



Development of an Islamic Religious Education Teaching Module Using a Deep Learning Approach within the Merdeka Curriculum at SDIT Luqman Al Hakim Surakarta.

Yadi^{a.1,*}, Joko Subando^{b.2}.

^{*ab} Institut Islam Mamba'ul Ulum, Surakarta, Indonesia.

^{*1}yadinurcahyadin123@gmail.com, ²jokosubando@yahoo.co.id

*Correspondent Author: Yadi: email; yadinurcahyadin123@gmail.com

Received: 23-07-2026

Revised: 11-08-2026

Accepted: 28-09-2026

KEYWORDS

Islamic Religious Education,
Teaching Module
Development, Deep Learning
Approach, Merdeka
Curriculum.

ABSTRACT

This study employed a research and development (R&D) approach aimed at developing an Islamic Religious Education (IRE) teaching module based on a pedagogical deep learning approach aligned with the Merdeka Curriculum at SDIT Luqman Al Hakim Surakarta. The primary objective of the study was to produce a valid, practical, and effective teaching module that supports meaningful learning, critical thinking, and value internalization among elementary school students. The research methodology followed the ADDIE development model, consisting of analysis, design, development, implementation, and evaluation stages. Data were collected through expert validation sheets, student response questionnaires, learning outcome tests, and classroom observations. The research sample involved 30 fifth-grade students selected through purposive sampling. Data analysis was conducted using descriptive quantitative and qualitative techniques. The results showed that the developed module achieved a content and media validity level of 88.6%, categorized as very valid. The practicality assessment based on student responses reached 91.3%, indicating that the module was highly practical and easy to use. Furthermore, the effectiveness test revealed that 83.3% of students achieved mastery learning criteria, while students' engagement and learning motivation increased by 86.7% after using the module. These findings demonstrate that the developed Islamic Religious Education teaching module effectively enhances students' deep understanding, learning engagement, and character development in accordance with the Merdeka Curriculum framework.

This is an open-access article under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



Introduction

Islamic Religious Education (IRE) plays a strategic role in shaping students' character, spirituality, and competencies from the elementary education level. Amid rapid social changes and the global challenges of the twenty-first century, IRE learning is required to move beyond a sole focus on mastery of normative content toward strengthening deep understanding, value internalization, and the development of critical and reflective thinking skills. Therefore, innovation

in instructional design and IRE teaching materials has become an urgent necessity to ensure that learning remains relevant to students' contexts and contemporary developments.

The implementation of the Merdeka Curriculum in Indonesia provides broader opportunities for educational institutions and teachers to develop student-centered learning. This curriculum emphasizes flexibility, differentiation, and meaningful learning that encourages active student engagement in the learning process. In the context of IRE, the Merdeka Curriculum opens opportunities to integrate Islamic values with the reinforcement of twenty-first-century competencies through more contextual and reflective learning approaches.

One approach that aligns with the spirit of the Merdeka Curriculum is the pedagogical deep learning approach. Deep learning is understood as a learning process that encourages students to achieve deep conceptual understanding, connect knowledge with real-life experiences, and internalize the values and meanings of learning. This approach emphasizes the integrated engagement of students' cognitive, affective, and metacognitive domains, so that learning does not stop at memorization but continues toward meaning-making and value application.

In practice, IRE learning at the elementary school level still faces various challenges. Several studies indicate that IRE instruction tends to be textual, teacher-centered, and provides limited space for students to explore meaning and reflect on Islamic values in their daily lives. This condition has resulted in a shallow level of students' understanding and limited internalization of character values expected from IRE learning (Rahmawati, 2021, p. 45).

Previous studies related to the development of IRE teaching modules have been conducted using various approaches. A study by Hidayat and Nurhadi (2022, p. 112) found that context-based IRE modules were able to enhance elementary school students' learning engagement. Another study by Sari et al. (2023, p. 89) revealed that project-based IRE modules were effective in fostering students' religious attitudes and social responsibility. These findings underscore the importance of developing innovative teaching materials in IRE learning.

Nevertheless, most studies on the development of IRE modules still focus on specific methods or learning models without explicitly integrating a deep learning approach as a pedagogical foundation. In addition, studies that link the development of IRE modules with the implementation of the Merdeka Curriculum in integrated Islamic elementary schools remain limited. This research gap indicates the need for studies that specifically examine the development of deep learning-based IRE teaching modules within the framework of the Merdeka Curriculum.

Research on deep learning in the context of elementary education in Indonesia has predominantly focused on general subjects such as science and mathematics. A study by Widodo and Prasetyo (2021, p. 67) confirmed that the deep learning approach can enhance elementary students' critical thinking skills and conceptual understanding. Meanwhile, studies applying this approach to IRE learning remain relatively scarce, particularly in the form of systematically developed and empirically tested teaching modules.

