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Discovery Learning for Islamic Education Improvement: Evidence from Jambi Junior High School

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ABSTRACT
Learning outcomes among students in Islamic Religious Education (IRE) and Character Education at Junior High School Students at State Junior High School (SMPN) 7 Jambi City remain suboptimal, with the majority of students failing to achieve the Minimum Mastery Criteria (MMC). This condition indicates the necessity for innovative pedagogical models that can enhance students' active engagement and foster profound conceptual understanding. This study aims to analyze the implementation of the discovery learning model in IRE and Character Education instruction and its impact on improving student learning outcomes. The research employed a Classroom Action Research (CAR) design conducted over two cycles with ninth-grade students at SMPN 7 Jambi City, involving 32 participants. Each cycle encompassed planning, implementation, observation, and reflection phases. Data were collected through teacher and student observation sheets, learning outcome assessments, and documentation, subsequently analyzed descriptively using percentages and mean scores. The findings demonstrate enhanced teacher and student activities, progressing from "good" in Cycle I to "excellent" in Cycle II, accompanied by an increased percentage of students achieving MMC. These findings indicate that the implementation of discovery learning contributes positively to enhancing student engagement and learning outcomes in IRE and Character Education subjects. The contribution of this research lies in providing empirical evidence regarding the effectiveness of discovery learning within the context of religious education in secondary schools, which can serve as a reference for teachers, curriculum developers, and policymakers in designing more interactive and student-centered learning strategies.

KEYWORDS
Discovery Learning, Learning Outcomes, Islamic Religious Education, Character Education, Junior High School

INTRODUCTION

Education constitutes a fundamental process in shaping mature individuals who are knowledgeable, morally upright, and capable of fulfilling their roles as members of society. From an Islamic perspective, education holds paramount importance as it represents an obligation for every individual to seek knowledge and apply it in daily life. Islamic Religious Education (IRE) in schools functions to develop Muslim personalities characterized by faith, piety, and noble character, encompassing both personal and social domains (Sagala, 2017). However, field observations reveal that IRE instruction frequently encounters challenges related to low student active participation and uneven learning achievement distribution. This condition necessitates innovative pedagogical strategies that focus not merely on knowledge transfer but also on cultivating attitudes, skills, and learning motivation. Based on

these challenges, this research was designed to address the question: How can the implementation of the discovery learning model enhance learning outcomes in IRE and Character Education among students at Junior High School Students at State Junior High School (SMPN) 7 Jambi City?

The selection of the discovery learning model as the primary variable is predicated on its student-centered characteristics, emphasizing exploration, problem-solving, and integration of new knowledge with existing knowledge (Hosnan, 2014). This model encourages students to actively discover concepts through direct experience, thereby facilitating comprehension and retention of instructional content (Rahmadhani, 2019). Within the context of IRE, this approach proves relevant as it can develop critical thinking skills, learning autonomy, and responsibility toward knowledge acquisition. Furthermore, discovery learning is considered effective for fostering student confidence in expressing opinions, which is essential for character and moral development. Consequently, this variable is deemed appropriate for testing its effectiveness in enhancing learning outcomes in IRE and Character Education at the secondary school level.

Various previous studies have confirmed the effectiveness of discovery learning in improving instructional quality. Aâ et al. (2022) found that this model can develop students' critical thinking abilities in IRE and Character Education instruction. Azizah and Mardiana (2024) affirmed that discovery learning-based pedagogical transformation can enhance student achievement through their active involvement in the learning process. Research by Wahyuni (2024) also demonstrated that implementing this model at the elementary school level can significantly improve student learning outcomes. Nurjali et al. (2024) added that discovery learning not only contributes to content mastery but also serves as an important strategy for IRE educators to instill character values in students.

Consistent with these findings, Kurniawati et al. (2021) in their narrative study emphasized that discovery learning contributes positively to developing students' critical thinking skills. Ningsih et al. (2025) demonstrated that this model, when integrated with cooperative and problem-based learning, can enhance students' communication and collaboration skills in social studies subjects. More broadly, research by Raab et al. (2009) and Karabulut et al. (2024) proved the effectiveness of discovery learning across various contexts, including physical education and hands-on activity-based STEM learning. Nevertheless, the majority of these studies remain focused on general subjects, sciences, or social skills, leaving in-depth examination of its application in IRE at the junior high school level relatively limited.

