INTEGRATION OF 21ST CENTURY SKILLS IN PESANTREN EDUCATION: AN INNOVATIVE MODEL FOR IMPROVING THE GLOBAL COMPETENCE OF SANTRI

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Abstract

In the context of rapid global change, pesantren face increasing pressure to equip santri with 21st-century skills essential for global competitiveness.This study explores how Al-Yasini Islamic Boarding School integrates 21st-century skills within an Islamic framework to sustain its religious identity while enhancing global competitiveness. Using a qualitative descriptive approach with a case study design, data were collected through in-depth interviews with kiai, teachers, and students, along with classroom observations and document analysis. Thematic analysis was applied to identify key patterns in leadership, independence, and digital literacy, while methodological triangulation was employed to ensure analytical credibility. The findings reveal that the integration of Islamic soft skills, the 4C learning framework (critical thinking, creativity, collaboration, and communication), the digitalization of Islamic literacy, and the cultivation of leadership and independence enables the institution to produce globally competitive graduates. However, several challenges persist, including limited technological infrastructure, resistance to modernization among some Islamic boarding schools, and insufficient teacher adaptability to innovative pedagogical methods. To address these gaps, this study recommends strengthening collaboration between Islamic boarding schools, higher education institutions, and industry partners to enhance student preparedness for global challenges. The study contributes to both theory and practice by providing a context-specific yet globally relevant framework for Islamic education reform.

Keywords*: Islamic Education; Experiential Learning; 21st-Century Skills.*

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Abstrak

Dalam konteks perubahan global yang cepat, pesantren menghadapi tekanan yang semakin besar untuk membekali santri dengan keterampilan abad ke-21 yang esensial untuk daya saing global. Studi ini mengeksplorasi bagaimana Pesantren Islam Al-Yasini mengintegrasikan keterampilan abad ke-21 dalam kerangka Islam untuk mempertahankan identitas religiusnya sambil meningkatkan daya saing global. Menggunakan pendekatan deskriptif kualitatif dengan desain studi kasus, data dikumpulkan melalui wawancara mendalam dengan kiai, guru, dan siswa, serta pengamatan kelas dan analisis dokumen. Analisis tematik diterapkan untuk mengidentifikasi pola kunci dalam kepemimpinan, kemandirian, dan literasi digital, sementara triangulasi metodologis digunakan untuk memastikan kredibilitas analitis. Temuan menunjukkan bahwa integrasi keterampilan lunak Islam, kerangka kerja pembelajaran 4C (berpikir kritis, kreativitas, kolaborasi, dan komunikasi), digitalisasi literasi Islam, serta pembinaan kepemimpinan dan kemandirian memungkinkan institusi ini menghasilkan lulusan yang kompetitif secara global. Namun, beberapa tantangan tetap ada, termasuk infrastruktur teknologi yang terbatas, resistensi terhadap modernisasi di beberapa pesantren Islam, dan ketidakmampuan guru untuk beradaptasi dengan metode pedagogis inovatif. Untuk mengatasi kesenjangan ini, studi ini merekomendasikan penguatan kolaborasi antara pesantren Islam, lembaga pendidikan tinggi, dan mitra industri untuk meningkatkan kesiapan siswa menghadapi tantangan global. Studi ini berkontribusi pada teori dan praktik dengan menyediakan kerangka kerja yang spesifik konteks namun relevan secara global untuk reformasi pendidikan Islam.

Kata Kunci: *Pendidikan Islam; Pembelajaran Berbasis Pengalaman; Keterampilan Abad ke-21.*

INTRODUCTION

The pesantren education model has become an integral part of the Islamic education system in various countries, especially in Indonesia, Malaysia, and several Middle Eastern countries. As educational institutions based on Islamic values, Islamic boarding schools have the advantage of preserving Islamic heritage and shaping the character (Islamic et al., 2024; Mas'udi, 2015; Muid et al., 2024; Mustain & Bakar, 2025). However, in the era of globalization and the Industrial Revolution 4.0, Islamic boarding schools face a major challenge in ensuring that their graduates have skills that are relevant to the times. Although Islamic boarding schools have proven capable of surviving for centuries with their unique educational system, current global dynamics require Islamic boarding schools to renew their learning systems to accommodate 21st-century skills, which have become global competency standards (Choirunnisa, 2016; Hussin et al., 2024).

