Digital and Non-Digital Leadership in Merdeka Curriculum Implementation: A Case Study at Al-Bahjah Cirebon

Sulfiani[1], Muh. Nur Islam Nurdin[2], Muhammad Nabhan Fajruddin[2], Sartika Putri Fauziana[2]
[1]Sekolah Tinggi Agama Islam Al-Bahjah Cirebon, Indonesia, [2]Universitas Islam Negeri Raden Intan Lampung, Indonesia
sulfiani@staialbahjah.ac.id[1], muhnurislam@radenintan.ac.id[2], mnabhanf@radenintan.ac.id[2], sartikaputrifauziana@radenintan.ac.id[2]

Abstract: *This study aims to describe and analyze the practices of principal leadership in the implementation of the Merdeka Curriculum at SMA Islam Qur'ani Al-Bahjah Cirebon, focusing on the dynamics of digital and non-digital leadership. The research employs a descriptive qualitative method with a single case study design, utilizing interviews, observation, and documentation involving the principal, vice principal for curriculum affairs, and teachers. The results indicate that non-digital leadership remains dominant as it aligns with the values of discipline and the pesantren (Islamic boarding school) character. Conversely, digital leadership is used to a limited extent for the efficiency of communication and administration, but is constrained by infrastructure and internal policies. The findings affirm the emergence of a hybrid leadership model where both approaches complement each other according to the context. This study emphasizes the importance of flexibility in educational leadership when adopting digitalization without abandoning traditional pesantren values.*

Abstrak: Penelitian ini bertujuan menggambarkan dan menganalisis praktik kepemimpinan kepala sekolah dalam implementasi Kurikulum Merdeka di SMA Islam Qur'ani Al-Bahjah Cirebon, dengan fokus pada dinamika kepemimpinan digital dan non-digital. Pendekatan penelitian ini menggunakan metode kualitatif deskriptif dengan desain studi kasus tunggal melalui wawancara, observasi, dan dokumentasi terhadap kepala sekolah, wakil kepala sekolah bidang kurikulum, dan guru. Hasil menunjukkan bahwa kepemimpinan non-digital masih dominan karena sesuai dengan nilai kedisiplinan dan karakter pesantren. Sementara kepemimpinan digital digunakan terbatas untuk efisiensi komunikasi dan administrasi, namun terhambat oleh infrastruktur dan kebijakan internal. Temuan menegaskan munculnya model kepemimpinan hibrida di mana dua pendekatan saling melengkapi sesuai konteks. Kajian ini menegaskan pentingnya fleksibilitas kepemimpinan pendidikan dalam mengadopsi digitalisasi tanpa meninggalkan nilai-nilai tradisional pesantren.

1. Introduction

The implementation of the Merdeka Curriculum inherently demands the digitalization of education; however, leadership in many Islamic institutions persists in non-digital models. This discrepancy creates a dichotomy that impedes transformation. While the Merdeka Curriculum is designed to foster adaptive, technology-based learning, the reality of traditional leadership in several *madrasah* and *pesantren* (Islamic boarding schools) shows limitations in responding to these mandates. Several studies indicate that manual leadership practices and resistance to technology create tension between policy direction and field implementation.[1] herefore, the success of the Merdeka Curriculum is heavily dependent on the ability of institutional leadership to reorient toward a digital paradigm.

---

[1] Ulfa Malikatuz Zahroh et al., *Inovasi Organisasi di Era Digital: Peran Transformasi Teknologi, Kepemimpinan Adaptif, dan Budaya Berbasis Nilai Islam*, n.d.; Siti Mutmainah et al., "Building Digital Skills

The rapid advancement of technology in the digital era has significantly impacted various aspects of life, including the education sector.[2] In Indonesia, the Ministry of Education, Culture, Research, and Technology introduced the Merdeka Curriculum as a response to 21st-century educational challenges.[3] A key feature of this curriculum is the utilization of digital technology in managing learning and administration. The curriculum is designed with a more flexible approach, centered on student autonomy, and grants teachers the freedom to select instructional methods appropriate for student characteristics. It also responds to global changes, such as technological advancements, socio-economic shifts, and the need for 21st-century skills.[4] Globally, educational transformation demonstrates that digital leadership styles play a crucial role in enhancing curriculum effectiveness. Countries like Finland and Singapore show success in implementing technology-based leadership approaches, focusing on flexible, project-based curricula that are responsive to student needs.[5]

