Experimental Learning Strategies in Improving the Quality of Learning in Islamic Religious Education

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Abstract
This study aims to analyze the implementation of experimental learning strategies in improving the quality of Islamic Religious Education learning at UPTD SDN 267 Pincengpute. Experimental learning strategies are learning methods that emphasize students' direct experiences through experiments and observation activities to build in-depth understanding of concepts. This study uses a qualitative descriptive method of analysis with data collection techniques through observation, interviews, and documentation. The subjects of the study were teachers and students of grade V at UPTD SDN 267 Pincengpute. The results of the study show that the implementation of experimental learning strategies in PAI learning can increase students' activities, motivation, and understanding of learning materials. The stages of implementing experimental learning include planning, experiment implementation, observation, data analysis, and conclusion. The advantages of this strategy include improving students' critical thinking skills, creativity, and scientific skills. However, there are several limitations such as requiring longer time, adequate laboratory facilities, and teachers' readiness to design experiments that are in accordance with PAI materials. This study recommends the importance of improving teachers' competence in designing contextual experimental learning and improving learning support infrastructure.
Keywords: Experimental Learning Strategies, Islamic Religious Education, Learning Quality

INTRODUCTION

Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential. In the context of national education, Islamic Religious Education (PAI) has a strategic role in shaping the character and personality of students who have faith, piety, and noble character. However, PAI learning in schools still faces various challenges, especially related to learning methods that tend to be conventional and do not actively involve students in the learning process (Majid, 2017). This has an impact on students' low motivation and understanding of PAI learning materials.

The problem of PAI learning that is still teacher-centered causes students to become passive and lack the development of their critical thinking skills (Mulyasa, 2016). Learning that only emphasizes on memorization and theoretical aspects without providing direct experience to students makes the learning material abstract and difficult to understand. Therefore, innovation in learning strategies is needed that can activate students and provide meaningful learning experiences. One of the learning strategies that can be applied is the experimental learning strategy that emphasizes experiential and discovery-based learning.

Experimental learning strategies are learning methods that provide opportunities for students to conduct experiments, observe phenomena, collect data, analyze, and draw their own conclusions based on the results of the experiments conducted (Sanjaya, 2016). In the context of PAI learning, experimental strategies can be applied in various materials such as thaharah (purification), prayer, zakat, and other practical aspects that require proof and direct experience. Through experimental learning, students not only listen to and memorize theories, but also feel, experience, and prove for themselves the concepts learned, so that learning becomes more meaningful and effective.

Several previous studies have shown that the application of experimental learning strategies has a positive impact on student learning outcomes (Arifin, 2017). Experimental learning can improve students' learning motivation, critical thinking skills, creativity, and

science process skills. In addition, experimental learning can also increase students' retention or memory of learning materials because it involves direct experience and multiple senses in the learning process (Fathurrohman, 2015). However, the implementation of experimental learning strategies in PAI learning has not been widely carried out and researched in depth, especially at the elementary school level.

UPTD SDN 267 Pincengpute is one of the elementary schools that seeks to improve the quality of PAI learning through the implementation of various innovative learning strategies, including experimental learning strategies. Based on initial observations, PAI teachers at the school have begun to implement experimental learning in some PAI materials, although they still face various obstacles and challenges. Therefore, this research is important to analyze in depth the implementation of experimental learning strategies in PAI learning, including basic concepts, characteristics, stages of implementation, advantages, limitations, and best practices that can be used as models for other schools.

This study uses a qualitative descriptive analysis approach to explore and describe the phenomenon of implementing experimental learning strategies in PAI learning in depth and comprehensively (Sugiyono, 2019). The focus of the research includes the concept and characteristics of experimental learning, the stages of implementation, advantages and limitations, and implementation practices in the field. Research data was collected through learning observations, in-depth interviews with teachers and students, and documentation of learning activities. Data analysis is carried out inducively to produce research findings and conclusions that can make theoretical and practical contributions to the development of quality PAI learning.

The results of this study are expected to provide a comprehensive overview of the implementation of experimental learning strategies in PAI learning, provide practical guidance for teachers in designing and implementing experimental learning, and provide policy recommendations for schools and education stakeholders in an effort to improve the quality of PAI learning. Thus, this research has important significance both from theoretical, practical, and policy aspects in the context of developing innovative, effective, and meaningful PAI learning for students.

In line with the experimental learning strategy applied in PAI, experiential learning journals become an important medium to capture students' direct experiences, reflections, and changes in understanding and attitude after participating in learning activities. Through these journals, students are encouraged not only to record the procedural stages of the experiments carried out in PAI materials (such as thaharah, prayer, and zakat), but also to reflect on the meaning of the activities, the Islamic values internalized, and how these experiences influence their daily behavior. For teachers, experiential learning journals provide richer qualitative data regarding students' engagement, difficulties, and spiritual-affective development, so that PAI learning is not limited to cognitive achievement, but also touches the domains of attitude and character formation. The limited use and study of experiential learning journals in PAI at the elementary school level shows the need for in-depth analysis of their role in supporting the effectiveness of experimental learning strategies and the realization of meaningful and value-based learning for students.

