IMPLEMENTATION OF LABORATORY DISCOVERY LEARNING METHOD IN PAI LEARNING AT SMP 1 SUNAN GIRI WAGIR MALANG

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ABSTRACT

Educational advance is a thing that should happen along with the changing times. In fact, after being explored, PAI learning faces several obstacles, such as the use of methods that could be more suitable. Therefore, it affects students understanding which has implications for low learning outcomes. Thus, this research focuses on implementing the laboratory discovery learning method in PAI subjects at SMP Sunan Giri Wagir, Malang. This research aims to analyze the effectiveness of the laboratory discovery learning method on the subject of Glorifying Allah SWT by Obeying His Commandments. The method used in this research is a quantitative experimental method. There are 32 students in class VII A SMP Sunan Giri Wagir Malang as objects. The data were then analyzed using SPSS 26 software. The conclusion is laboratory discovery learning method is effective. The reasons are the results of the paired sample t-test; it is known that H0 is rejected and H1 is accepted because of the value of Sig. (2-tailed) 0.000 <0.05, so it can be said that there is a difference between the pre-test and post-test of students.
Keywords: Laboratory Discovery Learning Method; Islamic Education; Education.

ABSTRAK

Kemajuan pendidikan merupakan hal yang seharusnya terjadi seiring dengan perubahan zaman. Kenyataannya, setelah ditelusuri, pembelajaran PAI menghadapi beberapa kendala, seperti penggunaan metode yang seharusnya bisa lebih sesuai. Sehingga mempengaruhi pemahaman siswa yang berimplikasi pada rendahnya hasil belajar. Oleh karena itu, penelitian ini berfokus pada penerapan metode laboratory discovery learning pada mata pelajaran PAI di SMP Sunan Giri Wagir, Malang. Penelitian ini bertujuan untuk menganalisis efektivitas metode laboratory discovery learning pada pokok bahasan Mengagungkan Allah SWT dengan Mentaati Perintah-Nya. Metode yang digunakan dalam penelitian ini adalah metode eksperimen kuantitatif. Subjek penelitian ini adalah 32 siswa kelas VII A SMP Sunan Giri Wagir Malang. Data kemudian dianalisis dengan menggunakan perangkat lunak SPSS 26. Kesimpulannya adalah metode pembelajaran penemuan laboratorium efektif. Hal ini dibuktikan dengan hasil the paired sample t-test, diketahui bahwa H0 ditolak dan H1 diterima karena nilai Sig. (2-tailed) 0,000 < 0,05, sehingga dapat dikatakan terdapat perbedaan antara pre-test dan post-test siswa.
Keywords: Laboratory Discovery Learning Method; Pendidikan Agama Islam; Pendidikan.

Introduction

The current digital era makes everyone strive to improve their quality, but unfortunately the quality of education as an intermediary is still far from the expected expectations. Education that supports future development is education that enables learners to develop their ability to face and solve problems. Education should also tap into students' potential skills as they seem to be important once one

enters society and the world of work (Sibuea, 2019). Departing from this, education is not only about cognitive aspects, but also about all aspects in individuals, namely attitudes, values, and psychomotor skills (Fitria & Andriesgo, 2019).

The presence of Islamic Religious Education (PAI) as one of the subjects in schools equips students with Islamic knowledge, awareness, experience, and practice to become Muslims who are continuously improving their faith. The above objectives of Islamic education are derived from the objectives of national education, according to the formulation of the UUSPN (Law No. 20 of 2003) which reads "*national education aims to the development of the potential of students to become human beings who believe and are devoted to God Almighty, have noble character, are healthy, knowledgeable, capable, independent, and become democratic and responsible citizens*" (Asbar, 2018; Mahardijaya et al., 2019; Nurkia & Sulkifly, 2020; Utami, 2018).