The Indonesian government has launched various initiatives to support the implementation of the Merdeka Curriculum through digital technology, such as developing the Merdeka Mengajar Platform (PMM), distributing ICT equipment, and utilizing data-based applications like SIPLah and ARKAS.[6] Nevertheless, marginalized, frontier, and outermost regions (3T) still face significant obstacles, including limited internet access and minimal digital device availability. Consequently, non-digital leadership approaches, which rely on conventional methods and face-to-face communication, remain widely applied.[7] In many Indonesian schools, particularly in rural areas, non-digital leadership is the primary choice due to infrastructure limitations.[8] However, with continuous technological support through training and the provision of digital platforms, some schools are beginning to adopt Learning Management Systems (LMS) and other online resources. Although implementation varies, the transformation toward digital leadership remains a long-term goal in enhancing the effectiveness of the Merdeka Curriculum.[9]

Research linking digital and non-digital leadership within the context of the Merdeka Curriculum has received limited attention from scholars. Existing studies can be

---

and Introducing AI for Santri Through a Training Program at the As-Sunniyah Islamic Boarding School in Kencong Jember," *International Journal of Community Service Learning* 8, no. 1 (2024): 115–21, https://doi.org/10.23887/ijcsl.v8i1.76313.

[2] Anita Candra Dewi et al., "Peran Kemajuan Teknologi Dalam Dunia Pendidikan," *Journal on Education* 6, no. 1 (2023): 1, https://doi.org/10.31004/joe.v6i1.4588.

[3] Abd Rahim and Bambang Ismaya, "Pendidikan Karakter Dalam Kurikulum Merdeka Belajar: Tantangan Dan Peluang," *JSE Journal Sains and Education* 1, no. 3 (2023): 3, https://journal.sabajayapublisher.com/index.php/jse/article/view/234.

[4] Amelia Stephani Marpaung et al., "Inovasi Manajemen Kurikulum Merdeka: Membangun Landasan yang Kokoh untuk Pendidikan Abad ke-21," *Jurnal BELAINDIKA (Pembelajaran dan Inovasi Pendidikan)* 6, no. 2 (2024): 2, https://doi.org/10.52005/belaindika.v6i2.164.

[5] I. Made Pustikayasa et al., *Tranformasi Pendidikan : Panduan Praktis Teknologi di Ruang Belajar* (PT. Sonpedia Publishing Indonesia, 2023).

[6] Administrator, "Indonesia.go.id - Digitalisasi Pendidikan Percepat Capaian Merdeka Belajar," June 14, 2024, https://indonesia.go.id/kategori/editorial/8293/digitalisasi-pendidikan-percepat-capaian-merdeka-belajar?lang=1.

[7] Elfina Saely and Sukiman, "Analisis Kritis Perbedaan Kurikulum 2013 Dan Kurikulum Merdeka," *Edudikara: Jurnal Pendidikan Dan Pembelajaran* 8, no. 1 (2023): 1, https://doi.org/10.32585/edudikara.v8i1.316.

[8] Pustikayasa et al., *Tranformasi Pendidikan*.

[9] Heni Agus Purwanti and Nina Oktarina, *The Influence of PMM Literacy and Teacher Learning Leadership on Teacher Performance: The Mediating Role of Professional Learning Community Effectiveness*, 42, no. 1 (2025).

grouped into three main aspects: First, teacher literacy and collaboration, where digital leadership is proven to enhance performance through the use of the PMM.[10] Second, digital leadership capacity, which still faces constraints in communication and digital resilience.[11] Third, implementation strategy, where principals with a digital vision and infrastructural support are better prepared for the Merdeka Curriculum.

However, the dominant focus of current research has been on general schools, leaving the dynamics of digital and non-digital leadership in institutions with distinct cultural and policy settings largely unexplained. Specifically, studies focusing on the unique technology policies and culture of Islamic boarding schools (pesantren-based schools) have been underexplored.

This study responds to the existing literature by addressing this gap, focusing specifically on the effectiveness of digital and non-digital leadership styles in the Merdeka Curriculum implementation within this unique context. The existing gap creates a challenge for the Merdeka Curriculum's digitalization process. While previous research shows that digital leadership can improve managerial effectiveness and teacher collaboration, this has not been extensively studied in boarding schools with strong religious cultures. Therefore, this research aims to understand how digital and non-digital leadership practices are simultaneously applied at SMA Islam Qur'ani Al-Bahjah Cirebon, and how both contribute to the execution of the Merdeka Curriculum. The focus is not on a quantitative comparison between the two styles, but rather on explaining the contextual dynamics and effectiveness of this hybrid approach.

