

THE URGENCY OF DEVELOPING RELIGIOUS LABORATORIES AS A MEANS OF STRENGTHENING CHARACTER EDUCATION IN SCHOOLS

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Abstrak

Penelitian ini bertujuan untuk mendeskripsikan urgensi pengembangan laboratorium keagamaan sebagai sarana penguatan pendidikan karakter di sekolah. Penelitian menggunakan metode studi pustaka dengan mengumpulkan, menelaah, dan menganalisis berbagai sumber literatur yang relevan, terutama buku dan artikel jurnal yang membahas laboratorium keagamaan, pembelajaran agama, dan pendidikan karakter. Data dianalisis secara deskriptif untuk mengidentifikasi fungsi, manfaat, dan kontribusi laboratorium keagamaan terhadap pembentukan karakter peserta didik. Hasil penelitian menunjukkan bahwa laboratorium keagamaan memiliki peran strategis dalam mengintegrasikan pemahaman konseptual dengan pengalaman praktik keagamaan. Keberadaan laboratorium memungkinkan peserta didik tidak hanya memahami ajaran agama secara kognitif, tetapi juga mengaktualisasikan nilai religius, toleransi, tanggung jawab, etika, kedisiplinan, dan kedamaian dalam kehidupan sehari-hari. Laboratorium keagamaan juga menyediakan ruang pembelajaran yang kontekstual untuk mengeksplorasi praktik keagamaan, membangun pengalaman spiritual, serta menumbuhkan sikap saling menghargai dalam kehidupan sosial yang beragam. Oleh karena itu, pengembangan laboratorium keagamaan perlu ditempatkan sebagai bagian strategis dari pengelolaan pembelajaran agama di sekolah guna memperkuat proses internalisasi nilai dan pembentukan karakter peserta didik secara berkelanjutan, sehingga pendidikan agama lebih aplikatif, kontekstual, dan bermakna.

Kata kunci: Laboratorium Keagamaan, Pendidikan Karakter, Pembelajaran Agama

Abstract

This study aims to describe the urgency of developing religious laboratories as a means of strengthening character education in schools. The study employed a literature review method by collecting, examining, and analyzing relevant sources, particularly books and journal articles addressing religious laboratories, religious learning, and character education. The data were analyzed descriptively to identify the functions, benefits, and contributions of religious laboratories to students' character development. The findings indicate that religious laboratories play a strategic role in integrating conceptual understanding with practical religious experiences. Their presence enables students not only to understand religious teachings cognitively but also to actualize religious values, tolerance, responsibility, ethics, discipline, and peace in everyday life. Religious laboratories also provide a contextual learning environment for exploring religious practices, developing spiritual experiences, and fostering mutual respect within diverse social settings. Therefore, the development of religious laboratories should be positioned as a strategic component of religious learning management in schools to strengthen the internalization of values and sustainable character formation among students, thereby making religious education more applicable, contextual, meaningful, and responsive to students' personal and social development needs.

Keywords: Religious Laboratories, Character Education, Religious Learning

INTRODUCTION

Laboratories constitute an important component of educational infrastructure because they provide structured spaces in which students can connect conceptual knowledge with direct experience. In conventional school settings, laboratories are commonly associated with science, computers, languages, and the arts. Their educational value lies in enabling students to observe, practice, test, simulate, and reflect on concepts that may otherwise remain abstract. Agustina (2018) emphasizes that laboratory-based learning can strengthen understanding by giving learners opportunities to experience the practical dimensions of subject matter. In this sense, laboratories are not merely physical rooms equipped with tools; they are pedagogical environments designed to promote active, contextual, and meaningful learning.

The importance of laboratory facilities is closely related to the broader quality of educational management. Adequate facilities, proper maintenance, and effective utilization contribute to the quality of learning processes and outcomes. Bararah (2020) and Suranto et al. (2022) argue that educational facilities and infrastructure must be managed systematically so that they genuinely support instructional goals. A laboratory that is available but poorly integrated into teaching will have limited educational impact. Therefore, laboratory development requires not only equipment and space but also curriculum alignment, teacher competence, instructional planning, and sustainable management. Nurhadi (2018) similarly notes that laboratory management influences the quality of learning because practical facilities become effective only when they are organized around clear learning objectives.

