



Implementation of Deep Learning in Religious Education Learning For The Internalization of Religious Values and The Formation of Religious Behavior

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Abstract

This study aims to analyze the implementation of deep learning-based Islamic Religious Education (PAI) learning and the internalization of religious values and religious behavior in students. This study used a mixed methods approach with a sequential explanatory design, namely the collection and analysis of quantitative data followed by qualitative data to strengthen and explain the research findings. Quantitative data were obtained through closed-ended questionnaires, while qualitative data were collected through open-ended questionnaires that explored the experiences, meanings, and changes experienced by students. The results show that deep learning-based PAI learning provides a memorable, enjoyable, and meaningful learning experience for students. The implementation of the deep learning approach to PAI learning is categorized as good, although the variety of learning methods is still categorized as needing improvement. These results indicate that the internalization of religious values has fostered an understanding of the practice of Islamic teachings in everyday life. PAI learning implementing a deep learning approach is effective in internalizing religious values and holistically shaping students' religious attitudes through active, contextual, reflective, and transformative learning.

Keywords: Deep Learning; Character Building; Internalization of Religious Values; Religious Behavior

Abstrak

Penelitian ini bertujuan untuk menganalisis implementasi pembelajaran Pendidikan Agama Islam (PAI) berbasis deep learning serta internalisasi nilai-nilai religius dan perilaku keagamaan peserta didik. Penelitian menggunakan pendekatan mixed methods dengan desain sequential explanatory, yaitu pengumpulan dan analisis data kuantitatif yang dilanjutkan dengan pengumpulan dan analisis data kualitatif untuk memperkuat dan menjelaskan temuan penelitian. Data kuantitatif diperoleh melalui angket tertutup, sedangkan data kualitatif dikumpulkan melalui angket terbuka yang menggali pengalaman, makna, dan perubahan yang dialami peserta didik. Hasil penelitian menunjukkan bahwa pembelajaran PAI berbasis deep learning memberikan pengalaman belajar yang berkesan, menyenangkan, dan bermakna bagi peserta didik. Implementasi pendekatan deep learning dalam pembelajaran PAI tergolong baik, meskipun variasi metode pembelajaran masih perlu ditingkatkan. Temuan ini juga menunjukkan bahwa internalisasi nilai-nilai religius telah menumbuhkan pemahaman peserta didik dalam mengamalkan ajaran Islam dalam kehidupan sehari-hari. Dengan demikian, pembelajaran PAI yang menerapkan pendekatan deep learning terbukti efektif dalam menginternalisasikan nilai-nilai religius serta membentuk sikap keberagamaan peserta didik secara holistik melalui pembelajaran yang aktif, kontekstual, reflektif, dan transformatif.

Kata kunci: Deep Learning; Pembentukan Karakter; Internalisasi Nilai-Nilai Religius; Perilaku Keagamaan.

Introduction

In the face of the ever-evolving digital age, character education, particularly the cultivation of religious values, is of great importance in education. This helps to shape individuals who are not only intellectually intelligent but also possess strong moral and spiritual qualities. This aligns with the objectives of Law No. 20 of 2003 regarding the national education system. In fostering character development, efforts should be made to enhance societal civilization, thereby producing individuals who are pious, virtuous, healthy, knowledgeable, capable, creative, and independent. Such individuals can then become responsible democratic citizens. (Annur et al., 2023) However, the current state of education shows that advancements in science, technology, and globalization often lead to a decline in moral values. For example, there is a lack of discipline in religious practices. The low level of tolerance and the decline in ethical standards in social interactions indicate that the internalization of religious values through the education process is not yet optimal.

In the teaching of Islamic religious education, there is often a focus on cognitive aspects of learning, such as memorizing religious concepts and knowledge. However, understanding and practicing religious values isn't given as much emphasis. As a result, learners fail to fully apply these teachings in their daily lives. Islamic religious education should be a holistic approach, encompassing not only knowledge but also the cognitive, affective, and psychomotor domains. All three aspects must be balanced so that learners not only understand the teachings conceptually but also are able to internalize them and put them into practice in their daily lives. Islamic religious education plays a crucial role in shaping a person's personality and character. It also helps learners understand Islamic values and apply them in their lives by fostering a sense of religious awareness. A balance between aspects of faith, worship, and morality. (Neneng Julianah, Sulfiah, 2025)

This phenomenon indicates that a more in-depth and reflective approach to learning is necessary, one that can help students internalize religious values and develop religious behaviors. In line with national education policies, particularly those related to the "free learning" curriculum, which emphasizes character development, it's important to adopt approaches that integrate knowledge, attitudes, and skills. One approach that fits this requirement is deep learning.

