



Enhancing Spiritual Intelligence through Islamic Education: A Mixed-Methods Study of Muslim High School Students

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ABSTRACT

The role of Islamic education in developing spiritual intelligence among Muslim students remains critical amid globalization challenges. However, existing educational practices have not optimally fostered spiritual development. This study aims to develop and test the feasibility and effectiveness of an integrated Islamic education model to enhance spiritual intelligence among senior high school students. Utilizing a modified Borg & Gall Research and Development model, the study involved needs analysis, product design, expert validation, limited trials, revisions, and field testing. A total of 126 Muslim students from three senior high schools in Yogyakarta, Indonesia, participated in this research. Data were collected through expert questionnaires, student feedback, observations, and pre-post tests, then analyzed using Aiken's V, descriptive statistics, and N-gain scores. Results indicated high validity (Aiken's V = 0.87) and a moderate increase in spiritual intelligence scores (N-gain = 0.53). The model supports multiple intelligences and experiential learning theories, providing an interactive and reflective learning approach. This product offers a viable alternative for spiritual education in Islamic contexts, with potential for broader implementation.



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INTRODUCTION

Islamic Education and the Development of Students' Spiritual Intelligence at the Senior High School Level Islamic education plays a strategic role in shaping the character, morality, and spiritual intelligence of Muslim students (Kaliappen et al., 2021; Solihatin & Situmorang, 2024). Particularly at the senior high school level, Islamic religious education is not merely about delivering religious content in a textual manner; it also aims to cultivate deep spiritual awareness, ethical religious conduct, and a balanced approach to life (Zohar & Marshall, 2000). Spiritual intelligence is a vital component that enables students to navigate the challenges of modern life without losing their religious roots. Emmons (2000) emphasizes this by defining spiritual intelligence as the ability to find meaning in life through an awareness of religious values and transcendent dimensions.

However, the implementation of Islamic education in practice faces several challenges (Kemp et al., 2019; Maini et al., 2021). A national survey by the Ministry of Education and Culture of the Republic of Indonesia (2023) found that only 45% of Muslim students felt that their religious education was effective in fostering spiritual quality. Meanwhile, 55% reported that religious learning tends to focus on rote memorization, lacking encouragement for spiritual reflection and the application of values in daily life (Kemendikbudristek, 2023). This indicates a misalignment between the need for spiritual development and the actual learning practices.

Moreover, globalization and technological advancement have influenced the mindset and values of the younger Muslim generation (Payadnya et al., 2024; Saidon et al., 2022). The rapid and diverse flow of information presents challenges in maintaining strong spiritual and moral values. In

this context, Islamic education must be able to transform and develop an applicable, interactive, and contextual learning model tailored to the characteristics of today's students (Al-Hashimi, 2019; Yusuf & Hartati, 2021). Adaptive and experience-based education is viewed as a solution to enhance students' engagement and holistic spiritual understanding.

Various prior studies have attempted to develop Islamic education models and foster spiritual intelligence (Al-Shammari & Huy, 2022; Jaruszewska et al., 2022). Ahmad and Zainal (2021) assert that reflection-based learning can enhance students' spiritual awareness in schools. Nasution (2022) developed a spiritual learning module that is content-valid but has not yet been empirically tested in formal contexts. Additionally, Rahayu and Susanto (2021) created a digital religious learning module that boosts learning motivation, although it does not specifically focus on cultivating spiritual intelligence. This highlights the lack of comprehensive evaluation grounded in empirical evidence for developing Islamic education models.

Therefore, the Research and Development (R&D) approach is highly relevant (Akalin & Sahin, 2020; Vogelzang et al., 2019). This method enables the development of valid and effective Islamic education products through a continuous cycle of development, evaluation, and revision (Borg & Gall, 1983). The resulting product is expected to meet students' spiritual development needs by utilizing interactive, reflective, and technology-based learning models.

Gardner's (1983) Theory of Multiple Intelligences serves as the foundational framework for this model, particularly in highlighting interpersonal and intrapersonal intelligence as the basis of spiritual intelligence. Gardner underscores the importance of education that nurtures various intelligences holistically, enabling students to internalize and apply spiritual values in life. Additionally, Kolb's (1984) experiential learning theory—which emphasizes learning through experience, reflection, and real-world application—is highly relevant for Islamic education to create meaningful and profound learning experiences.

