

Collaborative Learning and Mini Research Assignments on The History of Islamic Educational Thought: The Impact of Students' Critical Thinking Ability

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Abstract

This study aims to determine the effect of collaborative learning models and mini research assignments on the critical thinking skills of Postgraduate Students of the Islamic Education Study Program (PAI) of the State Institute of Islamic Studies (IAIN) Curup. The research design used in this study was non-experimental. The sampling technique used was total sampling by taking the entire population as research respondents. The sample in this study was the first-semester Postgraduate students in Class A and B of IAIN Curup. They have taken the History of Islamic Educational Thinking Course in the Academic Year of 2021-2022. Based on the statistical analysis to determine the relationship between collaborative learning and critical thinking skills, the $t_{observed}$ (9.110) was more significant than the $t_{critical}$ (2,056). Furthermore, the obtained $t_{observed}$ (26,674) was more significant than the $t_{critical}$ (2,056) to determine the relationship between mini research assignments and critical thinking skills. The analysis also shows that $F_{observed}$ (571.6) was more significant than $F_{critical}$ (3.34). Therefore can be concluded, there was an effect of collaborative learning, partially and simultaneously, on the critical thinking skills of IAIN Curup Postgraduate Students.

Keywords: Collaborative learning, mini research assignments, and critical thinking skills.

Abstrak

Penelitian ini bertujuan untuk mengetahui pengaruh model pembelajaran kolaboratif dan penugasan mini riset terhadap kemampuan berpikir kritis Mahasiswa Pascasarjana Program Studi Pendidikan Agama Islam (PAI) Institut Agama Islam Negeri (IAIN) Curup. Desain penelitian yang digunakan dalam penelitian ini adalah *Non-Eksperiman Design*. Teknik pengambilan sampel yang digunakan adalah *total sampling* yaitu teknik penentuan sampel dengan mengambil seluruh populasi menjadi responden penelitian. Dimana sampel dalam penelitian ini yaitu mahasiswa Pascasarjana IAIN Curup kelas A dan B Semester 1 yang mengambil matakuliah Sejarah Pemikiran Pendidikan Islam Tahun Akademik 2021-2022. Berdasarkan analisis statistik hasil penelitian untuk mengetahui hubungan antara pembelajaran kolaboratif dan kemampuan berpikir kritis menunjukkan t hitung sebesar 9,110 lebih besar dari t tabel sebesar 2,056, selanjutnya untuk mengetahui hubungan antara penugasan mini riset dan kemampuan berpikir kritis menunjukkan t hitung sebesar 26,674 lebih besar dari t tabel sebesar 2,056, hasil analisis juga menunjukkan F hitung sebesar 571,6 lebih besar dari F tabel 3,34. Sehingga dapat disimpulkan bahwa terdapat pengaruh pembelajaran kolaboratif baik secara parsial maupun serentak terhadap kemampuan berpikir kritis Mahasiswa Pascasarjana IAIN Curup.

Kata kunci: Pembelajaran kolaboratif, penugasan mini riset, kemampuan berpikir kritis

INTRODUCTION

Openness and globalization have transformed human life fundamentally in the 21st century, compared to how it was in the previous century (Komara, 2018). Education in the twenty-first century focuses on developing students' life skills, including critical thinking, which they will need in the future to meet the challenges of their times and deal with the problems of their everyday lives (Amrullah, 2022). It indicates that education is more than simply a process of transforming knowledge; it is also a means of developing students' critical powers on propositions (true-untrue) that have grown into judgment (something believed) that eventually becomes a judgment.

Because various techniques in science need students to answer problems, critical thinking was initially formed only during the learning process (laws, theories, facts and data) (Siti Zubaidah, 2010). Critical thinking allows students to cut calculations into straightforward ones by simplifying formulas so that they find answers in the form of numbers (Nuryanti et al., 2018). But in its development, it turns out that critical thinking can not only be done in science learning. Critical thinking is not only in simplifying formulas, making it easier to reach answers from mathematical theories alone. It has also developed social theories, including having penetrated religious theories and issues.

In Islamic education, for example, theories that have become propositions believed to be right or wrong have become the basis for criticism (Amrullah, 2022). Critical thinking cannot always alter, lower, or even eliminate the previously held order of truth. However, critical thinking may identify arguments that enhance the proposition.

For instance, consider the history of Islamic education. One of the widely held beliefs is that Islamic education was originally taught by the Prophet Muhammad by imparting monotheism (theology) education for 13 years during the Mecca period. This claim is accepted as valid. However, it is vital to question if the Prophet Muhammad merely preached monotheism in the Mecca period, ignoring the issues of sharia (the practice of worship) and morals (character).

