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STUDENTS' CRITICAL THINKING IN ISLAMIC RELIGIOUS EDUCATION SUBJECTS THROUGH THE DISCOVERY LEARNING METHOD

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Abstract

This research aims to determine the critical thinking abilities of students in Islamic Religious Education subjects who study using discovery learning methods and direct learning methods. This research uses a quantitative research approach with a quasi-experimental research design using a non-equivalent control group design model. The research was conducted at one of the Madrasah Aliyah in Bandung District with a sample of 2 class XI classes. The data collection technique used was a critical thinking ability test in the form of an essay with 4 questions. The data analysis technique used is the difference test analysis technique. The results of the research show that the critical thinking abilities of students who learn using the discovery learning method are higher on average than students who learn using the direct learning method.

Keywords: Critical Thinking, Discovery Learning, Islamic Religious Education

INTRODUCTION

In the 21st century and of course in the Industrial Revolution Era 4.0, students really need High Order Thinking Skills (HOTS). One of the HOTS abilities is critical thinking. Critical thinking is thinking conceptually, critical thinking is being able to see beyond the scope of what is visible, being able to differentiate between what is not important and what is important, critical thinking is not merely knowing what is visible or actual (Saifer, 2018). Critical thinking is thinking using reasoning, reflective thinking, being responsible, and being an expert in thinking (Rochaminah, 2008). Critical thinking is a thinking process with the aim of making accountable decisions regarding what to believe and what to do (Ennis, 1996).

Based on this definition, it can be said that critical thinking is a mental activity carried out using the steps in the scientific method, namely: understanding and formulating problems, collecting, and analyzing necessary and reliable information, formulating presumptions and hypotheses, testing hypotheses logically, drawing conclusions. carefully, evaluating and deciding what to believe or what to do, as well as predicting the consequences that might occur.

Critical thinking is currently said to be important because apart from being a recommendation from the Ministry of Education and Culture which states that one of the abilities that students must have in the 21st century is Critical Thinking, this critical

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thinking ability is also important because currently the world is in the knowledge age, which is open to open access to new knowledge and knowledge. where access to new knowledge and knowledge is very wide open. The impact of this era of knowledge has resulted in an increasingly complex order of life, society and economic conditions that require critical thinking skills.

The importance of critical thinking does not necessarily make critical thinking something that is easy for students to have. In the field, the development of students' critical thinking skills in the practice of implementing learning is still not optimal, this shows that critical thinking skills must be a concern. The low critical thinking abilities of students can also be seen from the results of the 2019 Program for International Student Assessment (PISA), Indonesia's ranking has decreased, with detailed scores ranking almost in the bottom 10 for mathematics, science and reading abilities.

If critical thinking skills are low when connected to a religious context, students will have difficulty being rational, getting information correctly, assessing and processing that information to become a credible source for each decision they choose, making it very easy to be eroded by wrong understandings (Bahri & Supahar, 2019). So, if students do not have critical thinking skills, they will have difficulty facing the real world.

Many factors cause students not to be accustomed to thinking critically, one of which is because the learning methods used tend to be less innovative. As is the case in Islamic Religious Education Lessons, the lecture method is a method that is quite widely used by teachers (Priatna, 2018) even though the learning method used should be one that can foster interest and motivation in learning (Cipta & Ida, 2019), so that the learning objectives can be achieved.

One method that is thought to be able to improve students' critical thinking skills is discovery learning. This is based on research conducted by Ilmiah (2016) that the discovery learning method can improve student learning outcomes. Masruroh's research (2018) shows that discovery learning methods can increase motivation and learning outcomes. Research (Rusli, 2020) shows that the discovery learning method can improve learning outcomes in Islamic Religious Education in Junior High Schools. Based on these studies, this article will explain students' critical thinking abilities through the discovery learning method because the discovery method itself is usually carried out by observing, classifying, measuring, predicting, and determining, which in the process requires a person to think critically in facing a reality.

METHOD

The method used in this research is the experimental method. with a Quasi Experimental Design experimental design, namely Non-equivalent Control group, namely by conducting a pretest in either the control class or the experimental class to determine the condition of a class before being given treatment. Then, after being given treatment, the control class and experimental class were given another test in the form of a post-test to determine the condition after being given treatment. The Islamic Religious Education

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learning process in the experimental class uses the discovery learning method. Meanwhile, for the control class, PAI learning practices use direct learning.

The research was conducted at one of the Aliah Madrasahs in Bandung City, with a population of 8 classes, the sample was taken from 2 classes using a purposive sampling technique based on the average value. The instrument used is an essay test with 4 questions which are tested on students at the beginning and end of learning which contains standardized indicators, namely, to reveal basic clarification, bases for a decision, inference, and advanced clarification skills in students.