2. Method

This study employed a qualitative approach with a case study design. The primary goal of this approach was to deeply understand and describe the social phenomena related to human behavior and experience, specifically within the context of principal leadership in implementing the Merdeka Curriculum. Qualitative research yields descriptive data in the form of spoken and written words, as well as observable behavior. In line with Creswell & Poth's view, the qualitative approach is a naturalistic and interpretive inquiry process aimed at understanding phenomena in a real-life setting through the perspectives of the participants.[12] The subjects or participants in this research consisted of the school principal, the vice principal for curriculum affairs, and teachers at SMA Islam Al-Bahjah Cirebon. This school was strategically selected (purposive sampling) because it has already implemented the Merdeka Curriculum using a leadership approach that incorporates conventional (non-digital) elements, which is highly relevant to the research focus.

Data in this study were collected using three main types of instruments: (1) nterview Guides: Used to elicit in-depth information from the principal, teachers, and educational staff regarding the leadership style employed in the execution of the Merdeka Curriculum. The interviews were conducted in a semi-structured format to maintain flexibility while ensuring the questions remained focused on the research objectives; (2) Observation Sheets: Used to systematically record observed leadership activities and

---

[10] Rais Hidayat and Yuyun Elizabeth Patras, "Digital Leadership of School Principals in Indonesia: Strategic Interventions Needed," *Pedagogia: Jurnal Ilmiah Pendidikan* 16, no. 1 (2024): 32–42, https://doi.org/10.55215/pedagogia.v16i1.10209.

[11] Yoharmen Arnov et al., "Strategi kepemimpinan kepala sekolah untuk mewujudkan merdeka belajar dalam konteks digitalisasi pendidikan kejururuan," *JPGI (Jurnal Penelitian Guru Indonesia)* 9, no. 2 (2024): 1–5, https://doi.org/10.29210/024897jpgi0005.

[12] Creswell J. W. and Poth C. N., *Qualitative Inquiry and Research Design: Choosing among Five Approaches* (Sage, 2018).

behaviors directly within the school environment, such as communication processes, decision-making, teacher supervision, and learning management; (3) Documentation Checklist: Used to gather various supporting documents, including the school's organizational structure, activity schedules, meeting minutes, activity photos, and curriculum documents relevant to the research objective. The data collection process was carried out during April and May 2025 at SMAIQU Al-Bahjah Cirebon, through three stages: (1) Participant Observation to understand daily leadership practices; (2) Semi-Structured Interviews to explore the participants' perceptions and experiences; and (3) Document Study to collect relevant supporting data. The entire process was conducted systematically and continuously to obtain complete and in-depth data.

The data analysis technique utilized the interactive analysis model proposed by Miles and Huberman, which comprises three concurrent stages:[13] (1) Data Reduction: This process involved selecting, summarizing, and filtering data from interviews, observation, and documentation to focus only on information relevant to the research objectives; (2) Data Display: The reduced data were organized into descriptive narratives, tables, and matrices to facilitate the identification of patterns and relationships between leadership styles and the effectiveness of the Merdeka Curriculum implementation; (3) Conclusion Drawing and Verification: The researcher drew tentative conclusions from the displayed data and subsequently performed verification by cross-referencing these conclusions with the original collected data to ensure the validity and reliability of the findings. To ensure the trustworthiness (validity and authenticity) of the data, the study employed data triangulation. The researcher performed triangulation by comparing and contrasting the results obtained from interviews, observation, and documentation. This technique helped to strengthen the interpretation and objectivity of the research findings.

3. Results

The findings of this study were obtained through the triangulation of data (interviews, observation, and documentation) involving three key actors: the school principal, the vice principal for curriculum affairs, and selected teachers. The results illustrate the leadership practices in managing the Merdeka Curriculum through two primary dimensions: (1) Digital Leadership, focusing on innovation, efficiency, and the use of technology for administration and communication, and (2) Non-Digital Leadership, emphasizing discipline, direct supervision, and the adherence to pesantren (Islamic boarding school) character values. The following analysis is framed by three theoretical constructs to contextualize the findings: (1) Instructional & Distributed Leadership (Hallinger, Spillane): Used to map the division of roles between the principal, vice principal, and teachers; (2) Digital Leadership Framework (Hildreth): Used to assess the leaders' capability in utilizing technology to facilitate school management and pedagogical practices; (3) SAMR/TPACK Model (Puentedura): Used to measure the depth of technology integration in learning and administration (Substitution, Augmentation, Modification, Redefinition).