Applying critical thinking to the abovementioned concerns is not intended to demolish the existing belief system. However, a critical thinking process is required to find new solutions, which are later expected to become a proposition that increases beliefs.

Suppose critical thinking in science learning is required for students after they leave school. In that case, it is because what they discovered in the classroom (the results of critical thinking) can be used as an analytical tool in situations encountered in everyday life (Nugraha et al., 2017). However, critical thinking may not be immediately tied to the analysis of problems in daily life when pursuing Islamic Religious Education. On the other hand, critical thinking becomes a tool for deepening religious belief, as the purpose of Islamic education is to make students successful both in this world and in the hereafter.

However, despite the immense potential expected from learning that develops abilities in the form of critical thinking, several issues continue to loom over the process of completing critical thinking. For example, the formation of critical thinking processes, essential constraints of thinking, and questioning a religion's transcendent values. Furthermore, the problem is that the Indonesian education system has not yet developed learning models based on critical thinking because the Indonesian education system focuses solely on the transformation of knowledge to students in fulfilling cognitive, affective, and psychomotor values rather than on skills assessment. Even if it exists, critical thinking is still a tiny part of the three domains (cognitive, affective and psychomotor).

The following issue is that without critical thinking abilities, existing knowledge in learning materials is static (still without change). The point is that scientific transformation is simply that, with no significant advancement, that results in new science, theorems, or laws. While the development of science in other parts of the region has been so advanced, as has the effect of students' critical thinking patterns, the acceleration of scientific growth continues.

Critical thinking in Islamic education can produce new theorems in the growth of Islamic education itself, besides developing information linked to Islam.

It is not tricky for Islamic education, which has been based on the concept of non-Islamic education, to advance through the advancement of educational sciences.

In its most basic form, critical thinking is the process of judging (deciding) a problem so that it can be interpreted, analyzed, evaluated, and inferred, as well as the presentation of evidence, concepts, methodologies, criteria, or contextual considerations that form the basis for the emergence of a decision (Facione, 2010). Giving actual difficulties will increase curiosity, the want to watch, and the urge to participate in a situation. The interest in a problem will motivate students to learn and comprehend the concept to arrive at the correct solution (Syafei, 2019).

In Islamic education, critical thinking is often referred to as rational thinking. It is even applied in the context of learning the teachings of *aqidah* because, basically, *aqidah* in Islam is included in the understanding of *aqidah aqliyah* (rational), not forced doctrine (*taqlid*). In practice, *aqidah* can be something that is believed to be true or justified with full confidence because it is produced through a thought process. Therefore, it is important in Islamic education to instil faith or belief utilizing rationality (*aqliyah*). For *aqidah* to be embedded in the human soul, there must be harmony between thinking activities (science), faith, and behaviour (Maryatin et al., 2020).

Seeing the complexity of the concept of critical thinking from the above definition, critical thinking skills cannot stand alone and immediately appears in learning. So it is necessary to have a comparative learning model linked to the fulfilment of critical thinking skills in learning to see the relationship between the learning model and the growth of critical thinking. Several learning models that can be used as a comparative tool to see their influence on the growth of critical thinking skills are collaborative learning models and mini research learning.

Collaborative learning is a learning model that implies students work together in small groups to strengthen understanding and achieve learning objectives (Fitriasari et al., 2020). Collaborative learning is also known as constructivist learning, which refers to a learning philosophy that stresses that learning is more than merely memorizing information but rather constructing or

building new knowledge and abilities from facts encountered by students in their daily life (Khoiriyah, 2016). The ability to analyze as a team and interact during the learning process can be improved. Furthermore, in collaborative learning, students can collaborate to tackle tasks and devise effective problem-solving solutions (Santrock, 2007) and ultimately hone their thinking power.

Meanwhile, learning which also includes constructivist learning, is mini research learning. Mini research learning is a learning model that makes problems the first step in gathering and processing. Through the mini research learning model, students are facilitated to design their projects to be carried out. They will be competent in exploring, assessing, interpreting, synthesising, and providing information (Kemendikbud, 2013). Judging from its application, mini research learning requires the concept of critical thinking to develop the acquired knowledge into something new knowledge.

The two learning concepts are implemented in the learning process by the Postgraduate program of IAIN Curup in the History of Islamic Educational Thought course. The collaborative learning technique addresses numerous challenges in Islamic education from a historical viewpoint, which is done in groups. Meanwhile, the mini research learning model is being implemented as a research project to analyze and create (develop) past Islamic education thinking concerning today's Islamic education.