METHODS

This research uses a qualitative approach with a type of descriptive research analysis. The qualitative approach was chosen because this study aims to explore and describe the phenomenon of implementing experimental learning strategies in PAI learning in depth and holistic (Sugiyono, 2019). Qualitative research descriptive analysis allows researchers to describe, analyze, and interpret data in depth based on the perspective of participants and the natural context in which the phenomenon occurs.

This research was carried out at UPTD SDN 267 Pincengpute in the even semester of the 2024/2025 school year for three weeks with the subject of PAI teachers and 18 grade V students. Data analysis uses the Miles and Huberman model through the stages of data reduction, data presentation, and inductive conclusion drawn. The validity of the data is guaranteed through source triangulation, method triangulation, and member checking.

RESULTS AND DISCUSSION
1. Basic Concepts and Characteristics of Experimental Learning

Based on the results of literature review and research data analysis, experimental learning strategies can be defined as a learning method that provides opportunities for students to conduct experiments by experiencing and proving something learned for themselves (M. Afandi, E. Chamalah, 2013). In experimental learning, students are given the opportunity to experience themselves or do it themselves, follow a process, observe an object, analyze, prove, and draw their own conclusions about a certain object, state, or process.

Experimental learning has a philosophical foundation of constructivism that emphasizes that knowledge is built by students themselves through experience and interaction with the environment (Trianto, 2014). Jean Piaget's learning theory of discovery learning and David Kolb's learning theory of experiential learning are the theoretical basis for experimental learning. In experimental learning, students not only receive information from the teacher but actively construct knowledge through the process of exploration, experimentation, and reflection.

The characteristics of experimental learning include several important aspects (Darmadi, 2017).

a) Student-centered: Students become active subjects in learning, not passive objects that only receive information from teachers.

b) Hands-on experience-based: Students learn through concrete experiences by conducting hands-on experiments or experiments.

c) Developing science process skills: Includes the skills of observing, classifying, measuring, predicting, inferring, and communicating results.

d) Encourages critical and creative thinking: Students are trained to analyze data, create hypotheses, and solve problems creatively.

e) Meaningful learning: Knowledge gained through experimentation is more memorable and long-lasting because it involves direct experience and multiple senses.

In the context of PAI learning, experimental strategies can be applied in various practical materials such as thaharah (purification), ablution and tayamum procedures, prayer procedures, zakat, and other practical worships (Roestiyah, 2012). For example, in the thaharah material, students can conduct experiments to prove the difference between absolute water and mutanajis water through direct observation of the properties of water. In the ablution material, students can directly practice the correct ablution procedures while observing the order and harmony of ablution.

1. Stages of Experimental Learning Implementation

Based on the results of observations and interviews at UPTD SDN 267 Pincengpute, the implementation of experimental learning in PAI is carried out through several systematic stages which include planning, implementation, and evaluation (Suprijono, 2015). Each stage has specific activities and focuses to ensure that experimental learning runs effectively and achieves learning goals.

The Planning Stage includes several important activities:

a) Competency and material analysis: Teachers identify basic competencies and PAI materials that are appropriate for experimental learning. Not all PAI materials can be

taught by experimental methods, so teachers need to selectively choose suitable materials.

b) Formulation of learning objectives: Teachers formulate learning objectives that are specific, measurable, and include cognitive, affective, and psychomotor aspects.

c) Experiment design: The teacher designs the experiments that students will perform, including specifying tools and materials, experimental procedures, and student worksheets.

d) Preparation of tools and materials: The teacher prepares all the necessary tools and materials for the experiment, ensuring their availability and safety of use.

e) Preparation of lesson plans: Teachers prepare a Learning Implementation Plan (RPP) that covers all stages of experimental learning in detail.

The Implementation Stage consists of several learning steps (Wena, 2014).

1. Orientation and motivation: The teacher opens the learning by conveying learning objectives, relating the material to daily life, and motivating students to be active in experiments.

2. Stimulus: The teacher gives questions or problems that will be answered through experiments, stimulating students' curiosity.

3. Hypothesis formulation: Students are invited to make predictions or hypotheses about the results of the experiment based on their initial knowledge.

4. Experiment implementation: Students conduct experiments in groups with the guidance of the teacher, following the established procedure.

5. Observation and data collection: Students observe the process and results of experiments, recording data and findings in worksheets.

