

Integration of Islamic Boarding School Curriculum Based on Islamic Values and Technology in Indonesia

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Abstract

This study addresses the urgent need for Islamic boarding schools to integrate Islamic values with technological skills, responding to the challenges and opportunities of the digital era, specifically, aims to analyze the model of integration of Islamic boarding school curriculum based on Islamic values and technology at Pesantren Sintesa Magetan, which combines religious learning and digital skills in one integrated education system. This study uses a qualitative approach with a case study method, collecting data through in-depth interviews, participatory observation, and documentation, involving caregivers, teachers, and students. The results of the study indicate that the Pesantren Sintesa curriculum integrates tahfidz teaching, book studies, and digital skills such as digital marketing, web management, and multimedia simultaneously, with project-based learning facilitated by mentors. This model is effective in improving the technical, soft, and conceptual skills of students, as well as forming graduates who are ready to compete professionally without losing their Islamic identity. The challenges faced include differences in basic digital skills of students, limited infrastructure, and the need for competent teachers, which are overcome through intensive mentoring and the use of online teachers. This study recommends strengthening technology-based teacher training, developing a flexible curriculum that is adaptive to digital developments, and replicating this integration model in other Islamic boarding schools to produce a generation of Muslims who are globally competitive. These findings are expected to be the basis for the development of technology-based Islamic education in the Society 5.0 era.

Kata kunci:

kurikulum integratif, pesantren, keterampilan digital, nilai-nilai Islam, pembelajaran berbasis proyek

Abstrak.

Penelitian ini bertujuan menganalisis model integrasi kurikulum pesantren berbasis nilai keislaman dan teknologi di Pesantren Sintesa Magetan, yang menggabungkan pembelajaran agama dan keterampilan digital dalam satu sistem pendidikan terpadu. Penelitian ini menggunakan pendekatan kualitatif dengan metode studi kasus, mengumpulkan data melalui wawancara mendalam, observasi partisipatif, dan dokumentasi, melibatkan pengasuh, pengajar, dan santri. Hasil penelitian menunjukkan bahwa kurikulum Pesantren Sintesa mengintegrasikan pengajaran tahfidz, kajian kitab, dan keterampilan digital seperti digital marketing, web management, dan multimedia secara simultan, dengan pembelajaran berbasis proyek yang difasilitasi mentor. Model ini efektif meningkatkan kompetensi technical, soft, dan conceptual skill santri, serta membentuk lulusan yang siap bersaing secara profesional tanpa kehilangan identitas keislaman. Tantangan yang dihadapi meliputi perbedaan kemampuan dasar digital santri, keterbatasan infrastruktur, dan kebutuhan akan pengajar kompeten, yang diatasi melalui mentoring intensif dan penggunaan pengajar daring. Penelitian ini merekomendasikan penguatan pelatihan guru berbasis teknologi, pengembangan kurikulum fleksibel yang adaptif terhadap perkembangan digital, serta replikasi model integrasi ini di pesantren lain untuk menghasilkan generasi muslim yang berdaya saing global. Temuan ini diharapkan menjadi dasar pengembangan pendidikan Islam berbasis teknologi di era Society 5.0.

INTRODUCTION

The world today has experienced significant social changes, starting from Society 1.0 (hunting society), Society 2.0 (agrarian society), Society 3.0 (industrial society), Society 4.0 (information society), to entering the era of Society 5.0—a concept of a human-centered and technology-based society. Society 5.0 aims to solve various social challenges and improve the quality of life through the use of innovations such as artificial intelligence, big data, and the Internet of Things (IoT) in various aspects of life (Cabinet Office, n.d.). In the field of education, various countries have responded to this change, with policy transformation and learning approaches. Japan, through its GIGA School program, is accelerating



Figure 1 https://www8.cao.go.jp/cstp/english/society5_0/society5_0e-1.jpg

the digitalization of schools by distributing devices and connectivity to all students (Times, 2021). South Korea is introducing artificial intelligence (AI) lessons nationwide in public schools as a strategy for future education and to reduce excessive academic pressure (Seung-hyun, 2025). However, this digital transformation is not free from negative impacts. Phenomena such as cyberbullying, gadget addiction, and technology abuse are serious concerns in many countries. The OECD notes that cyberbullying is a priority policy challenge, with consequences that disrupt students' psychological well-being and a healthy learning ecosystem (Gottschalk 2022). This shows that digital literacy alone is not enough. The world of education requires an approach that touches on ethical and spiritual dimensions in forming wise digital characters. In this context, Islamic education in Islamic boarding schools has a substantial impact on educating and shaping students' morals based on the Qur'an and Sunnah (Lundeto et al., 2021).