Implementing these two learning models in the History of Islamic Educational Thought course enables postgraduate students to conduct in-depth analysis with their groups to obtain problem-solving strategies if they encounter problems in lecture material and design quality Islamic education research projects. These competencies, however, cannot be fulfilled without the ability to think critically and conduct an in-depth investigation. Based on this context, this study aimed to investigate the impact of collaborative learning and mini-research learning on the critical thinking skills of IAIN Curup postgraduate students.

METHOD

This study used a non-experimental quantitative approach to describe the problem, explore, or describe the relationship between variables (Brink, 2009). The research design used was correlational, which aimed to detect how far between variables in a factor are related to variations in one or more other factors based on the correlation coefficient (Sumadi Suryabrata, 2010). The population in this study were all postgraduate students of the Islamic Education Study Program at IAIN Curup in the first semester of the academic year of 2021-2022. The population consisted of 2 classes and had taken the History of Islamic Education Thought course. The sample in this study used a total sampling technique (saturated sample), meaning that the entire population in this study became the sample.

Data Collecting Technique

The data collecting technique in this study was non-test, not giving questions or assignments to the subject (Agus Zainul Fitri dan Nik Haryati, 2020). The data obtained from the research subjects were collected through a questionnaire. A questionnaire is a set of questions or a written statement to the respondent to be answered later (Sugiyono, 2006). The questionnaire collected data on three variables: collaborative learning, mini research, and critical thinking. The statements for each variable consisted of ten questions that have been tested for validation and reliability. The validity test was used to measure whether the questionnaire was valid. The questionnaire can be said valid or appropriate if it can reveal something that will be measured.

The significance test was carried out by comparing the value of r_{observed} and r_{critical} . In this study, the number of samples (n) was 29, and the alpha was 0.05. The obtained r_{critical} was 0.367. If r_{observed} is greater than r_{critical} , the question or indicator is declared valid. The results of validity testing using the SPSS program are presented in the following table:

Table 1.
Validity Test Results

No	Collaborative Learning			Mini Research Assignment			Critical Thinking Ability		
	$r_{critical}$	$r_{observe}$	Criteria	$r_{critical}$	$r_{observe}$	Criteria	$r_{critical}$	$r_{observe}$	Criteria
		d			d			d	
1.	0.367	0.623	Valid	0.367	0.884	Valid	0.367	0.507	Valid
2.	0.367	0.939	Valid	0.367	0.680	Valid	0.367	0.831	Valid
3.	0.367	0.678	Valid	0.367	0.884	Valid	0.367	0.581	Valid
4.	0.367	0.678	Valid	0.367	0.884	Valid	0.367	0.831	Valid
5.	0.367	0.939	Valid	0.367	0.884	Valid	0.367	0.831	Valid
6.	0.367	0.939	Valid	0.367	0.658	Valid	0.367	0.476	Valid
7.	0.367	0.939	Valid	0.367	0.680	Valid	0.367	0.567	Valid
8.	0.367	0.623	Valid	0.367	0.884	Valid	0.367	0.831	Valid
9.	0.367	0.930	Valid	0.367	0.658	Valid	0.367	0.651	Valid
10.	0.367	0.930	Valid	0.367	0.658	Valid	0.367	0.651	Valid

After the validity test, the researchers performed a reliability test to determine the extent to which a measurement result is relatively consistent if the instrument is used repeatedly. The test used was the Cronbach Alpha formula. A variable is said to be reliable if the Cronbach alpha value is greater than 0.70. After testing using the SPSS 25 program, the results are presented in the following table:

Table 2.
Reliability Test Results

Variable	Cronbach's Alpha	Criteria
Collaborative Learning	0.951	Reliable
Mini Research Assignment	0.929	Reliable
Critical Thinking Ability	0.870	Reliable

Data Analysis Technique

The data analysis technique used was a correlation test to determine the level of closeness of the relationship between the variables X1 (collaborative learning) and Y (critical thinking skills) and X2 (mini research assignments) and Y (critical thinking skills). Multiple correlation test was performed to determine the level of closeness of the relationship between X1 and X2 together with Y. the researchers analyzed the data using the SPSS version 25.

RESEARCH RESULTS AND DISCUSSION

Critical thinking ability is a crucial aspect of the learning objectives. Postgraduate students must think critically, analytically, and systematically to tackle complicated problems. Critical thinking is also regarded as an intellectual skill that must be mastered. It functions to analyze various information and knowledge obtained so that it can later be integrated in answering life's needs, particularly in exploring the logical structure of a text that improves understanding. Thus, the collection of knowledge becomes a problem solver for students. Because critical thinking abilities are essential for students, creating a stimulus to encourage critical thinking skills is crucial. As a result, the purpose of this study is to determine whether collaborative learning is influenced in the classroom and mini research tasks completed separately and collaboratively.