21st-century skills encompass various aspects, ranging from digital literacy, critical thinking, creativity, communication, to collaboration, which are currently essential requirements in the academic and professional world (Zuhri et al., 2024). An education system that does not integrate these skills risks stagnating the competitiveness of its graduates (Kumar & Prajapati, 2025; Singun, 2025). In addition, a study conducted by the Organisation for Economic Co-operation and Development (OECD, 2014) shows that countries with education systems oriented towards 21st-century skills, such as Finland and Singapore, are able to produce graduates with better work readiness and high competitiveness. Therefore, the pesantren education system is required to adapt without losing its identity and adopt innovative approaches to ensure that santri not only have a strong command of Islamic knowledge, but also skills that can increase their competitiveness in the international arena.

However, the adjustment of the education system in Islamic boarding schools faces several major challenges in integrating 21st-century skills, namely the imbalance between traditional education and modern needs. Many Islamic boarding schools still rely on learning methods based on classical texts and halaqah (circle of learning) that emphasize memorization and understanding of classical texts (Krisdiyanto et al., 2019). Although this approach has advantages in strengthening religious understanding, it is not sufficient to equip students with the critical thinking and digital literacy skills needed to face global challenges (Harmathilda et al., 2024). Therefore, a new approach is needed that can combine the strengths of the pesantren education system with 21stcentury skills, without eliminating the essence of Islamic values that form the main foundation of pesantren education.

Several studies have attempted to explore innovation in Islamic boarding school education, but there are still limitations in its application. For example, researched the integration of the STEAM (*Science, Technology, Engineering, Arts, and Mathematics*) method into the Islamic boarding school curriculum (Wibowo et al., 2024). Their study results show that this approach can increase students' interest in science and technology, but it does not discuss in depth soft skills such as communication and collaboration, which are also part of 21st-century skills. Another study by (Zabidi & Tamami, 2021) discusses digital literacy in Islamic boarding schools, but finds that the implementation of technology is still hampered by a lack of infrastructure, teacher readiness, and cultural resistance to digitization. Therefore, further research is needed to develop innovative models that can comprehensively integrate 21st-century skills into the pesantren education system.

In addition, Islamic boarding school education also faces the increasingly complex challenges of globalization. In an increasingly digitized world, access to

information has become more widespread, and competition in the labor market has become more intense (Hetmańczyk, 2023; Poláková et al., 2023; Tirole, 2023). In this context, students need to have the ability to adapt, solve problems, and lead in order to compete in various professional sectors. A study by (Podgorski & Graham, 1989) emphasizes that religious-based educational institutions that successfully adopt 21st-century skills have higher levels of santri engagement in industry and academia. Therefore, Islamic boarding schools need to reform their curriculum to not only teach religious knowledge but also facilitate the development of skills that enable santri to actively participate in the knowledge-based economy.

Further studies also show that strengthening 21st-century skills in Islamic-based education has been successfully implemented in several other countries. In Malaysia, for example, the integration of Islamic education with digital technology and entrepreneurship has been implemented in the *Tahfiz Science Schools* program, which allows students to develop science and technology skills without neglecting religious education (Iksan, 2023). Meanwhile, in several Middle Eastern countries, STEM-based madrasah programs have successfully improved the global competence of graduates in various professional fields. These findings show that the transformation of Islamic-based education is not only possible but can also serve as a model for Islamic boarding schools in Indonesia in developing students who are globally competitive.

Based on a mapping of previous studies, this research offers a new, more comprehensive approach to integrating 21st-century skills into the pesantren education system. The innovative model developed in this study not only emphasizes the use of technology but also the strengthening of soft skills such as critical thinking, creativity, communication, and collaboration, which are key elements in modern education systems (Ross, 2018). In addition, this research also considers the social and cultural factors that are major challenges in implementing educational innovation in the pesantren environment, so that the solutions offered can be more applicable and contextual.