Within Islamic religious education, the need for laboratory-based learning is particularly significant. Religious education is often taught through explanation, memorization, reading, and classroom discussion, although many of its objectives involve practice, habituation, reflection, moral formation, and social behavior. This gap creates a pedagogical challenge. Students may understand religious concepts cognitively but may not necessarily be able to apply them consistently in worship, ethical decision-making, interpersonal relations, or social life. Widodo (2013) proposed the importance of developing an Islamic Religious Education laboratory as a learning environment in which religious knowledge can be translated into observable and meaningful practice.

A religious laboratory can therefore be understood as a structured learning space that facilitates practical religious learning, reflection, simulation, discussion, documentation, and value internalization. Its functions can include practicing worship, studying religious texts, developing religious literacy, organizing social-religious activities, conducting case-based discussions, and exploring religious diversity. Romadona et al. (2022) show that social laboratory learning in Islamic Religious Education can also be oriented toward religious moderation, enabling students to connect religious knowledge with attitudes of tolerance, dialogue, and responsible citizenship.

The urgency of religious laboratories becomes even stronger when connected with character education. Character formation cannot rely solely on verbal instruction because values need to be experienced, practiced, repeated, evaluated, and reflected upon. Krishnawati et al. (2023) emphasize that Islamic Religious Education has a strategic position in character development, while Khoiriyah et al. (2023) highlight the importance of pedagogical competence in implementing character-based religious learning. Recent studies also indicate that religious values, school culture, and strategically

managed religious education can strengthen socio-religious attitudes and students' character development (Dian et al., 2025; Chadijah et al., 2026; Wulandari et al., 2026).

Despite this potential, the role of religious laboratories has received less attention than laboratories in science and technology. Discussions of educational facilities often focus on infrastructure management in general, whereas studies of character education frequently emphasize curriculum, teacher modeling, school culture, or habituation. The specific position of the religious laboratory as a medium that connects religious knowledge, practical experience, and character internalization remains comparatively underdeveloped. This article therefore examines the urgency of developing religious laboratories in schools as a means of strengthening character education. It focuses on their pedagogical functions, their contribution to the internalization of religious and social values, and the management principles needed to ensure that religious laboratories become meaningful learning environments rather than symbolic facilities. Accordingly, the study positions religious laboratories as an educational bridge between knowing religious teachings and living their values through disciplined practice, ethical interaction, reflective learning, social responsibility, and respectful engagement with diversity within contemporary school communities.

METHOD

This study employed a literature review approach to examine the urgency of developing religious laboratories as a means of strengthening character education in schools. The review focused on scholarly literature addressing educational laboratories, Islamic Religious Education, character education, religious culture, educational facilities, and laboratory management. The sources consisted primarily of peer-reviewed journal articles and relevant academic books published in Indonesia and internationally. Twenty references supplied for this study were used as the principal literature base because they directly or indirectly discuss laboratory-based learning, infrastructure management, religious education, character formation, religious moderation, and school culture.

The review was conducted through several stages. First, the literature was classified according to four analytical themes: the pedagogical function of laboratories, management of educational facilities, the role of Islamic Religious Education in character formation, and the potential contribution of religious laboratories to experiential and value-based learning. Second, the content of each source was examined to identify concepts, findings, and arguments relevant to the research focus. Third, similarities, differences, and relationships among the sources were compared in order to construct a coherent interpretation of how religious laboratories may support character education.

The analysis used descriptive and interpretive techniques. Descriptive analysis was employed to map the functions and educational benefits reported in the literature, while interpretive analysis was used to synthesize these findings into a conceptual explanation of the religious laboratory as a learning environment. Particular attention was given to the relationship between religious knowledge, practical experience, habituation, reflection, tolerance, responsibility, and socio-religious behavior. Because this study relied on secondary sources, it did not measure the direct effectiveness of a particular religious laboratory. Instead, it generated an evidence-based conceptual synthesis intended to provide a

foundation for school policy, instructional planning, and future empirical research on the development and implementation of religious laboratories in diverse educational contexts today.