Deep learning isn't merely a memorization technique. It's a learning approach that emphasizes meaningful understanding, encouraging learners to engage in reflective thinking and creating meaningful learning experiences. This approach combines the

principles of mindful, meaningful, and joyful learning to create a holistic learning experience that's relevant to real-life situations. (Jatmiko Ananda Chosya, 2025) In the context of religious education, deep learning isn't just a theoretical concept; it connects learning materials to real-life situations and encourages self-reflection. (Prihantoro, 2025) As a result, learners feel emotionally connected to the material they're learning. (Hasanuddin et al., 2025) With deep learning, learners can analyze, connect, and reflect on Islamic values across various life contexts, by linking new knowledge with their existing experiences. Personalized learning in the real world. (Nurfajrina & Fadil, 2025) By combining these three learning approaches, a holistic and effective learning experience can be created. Mindful learning helps to enhance students' awareness and focus. Meaningful learning provides context and relevance to the learning material. Joyful learning, on the other hand, adds elements of enjoyment and motivation. This integration helps students not only understand the material but also enjoy the learning process itself. (Ahmad Syafii, 2025) These three principles support not only cognitive development but also the emotional and social aspects of learners. These findings are consistent with the idea that reflection, connection between concepts, and meaningfulness are important in the learning process. (Haq & Prasetyo, 2025)

Deep learning is an approach to learning that emphasizes a deep understanding of concepts, as well as the integration of values through reflection and experience. This helps to integrate knowledge and values into the learner's personality. It's not about the advancement of artificial intelligence technology per se, but rather about strategies to improve the quality of education. These strategies focus on encouraging students to be active, to understand concepts deeply, and to comprehend religious values. It also aims to enable students to think more critically and deeply, to collaborate effectively, and to solve problems in a meaningful way. (Deny Khusnul Khotimah, 2025)

The research problem focuses on how deep learning techniques can be applied in the teaching of Islamic studies at SMA Negeri I Cigugur. It also examines how the implementation of deep learning contributes to the internalization of religious values and the development of religious behaviors among students at this school.

This research is of great significance in supporting the implementation of deep learning approaches. Several studies have explored how deep learning can be utilized to address various issues related to learning today. The implementation of deep learning involves strategies such as context-based learning, in-depth discussions, fostering

Islamic values, and personal reflection. These approaches have proven to enhance students' understanding and appreciation of concepts related to work ethic, responsibility, and integrity. (Slamet Panuntun et al., 2025) To transform Islamic education, it's necessary to develop more interactive and dynamic learning methods by integrating deep learning with technology. Teaching methods should also be adapted to meet the needs of students. (Mundofi, 2025) Other studies have explored the use of deep learning in project-based learning scenarios. The role of teachers as facilitators is important. (Prihantoro, 2025) Deep learning approaches have proven effective in enhancing students' conceptual and spiritual understanding, while also helping to develop a deeper religious mindset. (Neneng Julianah, Sulfiah, 2025) deep learning is in-depth learning that emphasizes conceptual understanding, reflective skills, and problem solving. (Nurhasanah, 2025) Although various perspectives have been explored, existing research using literature-based methods has not yet addressed the practical application of deep learning in teaching religious education, with the aim of fostering religious values and behaviors.

This research aims to understand how learning can be facilitated using deep learning techniques, while also instilling Islamic values in learners. This is achieved through various stages of value internalization: knowing, understanding, believing, and acting. Any changes in the learners' attitudes serve as an indicator of the success of this learning process. The aim of Islamic religious education is to form a perfect human being (*insan kamil*) who is not only intellectually intelligent, but also noble in morals and spiritually strong. (Wafa & Nadhif, 2025)

Method

This study employs a mixed-methods approach, which combines quantitative and qualitative methods in order to gain a comprehensive understanding of the subject. This approach helps to provide a more complete picture when addressing more complex research questions. (Khabibullah, 2024) The study focuses on the implementation of deep learning in the context of Islamic religious education, as well as its impact on the internalization of religious values and the development of students' religious behaviors.