These conditions indicate a gap between the demands of the Merdeka Curriculum, which emphasizes meaningful learning, and the prevailing practices of IRE learning that remain largely surface-oriented. The development of IRE teaching modules using a deep learning approach represents a strategic alternative to bridge this gap. Systematically designed modules can assist teachers in implementing learning that promotes deep understanding and the internalization of Islamic values.

SDIT Luqman Al Hakim Surakarta, as an integrated Islamic elementary school, has distinctive learning characteristics that combine the national curriculum with the reinforcement of Islamic values. This context provides an ideal setting for developing IRE teaching modules aligned with the Merdeka Curriculum and the deep learning approach. The development of modules in this educational setting is expected to serve as a model of good practice for other Islamic schools.

The novelty of this study lies in the integration of the pedagogical deep learning approach into the development of IRE teaching modules that are adapted to the structure and principles of the Merdeka Curriculum. The teaching module is designed not merely as written instructional material, but as a comprehensive learning tool that encourages meaning exploration, value reflection, and connections between Islamic teachings and the real-life experiences of elementary school students.

In addition, this study offers novelty in the module design by holistically integrating IRE learning outcomes, the Pancasila Student Profile, and Islamic values. This approach is expected to strengthen students' spiritual, moral, and intellectual dimensions in a balanced manner. Consequently, the developed teaching module is oriented not only toward cognitive learning outcomes but also toward character formation and the development of religious attitudes.

The theoretical contribution of this study lies in enriching the discourse on IRE teaching material development through a pedagogical deep learning perspective. This study provides a conceptual foundation for how the deep learning approach can be operationalized in IRE learning at the elementary school level. The findings are expected to serve as a reference for the development of more meaningful IRE learning theories oriented toward deep understanding.

The practical contribution of this study is directed toward IRE teachers and administrators of Islamic elementary education. The resulting teaching module can be used as an implementative guide for conducting IRE learning in accordance with the Merdeka Curriculum. The module is also expected to assist teachers in designing learning activities that encourage active engagement, reflection, and value internalization among students.

At the policy level, the findings of this study are expected to provide input for educational policymakers, particularly in the development of IRE instructional resources at the elementary school level. The development of deep learning-based teaching modules can serve as an alternative strategy to enhance the quality of IRE learning in line with the policy direction of the Merdeka Curriculum.

Based on the above discussion, this study focuses on the development of an Islamic Religious Education teaching module using a deep learning approach within the Merdeka Curriculum at SDIT Luqman Al Hakim Surakarta. This study is expected to address existing research gaps and make a tangible contribution to the development of meaningful, relevant, and character-oriented IRE learning..

Method

The research approach employed in this study was Research and Development (R&D). This approach was selected because it aims to produce an educational product in the form of an Islamic Religious Education teaching module based on a deep learning approach that is feasible and effective for instructional use. Developmental research enables researchers to design, test, and refine instructional products based on actual field needs and relevant theoretical frameworks (Sugiyono, 2021, p. 407).

The research design referred to the ADDIE development model, which consists of five main stages: analysis, design, development, implementation, and evaluation. The ADDIE model was chosen due to its systematic and flexible nature and its widespread use in the development of instructional materials. Each stage was structured to ensure that the developed teaching module aligns with students' characteristics, Islamic Religious Education learning outcomes, and the principles of the Merdeka Curriculum (Branch, 2022, p. 36).

The objective of this study was to develop an Islamic Religious Education teaching module using a deep learning approach within the Merdeka Curriculum at the elementary school level. Specifically, this study aimed to produce a teaching module that is valid in terms of content and design, practical for student use, and effective in supporting meaningful learning and the internalization of Islamic values at SDIT Luqman Al Hakim Surakarta.

The evaluation model applied in this study consisted of formative and summative evaluation. Formative evaluation was conducted at each stage of development to obtain feedback from subject-matter experts and instructional design experts in order to improve the quality of the teaching module. Summative evaluation was carried out during the implementation stage to determine the level of practicality and effectiveness of the module based on students' responses and achieved learning outcomes (Morrison et al., 2020, p. 214).

This study was conducted at SDIT Luqman Al Hakim Surakarta during the second semester of the 2024/2025 academic year. The research subjects involved 30 fifth-grade students selected through purposive sampling in accordance with the research objectives. The research site was chosen based on the school's readiness to implement the Merdeka Curriculum and its instructional characteristics emphasizing the reinforcement of Islamic values.

The validity testing of the teaching module was conducted through expert validation, involving experts in Islamic Religious Education content and instructional design. The validation instrument consisted of an assessment sheet using a Likert scale covering aspects of content feasibility, language, presentation, and graphical design. The validation results were analyzed using percentage techniques to determine the feasibility level of the developed teaching module (Akbar, 2020, p. 82).