In practical terms, this research aims to explain a model of Islamic boarding school education that is more adaptive to global demands, without losing sight of the essence of Islamic values that form its foundation. Using an evidence-based research approach, this study will analyze the factors that support and hinder the implementation of 21st-century skills in Islamic boarding school education. In addition, this research will also identify best practices from various countries that have successfully adopted 21st-century skills in Islamic education systems, so that they can be used as a reference for the development of Islamic boarding school education policies in Indonesia.

Thus, integrating 21st-century skills into Islamic boarding school education is not only a necessity but also a strategic step to ensure that students have the competencies to compete at the global level. This study is expected to contribute to the development of Islamic education policies that are more innovative and relevant to the demands of the times. Furthermore, this research is also significant in the global academic context, as it can serve as a model for Islamic educational institutions in various countries facing similar challenges in adapting their education systems to the dynamics of global change. The results of this study are also expected to be a useful reference for academics, education practitioners, and policy makers in developing a more progressive and future-oriented Islamic education system.

RESEARCH METHODS

This study employs a qualitative approach using a case study design conducted at Al-Yasini Islamic Boarding School. The selection of this research site is based on identified challenges related to the integration of 21st-century skills within the Islamic boarding school education system. Preliminary institutional reports, internal curriculum evaluations, and comparative data with other Islamic boarding schools indicate that learning practices at Al-Yasini remain predominantly text-centered and traditional, with limited systematic integration of critical thinking, creativity, collaboration, and digital literacy skills. These conditions reflect a gap between the existing educational practices and the demands of 21st-century competencies expected of Islamic boarding school graduates. Therefore, Al-Yasini Islamic Boarding School represents a relevant and strategic case for in-depth analysis to explore how 21st-century skills integration is conceptualized, implemented, and constrained within a pesantren-based educational context. The qualitative approach was chosen because it allows for a holistic exploration of phenomena in their natural context (Creswell, 2014). Case studies were used to understand the specific practices applied at Al-Yasini Islamic Boarding School in developing 21st-century skills, including critical thinking, communication, collaboration, and creativity (4C).

Data were collected through in-depth interviews, participatory observation, and document analysis to understand the perspectives of students, caregivers, and educators regarding the innovative model applied. Research participants were selected using purposive sampling involving several administrators, teachers, and students (Etikan, I., Musa, S. A., & Alkassim, 2016). Research participants were selected using purposive sampling and included administrators, teachers, and students at Al-Yasini Islamic Boarding School. Participants were chosen based on

their roles and direct involvement in curriculum planning, instructional implementation, and the integration of 21st-century skills. Administrators represented institutional policy and decision-making perspectives, teachers contributed insights into pedagogical practices, and students reflected learning experiences and outcomes. This approach ensured the relevance and credibility of the data.

Data analysis techniques used a thematic analysis approach, with stages of open coding, pattern identification, and compilation of main themes related to educational innovation in Islamic boarding schools. Data validity was ensured through source and method triangulation, by comparing the results of interviews, observations, and Islamic boarding school curriculum documents (Denzin, N. K., & Lincoln, 2018). Additionally, a member checking strategy was applied to ensure the validity of the findings through direct verification with the research participants (Meleong, 2017). The entire research process followed qualitative research ethics standards, obtaining informed consent from participants, maintaining anonymity, and ensuring that the data was used academically and did not harm the parties involved (Resnik, 2018). . Through this approach, the study is expected to provide empirical contributions to understanding the role of Islamic boarding schools in building the competence of students to adapt to the global challenges of the 21st century.

RESULTS AND DISCUSSION
Results
Strengthening Soft Skills through Pesantren Learning Traditions

Strengthening soft skills through pesantren learning traditions in this study refers to the process by which traditional pedagogical practices within Islamic boarding schools contribute to the development of students' interpersonal, leadership, communication, and self-regulation skills. At Al-Yasini Islamic Boarding School, this strengthening process occurs through several classical learning traditions such as sorogan, bandongan, and halaqah discussions. These traditions are not merely instructional techniques for transmitting religious knowledge but function as social learning mechanisms that cultivate discipline, independence, collaborative interaction, and critical reflection among santri. In the daily educational environment of the pesantren, students are expected to actively participate in learning activities, demonstrate responsibility for their own learning, and engage constructively with teachers and peers.