The mixed methods model used in this study is the Sequential Explanatory Design approach. In this design, researchers first collect and analyze quantitative data at the initial stage. In the second stage, qualitative data is collected and analyzed. This approach strengthens the findings of quantitative research through qualitative analysis. Quantitative data analysis involves processing numerical data obtained from survey

instruments. The process includes editing data by checking the completeness of respondents' answers, converting answers into numerical codes using a Likert scale: Strongly Agree (5), Agree (4), Neutral (3), Disagree (2), Strongly Disagree (1). After that, data is tabulated, statistically analyzed, and interpreted. Qualitative analysis is used to process non-numerical data such as interview results, observations, and documentation. This process involves reducing data, presenting it in a meaningful way, and drawing conclusions from it. The integration of these two methods (mixed method) occurs during the interpretation phase. In this stage, quantitative data is supplemented with qualitative data. Thus, data collection and analysis are carried out separately, with the final results being integrated to arrive at a comprehensive conclusion. (Khabibullah, 2024)

This research was conducted at SMA Negeri I Cigugur during the odd semester of the 2025/2026 academic year. The total number of students in this school is 945. For this study, 90 students were selected as respondents. These students were chosen because they represent the characteristics of the entire student population, and their numbers meet the minimum requirements for statistical analysis in quantitative research.

Qualitative research was conducted through observations of the implementation of Islamic education using deep learning methods. Interviews were also held with Islamic education teachers and students. Additionally, various documents were analyzed, including lesson plans, teaching materials, reflection notes, and records of school-related religious activities.

Quantitative data analysis involves using descriptive statistics such as means and percentages, as well as correlation or simple regression analyses, to determine the impact of deep learning on the internalization of values and the development of religious behaviors among learners. Qualitative data analysis involves data reduction, presentation, and drawing conclusions from the data.

Results and Discussion

Students' Perceptions of the Implementation of Religious Education Learning Based on Deep Learning

Quantitative analysis was conducted in this study to understand the perceptions of students regarding the implementation of Islamic Religious Education in the classroom, as well as its impact on the internalization of religious values and the development of religious behaviors. Data were collected through closed-ended surveys

using a Likert scale, and the results were analyzed in terms of percentages.

Based on the questionnaire distributed to students at SMA Negeri 1 Cigugur, the implementation of Islamic studies education shows positive trends. This is evident from the majority of responses from the students, who agreed with various indicators of effective learning, such as the relevance of the material to everyday life, active participation in discussions, the use of engaging teaching methods, and the inclusion of reflective activities after the learning process. These findings indicate that Islamic studies education is beginning to adopt a more meaningful and student-centered approach to learning.

Firstly, 59.5% of respondents indicated that the content of PAI is relevant to everyday life. This makes learning more meaningful and relevant to the students' real-world experiences. These findings show that PAI education shouldn't merely focus on theoretical knowledge, but also connect it to the students' real lives, so that the knowledge becomes meaningful to them. (Islam et al., 2023) This contextual approach is consistent with the principles of meaningful learning in deep learning, which emphasizes understanding through the connection between concepts and real-life experiences. (Sulistiono Shalladdin Albany, 2025)

Secondly, 64.9% of the participants agreed with the idea of engaging in discussions and critical thinking. This indicates that the learning process provides opportunities for students to actively participate in discussions. Active participation is an important characteristic of deep learning, as students don't just passively receive information, but also engage in thinking, analyzing, and constructing their own understanding. This approach has a positive impact on classroom dynamics, fostering logical thinking and two-way communication. (Savira Seviardini, Meirza Nanda Faradita, 2026) Additionally, 51.4% of the participants agreed that teachers provide opportunities for students to express their opinions during the learning process. This shows an effort to create a democratic and participatory learning environment.

