

Learning Transformation: Increasing Student Achievement through Discovery Learning

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ABSTRACT

This research aims to improve student learning outcomes by applying strategies of Discovery learning in class IX-E students at SMP Muhammadiyah 8 Batu. Based on Bruner's theory, this research uses a qualitative approach with Classroom Action Research (CAR) types. Data was collected using observation techniques, documentation, and learning results tests from informants of 30 class IX-E students at SMP Muhammadiyah 8 Batu. This CAR was carried out in two cycles, each consisting of planning, implementation, observation, and reflection stages. The research results show that the implementation of the Discovery learning strategy in the material on "*understanding the postulates of naqli and the wisdom of believing in the akhirat*" by students of Class IX-E of SMP Muhammadiyah 8 Batu showed positive results with indicators: (1). Result of the average class score increased to 85, with the percentage of students achieving Minimum Completeness Criteria (MCC) of 90%; (2). Students' enthusiasm and motivation in learning increased, as seen from active participation in discussion activities; (3). The Discovery learning strategy has proven effective in helping students discover the concept of *iman* independently and understand it better. Therefore, it is recommended that the application of this strategy be further developed in learning PAI subjects at SMP Muhammadiyah 8 Batu.

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1. INTRODUCTION

The main problems in the world of education so far include the strong dominance of memorization and monologue methods in the learning process (Verduijn & Berglund, 2020), teaching materials that are too dense (Rao & Murty, 2019), and teachers' lack of attention to variations in the use of learning strategies (Suprihatiningrum, 2013). Therefore, at the learning implementation stage -especially in Islamic learning- a solution is needed to present the material to students well so that effective and efficient learning results can be obtained (Lumatauw, L., Wollah, M., & Tulangow, 2020). However, in context, theoretically, three main components in learning influence each other in the teaching and learning process. These three components are learning conditions, learning strategies, and learning outcomes (Suhandi & Robi'ah, 2022). Regarding these three components, teachers must be able to combine and develop them so that learning activities can run as expected, learning objectives are achieved and maximum results are achieved (Badawi, 2023; Djalilah, Muzakar, Suhardi, & Kartiko, 2024). Therefore, with the abilities and skills teachers possess, it is hoped that they will be able to make learning more interesting and enjoyable to obtain optimal learning results (Adriana, Santoso, Adijaya, & Srinio, 2023; Alwi & Mumtahana, 2023; Amzat, 2022).

Teachers' skills in the learning process are important and must be improved continuously and sustainably. These skills include the skills to plan, implement, and evaluate learning (Agus, Juliadharma, & Djamaluddin, 2023; Kasmah, Syam, Tajuddin, Hafid, & L, 2023). The effort in question is the use of appropriate strategies in learning to improve the quality of the teaching and learning process. Therefore, as a teacher, you must be able to determine the most appropriate strategy to use in learning, although it cannot be denied that in using this strategy, there are shortcomings and limitations (Nurfadillah & Mustika, 2024).

One of the effective learning strategies teachers can use in implementing the learning process is the discovery learning strategy. This strategy is through the active search for knowledge by humans and automatically provides the best results in this strategy (Nasution & Nasution, 2023). The discovery learning method creates an active learning process where material or content is not provided directly by the teacher at the beginning of learning (Syaiful, 2022). Students are asked to find ways to solve problems during the learning process. It can be further explained that this learning model is how students understand concepts, meanings, and relationships through an intuitive process to finally conclude (Medani, Suharto, Taryana, & Sumarmi, 2022). Discovery learning occurs when students are involved primarily in using their mental processes to discover several concepts and principles (Cahyaningtyas, Wardani, & Yudarasa, 2023). Discovery learning is done through observation, classification, measurement, prediction, determination, and inference activities. The above process is called the cognitive process or the mental process of assimilating concepts and principles in the mind (Iwantoro, Rahmat, & Haris, 2022).

Likewise, the problem that occurs at S.M.P. Muhammadiyah 8 Batu, the issue that happens in class IX-E students, is the low learning outcomes of students in Islamic Religious Education subject matter, especially the material "Faith in the Last Day." Students' weak abilities do not solely cause low student learning outcomes but also the teacher's lack of ability to attract students' interest in better mastering the learning material presented. This condition is because one of the teacher's duties is to present content/learning materials, emphasizing the task of Planning and implementing teaching. Therefore, teachers must have knowledge and technical teaching skills in addition to mastering the knowledge or materials to be taught.