An interview with a senior teacher revealed that the sorogan method plays a crucial role in fostering students' independence and responsibility in learning. The teacher explained:

> *"Through sorogan, students must prepare their lessons independently before presenting them to the teacher. This process trains them to be disciplined and responsible for their own learning outcomes."*

This statement indicates that sorogan encourages students to take ownership of their learning process. The requirement to prepare lessons individually before presenting them to the teacher creates a learning environment that emphasizes self-regulation, persistence, and accountability. From the researcher's interpretation, this practice functions as an informal mechanism for developing soft skills related to independence and learning discipline.

Another interview with a pesantren administrator highlighted the role of halaqah discussions in strengthening communication and collaboration skills among students. The administrator stated:

> *"In halaqah sessions, students are encouraged to discuss and respond to each other's ideas when analyzing religious texts. This activity builds confidence and the ability to communicate arguments respectfully."*

This interview illustrates that halaqah discussions create opportunities for students to engage in dialogue and exchange perspectives. According to the researcher's interpretation, this interactive learning process encourages students to develop communication skills, teamwork, and mutual respect, which are essential components of soft skills in educational and professional contexts.

Field observations conducted during classroom activities confirmed the presence of collaborative learning dynamics within pesantren traditions. During halaqah sessions, students were observed discussing classical Islamic texts in small groups while responding to questions raised by the teacher. Several students actively expressed opinions, provided textual references, and debated interpretations with their peers. These observations suggest that pesantren learning traditions encourage active participation rather than passive reception of knowledge. From the researcher's perspective, this collaborative learning environment contributes to the development of critical thinking, interpersonal communication, and collective problem-solving skills among students.

Based on the interview and observation data, pesantren learning traditions play a significant role in strengthening students' soft skills. The sorogan method

encourages independence and discipline, while halaqah discussions facilitate communication and collaborative learning. These findings indicate that traditional pesantren pedagogical practices inherently support the development of interpersonal and cognitive skills that are relevant to contemporary educational demands.

The data also reveal a clear pattern showing that soft skill development in pesantren occurs through interactive learning experiences embedded in daily educational practices. Rather than being taught explicitly as a separate subject, soft skills are cultivated through routine learning interactions between students, teachers, and the broader pesantren community.

Table 1. The Ideal Influence of Pesantren Learning Traditions on Soft Skills

Informant	Interview Excerpt	Soft Skills Indicators
Teacher	"Through sorogan, students must prepare their lessons independently before presenting them to the teacher."	Independence, learning responsibility
Administrator	"In halaqah discussions, students are encouraged to express opinions and respond to their peers."	Communication skills, collaboration

The data presented in Table 1 demonstrate that pesantren learning traditions significantly contribute to the development of students' soft skills. The interview with the teacher shows that the sorogan learning method fosters independence and responsibility among students. By requiring students to prepare their lessons before presenting them to the teacher, this method creates a learning structure that encourages self-discipline and personal accountability. This finding suggests that traditional learning systems in pesantren inherently cultivate important soft skills related to self-management and academic perseverance.

Meanwhile, the statement from the pesantren administrator highlights the role of halaqah discussions in developing communication and collaboration skills. Through group discussions, students are encouraged to articulate ideas, listen to different perspectives, and engage in constructive dialogue. These activities not only improve students' ability to communicate effectively but also strengthen their capacity to work collaboratively with others.

The data reveal a consistent pattern indicating that soft skill development in pesantren is embedded within traditional learning practices. Independence is primarily fostered through individual learning activities such as sorogan, while communication and collaboration skills are cultivated through interactive learning forums such as halaqah discussions. This pattern suggests that pesantren education

integrates character development and academic learning simultaneously through daily pedagogical interactions. As a result, students gradually develop essential soft skills alongside their mastery of religious knowledge.