This study was undertaken during the History of Islamic Education Thought course. One of the learning models employed was collaborative learning. Collaborative learning is viewed as a constructivist learning model that can enhance thinking and communicative skills while solving learning difficulties. The procedures used in the collaborative learning are as follows: (1) communicating students' successes and learning objectives; (2) dividing the students into several groups at the start of the meeting; (3) effective lecturers explaining the concept of learning, assignments, and technical lectures; (4) students collaborate on group division to discuss, identify, and analyze to find answers to existing problems; (5) the group writes a report on the results of the discussion; (6) the groups hold presentations and discussions; (7) effective lecturers provide direction and clarification if necessary.

Assignments in mini research are another constructivist learning idea used in this study. Research micro learning is a learning approach that uses challenges as the starting point for obtaining and processing knowledge. Thus, through micro research learning, students can develop their type of project to carry out, allowing them to explore, appraise, interpret, synthesize, and offer knowledge.

(Kemendikbud, 2013) Students' project in the course of the history of Islamic education philosophy is to research teaching content.

The achievement of critical thinking abilities for IAIN Curup Postgraduate students will result from adopting the collaborative learning model and mini research assignment. Comprehensive and systematic information is gathered through collaborative learning, which is then implemented in a mini research assignment. Critical thinking abilities are required to answer the research problems.

Pearson Correlation Test

The questionnaire distributed to students was used to see the level of closeness of the relationship between collaborative learning (X1) and critical thinking ability (Y). The results of the Pearson correlation test analysis using SPSS are as follows:

Table 3.
The Results of Pearson Correlation Test between Collaborative Learning and Critical Thinking Ability
Correlations

		Collaborative Learning	Critical Thinking Ability
Collaborative Learning	Pearson Correlation	1	.608**
	Sig. (2-tailed)		.000
	N	29	29
Critical Thinking Ability	Pearson Correlation	.608**	1
	Sig. (2-tailed)	.000	
	N	29	29

** . Correlation is significant at the 0.01 level (2-tailed).

Referring to the basis of decision making in Pearson's product-moment correlation test, if the significance value of sig. (2-tailed) is lower than 0.05, then there is a correlation between the variables. On the other hand, if sig. (2-tailed) is higher than 0.05, then there is no correlation. From the Pearson correlation test results, the significance value of the relationship between collaborative learning and critical thinking skills is 0.000. This shows that 0.000 is lower than 0.05. Therefore,

there is a correlation between collaborative learning on critical thinking skills of Postgraduate students of the PAI Study Program at IAIN Curup.

Furthermore, the relationship between collaborative learning and students' thinking skills can be seen. To determine the degree of relationship in the Pearson correlation test, it is necessary to pay attention to the degree of relationship.

Table 4.
Degree of Pearson Correlation

Pearson Correlation Value	Information
0.00 – 0.20	No correlation
0.21 – 0.40	Weak correlation
0.41 – 0.60	Medium correlation
0.61 – 0.80	Strong correlation
0.81 – 1.00	Perfect correlation

From the results of the calculation, the value obtained was 0.608. It means there was a strong correlation between the collaborative learning process and critical thinking skills.

Furthermore, the Pearson correlation test was carried out to test the level of closeness of the relationship between mini research assignments (X2) and critical thinking skills (Y). The results of the Pearson correlation test analysis using SPSS are as follows:

Table 5.
The Results of Pearson Correlation Test between the Mini Research Assignments and Critical Thinking Ability

		Correlations	
		Research Mini Assignment	Critical Thinking Ability
Research Assignment	MiniPearson Correlation	1	.952**
	Sig. (2-tailed)		.000
	N	29	29
Thinking Ability Critical	Pearson Correlation	.952**	1
	Sig. (2-tailed)	.000	
	N	29	29

** . Correlation is significant at the 0.01 level (2-tailed).

From the Pearson correlation test results, the significance value of the relationship between mini research assignments and critical thinking skills was 0.000. Therefore, there was a correlation between the mini research assignments and the critical thinking skills of the Postgraduate program students at IAIN Curup.

The Pearson correlation test obtained a value of 0.952. Based on table 5 regarding the degree of relationship, 0.952 equals 0.95. It means that there was a perfect correlation between the collaborative learning process and the critical thinking skills of the Postgraduate program students at IAIN Curup.

Multiple Correlation Test

Multiple correlation tests determined the level of closeness of the relationship between the two independent variables (X) and the dependent variable (Y). In this study, the two independent variables are collaborative learning (X1) and mini research assignments (X2) and critical thinking skills (Y).