Starting from the importance of changing learning and increasing educational output, research on improving student learning outcomes on "Faith in the Last Day" through the

Discovery learning strategy for class IX students at S.M.P. Muhammadiyah 8 Batu needs to be implemented. Strategy implementation Discovery learning in learning Islamic Religious Education is hoped to increase students' attention to the material being taught to achieve learning objectives optimally. Learning that was previously boring for students and seemed merely normative can now change its role to learning that is more enjoyable for students, facilitates collaboration skills, increases their critical thinking abilities, and can increase students' motivation, learning outcomes, and longer retention of learning material. Research on implementing the Discovery learning strategy in the material "Faith in the Last Day" in class IX-E SMP Muhammadiyah 8 Batu can provide a better understanding of the positive impact of this strategy on student learning outcomes. The results of this research can provide a solid basis for implementing techniques for Discovery learning widely in learning the material "Faith in the Last Day" in various schools and other educational levels.

2. METHODS

This research is Classroom Action Research (CAR), which aims to fix various real and practical problems in improving the quality of learning in the classroom, which are experienced directly in interactions between teachers and students who are learning. The main objective of this CAR is to improve and increase the quality and professionalism of teachers in handling the teaching and learning process so that learning objectives can be achieved optimally. Based on the problem formulation, this research aims to improve PAI learning outcomes for the "Faith in the Last Day" material at SMP Muhammadiyah 8 Batu.

Because time was limited, the action was carried out in two cycles. The cycle process model used refers to the CAR model of Stephen Kemmis and Robin Mc. Taggart has four (four) stages of activity in each cycle: planning, implementing actions, observation, reflection, and evaluation.

For further understanding, researchers visualized the action pattern through the following figure:



Figure 1. Classroom Action Research Action Patterns

3. FINDINGS AND DISCUSSION

FINDINGS

The implementation of this research consisted of two cycles with two meetings. The first meeting lasts 3x40 minutes. For learning and evaluation activities, the second meeting, which will last 3x40 minutes, is for cycle evaluation. Each cycle is carried out by the changes to be achieved, so this action research is carried out in two cycles.

The first cycle consists of planning, implementation, observation, and reflection. The planning stage begins with preparing the learning model that will be implemented through the Discovery of learning strategies for the PAI subject sub-material "Faith in the Last Day" in class. Next, develop a learning model scenario by creating a lesson plan, compiling a learner observation sheet or *Lembar Observasi Peserta Didik* (LOP), compiling a quiz (test), and compiling evaluation questions on the material "Faith in the Last Day," which will be tested in writing on IX-E students at SMP Muhammadiyah 8 Batu, as well as planning the formation of groups of students consisting of 6 people taken randomly.

The next stage is implementing the action. At this stage, learning is delivered according to the planned method, namely the discovery learning strategy, which involves inviting students to the prayer room or class with the textbook guide that has been prepared. Activities at this stage include: (a). Students have been given the task of reading teaching materials at home before the material is discussed with the aim that students have initial knowledge about the material to be studied; (b). Researchers who also act as teachers carry out the task of dividing groups consisting of 6 students. Each group consists of boys and girls, and then each group appoints one child as a guide, and the others follow, of course, still with the teacher's guidance; (c). Other students observe and prepare their group's turn; (d). Students make conclusions, and the teacher provides feedback or completes students' answers.

When the implementation phase of the activity has been completely designed, the next stage is observation using an observation format. At this stage, the teacher observes the implementation process practiced by students using an observation format and, after knowing the results, is used to solve problems that occur during the action. Finally, the reflection stage involves assessing the results of actions using the LOP format, evaluating the actions that have been carried out, and improving the implementation of actions according to the evaluation results for use in the next cycle.