The ideal learning objectives are unlikely to be obtained because PAI learning in public schools only gets a portion of 3 lesson hours. In addition, the current demands of Merdeka Curriculum require students to be actively creative through project-based assignments, emphasize only on essential materials so that the portion of literacy and numeracy increases, and the flexibility of teaching methods by teachers is highly dependent on its continuity with effective strategies designed by educators.

In reality, after being analyzed, PAI learning experiences several obstacles. Among them, cognitive aspects are prioritized over affective and psychomotor aspects. The low ability of students to explore knowledge, and their reluctance to enrich their learning experience. In addition, lessons with teacher learning centers make students reluctant to ask questions, less flexible in communicating their ideas, and afraid to ask if they do not understand the material. Generally, PAI teachers are more spiritual in nature, so when teaching, they usually only deliver teachings. Not only that, other problems such as the lack of creativity of teachers in exploring, developing media, models, methods, and learning strategies result in learning activities that tend to be monotonous (with one-way lectures) (Bumi et al., 2021; Mufidah et al., 2020; Ramadhan & Tarsono, 2020; Rofik, 2015; Saupi, 2018; Sofi, 2016)..

The various problems above cause learning to be less interesting so that students are bored, decreasing interest in learning and unable to master the competencies set in a subject, which has an impact on student achievement and activeness. If activeness in learning is applied, students are motivated to explore, find answers to questions, dig up information to solve problems and assignments that will affect their learning outcomes and achievements (Fitria & Andriesgo, 2019).

To answer these problems, there are several efforts that can be tried, such as innovating learning strategies, models, and methods to attract interest in learning in the classroom. Learning models are used to guide learning design in planning and conducting learning activities (Hasmar, 2020; Saupi, 2018). One method that can be implemented is discovery-based learning, which means learning by directing students to "discover knowledge independently" through observation, exploration, research and scientific action to draw conclusions from the results of scientific activities (Hidah & Sudibyo, 2022). This article will discuss the application of laboratory discovery learning methods applied in PAI subjects which are generally used in science learning.

Methods

In this study, the authors used experimental quantitative methods. The data obtained later is objective, meaning that the researcher presents the data based on the results of research in the field without adding the researcher's argument. Quantitative research generally produces data in the form of numbers which are then analyzed with statistics (Ibrahim et al., 2018; Ngatno, 2015; Sari et al., 2015; Shidiq & Choiri, 2019; Syahrum & Salim, 2014). The subjects who were given treatment in this study were 32 seventh grade students of SMP Sunan Giri Wagir Malang.

The data of this study were obtained through the use of closed questionnaire instruments in the form of pre-test and post-test given to students. The pre-test was conducted to check the initial ability of each student. Meanwhile, the post-test was conducted after they were treated with the laboratory discovery learning method in PAI learning at SMP Sunan Giri Wagir Malang with the intention of knowing how good the students' understanding was after being given the treatment. The research data obtained were analyzed by paired sample t-test testing on SPSS 26 software to get a picture of the research data in order to answer the hypothesis previously determined.

Results and Discussion

Islamic Education Learning

Chapter V Article 12 paragraph (1) of the 2003 Indonesian Law on National Education System states that "*every learner in each education unit has the right to obtain religious education in accordance with the religion he adheres to and is taught by an educator of the same religion*" (Asbar, 2018). With this binding legal force, PAI learning is mandatory at all levels of education in Indonesia.

As stated in the GBPP PAI in public schools, "*Islamic religious education is a conscious and planned effort in preparing students to recognize, understand, appreciate, and believe in the teachings of Islam, along with the demand to respect adherents of other religions in relation to inter-religious harmony so as to realize national unity and integrity.*" PAI subjects cover the material of al-Qur'an Hadith, akidah akhlak, fiqh, and the history of Islamic culture, as well as representing the realization of harmony, conformity, and balance in human relations with Allah swt., self, fellow human beings, other creatures of God and the environment (Utami, 2018; Zubaedi, 2020).