6. Data analysis: Students analyze the data that has been collected, compare it with the initial hypothesis, and discuss the findings with the group.

7. Drawing conclusions: Students draw conclusions based on the results of experiments and data analysis that have been carried out.

8. Class presentations and discussions: Each group presents the results of their experiments, followed by a class discussion to share findings and deepen understanding.

9. Reflection and reinforcement: The teacher provides reinforcement of concepts, corrects misconceptions if any, and connects the results of the experiment with the concepts of PAI learned.

10. Conclusion: The teacher and the students make a final conclusion, conduct a learning evaluation, and provide follow-up.

The Evaluation Stage includes the assessment of learning processes and outcomes. The assessment of the process is carried out through observation of students' activities during the experiment, including the skills of conducting experiments, group cooperation, and participation in discussions. Assessment of results is carried out through evaluation of experimental reports, group presentations, and concept comprehension tests. Teachers also conduct self-reflection on the implementation of learning for further learning improvement.

1. Advantages and Limitations of Experimental Learning Strategies

Based on the results of research and analysis of the implementation of experimental learning at UPTD SDN 267 Pincengpute, various advantages and limitations of experimental learning strategies in PAI learning were found (Hosnan, 2014). Understanding these advantages and limitations is important for teachers to be able to maximize learning effectiveness and anticipate obstacles that may arise.

The advantages of experimental learning strategies include:

a) Increase student activity and engagement: Experimental learning keeps students physically and mentally active, not just sitting and listening to the teacher's

explanations. Students are directly involved in the learning process through hands-on activities.

b) Develop critical and scientific thinking skills: Through experiments, students are trained to observe, analyze, hypothesize, prove, and draw conclusions. These high-level thinking skills are very important in everyday life.

c) Improves in-depth understanding of concepts: Learning through hands-on experience makes concepts more concrete and easy to understand. Students not only know the theory but also understand its application in a real context (Hamalik, 2014).

d) Increases motivation and interest in learning: Fun and challenging experiential learning can increase students' intrinsic motivation to learn. Students are more enthusiastic and enthusiastic in participating in learning.

e) Develop social and cooperative skills: Experiments conducted in groups train students to work together, communicate, and respect the opinions of others.

f) Improves retention or memory: Learning that involves multiple senses and hands-on experience makes information easier to remember and lasts longer in long-term memory.

g) Develop a scientific attitude: Students are trained to be objective, honest in reporting data, thorough, and open to criticism and opinions of others.

On the other hand, experimental learning strategies also have several limitations (Nurhadi, 2020).

a) Takes longer: Conducting experiments takes more time than the lecture or discussion method. This is an obstacle in the condition of limited learning time allocation.

b) Requires careful preparation: Teachers must prepare experiments carefully, including preparing tools and materials, designing procedures, and anticipating obstacles that may arise. Immature preparation can lead to ineffective learning.

c) Limited facilities and infrastructure: Not all schools have adequate laboratories or equipment to conduct experiments. This limits the types of experiments that can be carried out.

d) Requires high teacher competence: Teachers must have a strong understanding of concepts, good classroom management skills, and creativity in designing experiments. Not all teachers have this competence.

e) Difficulties in classroom management: Experimental learning that involves a lot of student activities can cause the classroom to become crowded and difficult to control if the teacher does not have good classroom management skills.

f) Not all materials are suitable for experimental methods: Some PAI materials that are abstract or theoretical in nature are difficult to teach with experimental methods. Teachers need to be selective in choosing appropriate materials.

g) Safety risks: Some experiments may involve potentially hazardous materials or procedures if not done correctly. The teacher must ensure the safety of the students during the experiment.

To overcome these limitations, teachers at UPTD SDN 267 Pincengpute implement several strategies, including: using simple tools and materials that are easy to obtain, conducting experiments in demonstration if the limitations of the tools, utilizing the surrounding environment as a learning resource, making clear and structured experimental guidelines, and conducting training and mentoring with fellow teachers to improve competence in designing experimental learning.

1. Implementation of PAI Experimental Learning at UPTD SDN 267 Pincengpute

The implementation of experimental learning strategies in PAI learning at UPTD SDN 267 Pincengpute has been carried out in several class V learning materials, especially in materials that are practical and allow experiments to be carried out (Ramayulis, 2015). Based

on the results of observations and interviews, there are several examples of the implementation of experimental learning carried out by PAI teachers in the school.

In the material of Thaharah (Purification), the teacher designed an experiment to distinguish absolute water and mutanajis water. Students were divided into several groups and given various water samples such as well water, rainwater, ablution water, used water for washing clothes, and water mixed with soap. Each group observed the color, smell, and taste of the water, then classified which water included absolute water and mutanajis water based on the criteria that had been studied. Through this experiment, students can concretely understand the difference between the two types of water and apply them in their daily lives.