This article offers a unique contribution by providing empirical evidence of discovery learning implementation in IRE and Character Education instruction at the junior high school level through a two-cycle Classroom Action Research (CAR) design. The novelty of this research lies in its focus on simultaneously enhancing learning outcomes and student engagement within the context of religious education, which is rarely addressed concurrently. Additionally, this study examines the application of discovery learning to content containing values and morals, thereby providing a different perspective compared to studies in exact sciences subjects. This research also fills a literature gap by presenting analysis based on observational data and test results at SMPN 7 Jambi City. The research findings are expected to serve as a reference for teachers, curriculum developers, and policymakers in designing IRE instruction that is more interactive, participatory, and oriented toward character formation.

METHOD

This study employed a Classroom Action Research (CAR) design implemented across two cycles, each consisting of planning, implementation, observation, and reflection phases. The selection of CAR was predicated on the research objective to continuously improve learning processes and outcomes within authentic classroom contexts. The research subjects comprised 32 ninth-grade students at SMPN 7 Jambi City, consisting of 15 male and 17 female students with diverse academic ability backgrounds. The study was conducted during the odd semester of the 2024/2025 academic year over a one-month period, commencing from July 23 to August 20, 2024. The instructional content utilized was the topic "Al-Qur'an Inspires: Achieving Success through the Spirit of Knowledge Seeking" in Islamic Religious Education and Character Education subject. The selection of research location and subjects was conducted purposively based on preliminary observations indicating low achievement of Minimum Mastery Criteria (MMC) in the subject.

Research instruments comprised teacher and student observation sheets, learning outcome assessments, and documentation. The observation sheets contained indicators of engagement, initiative, and collaboration in learning with a 1-4 rating scale, while learning outcome assessments consisted of multiple-choice and essay questions validated by two religious education experts. Instrument reliability testing was conducted using Cronbach's Alpha coefficient for assessments and inter-rater reliability for observations, demonstrating adequate reliability levels. Data were analyzed descriptively using percentages and mean scores, with success criteria referring to a minimum achievement of 75% of students obtaining scores above the MMC. The percentage calculation formula was $P = (\text{Obtained Score} / \text{Maximum Score}) \times 100\%$, while the mean score was calculated using $\bar{x} = (\Sigma x) / n$.

RESULT AND DISCUSSION

Student Learning Outcomes Prior to Discovery Learning Model Implementation

Prior to the implementation of the discovery learning model, student learning outcomes in Islamic Religious Education (IRE) and Character Education in ninth grade at SMPN 7 Jambi City demonstrated relatively low achievement levels. Based on daily assessment data conducted by the subject teacher, only 14 students or 43.75% were able to achieve scores above the Minimum Mastery Criteria (MMC). Conversely, 18 students or 56.25% had not yet reached the minimum standards established by the school. The class mean score at this stage was recorded at 56.18%, which fell significantly below the MMC. This condition indicates existing problems in both the learning process and student learning motivation. This fact became the foundational consideration for the necessity of more engaging and interactive pedagogical innovations.

The low learning outcomes during the pre-cycle phase can be attributed to several interconnected factors. The learning process tended to be dominated by lecture methods that rendered students less active in following lessons. The minimal variation in learning models resulted in reduced student involvement in material exploration and group discussions. IRE and Character Education content, which requires appreciation and emotional engagement, was frequently taught through overly theoretical approaches. Consequently, some students merely memorized material without comprehending its meaning profoundly. This reduced the attractiveness of learning and impacted the low achievement of learning outcomes.

The learning outcome conditions prior to discovery learning implementation also reflected limitations in teacher-student interactions within the classroom. Teachers functioned as the primary source of information, while students tended to passively receive material without substantial opportunities to express opinions. One-way communication patterns hindered students from developing critical and analytical thinking skills. Meanwhile, IRE and Character Education subjects should provide space for students to inquire, discuss, and connect material with their life experiences. This low active participation impacted the weak connectivity between subject matter and students' life realities. Consequently, learning motivation tended to decline over time.

Beyond pedagogical method factors, low pre-cycle learning outcomes could be influenced by students' own learning readiness. Some students may not yet possess strong independent study habits at home. Others encountered difficulties understanding material due to significant differences in initial academic abilities among individuals. Environmental factors, such as family support for religious education, also influenced learning outcome achievement. This unpreparedness became more pronounced when learning was conducted monotonously without encouraging student curiosity. Within this context, a learning model capable of stimulating intrinsic motivation and full student engagement was required.

The pre-cycle results provided an initial overview that previously utilized learning models had not been optimal in facilitating student learning needs. Although some students successfully achieved the MMC, the proportion of non-achievers was larger, indicating gaps requiring resolution. These gaps existed not only in knowledge aspects but also in learning attitudes and interaction skills during the learning process. Teachers as facilitators required strategies that better positioned students as active learning subjects. Such strategies must be capable of fostering student responsibility in seeking, understanding, and internalizing material. Thus, comprehensive learning quality improvement was anticipated.

