

The Effectiveness of the Discovery Learning Model on the Quality of Islamic Cultural History Learning

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Abstrak

Pembelajaran sejarah kebudayaan Islam dapat melatih siswa berpikir kronologis dan menumbuhkan nasionalisme dalam merancang masa depan berdasarkan pengalaman masa lalu. Penelitian ini bertujuan untuk menguji efektivitas model pembelajaran discovery dalam meningkatkan mutu pembelajaran Sejarah Kebudayaan Islam (SKI) serta menentukan model pembelajaran yang dapat menghasilkan pembelajaran SKI yang berkualitas. Penelitian menggunakan pendekatan kuantitatif dengan metode kuasi eksperimen, melibatkan kelas eksperimen yang menerapkan model discovery learning dan kelas kontrol yang menggunakan metode konvensional ceramah. Sumber data diambil dari pretest dan posttest di kedua kelas. Penelitian dilakukan di Madrasah Aliyah Ibadul Ghofur dengan sampel siswa kelas 10 MIA 1 sebagai kelas eksperimen dan kelas 10 MIA 2 sebagai kelas kontrol. Hasil penelitian menunjukkan bahwa model pembelajaran discovery efektif dalam meningkatkan mutu pembelajaran SKI, dengan nilai rata-rata posttest kelas eksperimen (86,91) lebih tinggi dibandingkan kelas kontrol (72,50). Pengukuran N-gain skor menunjukkan kelas eksperimen berada pada kategori efektif (70,49), sedangkan kelas kontrol pada kategori tidak efektif (35,10). Kesimpulan dari penelitian ini bahwa model pembelajaran discovery juga terbukti meningkatkan keaktifan dan motivasi siswa dalam belajar dibandingkan metode konvensional. Kesimpulannya, terdapat perbedaan signifikan dalam kualitas pembelajaran SKI antara kelas kontrol dan kelas eksperimen, di mana metode discovery learning lebih efektif dalam meningkatkan mutu pembelajaran.

Kata kunci: *Model Discovery, Efektivitas, Sejarah Kebudayaan Islam*

Abstract

Learning the history of Islamic culture can train students to think chronologically and foster nationalism in planning the future based on past experiences. This research aims to test the effectiveness of the discovery learning model in improving the quality of Islamic Cultural History (SKI) learning and determine learning models that can produce quality SKI learning. The research uses a quantitative approach with a quasi-experimental method, involving an experimental class that applies the discovery learning model and a control class that uses the conventional lecture method. Data sources were taken from the pretest and post-test in both classes. The research was conducted at Madrasah Aliyah Ibadul Ghofur with a sample of class 10 MIA 1 students as the experimental class and class 10 MIA 2 as the control class. The research

showed that the discovery learning model effectively improved the quality of SKI learning, with the average post-test score for the experimental class (86.91) being higher than the control class (72.50). The N-gain score measurement shows that the experimental class is in the practical category (70.49), while the control class is ineffective category (35.10). This research concludes that the discovery learning model has also been proven to increase student activity and motivation in learning compared to conventional methods. In conclusion, there is a significant difference in the quality of SKI learning between the control and experimental classes, where the discovery learning method is more effective in improving the quality of learning.

Keyword: *Effectiveness, History of Islamic Culture, Discovery Model.*

INTRODUCTION

Learning is the process of teaching students to develop their potential and play a role in determining their future. Therefore, it must be well-designed and managed with a suitable model (Wright & Lundy, 2014). The most important thing in classroom learning is to build a communication relationship between educators and students. The status of teachers and students significantly affects efforts to improve the quality of learning. (Surakhmad, 2000). The current learning model does not emphasize that students are empty containers that can be filled with knowledge at the discretion of educators. However, the students are curious, and the teacher gives them assignments. (Schweder & Raufelder, 2024). In learning activities, teachers only monitor students and instruct them to acquire or discover good knowledge independently. In this way, students are independent and actively participate in the search for knowledge and information.

Currently, education in Indonesia has advanced in its learning system, where teachers are not the center of learning activities and do not directly transmit their knowledge to students. Still, educators play a role in protecting learning and guiding. Students collect and acquire knowledge independently. (Nedovic et al., 2024). *Teacher-centered* Before entering 21st-century learning, it became a central point in classroom learning, but after entering the 21st century, now *teacher-centered* no longer the center of attention in learning but *student-centered*, where students must be active and look for active and critical sources and learning so that student achievement will be possible to increase rather than focus and only listen to the teacher who speaks. (Ibda, 2022). This learning model emphasizes that students are the focus of learning activities, and teachers only direct and support students in learning activities. This is the implementation of the 2013 curriculum according to Permendikbud number 22 of 2016 concerning process standards, namely the use of three learning methods or models. (Nurdiyanto et al., 2024). The learning model in question is (1) the Discover/Inquire learning model, namely understanding concepts, meanings, and relationships through an intuitive process that aims to

conclude, (2) problem-based (*problem-based learning*), (3) problem-based in the project (*Project-based learning*) (Muhajir et al., 2024).

The discovery learning model applies scientific methods. The process of application discovery learning consists of identifying the characteristics of understanding the concept and, ultimately, drawing conclusions or generalizations. Discovery is done using how to observe, classify, measure, predict, choose truth, and Last Interesting Conclusion (W. Wang et al., 2024). Ini be cognitive processes. At the same time, Innovation is a mental process in which the concept and Principle are Absorbed into thought. Implementation *Discovery Learning* consists of creating situations so students can identify problems, observe them, collect, process, analyze data, investigate, and finally draw conclusions. According to (WH et al., 2023), Learning Discovery is learning that starts from understanding concepts, meanings, and relationships through thinking and, finally, a conclusion. The learning model, Discovery, requires students to learn observations, experiments, or scientific activities to get conclusions from these actions (Garcia-Molsosa et al., 2023). Another opinion states that the discovery learning model is a method that starts from the opinion that students are subjects rather than learning objects. Students have initial abilities to develop to be better based on their abilities (Hendracipta, 2021).

