

Modernization of Nahdlatul Ulama Education Curriculum: Integrating Ahlussunnah Wal Jama'ah Values with Technological Innovation

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Abstrak

Perkembangan teknologi informasi dan komunikasi menuntut lembaga pendidikan, termasuk yang berbasis Nahdlatul Ulama (NU), untuk melakukan modernisasi kurikulum tanpa menghilangkan nilai-nilai tradisionalnya. Artikel ini bertujuan untuk mengkaji bagaimana nilai-nilai Ahlussunnah wal Jama'ah (Aswaja) dapat diintegrasikan secara harmonis dengan inovasi teknologi dalam sistem pendidikan NU. Penelitian ini menggunakan pendekatan kualitatif deskriptif dengan studi kasus pada Madrasah Tsanawiyah Ihyaul Ulum Gresik. dengan menggunakan sumber primer yang berasal dari proses observasi langsung di lapangan, wawancara kepala sekolah, guru dan siswa, dan sumber sekunder berasal dokumen kurikulum, serta literatur akademik yang relevan dengan tema penelitian, dianalisis menggunakan teknik analisis Miles dan Huberman, yaitu melalui tahap reduksi data, penyajian data, dan penarikan kesimpulan. Melalui tahapan Hasil penelitian menunjukkan bahwa modernisasi kurikulum NU dapat dilakukan melalui integrasi nilai-nilai moderasi, toleransi, keseimbangan, dan keadilan dengan teknologi digital seperti *E-learning* dan Raport Digital Madrasah (RDM). Meskipun menghadapi tantangan seperti keterbatasan infrastruktur, literasi digital, dan kesiapan sumber daya manusia, lembaga pendidikan NU terbukti mampu beradaptasi dengan era digital tanpa mengorbankan identitas keagamaannya. Integrasi ini menciptakan model pendidikan yang adaptif, kontekstual, dan berkarakter Islami, sekaligus memperkuat eksistensi NU dalam menjawab tantangan zaman.

Kata kunci: Aswaja; Modernisasi Kurikulum; Nahdlatul Ulama; Inovasi Teknologi.

Abstract

The development of information and communication technology requires educational institutions, including those based on Nahdlatul Ulama (NU), to modernize their curricula without losing their traditional values. This article aims to examine how Ahlussunnah wal Jama'ah (Aswaja) values can be harmoniously integrated with technological innovations in the NU education system. This study uses a descriptive qualitative approach with a case study at Madrasah Tsanawiyah Ihyaul Ulum Gresik. Using primary sources from direct observation in the field, interviews with the principal, teachers, and students, and secondary sources from curriculum documents and academic literature relevant to the research theme, the data was analyzed using the Miles and Huberman analysis technique, namely through the stages of data reduction, data presentation, and conclusion drawing. Through these stages, the results of the study show that the modernization of the NU curriculum can be carried out through the integration of the values of moderation, tolerance, balance, and justice with digital technologies such as *E-learning* and Madrasah Digital Report Cards (RDM). Despite facing challenges such as infrastructure limitations, digital literacy, and human resource readiness, NU educational institutions have proven capable of adapting to the digital era without sacrificing their religious

identity. This integration creates an adaptive, contextual, and Islamic character education model while strengthening NU's existence in responding to the challenges of the times.

Keywords: Aswaja; Curriculum Modernization; Nahdlatul Ulama; Technological Innovation.

INTRODUCTION

The rapid changes brought about by technological developments require every educational institution, including those based on Nahdlatul Ulama (NU), to innovate. The main challenge faced is how NU educational institutions can adapt to digital transformation without losing their religious character. In this context, innovations such as the development of digital literacy and the digitization of scientific management and archives are strategic steps to respond to the needs of the times while maintaining the values of Ahlussunnah wal Jama'ah (Aswaja) as the primary foundation of education. (Ashoumi et al., 2023).

Education is a strategic instrument in shaping the civilization and character of a nation. In the Indonesian context, the role of Islamic education has an essential position in instilling moral, spiritual and social values. Nahdlatul Ulama, as the most prominent religious organization in Indonesia, has a long and distinctive educational tradition. Nahdlatul Ulama Educational Institutions, including pesantren, madrasah, and Ma'arif schools, have long been essential actors in efforts to produce generations with Islamic character, nationalism, and religious moderation. NU-style education not only includes the transfer of spiritual knowledge, but also character building and maintenance of the Islamic tradition of the archipelago (Rosila et al., 2025).