This condition is even more relevant when viewed in the context of Indonesia. The Work Trend Index 2024 report by Microsoft and LinkedIn states that 92% of knowledge workers in Indonesia have used AI in their work, making Indonesia one of the countries with the highest AI adoption in the world. Ironically, 48% of organizational leaders admit that they do not yet have a mature AI implementation strategy, indicating a gap between technology utilization and institutional readiness. In line with this, the World Economic Forum's *The Future of Jobs Report 2023* states that 44% of global workforce skills will experience significant changes in the next five years. Skills such as analytical thinking, creativity, and technological literacy are key competencies in the era of digital transformation (Report, 2023). This fact reinforces the urgency of educational institutions to prepare students, including Islamic boarding school students, so as not to be left behind in global competition.

Pesantren as an Islamic educational institution has its own uniqueness in character formation and spirituality. The emphasis on the affective dimension and religious practices makes it a superior institution in educating students with noble character (Nuha et al., 2023.). In the current situation, pesantren are required to be able to transform, not only as a center for religious teaching, but also as a relevant institution in the digital era. In the perspective of Islam itself, efforts to create a balance between spirituality and worldly needs have been emphasized in QS. Al-Qashash: 77

“And seek the Hereafter with what Allah has given you, but do not forget your portion in this world.”. This verse is the basis that mastery of science and technology is not something that is contrary to Islamic values.

Several studies have highlighted the importance of reforming the Islamic education curriculum to remain relevant in the digital era. (Sulaeman, 2025) emphasized that Islamic education must be able to accommodate technological developments without ignoring Islamic values. The strategies they proposed include developing a contextual curriculum, teacher training, and utilizing technology as an adaptive learning medium. (Sholeh, 2023) identified that the main challenges in integrating Islamic education technology are the lack of infrastructure support, weak digital literacy of teachers, and the absence of integrated policies that encourage comprehensive digital transformation. He emphasized the need for a strong institutional vision and strengthening the capacity of educators so that this integration can run effectively. A study by (Mustafidin et al., 2024) provides an example of good practice through curriculum innovation at the Darul Amanah Islamic Boarding School, which combines learning of yellow books, general knowledge, and mastery of technology in one integrated education system. A project-based approach and digital literacy activities are key to strengthening the character and competence of students. Meanwhile, (Independent, 2025) studied more than 11,000 Islamic Education teachers in Indonesia and found that although the use of technology in Islamic learning is increasing, challenges in terms of content, data protection, and AI adaptation to student character are still obstacles. They suggest a more flexible curriculum approach and technology-based teacher training.

However, these studies generally still position technology as a learning aid or discuss the general managerial aspects of Islamic boarding schools. There are not many studies that specifically examine the integration of Islamic boarding school curriculum that places technology as a teaching subject, not just a learning instrument. Therefore, this study is here to fill this gap by analyzing in depth how the integrative curriculum model is designed, implemented, and has an impact on the formation of digital skills, in order to produce competent students in the era of digital transformation. Based on the explanation above, the formulation of the problem in this study includes: (1) What is the form of integration of Islamic boarding school curriculum based on Islamic values and technology? (2) What are the implementation strategies and teaching methods used? (3) How does the curriculum impact the competence of students?

METHOD

This study uses a qualitative approach with a case study type to explore the model of integration of Islamic and technology-based education at Pesantren Sintesa Magetan. The selection of this location is based on the characteristics of the pesantren which explicitly combines the teaching of Islamic knowledge with digital skills in one education system. Data collection was carried out through in-depth interviews, participatory observations, and documentation studies (Creswell, 2019). The main informants in this study included the pesantren caretakers, teaching

staff, curriculum, and students. Interviews were used to explore strategies and implementation of integrative learning, while observations were conducted to see the learning practices and daily activities of students in integrating religious values and technology. Supporting documents such as curriculum, student projects, and institutional profiles were also analyzed to strengthen field data.

The data were analyzed using an interactive model from (Miles et al., 2014) consisting of data reduction, data presentation, and drawing and verifying conclusions. To ensure the validity of the data, triangulation of sources and techniques was carried out. The presence of researchers directly at the research location is an important element to understand the context in depth and capture the dynamics of Islamic boarding schools holistically..