The discovery learning system will be implemented well if students' mental use is involved in discovering various concepts and principles. Nursit said that learning uses *discovery, so learning activities involve students in implementing mental activities through sharing opinions through discussions, seminars, reading, and practicing* so that students can learn independently. (Smith, 2018). According to Anugraheni, successful learning activities can be observed from their behavior, either in the form of mastery of knowledge, thinking skills, or motor skills of students, which will then change students' creativity for the better. (Anugraheni, 2017). Learning Islamic cultural history should be developed scientifically, using the *Learning by Discovery*. (Holloway et al., 2023). When studying the history of Islamic culture, most educators still identify learning in lectures, then test or claim that history classes contain stories of past events. (Guan & Wang, 2024).

Learning the history of Islamic culture is often interpreted by students as a lesson that forces them to memorize events from the past. In addition, SKI lessons are delivered by lecture only, so students always find them uninteresting. Students may be calm in class because passive learning is only necessary for listening (Halizah, 2023). Serious SKI research allows students to gain insight into past events that are still related to current events and help them in their daily lives. Moreover, Students always view SKI lessons as uninteresting because they are only

delivered with lectures and stories that sometimes lull students in class. After all, passive learning only requires listening. In severe SKI learning, students learn about past events that are still related to current events so that there are benefits in their daily lives. The study of Islamic cultural history developed (I. P. Lestari et al., 2021). In a sense, teachers no longer only teach in the classroom. In the learning model applied today, Teachers only provide equipment to carry out learning, and students need to be more active in their learning activities. Several things are needed in the process of learning activities. That is, (1) students as the center of activities. (2) Stimulating students' creativity. (3) Presentation of useful but enjoyable learning materials. (4) It includes ethical, logical, and kinesthetic values. (5) Creating experiences with students (Pertiwi et al., 2022). Students' interest in learning will significantly influence the achievement of learning goals. Interest is a sense of passionate inclination for something (Shah, 2001). Meanwhile, according to Salahuddin, interest is attention in which there is an element of feeling that will be the reason for doing an activity. This aligns with the teacher's goal so students are active and outstanding in SKI learning and can explore the noble values of ethics recorded in history (Salsabila & Achadi, 2024). Thus, students' willingness to learn is the most critical factor in students' success in understanding the material presented. Without students' willingness and interest in learning, learning becomes less critical and of poor quality, learning goals will not be achieved, and the quality of education will be poor (Fahmi, 2020).

Furthermore, many previous researchers have conducted research on the effectiveness of the discovery learning model on the quality of Islamic cultural history learning. Regarding the author's observation, the previous study is divided into three trends. *First*, Discovery learning has not improved student motivation and learning outcomes. *Second*, discovery learning effectively improves elementary school students' critical thinking skills. *Third*, Discovery learning can improve students' critical thinking skills compared to other methods. (Arwani & Hardini, 2023; Grasela et al., 2023; Hanifah & Indarini, 2021; Septiyowati & Prasetyo, 2021; Wahyuni & Astuti, 2021). Therefore, researchers share previous research as reference materials to distinguish research that has been carried out from research that will be carried out. If the researcher focuses on three trends, then in this case, the researcher will add the comparison and quality in improving the quality and motivation of student learning through the discovery learning model with the conventional learning model in Islamic cultural history lessons, which are identical to mere historic.

Previous research has shown that learning history at the Madrasah Aliyah and high school levels can foster students' awareness of the changes that occur from the past to the

present and the importance of the concept of space and time (Manca et al., 2023). In addition, learning history also encourages students to appreciate historical heritage, form a character that reflects the nation's civilization, and foster a sense of love and pride for the homeland (Disvia, 2024). Students' feelings of love and pride for the homeland of Indonesia will increase, and they will be more aware that they are members of the Indonesian nation who create empathy and tolerance in community and family life (J. Wang et al., 2024). Students are expected to be more empathetic and tolerant and better understand the relationship between past, present, and future events (Munawir et al., 2024). However, although the Islamic cultural history (SKI) learning model is expected to arouse students' interest and increase their involvement in the classroom, the study results show that students are still less interested in learning SKI. Despite increased learning activities, students do not fully feel that SKI learning is relevant or interesting (Nur, 2022). This shows a gap between the potential of existing learning models and students' interests and motivation to learn.

Efforts to obtain realities regarding the effectiveness of learning Islamic Cultural History and its relation to educators' application of learning models. This study aims to prove that the discovery learning model in learning Islamic cultural history is more effective and improved and to determine what learning model can make Islamic cultural learning quality. Therefore, this study considers it essential to explore further and in-depth by using testimonials to know the results to be obtained so that the correct and suitable theme in this study carries the theme "The Effectiveness of *the Discovery Learning Model* on the Quality of Islamic Cultural History Learning Experimental Research at Madrasah Aliyah Ibadul Ghofur Rajadesa.