Over time, NU developed educational institutions such as Islamic boarding schools, madrasahs, and the Ma'arif school network. These institutions serve not only as places to learn the Qur'an and the yellow book, but also as centers for internalizing moderate, inclusive Islamic values and a national ethos. Traditionally, NU-style education is built on three main pillars: the cultivation of moral values through the yellow Islamic classic books, the close and respectful teacher-santri relationship, and the acculturation of local culture in religious practices.

The NU education model explicitly emphasizes the values of Islam Nusantara based on Ahlussunah wal jamaah, such as tawassuth (moderation), tawazun (balance), and tasamuh (tolerance). This concept emphasizes Pancasila and harmony in Indonesia's cultural diversity. NU education not only transmits religious knowledge, but also educates santri to become responsible, intelligent, and noble citizens.

Curriculum modernization is a point of contention between the preservation of tradition and the need for change. Contemporary studies highlight the controversy in setting quality standards for pesantren education, and the importance of finding a balance between traditional and modern elements. In addition, digitalization is a significant challenge for NU educational institutions. Digitalization is not just a demand, but a necessity; its presence affects the management, teaching methods, and spirituality of these academic institutions (Kusumawati & Nurfuadi, 2024).

According to (UNESCO Institute for Statistics, 2018) Digital literacy is not only the ability to operate technological devices, but also includes critical thinking skills in managing information, maintaining digital security, understanding media ethics, and utilizing information wisely and responsibly. Digital literacy is an essential foundation in 21st-century education, including in the Nahdlatul Ulama educational environment.

The importance of digital literacy is in line with the latest data on the condition of digital literacy in Indonesia. Based on a report by the Indonesian Ministry of Communication and Information Technology, together with the Katadata Insight Center, released by Antara News, Indonesia's Digital Literacy Index in 2022 reached 3.54 on a scale of 1 to 5 (Kurmala, 2023). This achievement shows that the level of digital literacy of the Indonesian people is in the medium to upper category, with an increase compared to the previous year. However, aspects of digital literacy that are still low are related to digital ethics and digital security, which shows that people's ability to think critically, maintain privacy, and act wisely in the digital space still needs to be improved.

On the other hand, infrastructure challenges are also still a serious problem. Based on data from the Indonesian Internet Service Providers Association (APJII) in 2023, around 77% of Indonesia's population has been connected to the internet (APJII, 2023). However, internet penetration has not been evenly distributed, especially in rural pesantren areas, which are the main base of NU education. This is reinforced by the results of a survey by the ((APJII), 2023)) which shows that only 45% of pesantren in Indonesia have adequate internet access to support the digital-based learning process. This condition indicates that strengthening digital literacy in the pesantren environment does not only depend on the readiness of human resources, but is also closely related to the availability of adequate technological infrastructure.

The adoption of technologies such as AI for digitizing ancient manuscripts and learning, E-learning platforms, and digital literacy for teachers and students is one of the adaptive strategies of NU educational institutions in the modern era. However, infrastructure challenges,

cultural resistance, and limited human resources still hinder the improvement of the quality of education within NU (Hanif et al., 2024).

Several previous studies have shown that Nahdlatul Ulama educational institutions have begun to carry out digital transformation as a form of adaptation to the challenges of the times. (Agus Moh. Sholahuddin & Saeful Anwar, 2023) Highlighted how yellow book-based pesantren, such as Al-Ma'ruf Kendal, have adopted digital platforms without abandoning their classical scientific traditions. (Ulumuddin et al., 2022) Also explained the pesantren's strategy in internalizing Aswaja values through digital media for Generation Z. This is in line with (Maulana, 2020) who emphasized the importance of strengthening ICT literacy in the pesantren ecosystem. In addition, (Khozaini & Mundry, 2024) Emphasized that digital transformation needs to be based on local wisdom to be in line with religious values. These studies indicate that technological innovation can be in line with the preservation of Aswaja values, becoming the basis for developing a more modern and adaptive NU education curriculum.