RESULTS AND DISCUSSION

The Significance of Laboratories as Learning Facilities

The literature indicates that laboratories play an essential role in transforming learning from a predominantly verbal process into an experiential one. Their principal educational value lies in providing students with opportunities to observe, practice, test, simulate, and evaluate knowledge in situations that resemble real applications. Agustina (2018), although discussing science laboratories, demonstrates a broader pedagogical principle: students understand concepts more meaningfully when they engage directly with learning objects, procedures, and evidence. This principle is relevant beyond science because practical engagement can strengthen cognitive understanding while also developing procedural, collaborative, and reflective skills.

The effectiveness of laboratories, however, depends on more than the availability of rooms and equipment. Educational facilities must be planned, organized, maintained, and utilized according to instructional needs. Bararah (2020) emphasizes that effective management of facilities and infrastructure contributes to learning quality, while Suranto et al. (2022) similarly identify infrastructure management as an important component of educational quality. Megasari (2014) further shows that improving the management of educational facilities can support better learning processes. These findings suggest that a laboratory should be treated as a pedagogical system rather than merely as physical infrastructure.

Proper management requires alignment between laboratory activities and curriculum objectives. Nurhadi (2018) explains that laboratory management should improve learning quality; therefore, planning, scheduling, equipment, supervision, and evaluation must serve clear educational purposes. Facilities become meaningful only when teachers can design activities that encourage participation, inquiry, reflection, and application. Tafonao (2018) likewise shows the importance of instructional media in stimulating learner interest. This requires consistent pedagogical planning schoolwide.

These principles are highly relevant to religious education. Islamic Religious Education involves knowledge, practice, attitudes, values, and social behavior. Consequently, relying exclusively on lectures and textual explanation risks creating a separation between what students know and how they act. The laboratory model offers a way to reduce this gap by creating a setting in which knowledge can be practiced and reflected upon. Widodo (2013) specifically argues for the management of Islamic Religious Education laboratories in senior high schools, indicating that religious learning can benefit from organized facilities that support practical and contextual activities.

The Importance of Religious Laboratories for Character Education

A religious laboratory should not be narrowly interpreted as a room containing religious objects. Its educational significance lies in the activities, experiences, interactions, and reflections that take place within it. It can support the practice of worship, Qur'anic learning, religious literacy,

simulation of religious procedures, discussion of ethical cases, social-religious projects, and analysis of contemporary religious issues. Through such activities, students move from receiving information to experiencing how religious teachings guide conduct. This is particularly important because character education requires internalization rather than mere comprehension.

Krishnawati et al. (2023) underline the role of Islamic Religious Education in strengthening character education, while Alhamuddin and Asikin (2025) show that curriculum design in Islamic Religious Education has consequences for character development. These studies support the argument that religious learning should be organized not only around mastery of content but also around the formation of dispositions and behavior. A religious laboratory provides a practical environment where values such as discipline, honesty, responsibility, cooperation, respect, and care can be intentionally cultivated through repeated activities.

For example, worship practice can be used to develop discipline, accuracy, cleanliness, responsibility, and spiritual awareness. Group assignments can foster cooperation and mutual respect. Religious service projects can cultivate empathy and social responsibility. Case discussions can train students to make ethical judgments and explain religious reasoning. Reflection activities can help students examine the relationship between religious values and their own behavior. In this way, the religious laboratory functions as a bridge between cognition, practice, and character.

Character formation also depends strongly on teacher competence. Khoiriyah et al. (2023) emphasize pedagogical competence in implementing character-based Islamic Religious Education. Teachers must therefore be capable of designing laboratory activities that go beyond procedural imitation. Students should not simply perform a ritual correctly; they should also understand its ethical and spiritual meaning. Without reflection, practical activity may become mechanical. Conversely, when practice is combined with explanation, feedback, habituation, and reflection, the laboratory can facilitate deeper internalization.