A second cycle, implemented after the evaluation of action I, was carried out by the researcher observing the process of implementing the Discovery learning strategy PAI subject sub-material "Faith in the Last Day." The steps in the second cycle are as follows: 1). Planning, carried out by identifying specific problems experienced in the previous cycle, looking for alternative problem solutions, and creating action units (assisting); 2)—implementation of actions. The activities carried out at this stage are the development of action plan II by carrying out actions to increase students' enthusiasm for learning through the implementation of learning strategies, Discovery learning PAI subjects to improve the learning outcomes of class IX-E students at SMP Muhammadiyah 8 Batu as initially planned; 3). Observation. The researcher recorded all the processes in the learning model actions, discussed the action II carried out, and noted weaknesses and inconsistencies between scenarios and responses from students that might not be expected; 4). Reflection in the form of an evaluation test on the application of learning strategies Discovery learning PAI subject sub-material "Faith in the Last Day" to improve the learning outcomes of class IX-E students at SMP Muhammadiyah 8 Batu. At this stage, an analysis process is carried out on the results of observations to obtain a description of the impact of the actions taken and what needs to be improved so that reflection results can be obtained on the activities that have been carried out.

DISCUSSION

This Classroom Action Research (CAR) aims to find solutions to problems with the quality of learning in class IX-E of SMP Muhammadiyah 8 Batu, especially in the PAI subject, the "Faith in the Last Day" sub-material." Therefore, the solution stages carried out through 2 (two) cycles are carried out as the stages described by the researcher in the "Research Methods" sub-section. Details of the CAR stages in question include:

Classroom Action Research (Cycle 1)

Planning

In the initial stage, researchers carry out several research plans before conducting research. *First*, the researcher asks for permission and submits a research request to the leadership of SMP Muhammadiyah 8 Batu City, the exact location where the researcher carries out his daily activities. Researchers also explain the aims and objectives of conducting research. *Second*, permission was given to the researcher to carry out the research. *Third*, researchers prepare complete research files and several data collection instruments, including teaching aids. Once all the equipment is ready, the research continues to the implementation stage.

Implementation

In learning activities, researchers use learning strategies such as discovery learning, narrated in the Learning Implementation Plan -read: *Rencana Pelaksanaan Pembelajaran* (RPP). At this implementation stage, the researcher presents a picture of an animal; then, students ask questions related to the picture. Researchers chose six questions to be used as discussion material. There are several stages in the process of implementing this learning, namely:

Introduction

The preliminary stage of learning the sub-material "Faith in the Last Day" concerns apperception and preparation of teaching aids. In this PTK context, researchers consider the preparation of props and other tools in the form of picture illustrations or visual displays such as relevant films. This learning process is carried out using several methods.

First, Interactive lectures, namely by explaining stories through pictures or visual displays such as contextual and contemporary films.

Second, after the teacher provides a stimulus in the form of material, students discuss it in groups or pairs. The purpose of the debate is for students to give input to each other and strengthen their understanding of the material they receive. Each student is equipped with an observation sheet and can gain the correct knowledge.

The next stage of apperception is for students to say greetings and say prayers together. The teacher will check presence or absence, neatness of dress, position, and seating according to learning activities. The teacher greets the students and conveys the aims and objectives of the learning.

Implementation

At the implementation stage, the teacher begins by presenting mind mapping "Faith in the Last Day" lesson material for students. Through the previous apperception stage, students initially understand the material to be taught. Presentation mind mapping in the form of images it can strengthen the initial concepts and understanding that students already have. The following is a visualization of the material concept "Faith in the Last Day":