Although some previous studies have discussed digital transformation in the Nahdlatul Ulama educational environment, the focus of these studies has generally been limited to the implementation of technology and the preservation of Aswaja values in general. There have not been many studies that have examined in depth how the modernization of the NU education curriculum can be systematically designed to integrate Aswaja values with digital technology innovations in the context of educational institutions. In addition, most previous studies have focused on large Islamic boarding schools, while secondary madrasahs such as MTs Ihyaul Ulum Gresik have not been widely studied. Therefore, a study is needed to examine how the integration of curriculum modernization and learning digitalization can be carried out without eliminating the distinctive Islamic character of NU.

One concrete example of digital transformation in NU education can be seen at MTs Ihyaul Ulum Gresik. This institution has made a significant transition from a manual system to a digital system that is more efficient and adaptive to technological developments. The fast-paced era of globalization is also a challenge for MTs Ihyaul Ulum. Madrasahs need to use digitalization as an adaptive strategy to deal with changing times marked by technological acceleration and information disruption. In this context, the modernization of education based on Islamic values is becoming increasingly important, especially in the Nahdlatul Ulama educational environment. Changes in the times that are accelerating due to technological developments require every educational institution, including NU-based education, to make various innovations.

Thus, the urgency of curriculum modernization in NU education is not only limited to adjusting to technological developments, but also an important strategy in maintaining the existence of Aswaja values in the midst of increasingly rapid globalization. MTs Ihyaul Ulum Gresik, as one of the educational institutions under the auspices of NU, shows that digitalization and preservation of Islamic traditional values are not two things that contradict each other, but can strengthen each other. Therefore, an in-depth study is needed to see the extent to which technological innovation can be harmoniously integrated into the NU education system in order to create an adaptive, humanist, and Islamic character learning model.

METHOD

This research uses a descriptive qualitative approach with the aim of understanding and describing in depth the process of modernizing the Nahdlatul Ulama (NU) education curriculum through the integration of Ahlussunnah wal Jama'ah (Aswaja) values with technological innovation. (Moleong, 2019). This approach was chosen because it is able to reveal the meaning, values, and context underlying the transformation of education in the NU environment, especially in the application of curriculum digitization.

The focus of this study is to examine the modernization of the NU education curriculum by integrating Aswaja values with technological innovation in the case study of MTs Ihyaul Ulum Gresik, which is one of the educational institutions under the auspices of NU that has implemented digital transformation in various aspects, ranging from administration, learning, and evaluation. The data sources in this study include primary and secondary data. Primary data was obtained through direct observation in the field, semi-structured interviews with informants who were actively involved in the educational process at MTs Ihyaul Ulum Gresik, including the principal, two teachers, and two students, as well as documentation of various activities and institutional policies. The interviews covered several key indicators, including perceptions of the importance of curriculum modernization in the digital age, forms of integration of Aswaja values in technology-based learning, challenges and resistance that arise in the digitization process, and institutional strategies in implementing technological innovation.

Secondary data included curriculum documents and academic literature relevant to the research theme. MTs Ihyaul Ulum was chosen as the study location because it has implemented various technological innovations in its learning system.

The collected data was analyzed using the Miles and Huberman analysis technique, namely through the stages of data reduction, data presentation, and conclusion drawing. The

validity of the data was strengthened by triangulation of sources and methods to ensure the validity of the findings.

Data reduction was carried out by selecting, focusing, and simplifying the data from interviews and observations to identify the main themes related to curriculum modernization and digitization. Data presentation was carried out by compiling narratives, matrices, and thematic maps to illustrate the relationship between Aswaja values, technological innovation, and educational practices in madrasas. Conclusion drawing and verification are carried out by interpreting the meaning of the emerging data patterns and checking the consistency of the findings through comparison between data sources. (Elshabassi et al., 2024).

Through this approach, the research is expected to provide a comprehensive picture of how educational institutions under the auspices of NU adapt their curriculum to remain relevant to the demands of the digital age, while remaining firmly grounded in the traditional Aswaja values that are the identity and foundation of their religion.