Implementation of the 4C Learning Framework

The implementation of the 4C learning framework (critical thinking, creativity, collaboration, and communication) in this study refers to the integration of these competencies within pesantren-based learning practices. At Al-Yasini Islamic Boarding School, the 4C framework is operationalized through pedagogical activities such as Bahtsul Masail discussions, problem-based learning, group analysis of classical texts, and student presentations. These practices encourage students to analyze religious texts critically, develop creative solutions to contemporary issues, work collaboratively in groups, and communicate their ideas effectively. In this context, the 4C framework is not introduced as a separate curriculum component but embedded within traditional Islamic learning practices.

An interview with a teacher highlighted how Bahtsul Masail discussions promote critical thinking among students.

> *"When students participate in Bahtsul Masail discussions, they are encouraged to analyze social issues using references from classical Islamic texts. This activity trains them to think critically and evaluate different arguments."*

The teacher's statement indicates that Bahtsul Masail functions as a platform for intellectual inquiry within the pesantren environment. From the researcher's interpretation, this learning activity stimulates analytical reasoning and evaluative thinking, which are essential elements of critical thinking within the 4C framework.

Another interview with a student leader emphasized the importance of group discussions in fostering collaboration and communication.

> *"During group discussions, we usually work together to understand difficult texts and present the results to other students. This helps us learn how to cooperate and express our ideas clearly."*

This statement suggests that collaborative learning activities allow students to engage in peer interaction and shared problem-solving. According to the researcher's interpretation, these practices strengthen students' collaborative learning behavior and communication competence, which are core components of the 4C framework.

Classroom observations showed that students frequently participated in group discussions while analyzing classical Islamic texts. During these sessions,

students exchanged interpretations, asked questions, and collectively formulated responses to contemporary issues. The teacher acted primarily as a facilitator who guided the discussion rather than delivering direct instruction. These observations indicate that the pesantren learning environment encourages active participation and collective inquiry. From the researcher's perspective, such practices cultivate students' collaborative problem-solving and communication skills.

The interview and observation data indicate that the implementation of the 4C learning framework occurs naturally within pesantren learning traditions. Bahtsul Masail discussions strengthen students' critical thinking, while group learning activities promote collaboration and communication. These findings demonstrate that pesantren education can incorporate modern learning competencies without abandoning its traditional pedagogical structure.

The data also reveal a pattern showing that the development of 4C competencies occurs through dialogical learning interactions, where students actively engage with religious texts and contemporary issues in a collaborative learning environment.

Table 2. The implementation of the 4C learning framework

Informant	Interview Excerpt	Indicator
Teacher	"Bahtsul Masail discussions train students to analyze social problems using Islamic texts."	Critical thinking
Administrator	"Group discussions help students cooperate and present their ideas."	Collaboration and communication

The table indicates that the implementation of the 4C learning framework within the pesantren environment occurs through interactive learning practices. The teacher's statement highlights the role of Bahtsul Masail discussions in encouraging analytical thinking and argument evaluation. This activity trains students to interpret religious texts critically while considering contemporary social contexts.

Meanwhile, the statement from the student leader shows that collaborative learning activities promote teamwork and communication among students. Through group discussions and presentations, students develop the ability to articulate ideas clearly and engage in collective problem-solving.

The data show a consistent pattern indicating that the 4C learning framework in pesantren education is embedded within dialogical learning traditions. Critical thinking emerges through textual analysis, while collaboration and communication are developed through group discussions and student presentations.

Digitalization of Islamic Literacy

Digitalization of Islamic literacy in this study refers to the integration of digital technologies in accessing, understanding, and disseminating Islamic knowledge within the pesantren learning environment. At Al-Yasini Islamic Boarding School, this process includes the use of digital Qur'anic resources, online scholarly discussions, e-books, and social media platforms for Islamic learning and da'wah activities. Through these tools, students are encouraged to access broader knowledge resources while maintaining the traditional values of Islamic education.