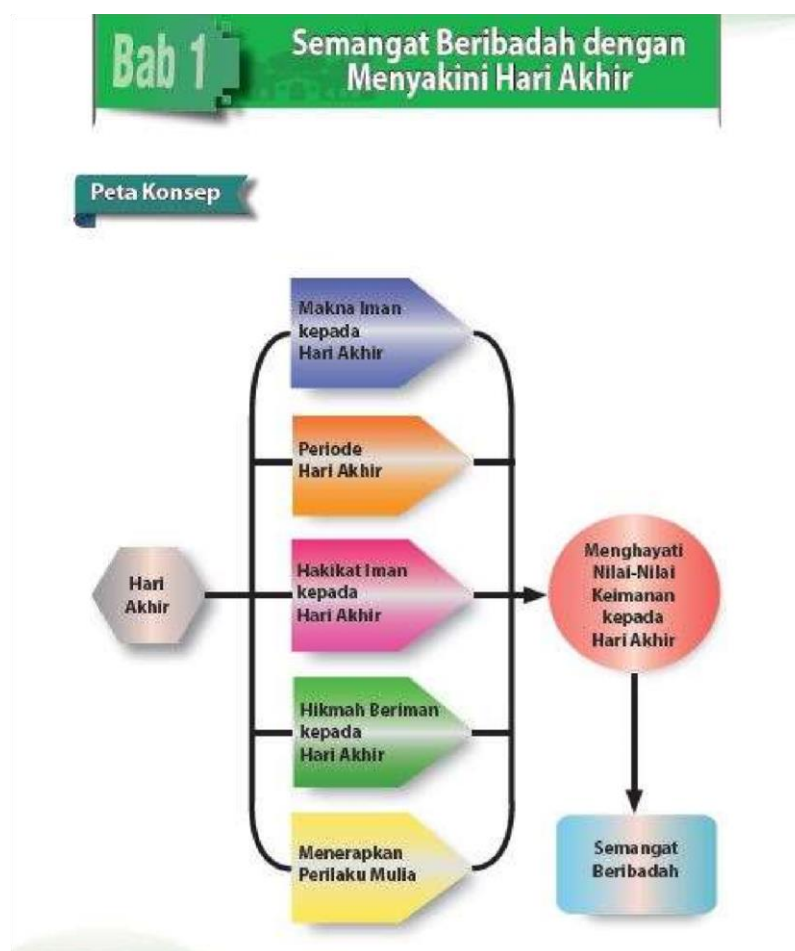


Figure 2. Mind mapping of “Faith in The Last Day” material

In terms of technical implementation, the presentation of the images is accompanied by a verbal explanation from the teacher about the knowledge being learned. In this case, students listen to the explanation of the meaning of belief in the last day. They were asked to read together the *naqli* proposition about believing in the previous day as a cognitive stimulus for implementing the Discovery learning strategy.

Next, students work in groups (the power of two) and do rote listening with their classmates. This step strengthens the students' initial concepts and is implemented as repetition memorization of *naqli* arguments about believing in the Last Day.

In the next stage, students in groups return to answer comments about the meaning of the last day and write the content from Q.S. Al-Zalzalah, Al-Qari'ah, and Al-Hajj. The teacher's role is to provide stimulus questions by motivating students to actively ask, for example: "What is the wisdom of believing in the last day?"

These questions were then asked to the students individually or in groups; the students held discussions to respond to and answer several of these questions, including questions to provide examples of behavior that reflects Faith on the last day. The teacher allows each group to read again and pay attention to the various types of doomsdays, the previous day's names, and Q.S. al-Zalzalah verses 1-2. Each group of students must present the results of their discussion, and other groups ask questions. In the context of strategy implementation Discovery learning Currently, the teacher's task is to ensure that students'

questions are no longer in the question corridor Low. Order Thinking Skills (LOTS), such as "what" or "who," but stimulates them to ask questions in a critical-analytical dimension that describes the level of High Order Thinking Skills (HOTS), such as "why" and "how."

The next stage of implementation is for students to discuss the wisdom of believing in the last day. They are allowed to ask questions about things they have observed; if they experience difficulties, the teacher provides guidance and guidance (stimulus) so that students find out by asking questions. In this process, the teacher gives students an explanation as addition and reinforcement (feedback) about the meaning of the content of the image/illustration. Responses from students or other groups are very much needed in this session.

The final stage of implementing the "Faith in the Last Day" learning material is inviting students to conduct an attitude analysis process reflecting Faith in the Last Day. After they could name several of the behaviors in question, each group discussed the meaning contained in the Q.S. Al-Qori'ah, QS. Al-Zalzalah and Q.S. Al-Hajj talk about "Faith on the last day" while identifying the meaning of the previous day and what events occur.

Conclusion

The closing session involves providing evaluations and reflections on the material that students have studied. At the next meeting, the teacher assigns the task of observing or reading from information sources related to the learning material. Next, the teacher rechecks the students' completeness by taking attendance. Students are invited to pray together, and the teacher ends the lesson and closes the class.

Observation

Researchers observed students' behavior and attitudes during PAI learning with the sub-material of the wisdom of believing in the last day through learning strategies, such as discovery learning. They observed the teacher's teaching skills. The results of observations of student learning activities in class can be described as follows:

At the level grouping, there are no significant obstacles. All students are happy to join the group, determined by the teacher immediately. Next, students prepare for what they will learn today. Students begin to collect information, analyze data, and draw conclusions related to the problem being investigated. In this stage, each student provides input on each activity, and students discuss with each other, clarify, and unite ideas and opinions.