RESULT AND DISCUSSION

Nahdlatul Ulama Education Curriculum in Aswaja Values

Curriculum is understood as a learning plan or design that includes objectives, content, methods, and evaluation, aimed at achieving certain educational goals. More than just a collection of subjects, the curriculum is a holistic framework that guides planning, implementation, and assessment in education. In terminology, the curriculum is not only limited to a list of subjects, but also includes all learning experiences, both in the classroom and outside the classroom, which are designed and directed by educational institutions. . The curriculum contains four main components, namely: Educational objectives, Content or learning materials, Learning methods or strategies, Evaluation to measure learning outcomes (Widia et al., 2022)

Meanwhile "Aswaja" stands for Ahlussunnah wal Jama'ah, consisting of three Arabic words: ahl (followers), sunnah (the way or tradition of the Prophet), and jama'ah (group or majority) Etymologically, this term describes a group of people who follow the sunnah of the Prophet Muhammad in accordance with the understanding of the companions and the majority of Muslims, in NU tradition reflects a deep understanding of the three core teachings of Islam: aqidah, fiqh, and tasawwuf (Deden Somantri, Aden yibni Fahrizal, Abdul Aziz Hakim, 2024). Education in NU is firmly rooted in the values of Ahlussunnah wal Jama'ah, which are moderate, tolerant and inclusive. The cultivation of values such as tawassuth (moderate),

tasamuh (tolerance), tawazun (balance), and i'tidal (justice) is carried out through exemplary teachers, worship habits, and the pesantren social environment (Nikmah, 2018).

Nahdlatul Ulama (NU) has laid these important foundations through the Magelang Congress in 1939. In this forum, NU established the principles of social relations and human values known as Mabadi Khaira Ummah, the principles of the best people. This principle teaches that in living life, in shaping character education in each individual who is noble and sturdy, including: Ash-shidqu (honest and trustworthy), uphold honesty and avoid lies in every action—Al-wafa bil 'ahd (keeping promises). Demonstrate integrity and responsibility for commitments made. At-ta'awun (helping) Fostering a spirit of togetherness, solidarity, and mutual assistance in social life (Patoni, 2018).

NU education itself focuses on "insan kamil," a perfect human being who is not only intellectually intelligent but also spiritually and socially mature. This character is formed through the learning of the yellow book, adab to the teacher, and spiritual practices such as dhikr, wirid, and tirakat. Nahdlatul Ulama (NU), as the most prominent religious organization in Indonesia, has a diverse education system, ranging from traditional pesantren to formal education institutions under the auspices of the Lembaga Pendidikan Ma'arif NU (LP). Nahdlatul Ulama (NU) education has distinctive characteristics that distinguish it from other educational systems. This is reflected in the structure, curriculum and learning methods applied in both pesantren education and Lembaga Pendidikan Ma'arif NU. Although diverse in institutional form, all NU education models carry the values of Ahlussunnah wal Jama'ah as the primary basis.

In addition to pesantren education, which is synonymous with NU, there are also formal educational institutions under the auspices of the Lembaga Pendidikan Ma'arif NU (LP). Lembaga Pendidikan Ma'arif NU itself is an institution that oversees all NU-affiliated madrasahs, starting from the Raudlatul Athfal (RA) level, Madrasah Ibtidaiyah (MI), Madrasah Tsanawiyah (MTs) equivalent, Madrasah Aliyah (MA) equivalent, to universities.

In the application of curriculum and learning methods at Ma'arif NU Educational Institutions, of course, it is more or less different from the learning in pesantren. The curriculum applied is by integrating Islamic values typical of Ahlussunnah wal Jamaah an Nahdliyah into the national education system. In practice, LP Ma'arif NU develops a curriculum and learning methods that are integrative in nature, combining the national curriculum with local content to the NUs and classical Islamic books. (Ulama, 2024).

In its application, the National Curriculum, such as the Merdeka Curriculum or 2013 Curriculum, includes general subjects such as Indonesian, Mathematics, Science, Social Studies, English, and Civic Education. However, the curriculum implemented by LP Ma'arif is a combination of Islamic Religious Education (PAI) learning, which is detailed in the subjects of Al-Qur'an Hadith, Akidah Akhlak, Fiqh, and Islamic Cultural History. Besides, local content learning at NU in the form of ASWAJA subjects is also added. Furthermore, there is also basic yellow book learning, such as Aqidatul Awam, Safinatun Najah, etc (Ibda et al., 2024) .

The learning method in LP Ma'arif NU itself combines active and contextual learning approaches as recommended in the national curriculum, with traditional approaches typical of pesantren, such as the classical method, which is the most commonly applied learning method in the formal education system, including in LP Ma'arif NU. It is used for general subjects, with a modern approach based on discussion, questions and answers, practice, and technology assistance. (Sista & Budiman, 2020).