From the results of multiple correlation statistical tests using SPSS 25, the following results were obtained:

Table 6.
Model Summary Calculation of Multiple Correlation Test
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. Change	F
						F Change	df1	df2		
1	.989a	.978	.976	.44874	.978	571,633	2	26	.000	

a. Predictors: (Constant), Research Mini Assignments, Collaborative Learning

Based on the decision-making in the multiple correlation test, if the significance value of sig. is lower than 0.05, there is a correlation between the variables. On the other hand, if sig. value is higher than 0.05. Then there is no correlation. From the results of the multiple correlation test, the obtained the value was 0.000. Since 0.000 is lower than 0.05, there is a correlation between collaborative learning (X1) and mini research assignments (X2) together (simultaneously) on the critical thinking skills.

The measurement results show that the level of closeness of the relationship between the variables X1 and X2 together with Y based on Table 5 is 0.99. The value indicates a perfect relationship between X1 and X2 together (simultaneously) with Y.

The value of R^2 (R Square) or the coefficient of termination is used to determine the percentage of the contribution of the independent variables toward the dependent variable. From the results of the above calculation, the R^2 value is 0.976. So the contribution of the independent variables is 97.6 or 98%, while the rest is influenced by other factors not examined.

Simultaneous Test (Anova)

In this study, a simultaneous test or F-test was performed to determine how all independent variables influence the dependent variable simultaneously. If the results of the significance measurement are less than 0.05, then there is a joint influence between the independent and dependent variables. On the other hand, if the result of the significance measurement is more than 0.05, then there is no joint effect. The results of calculations using SPSS 25 can be seen in Table 7.

Table 7.
The Result of the Simultaneous Test
ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	230,213	2	115.106	571,633	.000b
	Residual	5.235	26	.201		
	Total	235,448	28			

a. Dependent Variable: Critical Thinking Ability

b. Predictors: (Constant), Research Mini Assignments, Collaborative Learning

From the results of the simultaneous test calculation (Anova) in table 7, the obtained F_{observed} (571.6) was higher than F_{critical} (3.34), with a significance of 0.000. Thus, the collaborative learning and mini research assignments significantly influence the critical thinking skills of postgraduate students of the PAI Study Program at IAIN Curup.

Partial test (Coefficient)

The partial test in this research was used to determine the influence of each independent variable partially (independently) on the dependent variable. If the results of the measurement significance are less than 0.05, then there is a partial effect between the independent and dependent variables. On the other hand, if the result of the significance measurement is more than 0.05, then there is no joint effect. From the results of calculations using SPSS 25, the following data were obtained:

Table 8.
The Result of the Partial Test
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	.506	1.084		.467	.644
Collaborative Learning	.225	.025	.288	9.110	.000
Mini Research Assignment	.758	.028	.843	26,674	.000

a. Dependent Variable: Critical Thinking Ability

From the results of the calculation of the partial test (coefficient) in table 7, the t_{observed} (9.110) was higher than t_{critical} (2.056), with a significance of 0.05. This result indicated that there is an effect of collaborative learning on the critical thinking ability of Postgraduate students of the PAI Study Program at IAIN Curup. The second hypothesis can be seen that t_{observed} (26,674) was higher than t_{critical} (2,056), with a significance of 0.05. This result indicated that mini research assignments influence the critical thinking skills of Postgraduate students of the PAI Study Program at IAIN Curup.

The hypothesis testing results show a partial effect between collaborative learning and mini-research assignments on the critical thinking skills of Postgraduate students of the PAI Study Program at IAIN Curup. Meanwhile, simultaneously, there is an effect between collaborative learning and mini research

assignments and the critical thinking skills of Postgraduate students of the PAI Study Program at IAIN Curup.

CONCLUSIONS AND SUGGESTIONS

The collaborative learning model shows a substantial correlation with the critical thinking skills of postgraduate students. This is consistent with the premise that critical thinking skills can be developed through a collaborative learning strategy that gives a shared learning experience in problem-solving during the learning process.

Similarly, the mini research assignment was found to have a large and high correlation with postgraduate students' critical thinking abilities. The mini research assignment can theoretically develop the ability to use research to solve learning challenges. Critical thinking abilities are required for delving deeper into the search for answers to research challenges.

The results of this study also show a correlation between collaborative learning and mini research assignments, which together have a perfect level of closeness to the critical thinking skills of Postgraduate students of the IAIN Curup. It can be understood that if the collaborative learning model is carried out in conjunction with mini research assignments, students will produce critical thinking ability.

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