Thirdly, the use of interesting and varied teaching methods received 51.4% approval. This variety in teaching methods indicates that teachers are making efforts to create a more dynamic and less monotonous learning environment. However, the level of variation in teaching methods is still considered "fair". Therefore, further efforts are needed to make teaching methods more innovative and to enhance students' engagement in the learning process. The four reflection activities conducted after PAI lessons received a 62.2% approval rate. This indicates that students have the opportunity

to evaluate and re-understand the learning experiences they've had. Reflection is an important component of the deep learning approach. Through reflection, students can revisit their understanding, grasp the meaning of what they've learned, and relate it to religious values in everyday life. Overall, the findings of this study indicate that the implementation of deep learning-based approaches to teaching Islamic studies at SMA Negeri 1 Cigugur has provided students with meaningful learning experiences. However, there are still several areas that need improvement, particularly in developing more innovative and varied teaching methods, thereby enhancing students' participation in the learning process. By strengthening the use of deep learning in Islamic studies education, it is hoped that students' understanding of religion will improve, and their religious behaviors in daily life will be enhanced as well. From the results of research on learning using a deep learning approach, the role of the teacher is increasingly central: (1) a director who raises learning motivation, (2) a link to relevant learning resources, and (3) a reflective assessor of the learning process. (Ulfa, 2025)

Internalization of Religious Values through PAI Education

The research findings indicate that the implementation of PAI also affects the internalization of religious values among students. This is evident from the fact that 51.4% of students strongly agreed that they understood the teachings of Islam as conveyed by their teachers during PAI lessons. This understanding isn't merely cognitive; it also leads to a deeper spiritual awareness and appreciation of religious values.

In addition, 51.4% of the participants strongly agreed that learning about Islamic religious education encouraged them to apply Islamic teachings in their daily lives. These findings indicate that Islamic religious education has successfully linked religious concepts with real-life practices. This is in line with the goals of Islamic religious education, which focus not only on knowledge, but also on fostering religious attitudes and behaviors.

Furthermore, 59.5% of the participants agreed that Islamic values influence their attitudes and ways of thinking. This indicates that the learning process has contributed to the development of religious ways of thinking, as reflected in how participants approach various life issues. Thus, it can be said that the internalization of religious values has been successful through meaningful and reflective learning processes.

The application of the Deep Learning approach in Islamic Religious Education

(PAI) has consistently proven effective in improving conceptual understanding, religious awareness, and character development in students at various levels of education. This approach successfully transforms learning from memorization to internalization of values through an operational framework that integrates three key dimensions: in-depth understanding, contextual application, and critical reflection. (Dzulfiqar & Miskiyah, 2026)

The Impact of Religious Education on the Development of Religious Behaviors among Students

The application of deep learning techniques in Islamic studies also has an impact on the development of students' religious behaviors. Research findings show that 78.4% of students strongly agreed that they became more aware of the importance of honesty and responsibility after participating in Islamic studies classes. This indicates that learning isn't limited to cognitive aspects alone; it also influences the development of students' character. Additionally, 56.8% of students agreed that Islamic studies improved their faith and devotion, making them more disciplined and punctual in fulfilling their religious obligations. These findings suggest that Islamic studies can encourage students to apply religious values in their daily lives, especially in their religious practices. Other aspects of religious behavior were also observed: 51.4% of students agreed that they had developed certain religious habits as a result of these classes. Pray before and after engaging in various activities. This habit demonstrates the integration of spiritual values into everyday life. In terms of social ethics, 64.9% of the participants strongly agreed that they were polite toward teachers and peers. Additionally, 48.6% strongly agreed that they showed concern for others. These findings indicate that religious education also contributes to the development of social ethics among students, as reflected in their respect, empathy, and concern for others.

The Effectiveness of Deep Learning in the Teaching of Religious Education

Overall, the research findings indicate that the implementation of Islamic religious education using deep learning approaches is satisfactory. However, there is still room for improvement in the various teaching methods used. The average percentage of indicators fell within the range of 61%–77.8%, suggesting a generally positive trend in the implementation of these teaching methods.