The Sorogan and Bandongan methods are also applied in learning the classical books and strengthening Islamic values. Students are taught by reading classical texts and understanding their contents with the guidance of the teacher. In addition, there is the habituation of Religious Amaliyah; students are accustomed to participating in daily religious activities such as praying dhuha in congregation, reading tahlil, yasinan, istighotsah, and other religious activities as part of spiritual character education. Teachers and educators act as role models in behavior, ethics, and national spirit. The educational process does not only take place in the classroom, but also through social interactions in the school environment.

The Challenge of Modernizing Nahdlatul Ulama Education

Education is the primary foundation in shaping a civilization with character and competitiveness. Nahdlatul Ulama, as the most prominent Islamic organization in Indonesia, has a great responsibility in producing a generation that is not only religiously devout but also able to answer the challenges of the times. Through the Lembaga Pendidikan Ma'arif NU and its pesantren, NU has played a significant role in educating the nation. However, along with the development of technology, globalization, and social transformation, NU education faces various complex modernization challenges and requires the right strategy to answer them.

One of the main challenges facing NU education today is the digital divide. In the digital era, mastery of technology is vital. Unfortunately, many NU educational institutions, especially

in remote areas, do not have adequate infrastructure such as stable internet access, digital devices, or online-based learning. This causes a gap between NU institutions and educational institutions that have gone digital. Digitalization of education is a necessity, and without infrastructure readiness, Islamic educational institutions will be left far behind in producing superior generations in the era of Industry 4.0 and Society 5.0 (Ciptadi & Khozin, 2025).

Another challenge is the curriculum that has not been fully integrated with the needs of the times. Many NU educational institutions are still very focused on traditional yellow book-based teaching, while integration with science, technology, foreign languages, and life skills is still limited. In fact, the ideal education balances the scientific aspects of religion and the needs of global competence (Kusumawati & Nurfuadi, 2024). The quality of educators' human resources (HR) is also a challenge. Many teachers in NU educational institutions have not received adequate pedagogical or technological training. As noted in the LP Ma'arif NU report (2020), increasing the capacity of teachers must be a priority because they are the spearhead in realizing quality education.

In addition to curriculum and infrastructure challenges, the process of modernizing education within the NU environment also faces social and cultural obstacles. In several educational institutions, there is resistance from some teachers to the implementation of a digital learning system because it is considered to reduce traditional values in the teaching and learning process, such as direct interaction between teachers and students, which is a hallmark of traditional education. Some teachers are concerned that the use of digital platforms could shift their role as primary educators, or even eliminate the spiritual and moral aspects of learning.

On the other hand, the surrounding community also shows cultural obstacles, such as the view that excessive use of technology can reduce simplicity, humility, and respect for teachers. Such obstacles show that modernization requires not only technological readiness and policies, but also changes in mindset and cultural acceptance, so that educational innovation can run harmoniously without causing value conflicts.

In addition, support from parents also faces various limitations. Many parents do not have adequate digital literacy, so they do not fully understand how to use online learning platforms and technology to assist their children. Furthermore, economic limitations and household facilities, such as the unavailability of digital devices and stable internet access, are also obstacles to supporting technology-based learning in educational institutions. These conditions show that the success of NU's educational modernization is highly dependent on

synergy between institutions, teachers, and families, so that digital transformation can proceed inclusively and evenly.

With various challenges stemming from infrastructure, socio-cultural, and economic aspects, the process of educational modernization in the NU environment requires a comprehensive and adaptive strategy.

Modernizing NU education is a necessity. NU faces significant challenges in balancing the preservation of Aswaja values, strengthening pesantren traditions, and adapting to technology and the needs of modern times. Efforts to improve human resources, curriculum integration, strengthen infrastructure, and strengthen the narrative of moderate Islam are important keys to answering these challenges.