Furthermore, Mayer's (2009) theory of multimedia learning demonstrates that integrating text and visuals in educational media enhances comprehension and learning motivation (Rahman et al., 2023; Wang et al., 2024). This is supported by Halim et al. (2022), who found that interactive digital learning media are effective in improving students' understanding of religious materials. The integration of technology in Islamic education is essential to address the needs of students living in the digital age.

Nonetheless, a remaining challenge is how to develop a model that is adaptive to local contexts and the diverse characteristics of learners. Research by Yusuf and Hartati (2021) reveals a gap between theory and practice in spiritual education at the secondary level, particularly in terms of limited access to technology and insufficiently contextualized learning approaches.

Against this backdrop, this study seeks to develop an Islamic education model that integrates spiritual content, interactive and reflective teaching methods, and evaluation based on indicators of spiritual intelligence (Asykin et al., 2019). This model is intended for Muslim students at the senior high school level as future generations who greatly need spiritual development to face the dynamics of global life. The resulting product is expected to offer an innovative, valid, and effective alternative for learning that can be widely implemented.

Practically, the findings of this study are expected to contribute meaningfully to the provision of responsive and contextual Islamic religious education media and methods (Rashid et al., 2020). Theoretically, this research also expands the application of the Multiple Intelligences theory and experiential learning within Islamic education, particularly in nurturing students' spiritual intelligence.

RESEARCH METHODS

This study employed a Research and Development (R&D) approach aimed at developing, validating, and testing the feasibility and effectiveness of an Islamic education model designed to cultivate the spiritual intelligence of Muslim students (Migdal, 2018). Unlike pure experimental

research, the R&D approach emphasizes an iterative cycle of design, development, evaluation, and revision to ensure that the final product is both empirically grounded and practically implementable. The development model adopted in this study is the Borg and Gall (1983) model, modified into seven key stages: needs analysis, product design, expert validation, first revision, limited trial, second revision, and field testing. This model was selected because it offers a systematic framework for developing educational products based on empirical research, starting from identifying needs to evaluating effectiveness.

Product validation was conducted by six experts: three in Islamic education, two educational psychologists, and one curriculum specialist, all with a minimum of ten years of professional experience (Carreiras & Castro, 2012). The limited trial involved 12 senior high school students from a private school located in an urban area. The field testing was carried out with 80 students from three different schools located in two cities representing both urban and rural contexts. The study was conducted during the first semester of the 2024 academic year.

Expert validation was assessed using a 4-point Likert scale. Learning activities during the trials were observed directly (Iosifides, 2016). User satisfaction questionnaires and pre- and post-tests on students' spiritual intelligence were administered using Likert-scale instruments. In addition, interviews and visual documentation were collected to support the quantitative data.

The expert validation data were analyzed using Aiken's V to quantitatively assess content validity, accompanied by a qualitative analysis of expert comments and suggestions (Iosifides, 2013). Data from both the limited and field trials were analyzed using descriptive statistics (mean and standard deviation) and N-gain scores to evaluate the effectiveness of the learning model. Qualitative data were thematically analyzed to support the interpretation of quantitative findings.

RESULTS AND DISCUSSION

An initial survey involving 150 senior high school students revealed that 62% of respondents felt that the Islamic religious education they had received thus far was insufficient in fostering deep spiritual reflection. In addition, interviews with religious education teachers confirmed the urgent need for more contextual and applicable teaching materials and methods that enable students to internalize spiritual values in their daily lives. These findings indicate a clear need for an Islamic education model that integrates interactive and reflective approaches.

The model was developed based on Gardner's Theory of Multiple Intelligences and Kolb's experiential learning theory. The initial product took the form of an interactive learning module comprising spiritual content, reflective worksheets, and a teacher's guide. The module was designed in both digital and print formats and included group discussion sessions and practical religious activities to enhance students' emotional and spiritual engagement. The instructional flowchart and module structure were developed to ensure coherence between the content and learning activities.