METHOD

The approach taken in This study uses a quantitative approach by applying experimental methods. The experimental method aims to clarify the causal relationship (*causal relationship*) between one variable and another. To explain the causal relationship, researchers must carefully control and measure the research variables. Quantitative research methods are steps to gain knowledge and solve problems based on collected data. This study measured the relationship between the models of *Discovery Learning* and the quality of learning Islamic cultural history through experiments or experiments. Does the discovery learning model affect the quality and effectiveness of learning Islamic cultural history? (Khoiriyah et al., 2024). The research design was carried out using a pretest-posttest control group with the following scheme:

Table 1.
Research Design

Group		Pretest	Treatment	Post-test
Experimental Classes	R	01	X	02
Control Classes	R	03		04

R is the experimental group, and the control group taken from grade 10, O1, and O3 of the experimental and control classes are given a pretest. X is the treatment by implementing discovery model learning in the experimental class. At the same time, O2 and O4 are *post-tests* given to the experimental and control classes. The treatment procedure in the control class is as follows: Pretest (O3): Before the treatment is given, students in the control class will undergo a pretest to measure their initial ability to understand the Islamic Cultural History (SKI) material. Conventional Learning (Lecture Method): Students in the control class are given SKI learning using the lecture method, where the teacher delivers the material directly without involving an interactive or exploratory approach. The teacher acts as the sole source of information, and the student acts as a passive listener. Post-test (O4): After the learning session, students in the control class go back to the post-test to measure their improvement in understanding after learning with the lecture method. The results of this post-test will be compared with the post-test in the experimental class.

RESULTS AND DISCUSSION

The implementation of learning experiments with the discovery learning model is carried out in the following stages: (1) Preparation. At this preparation stage, the researcher prepares a student attendance list, SKI subjects, and lesson plans and prepares questions for pre-test and post-test; (2) the implementation of learning by applying the model *Discovery*; Model learning *Discovery* conducted in class X MIA 1 as an experimental class. Learning takes place in two sessions every two hours. The first meeting began with a pre-test. The best tests were conducted in class X MIA 1 as an experimental class and class X MIA 2 as a control class. (Hidayah et al., 2024). In the control class, learning takes place according to the general teaching method. At the last meeting, learning was implemented as a final test. (3) Data collection and analysis using the SPSS application (Rizqiyah et al., 2024).

Treatment Procedure with Discovery Learning Model

Learning activities using the *discovery model* were carried out in class X MIA 1 after pretesting in the following process. (1) Ask questions about the materials obtained in connection with the materials to be evaluated. (2) Motivate students by informing them about the relevance of the Meccans to the pre-Islamic civilization learned in daily activities. (3) Students are asked to see worksheets, photos, and videos that contain examples of materials/questions that students can develop, for example, from interactive media related to the pre-Islamic Mecca civilization. (4) To find a solution, students are given several questions about the pre-Islamic Mecca civilization. (5) Students are asked to work in groups to solve problems arising from internal and external sources (questions, surveys, associations). (6) Students are asked to work in groups, evaluate research, and correlate each group member's efforts. (7) Students exchange books/reference books for group activities (communication). (8) Write down the answers to the questions at hand. The results of the requested group work (association and communication). (9) Students appointed as speakers by the group will convey the results of group work (communication). (10) Other students listen and answer (observations and questions). Students use the information provided to analyze the results of the group's work. Broadcast by teachers (associations); (11) Students receive questions about what still needs to be clarified (communication).

These findings show that students are encouraged to work together in groups to find solutions to the problems given. This process includes gathering information from various sources, both from within (learning resources) and outside (other media or surveys) (I. Lestari & Pratama, 2020). Next, students are asked to present the results of their group work, followed by clarification and question-and-answer sessions guided by the teacher. This activity improves students' communication skills and strengthens their critical and analytical thinking skills. (Hasan et al., 2022).

The discovery learning model is based on the constructivist learning theory developed by Jerome Bruner. Bruner argues that effective learning occurs when students actively discover new knowledge through exploration and inquiry. (Sugrah, 2019). In this model, students are free to find solutions independently with minimal guidance from the teacher, who serves as a facilitator. (Daga, 2021). Through activities such as asking questions, analysis, and group discussions, students can better understand the material being studied and relate it to real-life contexts. The results of this study show that the application of the discovery learning model can

motivate students to be more active and independent in the learning process, as well as improve their ability to think critically and collaborate.

Islamic Cultural History Materials and Discovery Model Learning Activities

Essential Competencies: (1) Understanding the pre-Islamic state of Mecca; (2) a description of the condition of the people of Mecca before Islam; Indicators; (1) Explain the situation of the pre-Islamic Arabs. (2) Mentioning the gods of the Meccans before Islam. (3) Explain the pre-Islamic culture of the Mecca people. (4) Explain the condition of the people of Mecca before Islam. (5) Describe the condition of the Arabs before Islam. Subject Matter: (1) The condition of the people of Makkah before Islam. Learning Activities: Observe: (1) Observe photos of people associated with pre-Islamic beliefs. A brief explanation from the teacher about the position of pre-Islamic Arabs: asking; (1) Comment and ask questions about the images observed; (2) The teacher encourages other students to answer their friend's questions; (3) The teacher answers questions and answers from students. Explore: (1) Identify sources of information about the civilization of the pre-Islamic Meccan people from the year; (2) Gather information about the pre-Islamic Mecca civilization from various sources, including print and electronic media. Associate; (1) Citing lessons from various learning sources about the social civilization of pre-Islamic Mecca; (2) Analysis of the results of the civilization of the Mecca people from pre-Islam. Communicate (1) Presentation of conclusions made about the civilization of the Mecca people from pre-Islam; (2) Communicate the results of their research or knowledge about the civilization of the Mecca people from pre-Islam.