ASWAJA Values in Integrating Technological Innovation

Technological developments in the era of industrial revolution 4.0 and society 5.0 bring both challenges and opportunities for society, especially for Nahdlatul Ulama, who adhere to the values of Ahlussunnah wal Jama'ah. In the midst of these changes, Aswaja values become an important foundation for navigating the use of technology to remain in accordance with Islamic principles that are moderate, tolerant, and rahmatan lil 'alamin (Ehwanudin et al., 2022). Ahlussunnah wal Jama'ah is a religious understanding that is firmly held by Nahdlatul Ulama (NU). Aswaja is not only a theological system, but also a guide in social life, culture and education. In the context of the times, Aswaja values become the basis for filtering, selecting, and integrating technological developments to remain in harmony with moderate, inclusive, and civilized Islamic values. (Denmas Amirul Haq, Yoyok Amirudn, 2024). The values contained in ASWAJA that can be integrated are: (Deden Somantri, Aden yibni Fahrizal, Abdul Aziz Hakim, 2024)

Table 1. ASWAJA Values

Tawassuth (Moderation)	Tawassuth or moderation is an attitude of taking the middle path, not extreme in accepting or rejecting change, including in the face of technological developments. This attitude encourages NU educational institutions not to be anti-technology, but also not to be without control in its utilization. Technological innovations such as e-learning, digitalization of the yellow book, and social media are used as a means of strengthening da'wah and learning, without ignoring religious ethics and local culture.
Tasamuh (Tolerance)	Tasamuh or tolerance requires openness to change and diversity, including technological advances. In this context, NU pesantren and educational institutions not only accept

	technology as a learning tool but also educate students to understand media ethics, respect different views in the digital space, and prevent hate speech and hoaxes.
Tawazun (Balance)	The value of tawazun teaches a balance between the needs of the world and the hereafter, between spiritual and material aspects. In technology integration, this value plays an important role in ensuring that technology is used not only for worldly interests (work competence, access to information), but also to strengthen worship, da'wah, and Islamic character development. For example, the use of digital applications for learning the Qur'an, online yellow book studies, and da'wah content on social media.
I'tidal (Justice)	I'tidal or justice emphasizes that in the application of technology, access must be equitable without discrimination. This value encourages NU educational institutions to fight for equal access to technology, especially for pesantren in remote areas that have been facing a digital divide. This also includes justice in providing digital literacy training for all groups of teachers, students, and the general public.
Amar Ma'ruf Nahi Munkar (Inviting Good and Preventing Evil)	Digital technology is an effective tool for spreading good values (amar ma'ruf) and fighting harmful content, radicalism, and misleading information (nahi munkar). The utilization of social media, podcasts, and YouTube channels by NU institutions and da'i is a concrete example of the implementation of this value in the digital era.
Ukhuwah (Brotherhood)	Ukhuwah Islamiyah (Muslim Brotherhood), Ukhuwah Wathaniyah (National Brotherhood), and Ukhuwah Basyariyah (Humanitarian Brotherhood) are important values that are increasingly relevant in the digital space. With technology, the value of ukhuwah can be strengthened through learning networks across pesantren, collaboration between NU institutions, and strengthening global solidarity in facing the challenges of the digital era.

Thus, the integration of Aswaja values in the use of technological innovation is not only a necessity, but also a commitment to ensure that technological developments go hand in hand with the mission of da'wah, education, and civilization building based on moderate, tolerant, just and civilized Islamic principles. This is the foundation for Nahdlatul Ulama to continue to be relevant and adaptive to the dynamics of the times without losing its religious identity.

Implementation of Technological Innovation at MTs Ihyaul Ulum Gresik

Along with technological developments, various educational institutions under Nahdlatul Ulama have made digital transformation efforts. The implementation of technological innovation not only aims to improve the quality of education management, but also to integrate Aswaja values into the technology-based learning process (Lilik Muarrafah, 2025).

In its application, MTs Ihyaul Ulum has innovations in the curriculum field, which are realized through the use of technological innovation in supporting the learning process and student assessment. The application of technological innovation at MTs Ihyaul Ulum Gresik is an important part of the efforts to modernize the Nahdlatul Ulama education curriculum. One of the concrete forms of technology implementation in this madrasah is the use of digital platforms such as E-Learning and Madrasah Digital Report (RDM), which are the main media in the learning process and evaluation of students (Hasan Bisri, personal communication, July 5, 2025, at 9:30 A.m.).