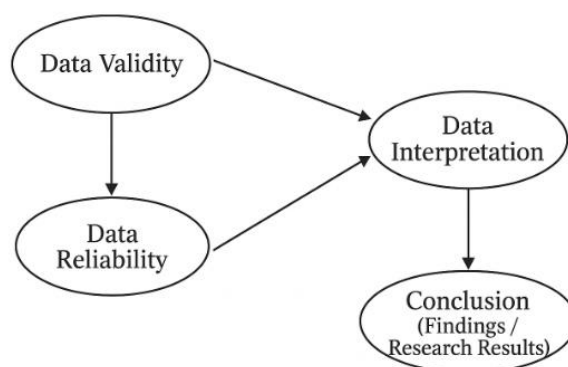


Figure 2. Validity and Reliability according to Milles and Huberman

RESULTS AND DISCUSSION

Results

Integration of Islamic Boarding School Curriculum Based on Islamic Values and Technology

Pesantren Sintesa is one of the modern Islamic boarding schools that implements integration between Islamic education and digital technology. The curriculum of this Islamic boarding school is designed to equip students with spiritual abilities through learning tahfidzul Qur'an and studying the book, while strengthening their skills in technology such as advertising, web management, multimedia, programming and digital asset management. The curriculum concept is based on the development of powerful intangible assets which include three main aspects: technical skills, soft skills, and conceptual skills, as the main capital for students in their careers or entrepreneurship.

"The curriculum here is designed so that students do not only focus on religious studies, but here students are also equipped with expertise or soft skills in the form of digital marketing that they can apply directly. Because the main mission of this synthesis is to form a financially independent Muslim community. So we want graduates from this synthesis to not only be strong in religion but also financially strong" (Interview, Curriculum Staff of the Sintesa Islamic Boarding School, 2025)

The uniqueness of the Pesantren Sintesa curriculum lies in its courage to combine Islamic education and technology learning equally and simultaneously. Unlike most Islamic boarding schools that generally only emphasize religious learning, memorizing the Qur'an, or other sharia sciences, Pesantren Sintesa presents an educational model that places digital marketing and technology-based skills as part of the core curriculum.

In addition, the use of digital devices such as mobile phones and laptops in the Islamic boarding school environment is not only allowed, but is actually an important part of the learning

process. This open attitude towards technology is a significant difference from conventional Islamic boarding schools that often limit access to digital devices because they are considered distracting.

To maintain a balance between religious education and technology, the learning system at Sintesa is divided into two main times, namely educational hours and Islamic boarding school hours. Educational hours run from 08.00 to 15.00, where students focus on studying the main material, namely digital marketing. While Islamic boarding school hours start from 15.00 WIB to 06.00 WIB, which are filled with spiritual activities such as memorizing/reciting the Qur'an and diniyah as conveyed by the Islamic boarding school supervisor.

"Because the synthesis is basically a business boarding school, so to balance between digital marketing learning and memorizing the Qur'an that the boarding school has targeted in each semester, so we divide the education and boarding school schedules, where the education schedule is only on Monday-Friday at 08.00 WIB in the morning until 15.00 WIB in the afternoon and the rest is included in the boarding school schedule which can be maximized by students to learn religious materials, one of which is to memorize the Qur'an accompanied by a musyri"

The following is a table of daily activities of students at the Sintesa Islamic Boarding School

Jadwal Kegiatan Harian

Waktu	Kegiatan
03.45 - 04.15	Bangun pagi & Persiapan Shalat Subuh
04.16 - 04.30	Shalat Subuh berjama'ah
04.31 - 04.45	Pembacaan Al-Ma'tsurat
04.46 - 06.00	Halaqah Qur'an
06.01 - 06.15	Shalat dhuha
06.16 - 06.45	Piket kebersihan
06.46 - 07.30	MCK
07.31 - 08.00	Sarapan
08.01 - 10.45	Materi Pendidikan
10.46 - 13.00	Ishoma
13.01 - 15.00	Produktif
15.01 - 15.30	Shalat Ashar berjama'ah
15.31 - 16.30	Kajian sore
16.31 - 17.00	MCK
17.01 - 17.14	Persiapan Al-Ma'tsurat sore
17.15 - 17.30	Pembacaan Al-Ma'tsurat sore
17.31 - 17.45	Tilawah sore
17.46 - 18.00	Shalat maghrib berjama'ah
18.01 - 19.00	Halaqah Qur'an
19.01 - 19.15	Shalat Isya' Berjama'ah
19.16 - 19.45	Makan malam
19.46 - 20.00	Persiapan kegiatan malam
20.01 - 21.00	Kegiatan malam (Muhadharah, belajar)
21.01 - 21.30	Free time
21.31 - 21.45	Bersih badan sebelum tidur
21.46 - 22.00	Persiapan tidur malam
22.01 - 03.45	Tidur malam

Through this kind of curriculum integration, Pesantren Sintesa is trying to produce a generation of Muslims who are able to preach in the digital space and are ready to compete in the professional world without losing their Islamic identity, but that does not mean that using this integrated curriculum will not have any obstacles, as stated by the curriculum staff.