Religious education learning is inseparable from three problems. In other words, religious education should be more focused on the practical aspect, but the situation in the field is that the cognitive aspect still dominates, thus it is not surprising that many children who get high scores in PAI subjects but in their daily behavior tend to deviate from the norms of the teachings due to lack of appreciation of the material that has been given, the religious education system that is less structured and less integrated with students, and the equalization of PAI assessments with other subjects. Not only that, the absence of motivation to learn from participants whose ability to read the Qur'an is not fluent and not in accordance with the rules makes PAI learning not run as expected (Utami, 2018).

According to Farid, there are several obstacles to the lack of maximization of PAI learning. First, the lack of awareness among Muslim teachers in supporting the program that has been launched. Second, the different backgrounds of students make it difficult to provide an understanding of worship that is furuiyah. Third, digital-based development is less than optimal due to limited facilities (projectors and inadequate internet connections) so that. Fourth, there are still few Islamic books in the library (Farid & Khairusani, 2020)..

***Laboratory Discovery learning* Method**

Most PAI learning is done in a classroom that does not change the room or the atmosphere, making students bored with learning activities from morning to noon and evening. PAI materials have many theories that need to be developed further, so that students are expected not only to understand the theory but also to be able to apply it in their daily lives (Hasan & Saputri, 2020). This situation makes the academic community and educational institutions compete to develop their learning methods according to the demands of the times (Taufik et al., 2021). This can be seen through the discovery learning method.

Discovery learning is applied as an effort to accelerate student creativity. Through laboratory practicum activities, students are required to be involved in the process of finding answers to problems. Laboratory practices can encourage curiosity through discovery based on direct experience, fact research, development of concepts, theories, and laws, and train creative, critical, analytical, and divergent thinking (Bahtiar & Dukomalamo, 2019; Masril et al., 2018; Minarni et al., 2022). Through the laboratory, students and researchers can test theories and attempt to demonstrate teaching materials more concretely. The learning process in the laboratory is expected to provide a more real learning experience (Habibi et al., 2022).

Students will get theoretical and practical learning experiences. Such a learning process has a positive impact on the acquisition of competencies that have been formulated, helping to build a generation that has noble morals by teaching Islamic values. There are several reasons why the existence of a laboratory is important for educational institutions: (1) Learner activities will not be able to be realized without media, where the laboratory is the media; (2) Activities aimed at developing process skills, motor skills, and the formation of scientific attitudes (especially the development of interest in research, research, and in-depth study) will not be possible without a laboratory; (3) the attitude of student autonomy in understanding lessons can be formed by doing activities in the laboratory (Hidayah & Zafi, 2021).

Currently, laboratory management is indeed more massively applied in the fields of physics, chemistry, language, informatics engineering, health, and psychology. However, the Islamic Religious Education laboratory may be no less important to develop in educational institutions because it will facilitate the process of delivering material to students (Jannah et al., 2021). Through practicum media that can produce learning experiences where students can interact with various tools and materials to observe phenomena directly and prove for themselves something that is learned and increase student enthusiasm in learning (Adyan et al., 2019; Amin et al., 2021; Armstrong & Perez, 2021).

The management of Islamic Religious Education laboratories has been regulated in the Decree of the Minister of Religious Affairs (KMA) Number 211 of 2011 which discusses the Guidelines for the Preparation of National Standards for Islamic Education in Schools, stating that schools are required to provide PAI laboratory facilities that can be utilized by students as a place to explore information related to Islam and other activities that support PAI learning, both in the form of intracurricular and extracurricular activities.

The management of PAI laboratories in educational institutions serves to: (1) Increase faith in Allah SWT by instilling, maintaining and developing knowledge, appreciation, practice, habits and Islamic experience in students; (2) Provide teaching aids to complement methods and strategies for strengthening faith, fostering noble morals, and improving the quality of prayer; (3) Utilize information and communication technology media to provide learning technology and training to PAI teachers (4) Revive Islamic nuances (Habibi et al., 2022)..