A pesantren teacher explained how digital resources support the learning of classical texts.

> *"Digital platforms help students access different commentaries on Islamic texts. This allows them to compare interpretations and broaden their understanding."*

From the researcher's interpretation, digital tools expand students' access to diverse knowledge sources, enabling them to engage more deeply with Islamic scholarship.

A student involved in digital media activities described the role of social media in Islamic literacy.

> *"We also use social media to share Islamic messages and reflections from our learning activities. It helps us practice writing and communicating Islamic ideas."*

This statement suggests that digital platforms provide opportunities for students to develop communication skills while promoting Islamic knowledge.

Observations showed that students frequently used smartphones and digital devices to access online Islamic resources during study sessions. Some students were also involved in producing digital content such as short religious reflections and educational posts. From the researcher's perspective, these practices indicate that digital literacy has become an integral component of the pesantren learning ecosystem.

The findings indicate that digitalization plays a significant role in expanding students' access to Islamic knowledge. Digital resources enable students to explore multiple interpretations of religious texts and participate in online knowledge-sharing activities. The data reveal a pattern where digital technology functions as a complementary learning tool that enhances traditional Islamic literacy practices rather than replacing them.

Table 3. The implementation of the 4C learning framework

Informant	Interview Excerpt	Indicator
Teacher	"Digital platforms allow students to access various interpretations of Islamic texts."	Digital literacy
Administrator	"Social media helps us communicate Islamic ideas to a wider audience."	Digital communication

The table demonstrates that digital literacy within the pesantren environment is developed through both academic and communicative activities. Teachers emphasize the role of digital platforms in expanding students' access to Islamic scholarship, while students highlight the importance of digital communication in disseminating Islamic knowledge. The data reveal a pattern showing that digital literacy in pesantren education develops through the integration of digital resources, online knowledge networks, and Islamic communication practices.

Leadership and Entrepreneurial Skills Development

Leadership and entrepreneurial skills development in this study refers to the cultivation of students' leadership abilities, decision-making skills, and economic independence within the pesantren environment. At Al-Yasini Islamic Boarding School, these competencies are developed through student organizational activities, deliberative decision-making forums, and participation in pesantren-based economic programs.

A pesantren administrator described how leadership training occurs through student organizations.

> *"Students are given responsibility to manage various organizational activities, and through this process they learn leadership and accountability."*

From the researcher's perspective, these activities allow students to practice leadership roles in real-life situations.

A santri involved in entrepreneurship activities explained:

> *"We are also trained to manage small business units within the pesantren, which teaches us how to manage finances and work as a team."*

This statement suggests that entrepreneurship programs provide students with practical experience in financial management and teamwork.

Observations revealed that students actively participated in organizing pesantren events and managing small-scale economic activities. Students were

responsible for coordinating tasks, managing schedules, and collaborating with peers. From the researcher's interpretation, these activities strengthen leadership competencies and entrepreneurial mindset.

The data indicate that leadership and entrepreneurial skills are developed through experiential learning practices within the pesantren environment. Students gain practical experience in managing organizations and economic activities. The findings reveal a pattern where leadership development is closely linked to collective responsibility and participatory decision-making within the pesantren community.

Table 4. The leadership and entrepreneurship development

Informant	Interview Excerpt	Indicator
Administrator	"Students manage organizational activities to learn leadership."	Leadership skills
Santri	"Managing pesantren business units teaches us financial responsibility."	Entrepreneurial skills

The table shows that leadership and entrepreneurship development in the pesantren context occurs through practical learning experiences. Organizational management activities train students in leadership and decision-making, while economic programs develop entrepreneurial competencies. The data reveal a pattern indicating that leadership and entrepreneurship skills emerge through experiential participation in organizational and economic activities within the pesantren environment.