The next stage is presentation; in this stage, each group presents the results of their work in front of the class; groups that are not presenters are actively involved as listeners and evaluate, clarify, ask questions, or respond to the topics presented. Next, the students and the teacher evaluate today's learning and End by working on evaluation test questions for each student.

Reflection

Based on data on the learning outcomes of Class IX-E students for the previous year's PAI subject in the material "Faith in the Last Day," it turns out that the results still contain many shortcomings, including the lack of completion of the learning process for Class IX-E students at SMP Muhammadiyah 8 Batu.

The student's cognitive learning outcome scores were obtained from the essay test where the questions had previously been tried. From the ten essay question items that had been tried out, all the questions were valid or fulfilled the requirements to be used as an achievement test

tool. The results of the initial test on the wisdom of belief on the last day can be seen in the table below:

Table 1. Frequency of Learning Outcome Scores

No	Scores	Frequency	Percentage
1	0 - 67	10	45%
2	68 - 100	11	55%
Total		21	100%

Source: Obtained Data

Based on the score data above, it can be seen that in cycle I, there were 30 students in Class IX-E of SMP Muhammadiyah 8 Batu, and only 11 students got scores above the minimum completion score. A total of 10 students, or 45%, obtained scores below the completion score limit, namely below 65.

Table 2 . Evaluation Test Results

Types	Test Result
The lowest scores	40
The highest scores	90
Scores average	67,22
Students who successfully complete	55%

Source: Obtained Data

Analysis of the evaluation results from student evaluation tests showed that the average score for students' ability to answer questions correctly was 67.22, which was still below the average score desired by researchers and schools, namely 68. Meanwhile, the percentage of students who completed the material was large. Faith on the last day is only 55%, and student completion is expected to reach more than 75% from the school. From the analysis of the evaluation tests, further action was taken to improve understanding, learning outcomes, and student activities in teaching and learning activities, especially for material on the wisdom of believing in the last day.

From the results of the cycle one evaluation test in the table above, it can be concluded that mastery of the material in understanding the daily naqli and the concept of Faith on the last day by Class IX-E students at SMP Muhammadiyah 8 Batu still needs to The existence of several indicators that still have an answer portion of less than 75% indicates that students still need to understand several indicators of learning material about the wisdom of believing in the last day.

Classroom Action Research (Cycle 2)

Planning

At the planning stage for Cycle 2, revisions were made based on reflections from Cycle 1. Steps taken included: *First*, refining student worksheets (LKS) to increase active participation. *Second*, Increasing the use of interactive learning media. *Third*, providing more time for

exploration and group discussion in applying discovery learning strategies to the material Faith in the Last Days.

Providing additional material related to the topic of Faith in the Last Day, which is connected to the context of daily life, and grouping students based on the results of Cycle 1 to increase collaboration between students.

Based on the results of reflection and evaluation in Cycle 1, several aspects were found that needed to be improved to achieve learning objectives optimally. Therefore, planning in Cycle 2 will focus on enhancing learning with discovery learning strategies. The following are the details of planning in Cycle 2: 1) Learning objectives. At this planning stage, there are three learning objectives to be achieved, including Improving student learning outcomes in the material Faith in the Last Days, encouraging students' active participation in the learning process by implementing strategies for discovery learning, Developing students' critical and collaborative thinking skills through group discussions and independent exploration. 2) Learning material, namely "Faith in the Last Day" with sub-topics: Understanding Faith in the Last Day and the Influence of Faith in the Last Day in Everyday Life. 3) Learning Steps with strategies discovery learning, among others:

Introduction (10 minutes): In the introductory stage, the teacher opens the lesson by giving a brief introduction about the importance of Faith in everyday life. Next, the teacher provides trigger or stimulus questions to arouse students' curiosity, such as: "How can faith in the last day affect how we behave in everyday life?" In the next stage, the teacher explains the learning objectives that will be achieved at the meeting.

Core Activities (60 minutes): The steps that will be taken during the core activities include exploration by the teacher dividing students into several small groups (4-5 people per group). Next, each group is given a worksheet containing problems or questions they must explore and find answers to independently.

Group Discussion: Students work together in groups to find answers to given questions. Each group member participates in contributing ideas and thoughts. Meanwhile, the teacher guides groups that need help but does not provide direct answers; instead, the teacher encourages students to find the answers themselves.

Group Presentation: At this stage, each group is asked to present the results of their discussion in front of the class. Other groups are allowed to ask questions or provide responses to the presentation given.