These findings indicate that the internalization of religious values has been successful. This is evident from the increased understanding of Islamic teachings among students, as well as their willingness to put these teachings into practice in their daily

lives. In addition, the study of religious education also contributes positively to the development of students' religious and social behaviors, particularly in terms of honesty, responsibility, discipline in religious practices, and social ethics.

Thus, it can be concluded that the implementation of deep learning techniques in Islamic education is effective in helping students internalize religious values and develop religious behaviors. Based on the students' responses to the question, "What is the most memorable experience you've had in learning PAI at school?"

Table 1. Qualitative Analysis of the Most Effective Experiences in Learning Religious Education

No	Indicators	Memorable Experiences	Statements from students	Deep Learning
1	Experiences of Worshiping Together	Religious activities that are carried out directly and together as a group	"Practicing Dhuha prayers together", "Learning how to perform wudu and prayers"	Meaningful learning comes from real-life experiences.
2	Fun Learning Methods	Use of games, Kahoot, and interactive PPTs	"Playing Kahoot", "Learning through games", "Fun and engaging"	Active participation and intrinsic motivation
3	Inspiring Guru PAI	The guru presents the material using real-life stories and examples as illustrations.	"Inspiring gurus share real-life stories", "Stories of prophets and everyday life"	Gurus as facilitators of deep learning
4	Discussion and Group Work	Active discussion and collective reflection	"Lively group discussions," "Group work and reflection"	Critical and collaborative thinking
5	Contextual Learning	The material is related to everyday life.	"Connecting religious theories with everyday life", "Realistic explanations"	Profound and contextual understanding
6	Meaningful Learning Media	Inspiring films and social initiatives	"Watching movies that have deep meanings," "Social service"	Reflection on values and the internalization of meanings

7	Profound Understanding of Religion	Increasing religious insight and understanding	“Better understanding of religious knowledge”, “Sustainable comprehension”	Deep understanding (not mere memorization)
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The table above shows that students’ descriptions of their memorable experiences in learning PAI reflect an active, contextual, reflective, and transformative learning process. PAI learning has led to the application of deep learning principles, where students not only understand the material, but also integrate religious values into their daily lives.

Based on the students’ answers to the question: What is the most meaningful thing they’ve learned from the PAI lessons?

Table 2. Qualitative Analysis of the Meaning of PAI Learning

NO	Indicators	Main Meaning	Students’ Answers	Deep Learning
1.	Profound understanding of religion	To increase and deepen knowledge about Islam	“Acquiring religious knowledge.” Gaining abroad understanding of religion, “ Learning more about laws traditions, obligation and hadiths.”	Profound conceptual understanding, not just rote memorization
2	Morality and Character Development	Cultivate attitudes “The importance of honesty, empathy, courtesy, and concern for others	“The importance of noble morals,” I’ve become more honest,” helping each other and being polite to others,” „	Internalization of values and meaningful learning
3.	Iman and Piety	An increase in awareness of worship and closeness to Allah	“Not neglecting prayer,” “Increasing faith and piety,” “The importance of worshipping and	Transforming religious attitudes and behaviors

remembering Allah"				
4.	Guidelines for Living and Moral Filters	Religion as a guide for living life	"It can serve as a foundation for living a meaningful life," "It acts as a moral filter that helps us become better individuals."	The relevance of learning to real life
5.	Motivation and Self Awareness	The drive to keep learning and doing good deeds	"I want to learn more and be motivated to do good deeds." "It makes me more aware of the importance of doing good."	Intrinsic motivation as result deep learning
6.	Understanding Practical Forms of Worship	Able to carry out religious practices correctly	"Proper ways of praying," Reminders about the rules of pronunciation in prayer," "Learning various prayers"	Integration of theory and practice

The table above shows that the meaning of learning PAI, as perceived by students, encompasses cognitive, affective, and psychomotor aspects. It also reflects the key characteristics of deep learning: a deep understanding, internalization of values, relevance to real-life situations, and lasting changes in attitudes.