As in the ministerial regulation, the PAI laboratory functions to: (1) Supporting teaching and learning activities (KBM) of PAI; (2) A means to visualize the concept of Islam; (3) A practicum facility for learning Islam; (4) An imitation model of worship procedures; and (5) A place to analyze da'wah materials. The PAI laboratory can also function as a place for research activities, studies, experiments, observations, and scientific testing (Habibi et al., 2022).

This *laboratory discovery learning* method can not only be applied in the classroom, but also in the musala, library, and other places related to the school to support the learning process. (Hasan & Saputri, 2020). However, this laboratory room is not yet worthy of being called a real laboratory because it only contains some practical media such as the Qur'an, banjari musical instruments, mannequins, shrouds, and tombstones. In addition, there are also Hajj and Umrah equipment such as miniature Kaaba and others (Hidayah & Zafi, 2021).

The PAI laboratory can be divided into three laboratory functions. Among them are the laboratory as a learning resource, as a medium for practicing Islamic teachings, and as a research room. The PAI laboratory as a learning resource can be designed by providing a lot of literature as a learning resource, both in hardcopy and digital form. Learning resources available in the laboratory can be utilized as teaching materials and relevant research materials. Especially in the context of Islamic studies, there has been a lot of literature research. So that various literatures/manuscripts that contain Islamic values will be useful to be studied and researched. For example; Islamic history literature, books on the thoughts of Muslim figures, classical akidah books, religious works, literary works that contain Islamic values, and other literature. In addition, it can also be equipped with various posters containing Islamic sciences.

Second, the PAI laboratory as a space for practicing Islamic teachings. Islamic teachings that are ritualistic in nature require a practice room to improve students' competence in mastering the material. For example, the teachings of purification, prayer, hajj, umrah, slaughtering livestock, adhan, recitation, tahlil, khutbah, measuring the direction of the qibla, calculating the beginning of the lunar year, and so on. Including the practice of practicing Islamic teachings that contain good values. Assuming that the above activities can be carried out in the laboratory, then the

completeness of supporting facilities related to the above learning practice media must be available and adequate..

Third, the PAI laboratory as a research space. As a field of knowledge, Islamic teachings are not only important to be practiced, but also studied and researched. Research that can be done in the laboratory is literature or documentary research. Examples of research topics that can be done in the PAI laboratory are research on the main sources of Islamic teachings, on the thoughts of Islamic figures, on the history of the development of Islam, on Islamic architecture found in the interior of the laboratory. With the laboratory, we can understand certain phenomena in more detail and depth. So that the understanding of certain material concepts can be more meaningful through experiments (Lestari, 2021; Warni et al., 2021), giving rise to the idea of scientific work studies, encouraging researchers to continue to seek the essence of scientific truth from scientific objects in the natural and socio-religious environment through research, investigation, observation, exploration, and experimentation (Martaida et al., 2017).

By developing the three functions of the Islamic Religious Education laboratory above, in essence, a new view of the function of the Islamic Religious Education laboratory has emerged. The development of a perspective on the function of the laboratory will make the function as a source of learning and research media no longer marginalized. In addition to the development of the function of the Islamic Education laboratory, development in the perspective aspect of the infrastructure in it can also be done. Among them are the design of Islamic Education laboratories that are built conventionally and digitally, practical resources and facilities that are developed with a multi-perspective and multi-disciplinary approach, and the construction of laboratories outside the school. Including, if the development of e-laboratories can be done, then this is an effective way to measure the psychomotor abilities of students (Habibi et al., 2022). So it can be interpreted that a religious laboratory is a place used for experimenting or practicing religious knowledge related to the procedures, pillars, and requirements of Islamic teachings.