Experimental Class *Pre-test* Data

The initial test gave students 45 multiple-choice questions with 40 multiple-choice questions and explanations from 5 essays. The highest achievable value is 100, and the lowest value is zero (0). The number of students in the experimental class is 23 people. It is carried out using the H to determine the number and interval of classes. A Sturges formula (Suliyanto & MM, 2017). These are as follows:

Number of interval classes $= 1 + 3.3 \log n$

Class length $= \text{Range}/\text{number of classes}$ Interval

Data range (*Range*) $= X_{\max} - X_{\min}$

The pre-test score data obtained from the control class is as follows:

Table 2
List of *Pre-test Scores* for Experimental Classes

It	Student Name	Value Pre-Test
1	Abdul Holik	59
2	Aditia Abdul Mutakin	55
3	Aini Lutfiah Muharromah	58
4	Ali Mukti Alfani Alfajri	60
5	Atih Siti Nuroniah	55
6	Dian Khoerudin	56
7	Dian Mulyana	58
8	Fenny Khoirunnisa	59
9	Hadiyya Kamilah	54
10	Hani Putri	54
11	Husnan Muhamad	61
12	Jajang M. Abdul Fatah	51
13	Mala Nuraini	66
14	Miftah Fajar	61
15	Muhammad Fadlil R	39
16	Muhammad Rizal Fadillah	39
17	Nurul Aini	57
18	Nurul Asiyah	64
19	Riska Fetriana	53
20	Riska Krismayani	67
21	Siti Alivia	58
22	Sinta Safitri	64
23	Siti Noer Azizatul W	64
<i>Average</i>		57

The following is the data on the frequency distribution of *pre-test scores* to determine the quality of early learning of the experimental class, which can be seen in the table below:

Table 3
Frequency Distribution of *Pre-test Scores* of Experimental Classes

It	Interval	Frequency
1	39-44	2
2	45-50	0
3	51-56	7
4	57-62	9
5	63-68	5
<i>Sum</i>		23

Based on the table above, data was obtained that the quality of SKI learning after the *pre-test* in the experimental class had a class length of 5 classes, an interval class of 6, and a range of 27. This study describes the pre-test process carried out in the experimental class by giving 45 multiple-choice questions and five essay questions. Data from 23 students in the experimental class were analyzed using frequency distribution to determine the initial quality of learning before the intervention. The pre-test score indicates that the student has a score range between 39 and 67, with an average score of 57. Grouping data based on class intervals uses the H.A. Sturges formula, which helps statistically determine the number and interval of classes.

The frequency distribution of pre-test scores shows that most students have scores in the intervals of 51-56 (7 students) and 57-62 (9 students), which means that most students get scores pretty close to the average. There were also five students in the higher score interval, namely 63-68, and 2 students in the lowest score range, 39-44. This data shows that most students had relatively uniform abilities before the learning intervention, with some students below average and others showing better results.

This frequency distribution analysis approach is supported by measurement theory in education, which assesses students' initial quality before learning interventions are carried out. (Nugroho & Haritanto, 2022). The H.A. Sturges formula is used to determine the number of interval classes, which is essential for efficiently grouping data to analyze the resulting value patterns more clearly. (Jaya & Warti, 2022). This is to the concept in education statistics, where data grouping using class intervals aims to understand the distribution of students' abilities in the classroom before further teaching actions are taken. In addition, the theory of educational measurement also emphasizes the importance of conducting pre-tests to determine students' baseline (essential initial ability). (Gani et al., 2024). The pre-test provides initial information about the level of students' understanding of the material before the intervention so that teachers can design learning methods based on students' needs and abilities. From the results of this analysis, it can be concluded that the experimental class has heterogeneity in students' initial abilities but is still in a range that can be adequately managed through proper learning.

Control class Pre-test data

The pre-test in the control group was to determine how much it affected the quality of students' initial learning in SKI training compared to that in the experimental group. The pre-test was carried out by giving students 45 multiple-choice questions, 40 questions, and five description questions. The highest score is 100, and the lowest is 0. The number of students in

the control class is 22 people. The pre-test score data obtained from the control class is as follows.

Table 4
List of *Pre-test* Scores of Control Class

It	Student Name	Value
		Pre-Test
1	Ade Sopyan	43
2	Adi Rahman	46
3	Ahmad Ali	62
4	Ahmad Pajar Salsa	55
5	Arin Ariny Rachmayanti	59
6	Aaron	56
7	Hilma Nurissobah	64
8	Maulana Pond	56
9	Lisna	56
10	Moch Azmi Hilyatul A	61
11	Muhammad Ikmal A	56
12	Nazla Nur Inzani	56
13	Neni Yuliani	51
14	Nova Oktapiani	51
15	Nurdin	60
16	Seli Marselina	61
17	Sri Alifia Nuraeni	61
18	Siti Nurfadzila	61
19	Siti Nurjanah	66
20	Taufiku Rohman	66
21	Wiwin Wulandari	61
22	Yeti Nurbaeti	66
	Average	58

The following is the data on the frequency distribution of *pre-test* scores to determine the quality of early learning in the control class, which can be seen in the table below:

Table 5.
Frequency Distribution of Control Class Pre-test Values

It	Interval	Frequency
1	43-47	2
2	48-52	2
3	53-57	6
4	58-62	8
5	63-67	4
Sum		22

Based on the table above, data was obtained that the quality of SKI learning after the *pre-test* in the control class had 5 class lengths, five intervals, and 23 ranges.