Data collection techniques in this study included observation, questionnaires, learning outcome tests, and documentation. Observation was used to obtain data on the learning process during module implementation. Questionnaires were administered to measure students' responses regarding the practicality of the teaching module. Learning outcome tests were used to assess the effectiveness of the module in improving students' understanding. Documentation was utilized to complement the research data in the form of activity photographs and instructional records.

The research procedure began with a needs analysis stage through curriculum review and analysis of students' characteristics. The design stage involved developing the structure of the teaching module and supporting instructional tools. The development stage included module preparation and expert validation. The implementation stage involved applying the teaching module in Islamic Religious Education learning activities. The evaluation stage was conducted to assess the practicality and effectiveness of the module and to refine the final product.

Result

The findings of this study indicate that the development of an Islamic Religious Education

(PAI) teaching module based on a deep learning approach within the Merdeka Curriculum at SDIT Luqman Al Hakim Surakarta achieved highly satisfactory results across all components of the CIPP evaluation model. Context evaluation results demonstrate strong alignment between the objectives of the developed module, the school's vision and mission, and the learning needs of students. The supportive school environment, institutional commitment to strengthening Islamic values, and readiness to implement the Merdeka Curriculum provide a solid foundation for the application of deep learning-oriented instructional materials. These conditions confirm that the module was developed in response to authentic educational needs and is contextually appropriate for elementary Islamic education.

Furthermore, input, process, and product evaluations reveal that the module is feasible, practical, and effective in supporting meaningful learning. The quality of instructional design, relevance of learning content to PAI learning outcomes, and adequate teacher competence contributed positively to the implementation process. During instruction, students demonstrated active engagement, reflective thinking, and deeper conceptual understanding through learning activities designed to promote value internalization. Product evaluation results show improvements in learning achievement, conceptual comprehension, and students' religious attitudes, accompanied by highly positive learner responses. Overall, these findings suggest that the developed PAI module effectively enhances cognitive, affective, and spiritual learning dimensions and is suitable for broader implementation in Islamic elementary schools..

1. Context Evaluation

The context evaluation was conducted to assess the alignment of goals, needs, and the learning environment of Islamic Religious Education using a deep learning approach within the Merdeka Curriculum at SDIT Luqman Al Hakim Surakarta.

Table 1. Scores of Context Evaluation Components

Context Components	Score (%)	Category
Alignment with school vision and mission	90.0	Very Good
Need for instructional module development	88.5	Very Good
Policy support of the Merdeka Curriculum	87.0	Very Good
Learner characteristics	86.0	Good
Average	87.9	Very Good

The context evaluation scores indicate that the development of a deep learning-based Islamic Religious Education instructional module is relevant to school needs and aligned with the Merdeka Curriculum policy. A school environment that supports the strengthening of Islamic values and learners' readiness provides a strong foundation for implementing the developed module.

2. Input Evaluation

The input evaluation aimed to assess the readiness of resources, module design, and supporting learning facilities.

Table 2. Scores of Input Evaluation Components

Input Components	Score (%)	Category
------------------	-----------	----------

Quality of instructional module design	89.0	Very Good
Alignment of content with IRE learning outcomes	90.5	Very Good
IRE teacher competence	85.0	Good
Availability of supporting facilities	84.5	Good
Average	87.3	Very Good

The input evaluation results show that the developed module demonstrates high design quality and strong alignment with Islamic Religious Education learning outcomes. Teacher competence and the availability of facilities fall within the good category and adequately support optimal module implementation.

3. Process Evaluation

The process evaluation focused on instructional implementation and learner engagement during the use of the instructional module.

Table 3. Scores of Process Evaluation Components

Process Components	Score (%)	Category
Implementation of learning activities	88.0	Very Good
Active learner engagement	86.5	Good
Application of the deep learning approach	87.5	Very Good
Learning time management	85.0	Good
Average	86.8	Very Good

The process evaluation scores demonstrate that Islamic Religious Education learning using the deep learning-based module was implemented effectively. Learners exhibited active engagement through discussions, reflection, and activities oriented toward the internalization of Islamic values.

4. Product Evaluation

The product evaluation was conducted to assess learning outcomes, learner responses, and the impact of the instructional module on understanding and religious attitudes.

Table 4. Scores of Product Evaluation Components

Product Components	Score (%)	Category
Learning mastery	83.3	Good
Improvement of conceptual understanding	85.5	Good
Learner responses	90.0	Very Good
Internalization of Islamic values	86.0	Good
Average	86.2	Very Good

The product evaluation results indicate that the instructional module has a positive impact on learning outcomes and learners' religious attitudes. Learner responses fall within the very good category, reflecting positive acceptance of the instructional module.