The above is clearly stated in the Regulation of the Minister of State for Administrative Reform and Bureaucratic Reform number 03/January/2010 and the Joint Regulation of the Ministry of National Education and the Head of the Civil Service Agency number 02 and number. 13 / May / 2010, provides a definition of an educational laboratory, namely "*a room to support academic activities in educational institutions, in the form of closed or open, permanent or mobile space that is systematically managed for testing, calibration and production activities on a limited scale, using tools and materials based on certain scientific methods, in the context of organizing education, research, and community service according to the tri dharma of higher education*" (Nurhasanah & Eliza, 2017)..

Result

The implementation of learning begins when the bell sounds for the change of class hours, students are asked to switch from class to the prayer room together in order to run according to the predetermined learning plan time. This is where learning happens and when students are involved in learning activities in the prayer room, the passive atmosphere turns into an active one. The steps (syntax) of the discovery learning model are: 1) stimulus, 2) problem formulation, 3) data collection,

4) data processing, 5) validation, 6) generalization (conclusion formulation). The stages of the laboratory discovery learning method in PAI learning material "*Glorifying Allah SWT by Submitting to His Commands*" at SMP Sunan Giri Wagir Malang are carried out as follows:

Table 1. Stages of laboratory discovery learning method

Stimulation **(Pemberian Rangsangan)**	• Students are given an initial understanding of the material ***"Glorifying Allah SWT by Submitting to His Commands"*** • Students are given questions about the blessing that we get for free from Allah
Problem Statement **(Pertanyaan/ Identifikasi Masalah)**	• Students are asked to mention the types of prostration outside of prayer and the reasons for doing the prostration. • Students are given questions about the location of sajdah verses in the Qur'an (each group gets a different sajdah verse question) and the procedure for performing prostration of recitation, gratitude, and shahwi.
Data Collecting **(Pengumpulan Data)**	• Students are asked to collect various information from textbooks and the Qur'an that can answer the questions on the worksheet by discussing in groups
Data Processing **(Pengolahan Data)**	• Students are asked to discuss the problems presented by processing information from the activities/materials given previously as the flow of solving the problems, and ask students if there are questions
Verification **(Pembuktian)**	• Students are asked to actively participate in group discussions and help each other solve problems related to the material ***"Glorifying Allah SWT by Submitting to His Commands"*** • Students are asked to demonstrate the work of each group
Generalization **(Penarikan Kesimpulan)**	• Students are asked to formulate conclusions about the material ***"Glorifying Allah SWT by Submitting to His Commands"*** • The teacher summarizes the causes and procedures for performing prostration of recitation, gratitude, and shahwi • Students are given the opportunity to ask questions about things they do not understand

This research data was obtained through the use of closed questionnaire instruments in the form of pre-test and post-test given to students. The pre-test was conducted to check the initial ability of each student. Meanwhile, the post-test was conducted after they were treated with the *laboratory discovery learning* method in PAI learning at SMP Sunan Giri Wagir Malang with the intention of knowing how good the students' understanding was after being given the treatment. The research data obtained were analyzed by *paired sample t-test testing* on SPSS 26 *software* to get a picture of the research data in order to answer the hypothesis previously determined.

Table 2. Test results of *laboratory discovery learning* method

No. Respondent	Test Result	
	Pre-test	Post-test
1.	70	75
2.	70	78
3.	90	95
4.	70	75

No. Respondent	Test Result	
	Pre-test	Post-test
17.	70	75
18.	90	90
19.	100	100
20.	70	70

5.	70	75
6.	70	78
7.	90	98
8.	70	75
9.	70	75
10.	60	65
11.	70	75
12.	93	100
13.	70	75
14.	70	75
15.	60	65
16.	60	60

21.	60	63
22.	60	60
23.	70	70
24.	90	95
25.	100	100
26.	70	78
27.	50	50
28.	70	70
29.	90	95
30.	90	93
31.	50	50
32.	90	93

Discussion

A learning method is "a way, step or strategy that is applied to convey certain material in learning activities in order to optimally achieve the learning objectives" (Sibuea, 2019, p. 87). This method must always be adjusted to the conditions of the class and the type of subject being taught. Also keep in mind that every method has its advantages and disadvantages. Therefore, the experience and creativity of educators greatly influence the accuracy in choosing methods. One of the methods that the author considers suitable in teaching PAI is by using the *laboratory discovery learning* model.