Table 3. Qualitative Analysis of Changes in Students after Participating in PAI Classes

No	Indicators	Forms Of Change	Answers from the student	Deep learning
1	Changes in Spiritual Attitudes	More peaceful, grateful, and closer to Allah	"More peaceful," "More grateful," "Feeling the joy of learning about religion."	Inner reflection and appreciation of values
2	Increase in Faith and Worship	Pray more diligently and improve the quality of one's religious practices.	"Pray more diligently," "Improve the quality of one's worship," "Perform worship more earnestly."	Transformations in religious behavior
3	The Formation of Morality and Character	Be more honest, disciplined, patient, and polite.	"More honest and disciplined," "More patient," "More polite."	Internalization of moral values

4	Moral Consciousness (Right-Wrong)	To better understand what's good and what's bad.	"So, one can better distinguish between right and wrong," "One becomes more aware of how to behave appropriately."	Understanding meaning and being reflective
5	Tolerance and Social Attitudes	To value differences and others more.	"More tolerant," "Respecting differences in beliefs and opinions"	Contextual and humanistic learning
6	Emotional Maturity	Be more patient when facing problems and challenges.	"Be more patient when facing hardships," "Emotional maturity"	Transformative Learning
7	Increase in Religious Knowledge	A better understanding of Islamic teachings and insights	"Better understanding of Islamic religious matters," "More new knowledge acquired," "Greater comprehension of rules related to Quranic recitation and inheritance laws."	Pendalaman kognitif (deep understanding)
8	Motivation for Self-Improvement	Driven to become a better person	"Motivated to become better," "Striving to improve oneself."	Intrinsic motivation as a result of deep learning
9	Islamic Views on Life	The values of Islam serve as a guide for living.	"Life perspectives", "Guidance for everyday life"	Transfer values to real life

The table above shows the changes that students experience after participating in PAI lessons. These changes encompass spiritual, moral, social, emotional, and cognitive aspects. PAI lessons lead to profound and lasting changes in students, which is consistent with the characteristics of deep learning: meaningful, reflective, and transformative learning.

Deep learning approach can support the internalization of religious character in Islamic Religious Education learning if it is applied consistently to help students understand religious values more deeply, connect them to real life, reflect on their own behavior, and apply them in everyday actions. (Lalak et al., 2026)

Deep learning-based teaching of PAI not only improves academic outcomes but also helps to develop students' religious character, social awareness, and emotional maturity over time. By incorporating deep learning into PAI education, it becomes possible to foster religious character through three main mechanisms: (1) Critical inquiry, which involves applying Islamic values and teachings to real-life situations; (2) Experiential learning, which connects theoretical concepts with everyday practices; and (3) Reflective dialogue, which encourages students to engage in moral and spiritual reflection (Prihantoro, 2025) The Deep Learning approach applied in Islamic Religious Education learning is believed to be able to bridge the gap between understanding religious concepts and practicing Islamic values in the lives of students, so that the goals of Islamic Religious Education can be achieved more optimally. (Lidyawati, 2025) Islamic Religious Education learning with a deep learning approach is able to create space for the formation of religious character and 21st century competencies simultaneously, not only forming students who know religious teachings, but also understand, believe in, and are able to practice them consciously and responsibly in real life. (Hoeruman et al., 2025)

Conclusion

Islamic Religious Education (PAI) is effective in fostering meaningful learning experiences and strengthening students' religious values and behaviors. The findings indicate that deep learning not only enhances students' cognitive understanding of Islamic teachings but also promotes active participation, contextual learning, reflection, and the practical application of religious values in daily life. Students reported positive learning experiences through collaborative discussions, communal worship, educational games, experiential activities, and inspiring teacher narratives, which contributed to improvements in discipline, honesty, patience, tolerance, social responsibility, and emotional maturity.

These results suggest that deep learning-based PAI effectively supports the holistic development of students' religious character. Despite these positive findings, this study has several limitations. The research was conducted in a single school with a

relatively small sample size, limiting the generalizability of the findings. In addition, the quantitative data relied on students' self-reported perceptions, which may be subject to response bias, while the perspectives of teachers and other contextual factors were not extensively explored. Therefore, future studies are recommended to involve multiple schools with more diverse participant characteristics, larger sample sizes, and more robust research designs, such as longitudinal or inferential studies. Further research should also examine teachers' pedagogical strategies and investigate how deep learning can be integrated with other instructional models to further strengthen students' religious character and overall personal development.

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