The data analysis used is inferential statistical analysis because we want to see differences in increasing students' critical thinking skills with specific characteristics rather than inferential analysis which wants to test the truth of a hypothesis (Creswell, 2016). The type of software used to assist researchers in analysing data is SPSS.

RESULTS AND DISCUSSION

The results of the analysis of students' critical thinking skills in the experimental class and control class with the 4 pretest questions given to students can be seen in table Table 1.

Table 1: Recapitulation of Pretest Scores for Critical Thinking Ability

Criteria	Experimental Class		Control Class	
	Frequency	Percentage	Frequency	Percentage
Very high	0	0	0	0
High	2	6,25	0	0
Middle	6	18,75	8	26,67
Low	20	62,5	18	60
Very low	4	12,5	4	13,33
Total	32	100	30	100

Based on Table 1, the students' critical thinking abilities in both the experimental and control classes are in the low average category, this can be seen from the average percentage of more than half of them being in the low category. The critical thinking abilities of students who fall into the moderate and high categories are small, and none of them have very high abilities.

The detailed description is based on the indicators put forward by Robert H. Ennis, namely (1) Basic clarification, (2) Bases for a Decision, (3) Inference, and (4) Advanced Clarification. Can be seen in Table 2.

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Table 2: Recap of Pretest Scores for Critical Thinking Ability in Experimental Class

Score	Indicator 1		Indicator 2		Indicator 3		Indicator 4	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
4	10	31,25	2	6,25	0	0	0	0
3	14	43,75	6	18,75	4	12,5	3	9,38
2	8	25	20	62,5	12	37,5	6	18,75
1	0	0	4	12,5	16	50	23	71,88
Total	32	100	32	100	32	100	32	100

Based on Table 2, the critical thinking skills of experimental class students for indicators 1 and 2 are better than indicators 3 and 4, thus for the experimental class the critical thinking skills of inference and Advanced Clarification require more attention.

Table 3: Recap of Pretest Scores for Control Class Critical Thinking Ability

Score	Indicator 1		Indicator 2		Indicator 3		Indicator 4	
	Frequency	%	Frequency	%	Frekuensi	Frequency	%	Frequency
4	16	53,33	0	0	0	0	3	10
3	12	40	12	40	2	6,67	6	20
2	2	6,67	18	60	12	40	18	60
1	0	0	0	0	16	53,3	3	10
Total	30	100	30	100	30	100	30	100

Based on Table 3, the control class students' critical thinking abilities for indicators 1 and 2 are also better than indicators 3 and 4, thus for the class it is also the same as the experimental class, the critical thinking abilities of inference and Advanced Clarification require more attention.

The findings of the low critical thinking skills in both the experimental and control classes were due to their inability to provide a scientific basis for the conclusions and decisions made, provide general conclusions, and provide assessments based on logical arguments. In this case, students have difficulty connecting the data and facts they find to solve problems and tend to accept data from only one source. This is indicated by the average value of each indicator which is still in the low category. This statement is strengthened by research results which state that students are not used to analyzing the facts and symptoms found (Aristka, 2020) and students are more likely to feel that they have received enough knowledge conveyed by the teacher without questioning in depth (Priyadi et al., 2018).

Next, a pretest difference test was carried out, with the aim of finding out that there were no significant differences in students' critical thinking skills in the experimental class and the control class, so that this assumption could be used as a claim that the two classes could be compared. Before carrying out the difference test, a prerequisite test is carried out first, namely the normality test using the SPSS application. The test results can be seen in Table 4.

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Table 4: Pretest Normality Test

Student critical thinking pretest	Class	Kolmogorov-Smirnov	
		Satatistic	Sig.
	Experimental Class	0,201	0,000
	Control Class	0,252	0,000

Based on Table 4, using the Kolmogorov_smirnov test, the sig value can be seen. 0.000 < 0.05 means that the experimental class and control class data are not normally distributed, so the difference test carried out is a non-parametric test.

Table 5: Pretest Difference between Experimental Class and Control Class

Mann-Whitney U	1152,400
Wilcoxon W	2562,500
Z	-1,628
Asymp. Sig. (2-Tailed)	0,106

Based on Table 5. You can see the Asymp value. Sig. (2-Tailed) 0.106 > 0.05, meaning there is no difference in the average pretest score between the experimental class and the control class. Thus, if there is a difference in the average posttest score between the experimental class and the control class, it can be assumed that it is due to the treatment of different learning models.

Furthermore, the results of the analysis of students' critical thinking skills in the experimental class using the discovery learning method and the control class using direct learning with 4 posttest questions given to students, can be seen in Table 6.