PAI learning requires students not only to understand the theory, but to be able to practice it in their daily lives. Therefore, educators must be able to make learning come alive and create conditions conducive for students to feel comfortable to receive and respond to the material provided by the teacher. If science learning is done in the science laboratory, language learning is done in the language laboratory, ICT is done in the computer laboratory, then PAI learning can also be done in the prayer room so that students can practice it directly..

Table 3. Paired sample statistics test result

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre-test	74.16	32	13.768	2.434
	Post-test after applying the Laboratory Discovery Learning Method	77.84	32	14.328	2.533

There is a difference between the pre-test and post-test, this can be seen in the average pre-test score of students who obtained an average of 74.16. The average level of student acquisition after using the laboratory *discovery learning* method is

77.84. Based on the paired sample t-test, there is a difference in student learning outcomes after using the *laboratory discovery learning* method..

Table 3. Paired samples correlations test result

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Pre-test & Post-test after applying Laboratory Discovery Learning Method	32	.981	.000

The post test of PAI learning outcomes using the *laboratory discovery learning* method has a higher average than before the application of the *laboratory discovery learning* method. Quantitative data shows that the learning strategy has a fairly significant effect on learning outcomes. not only is it easy to use and practical, but it also helps teachers improve student performance. In accordance with the test results of the existing hypotheses, it is known that the first hypothesis proves that the application of the *laboratory discovery learning* method in PAI teaching is considered effective. It can be seen from the post-test results of students increased after implementing the *laboratory discovery learning* method than before being subjected to the method. Based on paired sample t-test testing on SPSS 26 software, it is known that H0 is rejected and H1 is accepted because the Sig value. (2-tailed) 0.000 <0.05, so it can be said that there is a difference between the pre-test and post-test..

Table 4. Paired sample test result

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 & Post-test after applying Laboratory Discovery Learning Method	-3.687	2.822	.499	-4.705	-2.670	-7.392	31	.000

The level of achievement of learning outcomes is strongly influenced by many factors. This is also the case with the PAI learning outcomes carried out at Sunan Giri Junior High School in Wagir Malang. The results of this study confirm that the application of the *laboratory discovery learning* method is quite influential in increasing students' understanding of the material ***"Glorifying Allah SWT by Submitting to His Commands."***

In the author's opinion, this method is suitable for use in deepening the material at hand to ensure that students can remember the material taught. That way, learning activities run smoothly and learning achievement indicators can be achieved in accordance with the planned objectives. At the same time, it makes the learning atmosphere active and not boring. However, if the teacher always uses the *laboratory discovery learning* method in learning then over time, the situation is not conducive

because of the wider range of space and requires innovation as well as collaboration on the method to keep students focused on learning and can understand the material well so as to improve learning outcomes. In addition, at the end of the lesson the teacher provides clarification and reviews the material to avoid misunderstandings from students in capturing the material. In this case, the use of *laboratory discovery learning* method in learning is not limited to PAI learning only, but can also be implemented in other subjects..

Conclusion

Considering the problem of boredom experienced by students during PAI learning, the researcher tried to apply the laboratory discovery learning method. Through the research that has been conducted, the results of the analysis show that the *laboratory discovery learning* method is effectively applied in PAI learning. This can be seen and measured from the improvement of learning outcomes after applying the method based on the results of the paired sample t-test on SPSS 26 software, it is known that H0 is rejected and H1 is accepted because the value of Sig. (2-tailed) 0.000 <0.05, so it can be said that there is a difference between the pre-test and post-test of students taught with *laboratory discovery learning* method in class VII SMP Sunan Giri Wagir, Malang. In delivering the material, it should be interspersed with motivation and application of other methods so that participants remain enthusiastic about learning and can be conditioned and can achieve the learning objectives to be achieved.

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