Post-test Data of Experimental Classes

A post-test is carried out in an experimental classroom to test the quality of students' learning outcomes in SKI learning. The post-test was conducted by asking students 40 and 45 multiple-choice questions detailing five essay questions. The highest achievable value is 100, and the lowest value is zero (0). Below is a table of the *experimental class* post-test values:

Table 6
List of Post-Test Scores of Experimental Classes

It	Student Name	Value Post-Test
1	Abdul Holik	88
2	Aditia Abdul Mutakin	85
3	Aini Lutfiah Muharromah	82
4	Ali Mukti Alfani Alfajri	88
5	Atih Siti Nuroniah	86
6	Dian Khoerudin	86
7	Dian Mulyana	87
8	Fenny Khoirunnisa	86
9	Hadiyya Kamilah	84
10	Hani Putri	84
11	Husnan Muhamad	89
12	Jajang M. Abdul Fatah	83
13	Mala Nuraini	92
14	Miftah Fajar	87
15	Muhammad Fadlil Ramadhan	79
16	Muhammad Rizal Fadillah	77

17	Nurul Aini	83
18	Nurul Asiyah	95
19	Riska Fetriana	83
20	Riska Krismayani	97
21	Siti Alivia	85
22	Sinta Safitri	96
23	Siti Noer Azizatul Wahidah	97
	Average	87

The following is the calculation of Sturges frequency distribution data *post-test scores* to determine the quality of learning at the end of the experimental class, which can be seen in the table below:

Table 7
Distribution of Post-test Scores of Experimental Classes

It	Interval	Frequency
1	77-82	3
2	83-88	14
3	89-94	2
4	95-100	4
	Sum	23

Based on the Sturges calculation in the table above, the frequency distribution value for the final test score of the experimental class is 4 class length with an interval of 6 and a range of 20.

The findings of this study show that after the post-test was carried out in the experimental group, the average score obtained by students reached 87, with a score range between 77 and 97. Most students, namely 14 people, scored in the interval of 83-88, which shows a significant improvement compared to the pre-test scores. The frequency distribution data calculated using the Sturges formula shows that there are 4 classes of intervals with a length of 6 classes and a range of values of 20. This increase in scores reflects the success of the SKI learning process in the experimental group, where most students achieved better learning outcomes after applying the learning methods used. The frequency distribution interval also shows that most students are in the high-grade category (above 83), with only a few falling below that interval.

The reinforcement theory put forward by B.F. Skinner supports these results, where providing appropriate feedback and effective learning methods can strengthen students'

understanding and abilities (Addaeroby & Febriani, 2024). In addition, Jerome Bruner's theory of constructivism is also relevant because the learning process that encourages students to actively find their solutions (such as in the discovery learning method) can significantly improve learning outcomes (Purwati, 2022).

Control Class *Post-test* Data

The final test is carried out in the control class to test the quality of students' final learning outcomes in SKI learning. The post-test was conducted by asking 45 multiple-choice questions to students. The highest achievable value is 100, and the lowest value is zero (0). Below is a list of *the control class* post-test values:

Table 8
List of *Post-Test* Scores of Control Classes

It	Student Name	Value
		Post-Test
1	Ade Sopyan	57
2	Adi Rahman	58
3	Ahmad Ali	75
4	Ahmad Pajar Salsa	62
5	Arin Ariny Rachmayanti	86
6	Aaron	69
7	Hilma Nurissobah	75
8	Maulana Pond	65
9	Lisna	68
10	Moch Azmi Hilyatul A	81
11	Muhammad Ikmal A	68
12	Nazla Nur Inzani	74
13	Neni Yuliani	73
14	Nova Oktapiani	76
15	Nurdin	73
16	Seli Marselina	73
17	Sri Alifia Nuraeni	72
18	Siti Nurfadzila	75
19	Siti Nurjanah	80
20	Taufiku Rohman	78
21	Wiwin Wulandari	76
22	Yeti Nurbaeti	81
Average		73

The following is the final test score frequency distribution data based on the table above to determine the quality of learning at the end of the control class, which can be seen in the table below

Table 9
Frequency Distribution of *Post-test Values* of Control Class

It	Interval	Frequency
1	57-61	2
2	62-66	2
3	67-71	3
4	72-76	10
5	77-81	4
6	82-86	1
Sum		22

Based on the Sturges calculation in the table above, the frequency distribution value for the final test score of the control class is the number of classes as many as 6 with an interval of 5, and the range is 29. Overall, student achievement in the control class was still lower than in the experimental class, which showed that the learning methods applied in the experimental class had a more positive influence on student learning outcomes (Fitri et al., 2021). The behavioristic learning theory put forward by Thorndike supports these findings, where lower learning outcomes in control classes may be due to the use of more traditional learning methods, which encourage less active student interaction compared to experimental classes (Wibowo, 2020). In addition, Robert Gagné's theory of information processing also shows that learning that relies solely on tests without varied approaches tends to result in less in-depth understanding, as seen in the average score of the control class (Uno & Umar, 2023).

Requirements Test Analysis

Before analyzing the data, it must first go through the normality check requirements for data distribution and conduct a homogeneity check. The results of the requirements tests are:

Normality Test

This normality test aims to ensure that each variable's data follows a normal distribution. The data used for this distribution normality test are pre-test and post-test values conducted in both the experimental and control groups. The normality test was conducted using the IBM SPSS Version 25 Normality Test application, which was classified as normal if the calculated significance level was greater than the significance level = 0.05 (Abdurrahman & Rahayu, 2012). Then, if the significance is less than the significance level = 0.05, then it is classified as abnormal. Data normality test results *Pre-test* and *post-test* Experimental classes using IBM SPSS Version 25 *Tests of normality* The results are obtained as depicted in the table below:

Table 10
Results of the Normality Test *Pre-test post-test* of the Experimental class
Tests of Normality

Experimental Classes		Kolmogorov-Smirnova		
		Statistics	Df	Sig.
Value	Experimental Class Pre-test	0,160	23	0,131
	Post-test Experimental Class	0,159	23	0,134

Based on the table above, it can be said that the data of the normality test of data distribution *Pre-test* and *post-test* is categorized as distributed normally because the value of the calculated significance level is greater than the significance level $\alpha = 0.05$, which is 0.131 for the data *Pre-test* and 0.134 data *post-test* (Kariadinata, 2011). Data normality test results *Pre-test* and *post-test* control classes by using IBM SPSS Version 25 *Tests of normality* The results are obtained as depicted in the table below:

Table 11
Results of the *Pre-test Post-test Normality Test* of the Control Class
Tests of Normality

Experimental Classes		Kolmogorov-Smirnova		
		Statistics	Df	Sig.
Value	Control Class Pre-test	0,151	22	.200*
	Post-test Control Class	0,164	22	0,130

The table above illustrates that the normality values of *the pre-test* and *post-test* of the control class exceed the significance level of $\alpha = 0.05$, which is 0.200 for *the pre-test* and 0.130 for *the post-test* data of the control class. This study shows that normality tests have been carried out for pre-test and post-test data in experimental and control classes using IBM SPSS Version 25. The normality test ensures that the data follow the normal distribution through the Kolmogorov-Smirnov method. The analysis results showed that the significance values for the pre-test and post-test data in both groups (experimental and control) were above the significance level of 0.05. In the experimental class, the significance value for the pre-test was recorded at 0.131, and the post-test was 0.134, while in the control class, the pre-test value was 0.200, and the post-test was 0.130. Therefore, both classes' pre-test and post-test data can be considered normally distributed.

Inferential statistical theory supports the application of normality tests in data analysis, especially when using parametric hypothesis tests such as t-tests or ANOVA (Handayani, 2023). Normality tests are essential to ensure that normality assumptions are met before proceeding with more complex statistical analyses (Irrawati & Mukaramah, 2024). The Kolmogorov-Smirnov method applied in this test is one of the commonly used techniques to test the distribution of data, and a result that shows a significance greater than 0.05 indicates that the data distribution is normal (Novitasari, 2017).

Variance Homogeneity Test

The variance uniformity test is used to sample the entire population, whether or not from the same variance, and then determine whether they differ markedly from each other. To find the results of this variance homogeneity test, the researcher used the F Test statistical test with the IBM SPSS Version 25 application with the condition that if F_{hitung} greater than the value at the significance level $\alpha = 0.05$, then the variance is homogeneous F_{tabel} (Santoso, 2005). The results of the variance homogeneity test using the IBM SPSS Version 25 application, the results are shown in the table below:

Table 12
Variance Homogeneity Test Results
 Test of Homogeneity of Variance

	Levene Statistic	df1	DF2	Sig.
Based on Mean	1,466	1	43	0,233
Based on Median	1,261	1	43	0,268
Student Learning Outcomes Based on the Median and with adjusted df	1,261	1	39,892	0,268
Based on trimmed mean	1,382	1	43	0,246

Based on the results in the table above, it can be seen that the significance value (sig) *Based on the mean* is $0.233 > 0.05$, so it can be said that the variance of the experimental class and control class values is the same (homogeneous). This study shows that the variance

homogeneity test was carried out using the F Test on the IBM SPSS Version 25 application to determine whether the variance between the experimental and control groups was similar (homogeneous). The test results showed a significance value for variance based on an average of 0.233, which exceeded the significance level of 0.05. This indicates that the variance between the two groups is homogeneous.

Inferential statistical theory emphasizes the importance of conducting a variance homogeneity test before conducting a comparative statistical analysis, such as the t-test (Sihotang, 2023). The homogeneity test serves to ensure that the data comes from populations with similar variances, which is one of the fundamental assumptions in parametric analysis. The F test, applied in this study, played a role in identifying the uniformity of variance among the tested groups (Setiyowati & Sari, 2017). A significance value greater than 0.05 indicates that there is no significant difference between the variances of the groups, so the variance can be considered homogeneous.

Statistical Hypothesis Testing

This test was carried out to determine the effectiveness of *the discovery learning* model on the quality learning of Islamic cultural history in grade X students of MA Ibadul Ghofur Rajadesa. *First*, the hypothesis used in this study is that there is no significant difference in the quality of SKI learning between the control group and the experimental group at MA Ibadul Ghofur ($H_0: \mu_1 = \mu_2$). In addition, there is an alternative hypothesis that there is a significant difference in the quality of SKI education between the control and experimental groups in MA Ibadul Ghofur ($H_0: \mu_1 \neq \mu_2$).

The hypothesis test in this study uses a t-test with a significance level of $\alpha = 0.05$. The calculation of this t-test uses the IBM SPSS Version 25 application by using the > value criterion t_{value} at a significance level of 0.05, then the hypothesis $t_{tabel} H_0: \mu_1 = \mu_2$ is accepted and $H_0: \mu_1 \neq \mu_2$ is rejected. On the other hand, if $t_{value} <$ the level of significance $t_{table} \alpha = 0.05$, then the hypothesis $H_0: \mu_1 = \mu_2$ is rejected, and $H_0: \mu_1 \neq \mu_2$ is accepted. The following is a table of the results *of the t-test post-test* of the experimental class and the control class:

Table 13
Results of t-Test of Experimental Class and Control Class
 Based on the results of the *output of* Pair 1 in the experimental class, the value of Sig. Paired Samples Test

		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-Test Experiment - Post-Test Experiment	-29,870	3,659	0,763	-31,452	-28,287	-39,145	22	0,000
Pair 2	Pre-Test Control - Post-Test Control	-14,591	4,954	1,056	-16,787	-12,395	-13,815	21	0,000

(2-tailed) was obtained of $0.000 < 0.05$ or $t_{value} <$. The value of Sig. (2-tailed) $0.000 < 0.05$ shows a difference in student learning outcomes by using $t_{value} > t_{table}$ *discovery* learning model in the experimental class. Then, the result of *the output of* Pair 2 in the control class is Sig. (2-tailed) $0.000 < 0.05$ or $<$, it can be concluded that using conventional learning models can affect student learning outcomes. $t_{value} > t_{table}$