Discussions
Strengthening Soft Skills through Pesantren Learning Traditions

The findings of this study indicate that traditional pesantren learning traditions play a significant role in strengthening students' soft skills, including independence, discipline, communication, and collaboration. These results confirm that pesantren pedagogy functions not only as a system for transmitting religious knowledge but also as a learning environment that fosters interpersonal competencies and self-regulated learning among students. Previous studies on Islamic education have highlighted that pesantren institutions emphasize character formation and moral development as central elements of their educational philosophy (Krisdiyanto et al., 2019; Mas'udi, 2015). However, the present findings extend these earlier perspectives by demonstrating that pesantren learning traditions also support competencies associated with 21st-century skills, particularly communication, teamwork, and self-management.

Recent educational research emphasizes that soft skills such as communication, collaboration, and emotional intelligence are fundamental competencies required in modern education systems and professional environments (Trilling & Fadel, 2020; van Laar et al., 2020). In addition, collaborative learning environments have been shown to enhance students' interpersonal skills and critical thinking abilities through interactive learning processes (Johnson et al., 2021). In the pesantren context, halaqah discussions create a dialogical learning environment in which students collectively interpret classical Islamic texts and exchange perspectives. Such learning interactions foster both intellectual and interpersonal competencies.

From a theoretical perspective, these findings support constructivist learning theory, which emphasizes that knowledge is constructed through active engagement within social learning contexts (Piaget, 1972). Constructivist learning environments encourage students to participate actively in discussions, inquiry, and collaborative interpretation of knowledge. Recent research further confirms that constructivist pedagogical approaches contribute significantly to the development of 21st-century competencies such as problem-solving, communication, and teamwork (Darling-Hammond et al., 2021; Schleicher, 2020).

Theoretically, this study contributes to the literature on Islamic pedagogy and contemporary educational theory by demonstrating that traditional pesantren learning systems inherently support the development of soft skills required in modern education. Practically, the findings suggest that pesantren institutions do not necessarily need to abandon their traditional learning traditions in order to respond to contemporary educational challenges. Instead, strengthening these traditions can serve as culturally relevant strategies for developing students' interpersonal competencies.

Implementation of the 4C Learning Framework

The findings also reveal that the 4C learning framework is embedded in pesantren learning practices, particularly through activities such as Bahtsul Masail discussions, collaborative interpretation of classical texts, and student presentations. These learning practices encourage students to analyze religious texts critically, evaluate different perspectives, and collaboratively develop responses to contemporary social issues.

These results align with recent international research emphasizing that the development of 4C competencies is central to preparing students for the demands of the knowledge economy (Ananiadoui & Claro, 2009; OECD, 2021). Educational studies have also shown that collaborative learning environments significantly

improve students' critical thinking and communication skills (Care et al., 2021; Voogt & Roblin, 2020). In this study, Bahtsul Masail discussions function as dialogical learning forums in which students critically analyze contemporary issues using Islamic jurisprudential frameworks.

Furthermore, the learning practices observed in pesantren resemble the principles of problem-based learning (PBL), where students analyze real-world problems and collaboratively construct solutions (Barrows, 1986). Contemporary studies confirm that PBL approaches enhance higher-order thinking skills, including analytical reasoning, creativity, and collaborative problem-solving (Belland et al., 2021; Hmelo-Silver, 2020).

However, a distinctive aspect of pesantren education revealed in this study is that the 4C competencies are not introduced through formal curriculum reforms but rather embedded within traditional Islamic learning traditions. This finding suggests that pesantren institutions possess inherent pedagogical structures that support the development of higher-order thinking skills and collaborative learning processes.

Theoretically, this study contributes to the integration of Islamic educational traditions with contemporary pedagogical frameworks. Practically, the findings suggest that pesantren institutions can strengthen students' global competencies by optimizing dialogical learning practices such as Bahtsul Masail discussions and collaborative knowledge construction.

Digitalization of Islamic Literacy

Another important finding of this study is the integration of digital technology into Islamic literacy practices within the pesantren learning environment. Students utilize digital platforms, online Qur'anic commentaries, and social media to access and disseminate Islamic knowledge. These findings indicate that pesantren institutions have begun to adapt to the digital transformation of education while maintaining their traditional learning traditions.