"In its implementation, we also face several challenges. The different backgrounds of the students, especially in basic digital skills, require us to be more intensive in mentoring. There are students who are using a laptop for the first time, so the adaptation process takes longer. In addition, sometimes infrastructure such as an unstable internet network is also quite an obstacle."

Implementation Strategies and Teaching Methods Used

The learning model applied at Pesantren Sintesa is designed to create a balance between mastery of Islamic material and technological skills. In general, the learning method used is project-based learning, where around 60% of activities focus on direct practice, while the remaining 40% is allocated to theory. This approach provides space for students to not only understand concepts cognitively, but also be able to apply them in the form of real work, such as building websites, developing digital marketing strategies, to producing Islamic preaching content on social media. The learning process is facilitated by mentors who accompany students in each learning session. Each class has a ustadz who is tasked with providing direction and answering technical and conceptual difficulties experienced by students. The teachers come from diverse backgrounds; some are Sintesa alumni who already have experience in their fields, and there are also professional practitioners from outside the region who provide materials online.

"When talking about teaching strategies at Sintesa, we do emphasize a project-based approach. Because students here don't just learn theory, but must be able to practice directly, such as making websites or running ads. Well, the challenge is, for certain technical materials such as programming or content creators, we do have difficulty finding teachers who can teach offline. So, we get around it by bringing in online teachers from outside the city. They usually provide material via Zoom or learning videos, then there are mentors here to accompany them. So even though the teacher is not physically present, the learning process continues. Students can discuss via Discord, so that communication remains smooth." (Interview, Curriculum Staff of Sintesa Islamic Boarding School, 2025)

Learning materials, especially in the field of digital marketing, are arranged in stages and developed in the form of teaching modules. Each teacher is required to prepare a syllabus along with material achievement targets, so that the learning process has a clear and measurable direction. Learning stages generally start from the basic level, but if students show high development and interactivity, they can be directed to advanced material (middle) in a personalized manner. Learning evaluation is carried out systematically through the student monitoring and evaluation (monev) program. In this program, students are required to submit weekly monitoring sheets to mentors, which contain material achievements and reflections on understanding. Mentors provide validation and additional notes as a form of feedback on student development.

"Every student here is indeed facilitated with a monitoring sheet that they must fill out every week. On the sheet, all the materials taught are written. Every weekend, the sheet is submitted to their respective mentors. If it turns out that the student has really understood the material, the mentor will usually give an initial as a sign that they have really understood the theory and practice. But if there is still something that is not understood, the mentor will write an evaluation note or additional suggestions, and the student is required to study again and then repeat it again. In this way, we can see the development of students individually and know who needs further guidance." (interview, Education Mentor, 2025)

In addition, each material has a final project that is a benchmark for achievement. For example, in the web management material, students are targeted to be able to build and manage sites independently. While in the advertising material, they are tasked with designing digital advertising strategies and conducting market research.

Although there is no specific learning strategy explicitly designed to bridge the gap in technological understanding, the presence of daily mentoring sessions has proven to be a key element in the process of adapting and deepening the material. Some teachers also form discussion groups via digital platforms to strengthen communication and Q&A outside of class hours. However, the implementation of online learning presents its own challenges. The limited concentration of students during online classes is one of the obstacles, especially when sessions

last more than 30 minutes without direct supervision. In addition, the obstacle in finding competent teachers in the field of technology in the surrounding area means that Islamic boarding schools have to rely on online teachers from outside the city, which although a solution, still leaves problems in controlling the quality of learning.

On the other hand, spiritual development remains the main foundation of education at Sintesa. Students receive diniyah material that includes fiqh, ta'lim muta'allim, and muhadhoroh routinely. This learning is not only focused on understanding the text, but also on internalizing Islamic values as moral provisions in facing technological developments. The integration between spiritual aspects and digital skills is the main strength of the education model at Sintesa.

Impact of Curriculum on Students' Competence

The implementation of the integrative curriculum at Pesantren Sintesa has shown a significant contribution to the development of students' competencies, especially in the fields of technology and digital entrepreneurship. The curriculum that balances the mastery of religious knowledge and technology learning has succeeded in encouraging students to not only understand concepts, but also be able to apply them directly in the real world. Students are equipped with three main pillars of competency, namely technical skills, soft skills, and conceptual skills, as the focus of the Sintesa curriculum. Technical skills include technical abilities such as building websites, managing digital marketing campaigns, and creating visual and audiovisual content for digital platforms. Soft skills are developed through the habituation of discipline, communication, teamwork, and leadership and public speaking training through muhadhoroh activities. Meanwhile, conceptual skills are built through learning a business mindset, understanding digital trends, and strategic thinking in building long-term assets.