To find out the first hypothesis, there is no significant difference in the quality of SKI learning in the control and experimental classes in MA Ibadul Ghofur ($H_0: \mu_1 = \mu_2$). Furthermore, the alternative hypothesis is that there is a significant difference in the quality of SKI learning in the control class and the experimental class in MA Ibadul Ghofur ($H_0: \mu_1 \neq \mu_2$) can be seen in the following table:

Table 14
Descriptive Statistical Results of Experimental and Control Class t-Test

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre Test Experiment	57.04	23	7.093	1.479
	Post Test Experiment	86.91	23	5.401	1.126
Pair 2	Pre Test Control	57.91	22	6.133	1.308
	Post Test Control	72.50	22	7.334	1.564

Based on the table above, the difference in the average score of the post-test of the control class and the Experimental class, the Experimental Class is much larger than that of the

control class. It can be concluded that there is a significant difference in the quality of SKI learning in the control class and the experimental class with a mean *pre-test value* of 57.04 and *post-test* 86.91 in the experimental class. Furthermore, the mean value of the control class was 57.91 for the pre-test and 72.50 for the post-test. *Second*, the hypothesis used in this second test is that the conventional learning model applied is more effective than the discovery learning model in improving the quality of SKI learning ($H_0: \mu_1 < \mu_2$). To determine the effectiveness of using the learning model used between *the discovery* and conventional learning models, the weight of effectiveness is calculated using the N-gain score based on the criteria for interpreting the effectiveness of the N-gain score, namely:

Table 15
Categories of N-Gain Score Effectiveness

Percentage (%)	Interpretation
< 40	Ineffective
40 - 50	Less Effective
50 - 75	Quite Effective
> 76	Effective

The following are the results of the analysis of the calculation of the effectiveness of the use of *discovery* and conventional learning models, which can be seen in the table below:

Table 16
Descriptive Statistical Results of N-Gain Score

Descriptives				
Class		Statistics		Std. Error
NGain_Persen	Experiment	Mean	70,4875	2,02831
		95% Confiden	Lower Bound	66,2810
		ce	Upper Bound	74,6939
		Interval for Mean		
		5% Trimmed Mean		70,0336
		Median		66,6667
		Variance		94,623
		Std. Deviation		9,72741
		Minimum		57,14
		Maximum		91,67
		Range		34,52
		Interquartile Range		6,58
		Skewness		1,246
				0,481

	Curtosis	0,574	0,935
Control	Mean	35,0925	2,48037
	95% Lower Bound	29,9343	
	Confidence Interval for Mean	Upper Bound	40,2507
	5% Trimmed Mean	34,5178	
	Median	33,3553	
	Variance	135,349	
	Std. Deviation	11,63394	
	Minimum	15,56	
	Maximum	65,85	
	Range	50,30	
	Interquartile Range	14,64	
	Skewness	0,798	0,491
	Kurtosis	0,983	0,953

Referring to the N-Gain Score value in the form of percent (%) and the Descriptive output table above, a table of the results of the calculation of the N-Gain score test can be made below:

Table 17
Results of N-Gain Calculation of Experimental and Control Class Scores

It	Experimental Classes	Control Classes
	N-Gain Score (%)	
1	70.73	24.56
2	66.67	22.22
3	57.14	34.21
4	70.00	15.56
5	68.89	65.85
6	68.18	29.55
7	69.05	30.56
8	65.85	20.45
9	65.22	27.27
10	65.22	51.28
11	71.79	27.27
12	65.31	40.91
13	76.47	44.90
14	66.67	51.02
15	65.57	32.50
16	62.30	30.77
17	60.47	28.21

18	86.11	35.90
19	63.83	41.18
20	90.91	35.29
21	64.29	38.46
22	88.89	44.12
23	91.67	
Average	70,4875	35,0925
At least	57,14	15,56
Maximum	91,67	65,85

Based on the N-Gain score table, it can be seen that the average N-Gain score of the experimental class using the discovery learning model is 70.48%, which is included in the category of quite effective. Then, the N-Gain score is a minimum score of 57.14% and a maximum of 91.67%. In addition, the average N-Gain score for the control group using the traditional learning model was 35.09%, which was classified as ineffective. The minimum N-Gain score is 15.56, and the maximum is 65.85%. Therefore, the second hypothesis that the conventional learning method is more effective than *the discovery learning method* in improving the quality of SKI learning ($H_0: \mu_1 < \mu_2$) is rejected or not accepted. Because it is proven that the N-Gain score of the experimental class reaches 70.48%, which is included in the criteria, it is pretty compelling. Meanwhile, the N-Gain score of the control class only reached 35.09%, which was included in the ineffective category.

Third Statement on the third hypothesis, namely the learning model *Discovery*, is more effective than the conventional learning model in improving the quality of SKI learning ($H_0: \mu_1 > \mu_2$). The average value of N-Gain scores in the experimental class using a learning model *Discovery* is 70.48%, included in the category of quite effective, with an N-Gain score of a minimum score of 57.14% and a maximum of 91.67%. Meanwhile, the average N-Gain score for the control class using the conventional learning model is 35.09%, included in the ineffective category, with an N-Gain score of 15.56% and a maximum of 65.85%. So, the learning model *Discovery*, which is applied, is included in the category of quite effective. The conclusion of this third hypothesis is the learning model *Discovery*. The hypothesis that is used more effectively than the conventional learning model in improving the quality of SKI learning is the accepted hypothesis. The implementation of SKI learning that has been carried out to date is mainly done by lecturing. This causes the learning activities carried out to be passive. Learning outcomes also tend to be of poor quality due to the lack of interest from students in SKI subjects. The learning model applied by teachers should be able to arouse students' minds.

One of the learning models that teachers can apply is the learning model *Discovery*. Learning model *Discovery* in the classroom can influence students in active learning, further improving the quality of learning. (Juhri, 2020).