Based on pre-cycle condition analysis, a learning model capable of transforming passive learning patterns into active and participatory ones was required. The discovery learning model was deemed appropriate to address this need as it focuses on student involvement in independently discovering concepts through direct learning experiences. Through this approach, students would be encouraged to think critically, solve problems, and connect knowledge with real life. Discovery learning implementation was expected to reduce learning outcome gaps and increase MMC achievement. Additionally, this model has the potential to strengthen student character formation in accordance with values taught in IRE and Character Education. Therefore, the pre-cycle phase became an important foundation for measuring the effectiveness of this model in subsequent stages.

Teacher Activities in Implementing the Discovery Learning Model

Teacher activities in implementing the discovery learning model constitute a key factor determining learning success. Based on observational results in Cycle I, teachers demonstrated fairly good performance in preparing materials and delivering instruction according to the lesson plan. Teachers attempted to engage students through stimulating questions, although the interactions created remained limited to several active students. Material presentation was conducted by integrating brief explanations with simple exploration task assignments. However, at this stage, teachers still tended to dominate the

learning flow, resulting in suboptimal opportunities for students to explore concepts independently. This became an important note for improvement in the subsequent cycle.

Observations also indicated that teachers began implementing their role as facilitators rather than merely information providers. In discovery learning implementation, teachers provided initial instructions, divided students into groups, and guided discussion processes. Nevertheless, the guidance provided in Cycle I had not fully encouraged all groups to actively discover answers. Several groups appeared dependent on teacher instructions, resulting in suboptimal concept discovery processes. Teachers recognized this and planned student motivation reinforcement strategies for Cycle II. These steps included utilizing open-ended questions and more challenging assignments to stimulate student curiosity.

Significant changes were evident in Cycle II, where teachers successfully enhanced their facilitator role more consistently. Teachers provided greater freedom for students to seek information, engage in discussions, and conclude subject matter. Teacher intervention was conducted only when necessary, thereby encouraging students to solve problems independently. The utilization of varied learning media assisted students in understanding concepts more concretely. Question-and-answer activities became more dynamic, with more students demonstrating courage to express opinions before the class. This improvement directly contributed to the quality of student engagement in learning.

Observational results demonstrated increased teacher activity scores from the “fairly good” category in Cycle I to “excellent” in Cycle II. In Cycle I, teacher activities achieved a percentage of 68.75%, while in Cycle II this increased to 84.38%. This increase reflects teacher success in adapting discovery learning strategies more effectively. These improvements encompassed more efficient time management, clear directional guidance, and utilization of collaborative learning methods. Teachers were also capable of creating conducive classroom atmospheres for active learning. These changes demonstrated that inter-cycle reflection proved highly beneficial in enhancing instructional quality.

Table 1. Student Activity Development in Cycle I and Cycle II

Cycle	Teacher Activity Percentage	Category	Improvement (%)
I	68.75%	Good	–
II	84.38%	Excellent	+15.63

Note: The 15.63% increase from Cycle I to Cycle II indicates the teacher’s success in optimizing the application of the discovery learning model. Improvements included more effective time management, clearer instructional guidance, and more intensive use of collaborative learning methods. Additionally, the teacher successfully created a conducive classroom atmosphere for active learning.

Teacher success in implementing discovery learning in Cycle II was inseparable from continuous evaluation conducted after each session. Teachers routinely analyzed observational results and student feedback to identify learning strengths and weaknesses. Successful strategies were maintained, while less effective aspects were immediately improved. This approach demonstrated that teachers were capable of implementing continuous improvement principles in learning. Thus, the teacher’s role extended beyond instruction to encompass that of a researcher continuously developing teaching practices.

This aligns with the objectives of Classroom Action Research (CAR) to systematically enhance learning quality.

The improvement in teacher activities from Cycle I to Cycle II proved that pedagogical strategy adaptation directly influences student engagement. Teachers' increasingly effective role as facilitators encouraged students to be more active in material exploration, group discussions, and result presentations. This situation created more meaningful learning as students experienced the process of discovering knowledge independently. Additionally, interpersonal relationships between teachers and students became increasingly positive, reflected in students' enhanced confidence to ask questions and express opinions. These results indicate that discovery learning impacts not only academic achievement but also the formation of student attitudes and social skills. Therefore, this model merits consideration as a sustainable learning strategy in IRE and Character Education subjects.