Concept Strengthening: The teacher provides feedback and corrects concepts that still need to be corrected or understood by students. In addition, the teacher emphasizes essential points from the material that students have studied.

Closing (10 minutes): The teacher asks students to conclude the material that has been learned. The teacher then closes the learning by giving a short reflection on the importance of Faith in everyday life and motivating the students to continue to improve their understanding of Faith on the last day. Finally, the teacher gives homework related to the material of Faith on the previous day to deepen students' understanding.

Assessment Instrument: Cognitive Assessment (Written Test): On the last day, written evaluation questions will be given to measure students' understanding of the concept of Faith and the pillars of Faith. **Affective Assessment: Observations** regarding students' attitudes during the learning process, such as respect for friends' opinions, enthusiasm, and activeness

in group discussion activities. Psychomotor Assessment: Assessment of students' ability to express opinions, work together in groups, and make presentations in front of the class.

Learning Resources: References that are learning resources include: (a). Class IX Islamic Religious Education Book; (b). Student Worksheets (L.K.) that have been updated based on Cycle 1 evaluation; (c). Al-Quran and Hadith are relevant to the material of Faith in the last days; (d). Interactive learning media such as short videos about Faith the previous day.

Tools and materials: Tools and materials needed for implementing cycle two learning include Student Worksheets (LKS), an LCD projector to display visual material (if required), and material cards for group discussions

Follow-up: If, in Cycle 2, there are still students who need to reach the Minimum Completeness Criteria (KKM), the teacher will provide additional guidance in small groups or individually. The teacher will further evaluate the effectiveness of the strategy discovery learning in improving student learning outcomes.

Implementation of Action

Learning actions are carried out according to the prepared plan. The learning activities carried out in Cycle 2 are as follows: (1). The teacher opens the lesson with a trigger question related to the concept of Faith on the last day; (2). Students work in groups to discover the central idea of belief on the previous day through exploration and problem-solving (according to strategy discovery learning; (3). Students actively discuss and present group results; (4). Teachers provide direct feedback during learning activities; (5). The lesson closes with conclusions and reflections by students.

Observation

In the observation stage of Cycle 2, observations were made of student learning activities. The observation results show a significant increase in several things: (1). Active participation of students in group discussion activities; (2). A better understanding of the concept of Faith on the last day compared to Cycle 1; (3). Cooperation between students is more conducive, and they collaborate well; (4). Students' courage in asking questions and providing opinions. Observers note that strategy discovery learning succeeded in increasing students' enthusiasm for studying the material about Faith in the Last Days, with many students actively exploring information independently.

Reflection

Based on the observation and data analysis results in Cycle 2, the reflection carried out is as follows: *First*, Student learning outcomes have increased significantly. From the evaluation results, the average class score increased to 85, with the percentage of students achieving the Minimum Completeness Criteria (K.K.M.) of 90%. *Second*, Students' enthusiasm and motivation in learning increased, as seen from active participation in discussion and question-and-answer activities. *Third*, strategy Discovery Learning has proven effective in helping students discover the concept of Faith independently and understand it better.

However, several aspects need to be considered. Some students still need further guidance directing the discussion process to stay focused. Apart from that, efforts need to be made to use more varied learning media to attract more students' attention. Thus, implementing Cycle 2 is an effort to improve learning outcomes regarding Faith in the End Times with Strategy Discovery Learning in Class IX-E students at SMP Muhammadiyah 8 Batu, which has shown positive results.

4. CONCLUSION

Based on the research results, implementing the Discovery learning strategy at S.M.P. Muhammadiyah 8 Batu City showed positive results. However, development efforts are still needed through variations in the research instruments used. Through the cycle implemented in Classroom Action Research (PTK), Discovery learning can improve understanding, learning outcomes, and student activities in teaching and learning activities, especially for material on the wisdom of believing in the last day.

Thus, Discovery learning has proven to be an effective learning strategy. Moreover, this strategy could be developed further to improve learning outcomes and student engagement. Therefore, it is recommended that this strategy be implemented and developed simultaneously to be applied in learning other subjects at S.M.P. Muhammadiyah 8 Batu City and other schools with similar student characteristics. This research's limitations lie in several aspects, including the limitations of the sample and methods used by researchers. Based on this, further research is needed that accommodates achievements in Discovery learning in the learning process with more varied cases.

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