These results are consistent with recent research highlighting that digital literacy is an essential competency in modern education (Ng, 2021; UNESCO, 2021). Digital literacy enables learners to access diverse information sources, evaluate knowledge critically, and participate in global knowledge networks (van Laar et al., 2020). In addition, studies on digital learning environments suggest that digital platforms can enhance students' ability to collaborate, communicate, and share knowledge beyond the classroom (Redecker, 2020; Selwyn, 2022).

From a theoretical perspective, these findings align with connectivism theory, which argues that learning in the digital age occurs through networks connecting

multiple sources of information (Siemens, 2005). Digital technologies allow students to access broader interpretations of Islamic texts and engage with knowledge communities beyond the physical boundaries of the pesantren.

However, the findings of this study show that digital technology does not replace traditional pesantren learning traditions. Instead, digital tools function as complementary learning resources that enrich traditional Islamic literacy practices. This hybrid learning model demonstrates that technological innovation can coexist with traditional educational values.

Theoretically, this study contributes to the emerging literature on digital transformation in Islamic education by illustrating how digital literacy can be integrated into traditional religious learning environments. Practically, the findings suggest that pesantren institutions should continue expanding digital learning infrastructure while maintaining ethical and spiritual values embedded in Islamic education.

Leadership and Entrepreneurial Skills Development

The findings also reveal that leadership and entrepreneurial competencies are developed through student organizational activities and pesantren-based economic initiatives. Students actively participate in managing organizational responsibilities and engaging in small-scale business activities within the pesantren environment.

These findings correspond with recent research emphasizing the importance of experiential learning in leadership and entrepreneurship education. Experiential learning models highlight that leadership competencies and entrepreneurial skills develop most effectively through real-world experiences rather than purely theoretical instruction (Kolb, 1984; Neck & Corbett, 2018). Recent studies also show that entrepreneurship education significantly enhances students' entrepreneurial intentions and innovation capabilities (Fayolle & Gailly, 2020; Nabi et al., 2021).

Furthermore, leadership practices observed in the pesantren environment reflect the Islamic principle of shura (consultative leadership), which emphasizes participatory decision-making and collective responsibility. Modern leadership theories similarly emphasize collaborative leadership models that encourage shared responsibility and collective decision-making within organizations (Bolden & Gosling, 2021; Pearce & Conger, 2003).

Theoretically, this study contributes to the integration of Islamic leadership principles with contemporary leadership and entrepreneurship theories. Practically, the findings suggest that pesantren institutions can strengthen students' leadership competencies and economic resilience by expanding experiential learning opportunities through organizational and entrepreneurial activities.

CONCLUSION

The findings of this study demonstrate that the integration of 21st-century skills within pesantren education can be effectively achieved without abandoning traditional Islamic learning traditions. Practices such as sorogan, bandongan, and halaqah discussions were found to strengthen students' soft skills, including independence, communication, and collaboration. In addition, dialogical learning activities such as Bahtsul Masail discussions support the development of critical thinking and collaborative problem-solving skills, while the integration of digital literacy and entrepreneurship programs enhances students' adaptability to contemporary social and economic challenges. These findings highlight an important lesson that traditional Islamic educational systems possess inherent pedagogical structures capable of fostering competencies required in the modern world.

The strength of this study lies in its contribution to bridging traditional Islamic pedagogy with contemporary educational frameworks, particularly the integration of 21st-century competencies such as the 4C learning framework, digital literacy, and leadership development. By demonstrating how pesantren educational traditions can support modern competencies, this study contributes to the development of a contextual model of Islamic education that integrates religious values with global educational standards. This contribution is particularly relevant for policymakers and educators seeking to reform Islamic education systems while preserving their cultural and religious foundations.

Despite these contributions, this study has several limitations. The research was conducted within a single pesantren institution, which may limit the generalizability of the findings to other Islamic educational contexts. In addition, the qualitative case study design focuses on in-depth exploration rather than broad comparative analysis. Future research should therefore examine the integration of 21st-century competencies in a wider range of pesantren institutions and explore comparative models across different Islamic education systems. Such studies would provide a more comprehensive understanding of how traditional Islamic educational institutions can adapt to the evolving demands of global education.

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