Student Learning Outcomes Following Discovery Learning Model Implementation

The implementation of the discovery learning model in Islamic Religious Education (IRE) and Character Education demonstrated significant positive impact on student learning outcomes. Based on assessment results in Cycle I, students' mean scores increased to 74.31 compared to the pre-cycle average of 56.18. The percentage of students achieving Minimum Mastery Criteria (MMC) also increased to 68.75%, or 22 out of 32 students. Although this improvement was considerable, Cycle I results indicated that some students had not yet reached the target. This demonstrates that while improvement occurred, the learning model still required optimization. Therefore, strategic improvements were implemented in Cycle II to promote more equitable achievement.

Table 2. Comparison of Learning Outcomes: Pre-Cycle, Cycle I, and Cycle II

Stage	Mean Score	Number of Students Meeting Criteria	Percentage Meeting Criteria
Pre-Cycle	56.18	14	43.75%
Cycle I	74.31	22	68.75%
Cycle II	83.00	27	84.38%

In Cycle I, this learning outcome improvement was supported by implementing discovery learning phases that engaged students in exploration activities and concept discovery. Teachers provided contextual problems that encouraged students to think critically and engage in group discussions. This process rendered students more active, although engagement remained uneven as some students remained passive. This factor potentially influenced overall MMC achievement. Nevertheless, Cycle I achievements provided initial evidence that this method could motivate students to learn more effectively compared to conventional methods. These results became the foundation for implementing learning improvements in Cycle II.

Strategic improvements in Cycle II encompassed enhanced teacher guidance, utilization of more varied learning media, and provision of more challenging assignments. This approach successfully engaged all groups in more active participation in the concept discovery process. Consequently, the class mean score increased to 83.00, exceeding the MMC established by the school. The percentage of students meeting MMC also increased to 84.38% or 27 out of 32 students. This improvement reflects the successful implementation of the discovery

learning model in creating effective and engaging learning experiences. These changes also demonstrate that inter-cycle strategic adjustments can directly impact student learning outcomes.

The improvement in learning outcomes from pre-cycle through Cycle II indicates consistent development in students' academic capabilities. Changes occurred not only in mean scores but also in student confidence during learning participation. Students became more courageous in asking questions, expressing opinions, and presenting group work results. This positive attitude supported profound material comprehension, resulting in more durable acquired knowledge. This aligns with Hosnan's (2014) theory stating that discovery learning can enhance student memory retention and thinking skills. Thus, academic achievement improvement in Cycle II reflects the successful implementation of this method.

When comparing pre-cycle, Cycle I, and Cycle II results, learning outcome improvements occurred gradually and significantly. Mean scores increased by 18.13 points from pre-cycle to Cycle I, and increased by an additional 8.69 points from Cycle I to Cycle II. Mastery percentage increases were also substantial: 25% from pre-cycle to Cycle I, and 15.63% from Cycle I to Cycle II. These data demonstrate that discovery learning provides sustained positive impact when implemented consistently. This achievement also proves that the method can reach more students to attain learning standards. Consequently, this model merits retention and development for IRE and Character Education instruction.

Overall, discovery learning implementation has brought meaningful changes to learning outcomes among ninth-grade students at SMPN 7 Jambi City. This success is evident not only from academic score improvements but also from changes in student learning behaviors that became more active and independent. The learning process became more collaborative, interactive, and enjoyable for students. These findings reinforce that discovery learning is effective for implementation in subjects emphasizing conceptual understanding and moral values. The success of this implementation can also serve as a model for other teachers in developing student-centered learning strategies. Thus, discovery learning can become an integral component of learning quality improvement strategies in secondary schools.

CONCLUSION

This research demonstrates that the implementation of the discovery learning model in Islamic Religious Education (IRE) and Character Education at SMPN 7 Jambi City was capable of significantly enhancing student engagement and learning outcomes. Teacher and student activities that initially fell within the "good" category in Cycle I improved to the "excellent" category in Cycle II. This improvement was accompanied by an increased number of students achieving Minimum Mastery Criteria (MMC) and elevated class mean scores. This proves that the discovery learning model is effective in creating active, interactive, and student-centered learning environments. This success was also supported by student involvement in concept discovery processes, problem-solving, and connecting new knowledge with previous experiences. Thus, discovery learning can serve as a relevant pedagogical strategy for enhancing religious education quality in secondary schools.

The findings of this research hold theoretical and practical implications for the educational field. Theoretically, these results strengthen scholarly understanding that discovery learning is effective not only for science subjects but also relevant for implementation in content containing value and character dimensions. Practically, teachers are recommended to implement this model systematically while considering planning,

implementation, observation, and reflection phases in each learning cycle. School principals can support this implementation through providing adequate teacher training and learning facilities. Future research may extend examination to other subjects or different educational levels to test the consistency of these findings. Through these steps, discovery learning implementation can become an integral component of learning quality improvement strategies across various educational contexts.

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