically expressed as follows (Hosmer et al., 2000).

$$\text{Logit (Y2)} = 19.567 + 2.468X1 + 0.321X2 + 3.917X3$$

$$\text{Logit (Y3)} = 24.558 + 2.468X1 + 0.321X2 + 3.917X3$$

$$\text{Logit (Y4)} = 32.301 + 2.468X1 + 0.321X2 + 3.917X3$$

The interpretation of the Wald test results shows significant values for 2 variables suspected to have an effect, namely Learning Motivation at 0.005 and Emotional Condition at 0.000, which are both smaller than the error level of 0.05. This indicates evidence that the factors of Learning Motivation and Emotional Condition of Students at Darussalam Gontor significantly affect Critical Thinking Ability. Meanwhile, the Learning Environment among Students at Darussalam Gontor has a significant influence of 0.581, which is greater than the error level of 0.05. Therefore, this indicates evidence that the factor of Learning Environment among Students at Darussalam Gontor does not significantly affect Critical Thinking Ability.

DISCUSSION

The results of the analysis and hypotheses conducted are as follows: H_1 Learning Motivation significantly affects the Critical Thinking of Students at Darussalam Gontor, thus H_1 is accepted. Meanwhile, the H_2 Group Learning Atmosphere does not significantly affect the Critical Thinking of Students at Darussalam Gontor, in other words, H_2 is not accepted. Furthermore, H_3 Emotional Condition is proven to significantly affect the Critical Thinking of Students at Darussalam Gontor, thus H_3 is well accepted.

The analysis results show that the value of $F_{\text{fitting AB}}$ is 11.71, while the F_{tabel} value is 4.20. Since hitting B (11.71) is greater than F_{tabel} (4.20), then H_0 . Thus, there is a significant interaction between the factors and the factors (learning motivation) on students' critical thinking skills (Nurlaela, 2017). The motivation to learn that a person possesses during the learning process can have a positive impact on the development of their abilities. Therefore, a teacher needs to be able to encourage students' motivation to learn so that the learning process can proceed optimally. This is in line with (Nurlaela, 2017) opinion that based on the results of the test on the influence of learning motivation on mathematical critical thinking ability in the Algebra Structure II course, as shown in Table 1, a significance value of 0.047 was obtained, which is less than 0.05 (Sani, 2015). This indicates that H_0 is accepted, so it can be concluded that there is a significant influence between learning motivation and students'

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mathematical critical thinking ability in the Algebra Structure II course. The influence of emotional intelligence on mathematical critical thinking ability was tested using a hypothesis with the criteria: H_0 is accepted if the t -count value $\leq t$ -table and H_0 is rejected if the t -count $> t$ -table.

Based on the distribution table with a significance level of $\alpha = 0.05$ and 151 degrees of freedom, a t -table value of 1.98 was obtained. The calculation results show a t -count value of 3.88. Because t -count (3.88) $> t$ -table (1.98), H_0 is rejected and H_1 is accepted. This indicates that emotional intelligence (X1) has a significant influence on mathematics learning achievement. (Y). the contribution of emotional intelligence to mathematical critical thinking ability is 15.6% (Sulistianingsih, 2016). The theory of emotional intelligence is also supported by research conducted by (Adriyati, M., & Fatwa, 2015), which found a significant influence between emotional intelligence and students' mathematical critical thinking skills. The values obtained from the RLO analysis in this study also indicate that the factors significantly affecting Students' Critical Thinking at Darussalam Gontor are Learning Motivation and Emotional Condition.

Statistically, the results of the Wald Test serve to determine the influence of each variable in the research. Learning Motivation affects the Critical Thinking Ability of Students at Darussalam Gontor with an odds ratio value. The odds ratio value obtained (X1) $\Psi = e^{2.468} = 11.77$, where the chance of students with Learning Motivation is 11.77 times higher in thinking critically correctly compared to students who do not have good Learning Motivation. For the odds ratio value of Emotional Condition (X3) = 50.24. This means the level of Critical Thinking increases 50.24 times compared to students who cannot manage their Emotional Condition well. This result is consistent with the statement that (X3) $\Psi = e^{3.917} = 50.24$. Our ability to think critically is influenced by many factors, one of which is the emotions we feel. When we are feeling happy, sad, angry, or any other emotion, it can affect the way we think and make decisions (Sulistianingsih, 2016).

It is important to further discuss why the Learning Environment factor does not influence the Critical Thinking of Students at Darussalam Gontor. Survey results show that all students are very enthusiastic about the learning method that combines problemsolving and mind mapping. (Mind mapping). They feel that this method makes learning more enjoyable because they can actively engage, exchange ideas, explore creative concepts, and conduct direct observations.

In other words, the learning atmosphere becomes more lively and engaging, making it easier for them to understand the concept of ecosystems. These findings are in line with (Naim, 2009) research, which states that learning with mind mapping creates a more effective learning atmosphere because it directly involves students and makes them more interested and motivated. Data analysis using the t -test shows a significant difference in students' critical thinking skills between the experimental class and the control class. This difference indicates that the more effective learning environment created in the experimental class has successfully improved students' critical thinking skills (Tia Ristiasari, Bambang Priyono, 2012). Test results show that students who learn in a

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more dynamic and stimulating learning environment, such as in the experimental class, have better critical thinking skills compared to students in the control class (Ayuningrum, 2015).

Steps that can be taken to improve the learning atmosphere of students at Darussalam Gontor University Based on research and analysis, it can be concluded that the application of eight basic teaching skills by educators, namely: 1) questioning skills; 2) providing reinforcement; 3) creating variation in methods; 4) explaining material clearly; 5) opening and closing lessons effectively; 6) facilitating small group discussions; 7) managing the classroom well; and 8) teaching in small groups and individually, can create a pleasant learning atmosphere. Thus, the learning process can proceed smoothly and enjoyably. (Jaya, 2017).

CONCLUSION

Based on the results of the research data analysis, it can be concluded that learning motivation and emotional condition have a significant influence on the critical thinking ability of students at Universitas Darussalam Gontor, with significance values of 0.005 and 0.000 respectively. This indicates that students who have high learning motivation and are able to manage their emotional conditions will tend to have better critical thinking abilities. Conversely, the learning atmosphere does not show a significant influence on critical thinking ability, with a significance value of 0.581, indicating that other factors are more dominant in influencing this ability. In the analysis, a high significance value of 77.2% was obtained, thus it is recommended for teachers or lecturers to implement the eight basic teaching skills to create a pleasant, creative, and effective learning atmosphere. The management of emotions in the current generation is an important factor for their mental health, enabling them to think critically and generate many brilliant ideas.

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Research Article

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