The direct impact of this curriculum approach can be seen from the results achieved by students during and after studying at Sintesa. Many students have even earned passive income from digital activities carried out during the program before graduating. In addition, alumni have proven to be able to compete in the professional world. Several Sintesa alumni have succeeded in running their own businesses, working in affiliate marketing, establishing PTs and employing many employees, and establishing cooperation in various sectors, including transportation services. However, the development of student competencies at Sintesa is not entirely even. Differences in background and initial readiness of students are the main factors that influence the speed of adaptation to this integrative curriculum. Students who have had an interest in the digital world from the start or have had little previous experience generally show faster progress in absorbing the material. Conversely, for those who enter with unclear learning motivation or no digital background at all, the adaptation process requires a longer time and more intensive mentoring.. This was confirmed by one of the mentors in the field of education who explained, *"If students come here already interested in digital materials, they usually develop faster. But there are also students whose basic knowledge is zero or who don't know what they want to learn. For those like this, we usually accompany them more closely, chat slowly, find out where their potential is."* (Interview, Education Mentor, 2025). This personal approach is the key so that no students are left behind and all can develop according to their respective capacities. Post-graduation support is also one of the strengths of the coaching system at Sintesa. Alumni are members of a cross-generation community that is active on digital platforms. This alumni group is not only a forum for communication, but also a place to share information on job vacancies, business opportunities, and collaboration between alumni. *"Usually alumni who already have a business and need employees will look for them from alumni groups too, because they already know the character and quality of Sintesa graduates,"* said the curriculum staff in an interview (Interview, Curriculum

Staff, 2025). This proves that the curriculum not only has an impact while the students are studying, but also continues to build a sustainable support ecosystem

In terms of fostering students who are less interested in technology, Sintesa does not impose a rigid curriculum. A humanist approach is applied by continuing to provide general material, but then a personal approach is taken to explore individual potential. If students are found to be interested in other aspects that are still in accordance with the vision of the Islamic boarding school, then development is directed there. This strategy shows the flexibility of the Sintesa curriculum which remains rooted in Islamic values but is able to adapt to the needs and uniqueness of students. This shows that an integrative approach that places technology as the main teaching material, not just a tool, is able to produce graduates who are relevant in terms of competence and at the same time spiritually strong. This model is in line with Al-Attas' thinking which emphasizes the importance of education to form knowledgeable and civilized humans.

Based on the analysis of the curriculum implementation at pesantren sintesa, several notable findings emerged, which are presented in the following table for clarity

Aspect	Key Findings	Supporting Evidence
Curriculum Characteristic	Balanced integration between religious studies and technological skill	Separate schedules for education and pesantren activities; active use of laptops and smartphone in the learning process
Teaching Strategies	Project-based learning with 60% practice and 40% theory	Final projects for each subject, daily mentoring, guest lectures through online platforms
Impact	Student acquire technical, soft, and conceptual skills; some generate income before graduation	Alumni run their own businesses, work as affiliate marketers, and some are able to establish limited liability companies (PT)
Challenges	Diverse digital skill backgrounds among students; unstable internet infrastructure	Students with no prior digital experience require longer adaptation periods
Solutions	Intensive mentoring, personaliz Learning approaches, active alumni support network	Alumni community actively shares job,opportunities and business collaborations

DISCUSSION

Integration of Islamic Boarding School Curriculum Based on Islamic Values and Technology

The integration of the curriculum between Islamic values and technology in modern Islamic boarding schools such as Sintesa reflects a response to the challenges of the digital era that demands harmony between spirituality and digital literacy. Sintesa itself applies a balanced curriculum between religious learning and digital skills such as digital marketing and programming, which are carried out simultaneously and equally. This model emphasizes the development of technical skills, soft skills, and conceptual skills as the main capital for students in facing the professional and entrepreneurial world. This approach is in line with the integrative theory which

emphasizes the importance of combining spiritual and technological aspects in education so that students are not only technically competent but also have an Islamic character (Assa'idi, 2021).