The implementation of the E-Learning platform and Madrasah Digital Report Card at MTs Ihyaul Ulum began to be used in 2019, along with the implementation of the 2013 Curriculum, which emphasizes a competency-based learning approach and the use of information technology in the teaching and learning process. E-Learning has become an important tool, especially in distance learning activities, collecting assignments, and conducting evaluations such as Daily Tests (UH) and End of Semester Summative (SAS). The use of e-learning at MTs Ihyaul Ulum is flexible and highly dependent on the initiative of the subject teacher. If the teacher provides additional material in the form of learning modules or videos, then students can access them directly through the platform. In addition, students also use E-Learning as the primary medium to work on and collect assignments given. Interestingly, the results of student work can be downloaded by the teacher to be analyzed and used as the basis for assessment (Nur Izzatul Islamiyah, personal communication, July 5, 2025, at 9:40 A.m.).

Meanwhile, the final assessment process is carried out through RDM (Raport Digital Madrasah). All teachers who teach subjects and extracurricular activities have access to input grades into the system. After the grade input process is complete, the homeroom teacher will download all student grade data and perform the ranking process using an Excel template that has been prepared by the madrasah operator and the data from Excel is uploaded on the madrasah E-Raport platform. This system allows the grade recapitulation process to be more efficient (Metha Kusuma Dewi, personal communication, July 5, 2025, at 9:30 a.m.).

The implementation of the E-Learning platform and digital report card at MTs Ihyaul Ulum has a significant positive impact in supporting the learning modernization process. One of the main benefits is the increased efficiency in assignment management and assessment. Teachers can easily give assignments online, monitor the collection of assignments by students, and download the results of work to be analyzed as a basis for giving grades. In addition, E-Learning also facilitates the implementation of evaluations such as Daily Tests (UH) and End

of Semester Summative (SAS) digitally, so that the learning process becomes more structured, documented, and time-saving.

Meanwhile, the use of the Madrasah Digital Report Card (RDM) at MTs Ihyaul Ulum has a real positive impact in terms of efficiency and accuracy of processing student grades. This system allows teachers to input grades directly into the digital platform, so that the process of recapitulating and reporting learning outcomes becomes faster, more organized, and less error-prone. In addition, RDM makes it easier for homeroom teachers to access and download student grades as a whole, as well as simplifying the ranking process through Excel templates that have been prepared by madrasah operators. The existence of RDM also supports transparency and openness in the assessment system, and is also part of a digital archive that can be accessed in the future, and is the first step towards digitizing a more modern and professional administration in the madrasah education environment.

The implementation of RDM and E-Learning at MTs Ihyaul Ulum shows that the process of digitization and implementation of educational technology has begun to develop in the NU madrasah environment. In line with that, some of the following NU pesantren and educational institutions are concrete examples of implementing these innovations.

Table 2. Examples of Technological Innovation Implementation

Research	Institution	Technology Innovation	Impact/Application
(Munawara et al., 2020), "Pemanfaatan Media Digital untuk Dakwah Pesantren Tebuireng (Studi pada Akun Media Sosial tebuireng.online)", <i>KOMUNIKA: Jurnal Dakwah Dan Komunikasi</i> 14, no. 1 29-45.	Pondok Pesantren Tebu Ireng	Digitalization of Kitab Kuning, Tebuireng E Learning for online learning. Digitalization of Pesantren Administration and Management (santri data, attendance, finance), Digital Da'wah.	Santri are able to combine classical scientific traditions with technology, expand da'wah and education, improve the efficiency of pesantren management, and optimize the da'wah of Aswaja values through digital media.
(Maulana, 2020), "Pengembangan Literasi Teknologi Informasi Dan Komunikasi Di Lingkungan Pesantren Tebuireng Jombang", <i>ADALAH: Buletin Hukum dan Keadilan</i> , Vol. 4, No. 4, 52-70.			
(Khozaini & Mundiri, 2024), "Mewujudkan Transformasi Digital Berbasis Kearifan Lokal; Strategi Cerdas Menuju Sistem Tata Kelola Unggul", <i>JlIP: Jurnal Ilmiah Ilmu Pendidikan</i> , Vol. 7, No. 1, 383-392.	Nurul Jadid Islamic Boarding School	Smart santri app, E Learning Nurul Jadid	Facilitate the management of pesantren and the teaching and learning process and Santri are more technologically literate without leaving the Aswaja tradition.
(Syafiih, 2022), "Perancangan Sistem Smart Program Lembaga			

Motivasi Nurul Jadid Berbasis Web", (2022), *INSOLOGI: Jurnal Sains Dan Teknologi* 1, no. 3, 169–82.