. **Table 6: Recapitulation of Posttest Scores for Critical Thinking Ability**

Criteria	Experimental Class		Control Class	
	Frequency	Percentage	Frequency	Percentage
Very High	10	31,25	0	0
High	12	37,50	10	33,33
Middle	10	31,25	20	66,67
Low	0	0	0	0
Very Low	0	0	0	0
Total	32	100	30	100

Based on Table 6, for the experimental class the average student's critical thinking skills are in the "high" category, thus the student's tendency to carry out basic clarification processes, bases for a decision, inference, and advanced clarification in receiving information is at high category. Meanwhile, for the control class, the average critical thinking ability of students is in the "middle" category.

To see the level of critical thinking skills for each indicator, you can see the details of the scores obtained by students in answering the questions asked. These results can be seen in Table 7.

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Table 7: Recap of Posttest Scores for Critical Thinking Ability for Experimental Class

Score	Indicator 1		Indicator 2		Indicator 3		Indicator 4	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
4	24	80	18	56,25	8	25	4	12,5
3	6	20	12	37,50	11	34,38	12	37,50
2	0	0	2	6,25	13	40,63	16	50
1	0	0	0	0	0	0	0	0
Jumlah	32	100	32	100	32	100	32	100

Based on Table 7. For the basic clarification indicator, bases for a decision, experimental class students got a score of 4 on average and for the inference indicator and advanced clarification the average was 2. Of the four indicators, no students got a score of 1. Next for looking at critical thinking skills based on the control class posttest questions can be seen in Table 8.

Table 8: Recap of Posttest Scores for Control Class Critical Thinking Ability

Score	Indicator 1		Indicator 2		Indicator 3		Indicator 4	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
4	28	93,33	18	60	0	0	0	0
3	2	6,67	12	40	8	26,67	2	6,67
2	0	0	0	0	21	70	13	43,33
1	0	0	0	0	1	3,33	15	50
Total	30	100	30	100	30	100	30	100

Based on Table 8. For the basic clarification indicator, bases for a decision, experimental class students averaged a score of 4, for the inference indicator the average score was 2, and advanced clarification averaged a score of 1.

Furthermore, to find out which students' critical thinking abilities in the experimental class or control class are better after using the learning method, a posttest difference test will be carried out by first carrying out a normality prerequisite test. The results of the posttest normality test can be seen in Table 9.

Table 9: Posttest Normality Test

	Class	Kolmogorov-Smirnov	
		Satatistic	Sig.
critical thinking posttest	Experimental Class	0,158	0,002
	Control Class	0,210	0,000

Based on Table 9, using the Kolmogorov_smirnov test, the sig value can be seen. 0.002 < 0.05 and 0.000 < 0.05 means that the experimental class and control class data are not normally distributed, so the difference test carried out is a non-parametric test.

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Table 10: Pretest Difference between Experimental Class and Control Class

Mann-Whitney U	523,500
Wilcoxon W	18762,500
Z	-4,490
Asymp. Sig. (2-Tailed)	0,000

Based on Table 10. You can see the Asymp value. Sig. (2-Tailed) 0.000 < 0.05 means there is a difference in the average posttest score between the experimental class and the control class. Thus, it can be said that there is a difference in the average posttest score between the experimental class and the control class. To see which one is better, you can see the average value between the experimental class and the control class in Table 11.

Table 11: Average Posttest Scores for Experimental and Control Classes

	Class	N	Mean Rank
Critical Thinking Posttest	Experimental Class	32	70,01
	Control Class	30	38,23
	Total	62	

From Table 11, it can be said that the average critical thinking ability of students who study using the discovery learning method is higher than students who study using the direct learning method.

The critical thinking abilities of students in the experimental class and control class have significant differences. The average critical thinking ability of experimental class students is higher than students who study Islamic Religious Education using direct learning. Thus, it can be said that the discovery learning method in Islamic Religious Education learning contributes to students' critical thinking abilities. The discovery learning method itself is the output of the learning theory put forward by Jerome S. Bruner where education and learning are directed at developing students' critical thinking abilities.

Based on the results of this research, the discovery learning method can be an alternative for teachers in schools to develop critical thinking skills so that they can prepare students to face the dynamics of developments in the increasingly massive flow of information, and the demands of the times that require them to develop creatively.

CONCLUSION

Based on the research results, it can be concluded that students' critical thinking abilities are significantly different between students who study using the discovery learning method compared to students who study using the direct learning method. students who study using the discovery learning method in studying Islamic Religious Education have a higher average score compared to classes who study Islamic Religious Education using the direct learning method.

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