(Aksan et al., 2023) also argue that the collaboration of Islamic education with science and technology is a necessity to create graduates who are highly competitive spiritually and professionally. (Miseliunaite & Kliziene, 2022) added that this integration requires holistic and flexible curriculum management in adapting to the needs of the times. This education model breaks the old paradigm of Islamic boarding schools which are exclusive to digital devices. Pesantren Sintesa, for example, actually makes cellphones and laptops part of the learning instruments, not distractions. This is in accordance with the findings of (Ade Vera Yantika, Ahmad Syafak Khoirut Tobib, Bagas Armayoga, Dimas Raba Pramodana, Agus Jatmiko, Meriyati, Chairul Amriyah, 2025) which state that the application of technology in Islamic education can expand the reach of da'wah and accelerate the spread of Islamic values. in line with the statement (Neliwati et al., 2024) regarding the need for a digital curriculum based on Islamic values for innovative learning.

Modern Islamic boarding school curriculum management that integrates Islamic and scientific values has been applied in several Islamic boarding schools such as Anwarul Huda Malang. Research by (W. Widodo, 2025) shows that curriculum management starts from the vision, mission, and objectives that prioritize the integration of Islamic values and science, including technology, so that students not only study yellow books but also science and technology subjects according to national curriculum standards. This approach strengthens the theory of integrative curriculum that prioritizes synergy between religious values and modern science (Beane, 1997). However, the success of this integration is inseparable from major challenges, especially related to the readiness of students in mastering technology (Lisnawati, 2020). This is confirmed by (Aprilianto et al., 2025) who highlighted the gap in the quality of human resources of students as the main problem in the process of digitalizing Islamic boarding school education. As a solution, a scaffolding learning-based approach needs to be applied to assist students with varying levels of digital literacy.

Theoretically, this approach refers to Vygotsky's social constructivism theory, (Vygotsky, 1978) which emphasizes the importance of the zone of proximal development (ZPD), which is the zone where learners need help to understand new knowledge. This is relevant to what is applied in Sintesa where in learning activities students receive guidance from mentors so that students who are new to digital devices will be guided, as studied by (Nugraha et al., 2025) that the pesantren curriculum that integrates technology must be accompanied by training and adaptation of digital culture. In the perspective of Islamic educational epistemology, this integration is a manifestation of the bayani, irfani, and burhani rational approaches as explained by (Hapidin et al., 2022). A curriculum that combines textual (bayani), spiritual (irfani), and rational-empirical (burhani) aspects is believed to be able to produce pesantren graduates who are comprehensive in terms of knowledge and morals.

Integration of Islamic boarding school curriculum based on Islamic values and technology is a strategic effort in responding to the challenges of 21st century education (Astuti et al., 2024; Hasmiza, 2025). This curriculum not only emphasizes digital competence, but also instills Islamic values in every aspect of learning. Its success depends on curriculum management, HR readiness, technological infrastructure, and the clarity of the spiritual and professional vision of the Islamic boarding school (Junaidi & Hitami, 2024). Thus, the concept as implemented in Pesantren Sintesa can be a blueprint for the development of future Islamic education.

Implementation strategies and teaching methods at Pesantren Sintesa

Pesantren Sintesa strives to create a balance between mastery of Islamic material and technological skills, with a focus on hands-on practice and mentoring. However, there are obstacles such as differences in the digital skills of students, limited infrastructure, and challenges in finding competent teachers, which require strategic adaptations such as the use of online teachers. The aspect of spiritual guidance remains the main foundation, emphasizing the pesantren's commitment to maintaining the Islamic identity of students amidst technological advances. The project-based learning model (PjBL) applied at Pesantren Sintesa, with an emphasis on 60% direct practice, is in line with the findings (Budiono et al., 2024) which state that PjBL is an innovative model that increases creativity and motivation of students through problem solving and production of real work. In the context of Islamic religious education (PAI), PjBL can be an effective solution to improve the quality of learning, encourage students to be more active and creative, and develop critical thinking skills (Masruri & Misbah, 2023).

This is very relevant to Pesantren Sintesa's efforts to equip students with applicable technical and conceptual skills, such as building a website or developing a digital marketing strategy, which are concrete forms of meaningful project results. Although PjBL offers many advantages, its implementation at Pesantren Sintesa faces challenges similar to those identified in the literature. The limited digital skills of students and unstable internet network infrastructure are significant obstacles, as highlighted by (Sulaeman, 2025) in their study on Islamic education reform in the digital era. They found that 72% of institutions reported inadequate digital infrastructure, and teachers' digital literacy was still a concern. Pesantren Sintesa addressed these challenges with daily mentoring sessions and the use of online teachers from outside the city, demonstrating strategic adaptation to local resource constraints. These solutions reflect the flexibility needed to bridge the technology gap and ensure continuity of learning, although challenges such as quality control of online learning remain. The integration of the curriculum at Pesantren Sintesa which combines Islamic education and technology equally and simultaneously is a response to the need to avoid the dichotomy of knowledge, as expressed by (Suhendi, 2024). This study emphasizes that national and Islamic education should complement each other to produce a superior and balanced generation.