(NF, 2022) NU Online, "LP Ma'arif LP Ma'arif PBNU PBNU Digitizes Institutional Data and Assets," NU Online, accessed July 1, 2025, at 10.00 a.m.	LP Ma'arif PBNU	Digitalization of Institutional Data and Assets	To support technology-based management, the foundation for e-report and e-admin.
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From the findings of other studies, such as Pesantren Nurul Jadid and Pesantren Tebuireng, the application of technological innovation at MTs Ihyaul Ulum has distinctive characteristics. These institutions tend to utilize digitalization to support da'wah activities and blended learning-based classical Islamic text learning, while MTs Ihyaul Ulum places more emphasis on digitalization in managerial and evaluative aspects through the use of E-Learning and Madrasah Digital Report Cards. This difference shows that even though all NU educational institutions are moving towards a similar direction of modernization (convergence in terms of technological adaptation and Aswaja values), each institution has its own unique implementation strategy in accordance with its institutional characteristics.

The findings at MTs Ihyaul Ulum Gresik are in line with the argument of (Pratiwi & Nur Valentin, 2024) That digital madrasahs do not merely adopt technology, but build a value-based management ecosystem that is adaptive to developments in the digital era. While MTsN 3 Ponorogo emphasizes institutional competition and innovation, MTs Ihyaul Ulum integrates digital transformation in managerial and evaluative aspects through the implementation of an E-Learning system and Digital Madrasah Report Cards.

Thus, the findings at MTs Ihyaul Ulum enrich the discourse on the integration model of Aswaja values and technological innovation by providing a new perspective at the secondary madrasah level, rather than large Islamic boarding schools or higher education institutions as in previous studies.

Based on the table and statements above, it can be concluded that the digitization process carried out by NU educational institutions does not only focus on administrative aspects but also touches on the core of the learning process, da'wah, and character building based on Aswaja. These innovations are proof that NU educational institutions are able to adapt to the challenges of the digital era without abandoning their religious identity. This shows that Aswaja values remain the primary foundation in every transformation that is carried out.

CONCLUSION

This study shows that modernizing the Nahdlatul Ulama (NU) education curriculum by integrating Ahlussunnah wal Jama'ah (Aswaja) values with technological innovations is a strategic step to respond to the challenges of the digital era without abandoning Islamic traditions. The application of digitalization in learning, managerial, and evaluative aspects, such as the use of E-Learning platforms and Madrasah Digital Reports, proves that Aswaja values can adapt harmoniously to technological advances. A case study at MTs Ihyaul Ulum Gresik shows that technological innovation can strengthen the effectiveness of educational management while maintaining religious character.

However, this modernization process is not without challenges, such as limited digital infrastructure, technological literacy gaps, and the need to improve the quality of human resources. The curriculum, which is still traditionally oriented, also needs to be strengthened through the integration of contemporary content such as digital literacy, general knowledge, and 21st-century skills. The case study at MTs Ihyaul Ulum Gresik shows that digital transformation can be carried out effectively without eliminating the distinctive Islamic character of NU. The implementation of the E-Learning and Madrasah Digital Report Card platforms has been proven to improve the efficiency of learning, assessment, and educational management, while maintaining the religious and cultural values of Islamic boarding schools.

Theoretically, this research enriches our understanding of how traditional Islamic education can adapt to technological modernization. Aswaja values have proven to be an adaptive paradigm in the development of Islamic education theory in the digital era. Practically, the findings of this study confirm that the success of digital transformation in the NU educational environment is highly dependent on the readiness of human resources, institutional policy support, and collaboration between teachers, parents, and madrasah administrators. Therefore, NU policy makers and education administrators need to strengthen digital literacy training for teachers and educational staff, expand access to technological infrastructure, and develop an integrative curriculum that balances religious values and global competencies.

Going forward, further research needs to be conducted to assess the long-term impact of the digitization process on the quality of learning, the character building of students, and the governance of Nahdlatul Ulama educational institutions. In addition, comparative studies between Islamic educational institutions, both domestic and foreign, will provide a broader perspective on the position of NU education in the global map of modern Islamic education. Thus, the modernization of the NU education curriculum is not merely an adaptation to

technology, but also a manifestation of a commitment to strengthening the role of moderate Islam that is inclusive, contextual, and competitive in the future.

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