Based on data analysis, the effect of the application of *the discovery* learning model on learning outcomes was 70.48% of the results of the N-Gain Score test. This is inversely proportional to the learning outcomes using the conventional learning model of 35.09%. In the implementation of SKI learning, when carried out in the control class, the learning activities in the student control class are passive; in contrast to the experimental class, the students are proactive. In the control group, students were less interested in learning. Students seem passive when learning SKI in class because the teaching strategies and methods applied are only ordinary lectures. Students' interest in SKI learning has also decreased, which results in poor learning quality. This can be seen in *the pre-test* and *post-test* obtained in the control class, which is 15.56% and a maximum of 65.85%. Students' interest in learning activities became high after learning in the experimental classroom using the discovery learning model. Students are proactive in learning activities, their minds are awakened, and the learning results become quality. This can be seen in the results of the initial and final test of students in the experimental group, which has a minimum of 57.14% and a maximum of 91.67%.

The quality of learning in Islamic Cultural History between before and after using the Discovery learning model.

Quality learning pleases students, allows them to work together, and is accompanied by increased achievement. (Asmani, 2016). Before using the method of *Discovery*, *Students only listen and then receive assignments from the teacher* or practice questions. Students are not trained to dig up information in groups, so students are less skilled in building cooperation to solve problems. After learning with the model *Discovery*, Students are proficient in digging up information from various sources and discussing it with their peers. The knowledge gained by students' independent efforts will be more deeply embedded in students' minds. Thus, the implementation of learning Islamic Cultural History by applying the model of *Discovery* becomes more quality than before implementing the model of *Discovery*. (Helmi, 2023).

There are differences in Learning Quality in Islamic cultural history subjects between Classes with Discovery Learning Models and Conventional Learning Models.

In the group that applied the conventional learning model with lectures, students were not proactive; they just listened, and when the teacher finished lecturing, they opened questions. However, the students who asked were only a little more than three. This is because students lack the focus on the teacher's lectures, so the knowledge students absorb is little (Dewi et al., 2021). As a result of the lack of knowledge material absorbed by students, the learning achievement that applies the conventional model with lectures will be low. The final test results show that the control class is lower than the experimental class after the learning model is applied to *Discovery* (Dewi et al., 2021). In a class that applies the discovery model, *students are empowered, activated to explore information using group discussions, and then required to present knowledge so that it is more deeply embedded in students' memories* (Bere, 2023). Learning also empowers students because students' ability to appear and present is awakened, so there are various styles and abilities of students in conveying information or communicating the knowledge they have acquired, as seen in the photo of the learning activity with the model *Discovery* who apply discussion and presentation techniques (Nurdiyanto, 2024).

The Discovery Learning Model is Effective in Improving the Learning Quality of Islamic Cultural History Subjects

The concept of effective learning provided by the Ministry of National Education is functional learning. (1) Especially students. (2) Learning through experience. (3) Development of social, cognitive, and emotional skills. (4) Cultivate curiosity, imagination, and godly qualities. (5) Lifelong Learning, (6) Combination of independence and cooperation (Annisa, 2021). Effective learning must also provide students with experiences that include mental, physical, and social experiences. In the application of the learning model *Discovery* In the experimental class, the teacher stimulates students with questions to arouse the minds of students to dare to seek answers. Thus, students will grow curiosity. Then, students collect problems that need to be answered and identify problems from the subject matter presented by the teacher. (Annisa, 2021).

Students must be able to find answers to these problems by discussing them with their friends in groups. In group discussions, students learn to communicate, work together, and gain physical, social, mental, and social experiences. Students experience themselves searching for information and how to infer their knowledge. Learning with *the discovery* model can meet the

criteria for effective learning. Applying this model to learning Islamic Cultural History will make Islamic Cultural History lessons more effective. Learning with the discovery model becomes of higher quality than learning with conventional models or lectures.

CONCLUSION

Based on the results of data analysis, hypothesis testing, and discussion, it can be concluded that the results of this study are as follows: *First*. There is a clear difference in Islamic Cultural History learning quality between the control class and the experimental class of MA Ibadul Ghofur ($H_0: 1 \neq 2$). This is evident in the test results, pretest 57.04, and post-test 86.91 in the experimental class. In addition, the control group's average was 57.91 in the pre-test and 72.50 in the post-test. *Second*, the discovery learning method improves the quality of SKI learning and is smoother than the traditional learning method $H_0: 1 > 2$. The results of the statistical analysis of the N-Gain score showed that the average N-Gain score of the experimental class that applied the discovery learning model of 70.48% was included in the category of quite effective with a minimum N-Gain score of 57.14 and a maximum of 91.67%. In addition, the average N-Gain score for the control class using the traditional learning model was 35.09%, included in the ineffective category. The minimum score is 15.56%, and the maximum score is 65.85%. *Third*, the *discovery learning model* effectively improves the quality of Islamic Cultural History learning quality. In discovery learning, students are given stimuli that result in students being curious. Students will be motivated, and finally, students will be active and enthusiastic in participating in learning Islamic cultural history. The effectiveness of the discovery learning model in improving the quality of learning is as follows. From stimulus, curiosities, motivation, and actively participating in learning.

From the results of this study, it can be understood that the effectiveness of learning using *discovery* is very significant and can affect the treatment of student creativity at Madrasah Aliyah Ibadul Ghofur Rajadesa Ciamis so that this study opens up space for further researchers to explore the application of *the Discovery Learning* learning model to learning Islamic cultural history with diverse materials and try to compare the Discovery Learning learning model with the Interdisciplinary Method (problem-based learning, project-based learning and so on). It will also further examine the implications of the *Discovery Learning model* on Student Learning Motivation with Various Types of Learning. And its influence on students' cognitive aspects.

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