Pesantren Sintesa realizes this by dividing learning time into educational hours (technology focus) and pesantren hours (spiritual focus), ensuring that students not only master digital skills but also deepen Islamic values. This approach shows that technological advances do not have to sacrifice spiritual identity, but can be a means to strengthen it, creating holistic and relevant individuals in the modern era. The role of mentors in accompanying students at Pesantren Sintesa is crucial, especially in bridging the gap in understanding technology and ensuring personalization of learning. The weekly monitoring and evaluation system that requires students to submit material achievement sheets and reflections on understanding, as well as validation and feedback from mentors, demonstrates a commitment to adaptive learning. This is in line with the findings (Salim & Aditya, 2025) which highlight the importance of personalization in Islamic education through the use of technology, including the potential of AI for adaptive learning. Although Pesantren Sintesa has not explicitly used AI, this intensive and personalized mentoring approach adopts the basic principles of adaptive learning, ensuring that each student receives support according to their individual needs and development. This is the key to success in dealing with the heterogeneity of the students' backgrounds. The uniqueness of Pesantren Sintesa in

combining Islamic education and technology equally and simultaneously makes it a relevant model for other Islamic educational institutions.

This approach focuses not only on mastering religious knowledge, but also on developing practical skills needed in the digital era, such as digital marketing and programming. This is different from many traditional Islamic boarding schools that may still limit access to technology, due to concerns about its negative impacts. However, Pesantren Sintesa shows that with the right strategy, technology can be a powerful tool for da'wah and economic independence, without sacrificing spiritual values. Research by (Syafaruddin et al., 2024) supports this idea, highlighting how technological transformation in Islamic education can be utilized to improve the quality of education and its relevance in the digital era. This model has the potential to be replicated, especially amidst the increasing need for Islamic boarding school graduates who are not only noble but also have global competitiveness.

Impact of Curriculum on Students' Competence

The integrative curriculum as implemented at Pesantren Sintesa has proven to have a significant impact in forming the competence of students comprehensively. This curriculum not only instills Islamic values but also equips students with digital and entrepreneurial skills. As stated by (Muzaini et al., 2024), the integration of Islamic values and technology can improve students' ability to understand Islamic knowledge contextually and adaptively to the development of modern technology. This approach is in line with the concept of the Integrative Curriculum (Drake, 2012), which emphasizes that interdisciplinary learning strengthens the relevance of knowledge and improves application skills. According to (Icela, 2022; Salma et al., 2025), mastery of digital technology is an essential aspect in 21st century education, because it can increase the competitiveness of graduates in the global job market.

This integrative curriculum equips students with three main pillars: technical skills, soft skills, and conceptual skills. Technical skills include the ability to build websites, digital marketing, and creative content; soft skills are developed through communication, teamwork, and leadership training; while conceptual skills are honed through growth mindset learning. Other studies confirm that strengthening these three competencies is key to students' readiness to face the challenges of the world of work and changing times (Ritter et al., 2017; Rohm et al., 2021). This reflects the application of John Biggs' Constructive Alignment theory (John Biggs, 2007), where curriculum, teaching methods, and assessments are aligned to develop real competencies.

The impact of the curriculum on strengthening the technical skills of students is relevant to the findings (Jannah & El-Yunusi, 2024), which show that the implementation of e-modules based on project-based learning in Islamic boarding schools is effective in increasing the activeness and digital skills of students. This finding is reinforced by (Elia et al., 2025), which proves that the project-based learning strategy based on digital technology globally significantly increases digital literacy and technical skills of students, so that it is relevant to be adopted in the Islamic education curriculum to prepare students to face the challenges of the 21st century. Synthesis optimizes this through real projects, one of which is marketing through digital platforms such as Facebook and Google Ads, so that students get passive income before graduating. This is in line with the results of research by Saputri et al., (2024) which states that an entrepreneurship-based curriculum is effective in increasing students' entrepreneurial interests and skills. In addition, research by (Firmansyah et al., 2024; Zhou & Cen, 2024) also found that technology training programs directly contribute to increasing digital entrepreneurship capacity.

In addition to technical skills, the Sintesa curriculum also fosters soft skills through muhadharah activities, leadership training, and teamwork, in line with Albert Bandura's Social Learning theory (Albert Bandura, 1977). This approach is in line with the findings of (Widodo et al., 2025) that the digitalization of Islamic boarding school education must be accompanied by the internalization of Aswaja values and interpersonal training for students. Another study by (Resta et al., 2022) found that routine muhadharah activities can train students' courage and confidence to speak in public. Sintesa uses this approach to create graduates who are technically competent and have character.