The relevance of religious laboratories extends to the formation of socio-religious character. Romadona et al. (2022) demonstrate that social laboratory learning in Islamic Religious Education can be developed on the basis of religious moderation. This orientation is especially important in plural societies, where religious education must strengthen commitment to one's own faith while also developing respect for others. Religious laboratories can provide structured opportunities for dialogue, comparative learning, discussion of social diversity, and collaborative activities that train students to respond to differences peacefully and responsibly.

This function is consistent with recent research emphasizing the integration of religious values and character education. Dian et al. (2025) show that strategic management of character education can foster socio-religious attitudes, while Chadijah et al. (2026) highlight the integration of religious values into character education in an Islamic educational context. Wulandari et al. (2026) also demonstrate the importance of religious culture in character formation. Taken together, these studies suggest that character is strengthened when values are embedded in school practices, interactions, routines, and environments. The religious laboratory can become one of the institutional spaces where this integration is deliberately organized.

Nevertheless, the establishment of a religious laboratory should not be reduced to infrastructure procurement. Schools need a clear educational concept, management structure, activity program, teacher preparation, utilization schedule, and evaluation mechanism. School leadership is important in ensuring that the facility is integrated into institutional priorities. Ekosiswoyo (2007) emphasizes the importance of effective school leadership for educational quality, and this insight applies to the sustainability of religious laboratory programs. Administrators must ensure that facilities are adequately supported, teachers are prepared, and activities remain connected to curriculum goals.

The religious laboratory also needs to be integrated with broader character education strategies. Suhardin et al. (2025) emphasize the strategic development of character education based on Islamic Religious Education, while Hidayati et al. (2026) highlight the importance of curriculum development grounded in character education. Accordingly, laboratory activities should not stand apart from classroom learning, school culture, extracurricular programs, or student services. They should reinforce the same values across different educational settings. Such integration prevents the laboratory from becoming ceremonial or symbolic.

The synthesis of the literature therefore reveals three central reasons for developing religious laboratories. First, they provide experiential learning that connects religious concepts with practice. Second, they create structured opportunities for the internalization of personal and social character values. Third, they offer an institutional space for contextual religious education that includes reflection, moderation, collaboration, and responsible participation. Their significance lies not in the physical room itself but in the pedagogical experiences it enables.

Ultimately, developing religious laboratories should be understood as an investment in the quality of religious education and character formation. When supported by appropriate management, competent teachers, relevant curricula, and reflective learning activities, religious laboratories can transform religious education from predominantly knowledge-oriented instruction into a more experiential, contextual, and character-centered process. Their development is therefore urgent not because every school needs another specialized room, but because schools need structured educational environments that enable students to practice religious knowledge, internalize values, engage respectfully with diversity, and translate faith into responsible personal and social conduct.

CONCLUSION

Religious laboratories have strategic significance in strengthening character education because they provide a learning environment in which religious knowledge can be connected with practice, reflection, habituation, and social interaction. Their value does not lie merely in the existence of a special room or religious equipment, but in their capacity to facilitate meaningful experiences that help students internalize religious and moral values. Through worship practice, ethical discussions, social-religious projects, reflective activities, and collaborative learning, students can develop discipline, responsibility, tolerance, empathy, cooperation, and spiritual awareness.

The literature also shows that the effectiveness of religious laboratories depends on appropriate management, curriculum integration, teacher competence, adequate facilities, and continuous evaluation. Religious laboratories should therefore be incorporated into the broader

strategy of Islamic Religious Education and school-based character development rather than treated as supplementary facilities. Their programs should connect classroom knowledge with students' personal and social experiences.

Developing religious laboratories is consequently an important educational investment. When properly designed and managed, they can make religious education more contextual, experiential, and character-oriented. Future studies should empirically examine different models of religious laboratories, their management practices, student participation, and their measurable contribution to religious, moral, and socio-religious character formation in diverse school settings over time effectively.

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