In the ablution material, experimental learning is carried out with direct practice of the correct ablution procedure. Students are divided into small groups and take turns practicing ablution while observing and recording each pillar and sunnah of ablution (Sudjana, 2014). Teachers provide observation guides that contain a checklist of the pillars of ablution that must be observed. Each student in the group observes each other and gives feedback on their friend's ablution practice. Through this learning, students not only memorize the pillars of ablution but can also practice it correctly and understand the wisdom behind each ablution movement.

In the Prayer material, the teacher designed an experiment to understand the direction of the Qibla and how to determine it. Students are invited to observe the position of the sun at certain times, use a compass to determine the direction, and compare it with the direction of the qibla in the school prayer room. Students also conducted simple experiments to understand the concept of shadows and their relationship to prayer times. This learning provides a deeper understanding of the scientific aspects of prayer and fosters admiration for the greatness of Allah SWT.

The results of observations show that the implementation of experimental learning has a positive impact on students' learning activities and motivation (Rahmawati, 2018). Students seem more enthusiastic and active in participating in learning. The level of student participation in group discussions and presentations has also increased. Students are not shy to ask questions, give opinions, and share their experiences during experiments. Interaction between students becomes more intense, both in group work and in class discussions.

From the aspect of concept understanding, the results of the learning evaluation showed a significant increase. Students are not only able to mention the definitions and pillars of worship but can also explain the reasons, wisdom, and applications in daily life. The students' ability to analyze problems and provide solutions related to worship practices also increases. This shows that experiential learning is effective in developing a deep understanding of concepts and high-level thinking skills.

However, in its implementation, several obstacles are still found (Yamin, 2013). The main obstacle is the limitation of learning time which causes not all stages of the experiment to be carried out optimally. Teachers often have difficulty managing time between experiments, discussions, and evaluations. In addition, the limitations of tools and materials are also an obstacle, especially for experiments that require special tools. Classroom management is also a challenge in itself, especially when students conduct experiments in groups that cause the class to become crowded.

To overcome these obstacles, teachers make several efforts, including: planning more efficient time by allocating specific time for each stage, using simple tools and materials that are easy to obtain from the surrounding environment, conducting demonstration experiments for certain materials, making clear group work rules and procedures for better classroom management, and coordinating with the principal for the procurement of tools and materials Required learning.

The principal provides full support for the implementation of experimental learning by providing a budget for the procurement of learning tools and materials, giving teachers the

freedom to innovate in learning, and facilitating lesson study activities and sharing sessions between teachers to share experiences and best practices in experimental learning (M. Zainuddin, 2019). The support of the principal is very important in creating a school climate that is conducive to learning innovation.

CONCLUSION

The stages of implementing experimental learning include planning, implementation, and evaluation which are carried out in a systematic and structured manner. In the planning stage, teachers conduct competency and material analysis, formulate learning objectives, design experiments, prepare tools and materials, and prepare lesson plans. At the implementation stage, teachers facilitate students to conduct experiments through orientation steps, stimulus giving, hypothesis formulation, experiment implementation, observation, data analysis, conclusion drawn, presentation, and reflection. The evaluation stage is carried out to assess the learning process and outcomes and reflect on further learning improvements.

The advantages of experimental learning strategies include increased student activity and engagement, development of critical and scientific thinking skills, increased in-depth understanding of concepts, increased motivation and interest in learning, development of social and cooperative skills, increased retention or memory, and development of scientific attitudes. However, there are several limitations such as requiring longer time, requiring careful preparation, limited facilities and infrastructure, requiring high teacher competence, difficulties in classroom management, not all materials are suitable for experimental methods, and safety risks.

The implementation of PAI experimental learning at UPTD SDN 267 Pincengpute has been carried out on several materials such as taharah, ablution, and prayer with positive results. Experimental learning has been proven to increase students' activities, motivation, and understanding of learning materials. Students become more active, enthusiastic, and have a deeper understanding of PAI concepts. However, in its implementation, there are still several obstacles such as limited time, tools and materials, and classroom management that require creative solutions from teachers.

Based on the above conclusions, this study recommends several things: First, teachers need to improve their competence in designing and implementing experimental learning through training, workshops, and lesson studies. Second, schools need to improve facilities and infrastructure to support experimental learning such as the provision of tools and materials, flexible classroom arrangements, and the development of PAI laboratories. Third, teachers need to be more selective in choosing materials that are in accordance with experimental methods and integrating them with other methods for learning variations. Fourth, efficient time management and careful planning are needed so that all stages of experimental learning can be carried out optimally. Fifth, it is necessary to conduct further research on the effectiveness of experimental learning on other PAI materials and at different levels of education.

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