Conceptual skills, such as strategic thinking and understanding digital trends, are important pillars at Pesantren Sintesa. Bruner's theory (Bruner, 1961) on discovery learning explains that learning that emphasizes exploration and problem solving will improve high-level thinking skills. International research by (Ratten & Usmanij, 2020) that emphasizes the importance of entrepreneurship education that is in line with digital trends and changes in the world of work, to equip students with adaptability and an entrepreneurial spirit. Sintesa confirms this through alumni, some of whom have been able to establish businesses and create jobs. However, disparities in competency due to differences in background and initial motivation of students are the main factors in the speed of adaptation to the curriculum. As stated in the OECD, (2015) that family background and initial access to technology affect the speed of learning. To overcome this, Sintesa applies a differentiated instruction approach that personalizes mentoring based on the interests and initial abilities of students, according to Hattie's study (2009) which states that intensive mentoring reduces the learning gap.

Post-graduation support is one of the advantages of the coaching system at Sintesa. Alumni are members of a cross-generation community that actively shares information about job and business opportunities. Not only that, but the alumni also play a role in providing access and opening opportunities for alumni to collaborate with various institutions. Research shows that a strong alumni network can strengthen the competitiveness of graduates in the professional world, both through support from Islamic boarding school business units and alumni involvement in strategic positions (Jalil, 2019), as well as through the development of professional networks that increase graduates' work readiness more broadly (English et al., 2021).

This model is also in line with the theory of social capital which emphasizes the importance of networks and social relationships in career development (Coleman, 1988). By considering Al-Attas' theory of adab education, the curriculum that forms knowledgeable and moral humans is proven to be a basic principle in the Synthesis model. (Wan Mohd Nor Wan Daud, 1998) explained that the Al-Attas concept emphasizes the balance of knowledge (fardhu ain and fardhu kifayah), which is achieved when students master technology without ignoring spirituality.

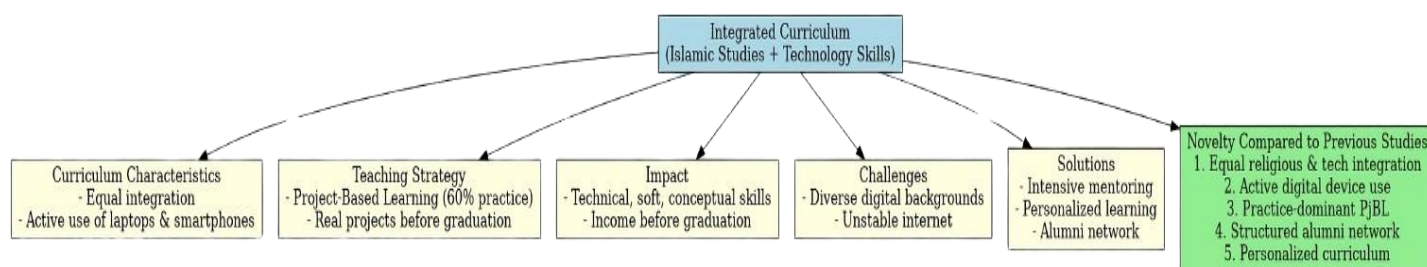


Figure 3 Integrated Curriculum

CONCLUSION

The findings of this study demonstrate that integrating Islamic values with technological competencies in an Islamic boarding school curriculum offers an effective response to the educational challenges of the digital era. The model implemented at Pesantren Sintesa successfully produces students with balanced digital and spiritual competencies, equipping them to navigate the dynamics and demands of modern society. Mastery of technology such as digital marketing and programming is carried out in parallel with tahfidz and diniyah activities. The use of project-based learning strategies and intensive mentoring by mentors has been pivotal to the curriculum's success.

Theoretically, this study enriches the literature on curriculum integration by offering a model that positions technology not merely as a supporting tool but as a core subject in Islamic education. Practically, it provides a replicable framework for Islamic boarding schools aiming to prepare students with both religious and professional competencies. This model also offers policy insights for educational stakeholders seeking to design adaptive curricula for the Society 5.0 era.

This study is limited to a single case at Pesantren Sintesa, which may affect the generalizability of its findings. Future research is recommended to broaden the scope to multiple pesantren in different regions, employ a quantitative or mixed-methods approach, and explore the long-term impacts of this integrative curriculum model. Such research will provide a more comprehensive understanding of its effectiveness across diverse educational contexts..

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