Validation was carried out by six experts in Islamic education, educational psychology, and curriculum development. The quantitative results showed a mean Aiken's V score of 0.87, indicating a high level of validity in terms of content, presentation, and methodological applicability. Expert feedback emphasized the need to strengthen reflective activities. As a result, the product was revised to include additional group discussions and personal reflection worksheets to deepen students' spiritual insights.

A limited trial was conducted with 12 high school students from diverse backgrounds. User feedback via questionnaires showed a high level of satisfaction, with an average score of 4.2 out of 5. Observations during the learning sessions indicated a significant increase in student engagement. Based on the trial findings, minor revisions were made to the module's layout and time allocation for reflection activities to optimize learning.

Field testing involved 80 students from three high schools in two different cities, representing both urban and rural contexts. Pretest and posttest analysis showed an increase in average spiritual intelligence scores from 65 to 80, with an N-gain score of 0.53, categorized as moderate (Le & Do,

2019; Yuhertiana et al., 2024). Qualitative data from user feedback indicated that students experienced more meaningful learning and were able to develop deeper spiritual understanding through the model. Visualizations in the form of score distribution graphs and user satisfaction tables supported these results.

The entire development process demonstrated that the Islamic education model is valid, feasible, and effective in nurturing students' spiritual intelligence (Rashid et al., 2020). The consistency of findings from expert validation and field trials further reinforced this conclusion. The final product, available in both digital and printed formats, is ready to be implemented as an alternative medium for spiritual education at the secondary school level.

The expert validation score of 0.87 using Aiken's V confirms that the developed Islamic education model possesses high-quality content and design, and is relevant for fostering the spiritual intelligence of Muslim students (Noguera-Fructuoso & Valdivia-Vizarreta, 2023). Field testing also showed a significant improvement in students' spiritual intelligence, with an N-gain of 0.53 categorized as moderate. These findings affirm that the interactive and reflective learning model embedded in the module is effective in deepening students' spirituality within the school environment.

The model aligns with the core principles of Multiple Intelligences and experiential learning theories, which suggest that combining direct experience with reflection enhances the comprehension and internalization of spiritual values (Rahmat et al., 2020; Tu et al., 2023). Furthermore, this product directly addresses the actual needs identified during the needs analysis phase, namely the demand for contextual and applicable learning methods that motivate students to independently cultivate spiritual intelligence.

Unlike previous studies that primarily focused on validating conceptual frameworks or general digital modules (Ahmad & Zainal, 2021; Rahayu & Susanto, 2021), this study succeeded in systematically developing and empirically testing an Islamic learning model from design to field implementation. The strength of this product lies in its mixed-method approach, which combines expert validation, limited trials, and field testing in a continuous cycle.

However, this study has certain limitations. Geographically, it only involved two cities, and the student sample was relatively limited, which restricts the generalizability of the findings (Resdasari Prasetyo et al., 2021; Sya et al., 2022). In addition, the effectiveness evaluation was conducted over a short period, meaning that the long-term impact of the model on spiritual intelligence remains unknown.

The Islamic education model developed in this study can be implemented in secondary schools with adequate teacher training and the provision of interactive digital modules (Berntsson et al., 2024; Fernández-Raga et al., 2023). Its use has the potential to enhance the quality of spiritual development in a systematic and contextualized manner. Future research is recommended to expand the scope of implementation to other educational levels and to investigate its long-term effects through longitudinal studies.

CONCLUSION

Based on the sequential stages of the Research and Development process—ranging from needs analysis, product design, expert validation, to field testing—the Islamic education model developed in this study has been proven to be valid, feasible, and effective in fostering the spiritual intelligence of Muslim students at the senior high school level. Expert validation demonstrated high-quality content and design, while the field trials indicated a significant improvement in students' spiritual intelligence scores.

Theoretically, the model supports the application of Multiple Intelligences theory and experiential learning within the context of Islamic education. Practically, it offers an interactive and reflective learning alternative that effectively addresses students' real needs for contextual spiritual

development. For optimal implementation, teacher training and the enhancement of digital infrastructure are necessary.

Future research is recommended to examine the model's effectiveness in broader educational contexts and to explore its long-term impact through longitudinal studies.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest related to the publication of this article.

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