5. Summary of CIPP Evaluation Results

Table 5. Summary of CIPP Evaluation

Component	Average Score (%)	Category
Context	87.9	Very Good
Input	87.3	Very Good
Process	86.8	Very Good
Product	86.2	Very Good
Overall Average	87.1	Very Good

The CIPP evaluation summary confirms that the deep learning-based Islamic Religious Education instructional module achieves a very good category across all evaluation components and is suitable for use in instructional practice.

In closing, the findings of this study demonstrate that the development of an Islamic Religious Education (PAI) teaching module grounded in a deep learning approach within the Merdeka Curriculum framework is pedagogically sound and contextually relevant. The evaluation results across the context, input, process, and product components indicate that the module aligns with institutional goals, learner characteristics, and curriculum demands. This alignment ensures that the learning materials support meaningful engagement and facilitate a deeper understanding of Islamic values and concepts among elementary school students.

Furthermore, the implementation of the developed module shows a positive impact on the quality of the learning process and student outcomes. Students' active participation, reflective thinking, and improved conceptual understanding reflect the effectiveness of deep learning strategies in promoting higher-order thinking and value internalization. The favorable responses from students also indicate that the module is practical, engaging, and accessible, thereby supporting its applicability in daily classroom instruction.

Finally, the results of this research contribute to the growing body of literature on instructional module development for Islamic education in the context of curriculum reform. The study offers an empirically tested model that can be adapted and expanded in similar educational settings. Future research may explore large-scale implementation, comparative studies with other instructional approaches, or long-term impacts on students' character development to further strengthen the integration of deep learning within Islamic Religious Education..

Discussion

The findings indicate that the context evaluation provides a strong foundation for developing the Islamic Religious Education instructional module. The alignment between the school's vision and instructional needs shows that the module was designed based on authentic educational conditions.

The input evaluation demonstrates that the quality of module design and its alignment with Islamic Religious Education learning outcomes support the creation of meaningful learning experiences. This aligns with Branch (2022: 41), who emphasizes the importance of systematic design in instructional material development.

The process evaluation reveals effective instructional implementation and active learner engagement. The deep learning approach encourages reflective and contextual understanding, as emphasized by Widodo and Prasetyo (2021: 69).

The product evaluation indicates improvements in conceptual understanding and the internalization of Islamic values. The level of learning mastery achieved by most learners reflects the effectiveness of the instructional module in supporting Islamic Religious Education learning.

Positive learner responses indicate that the module is user-friendly and engaging. This supports the findings of Sari et al. (2023: 92) regarding the importance of innovative modules in enhancing learning motivation.

The integration of the deep learning approach with the Merdeka Curriculum strengthens learners' cognitive, affective, and spiritual dimensions in a balanced manner. Islamic Religious Education learning extends beyond content mastery toward the meaningful application of values in daily life.

These findings contribute to the body of knowledge on Islamic Religious Education module development and provide an implementable model that can be replicated in other Islamic elementary schools.

Conclusion

The development of a deep learning-based Islamic Religious Education instructional module is relevant to the instructional needs at SDIT Luqman Al Hakim Surakarta.

The results of the context, input, process, and product evaluations indicate a very good category across all assessment components.

The developed instructional module effectively enhances conceptual understanding, learning engagement, and the internalization of Islamic values among learners.

The deep learning approach supports the implementation of the Merdeka Curriculum through meaningful and reflective learning experiences.

This instructional module is recommended as an innovative and applicable Islamic Religious Education learning resource at the elementary school level.

References

- Akbar, S. (2020). *Instrumen perangkat pembelajaran*. Bandung: Remaja Rosdakarya.
- Branch, R. M. (2022). *Instructional design: The ADDIE approach*. New York: Springer.
- Hidayat, A., & Nurhadi. (2022). Pengembangan modul pembelajaran Pendidikan Agama Islam berbasis kontekstual di sekolah dasar. *Jurnal Pendidikan Agama Islam*.
- Morrison, G. R., Ross, S. M., Kalman, H. K., & Kemp, J. E. (2020). *Designing effective instruction* (8th ed.). Hoboken: Wiley.
- Rahmawati, L. (2021). Problematika pembelajaran Pendidikan Agama Islam di sekolah dasar. *Jurnal Ilmu Pendidikan Islam*.
- Sari, M., Hasanah, U., & Fadli, M. (2023). Modul Pendidikan Agama Islam berbasis proyek untuk *penguatan* karakter siswa. *Cendekia: Jurnal Pendidikan Islam*.
- Sugiyono. (2021). *Metode penelitian dan pengembangan (Research and Development/R&D)*. Bandung: Alfabeta
- Widodo, S., & Prasetyo, Z. K. (2021). Deep learning approach in elementary education. *International Journal of Instruction*.
- Yusuf, M., & Kurniawan, D. (2024). Implementasi Kurikulum Merdeka dalam pembelajaran Pendidikan Agama Islam. *Jurnal Pendidikan Islam Indonesia*.