3.1. Leadership Style in Merdeka Curriculum Implementation

3.1.1. Digital Leadership Practices

Based on interviews and observation, the application of digital leadership at SMAIQU Al-Bahjah is currently limited and restrained. The school principal and the vice principal for curriculum explained the institutional context:

---

[13] Matthew B. Milles and A. Michael Huberman, *Qualitative Data Analysis: An Expanded Sourcebook* (Sage, 1994).

"In this pesantren, there is a policy restricting the use of technology in the classroom, aiming to ensure students remain focused and maintain Islamic ethics (adab) according to our institutional culture. However, this also poses a distinct challenge in maintaining student discipline when using the internet. Furthermore, our school's digital infrastructure is not yet fully optimal."

The Vice Principal for Curriculum Affairs further elaborated:

"Teacher adaptation toward innovative learning is still ongoing. The utilization of digital technology so far is mostly restricted to specific activities, such as evaluation meetings via Zoom or Google Meet, and teacher training through the Platform Merdeka Mengajar (PMM). For crucial decision-making, we still predominantly rely on face-to-face meetings. Although we have conducted training related to digital technology, it remains largely at the foundational level of using online learning platforms."[14]

In the context of the SAMR Model, these digital practices primarily operate at the Substitution and Augmentation levels, meaning technology substitutes manual functions but stops short of deep pedagogical transformation. Within the framework of Instructional Leadership, the principal's role is not yet that of a digital instructional coach, but rather an administrative manager overseeing the use of technology.

3.1.2. Non-Digital Leadership Dominance

Interview results strongly indicate that non-digital leadership remains highly dominant in the execution of the Merdeka Curriculum at SMAIQU Al-Bahjah. The principal highlighted the rationale for this approach:

"Here, non-digital leadership is still more dominant in implementing the Merdeka Curriculum. We believe this conventional approach is better suited to the pesantren-based school character, as it helps maintain discipline, emotional proximity, and direct control over the students. Our non-digital leadership takes forms such as face-to-face meetings, largely manual administration, direct information dissemination, the use of announcement boards, and paper-based group discussions and projects. While technology is used in some learning aspects, we find that the non-digital leadership style is more effective for building relationships among school members and preventing the misuse of technology."."[15]

This conventional approach is deemed aligned with the characteristics of a pesantren-based school because it safeguards discipline, reinforces emotional connection, and provides immediate supervision over students. Despite the increasing use of technology in certain facets, the non-digital leadership style is still considered more effective in fostering closer relationships within the school community and mitigating the potential for technological misuse by students.

3.2. Comparison of Digital and Non-Digital Leadership

The interview data reveal that both leadership approaches (digital and non-digital) operate concurrently within the school. The institution utilizes digital media sparingly to support efficiency, while the non-digital approach remains the principal pattern for overall school management. This coexistence forms a hybrid model. The comparative dynamics between digital and non-digital leadership styles, particularly concerning their implications for the Merdeka Curriculum, are summarized in the following table:

---

[14] Wakil Kepala Bagian kurikulum, "Hasil Wawancara Implementasi manajemen kurikulum meredeka," Mei 2025.

[15] Kepala sekolah, "Hasil Wawancara Kepemimpinan Kepala Sekolah," Mei 2025.

Tabel 1. Comparative Analysis of Digital and Non-Digital Leadership

Aspect	Operational Definition	Digital Leadership Implication	Non-Digital Leadership Implication
Information Access	Method for leaders and teachers to acquire and disseminate curriculum information.	Accelerates information reach and accessibility for stakeholders.	Ensures Ceremonial Clarity and high participation through direct announcement boards and meetings.
Communication & Decision-Making	Mechanism for coordination and critical decision processes.	Offers Efficiency for routine coordination (e.g., Zoom meetings) and documentation.	Reinforces Adherence and Adab (Ethics) through face-to-face deliberation, ensuring behavioral compliance.
Supervision & Control	Method for monitoring teaching practices and student behavior.	Requires clear SOPs (e.g., MDM/Content Filters) for remote monitoring and data collection.	Enables Live Control and Direct Intervention, crucial for managing student behavior in a *pesantren* setting.
Administration & Assessment	Management of educational documents and learning evidence.	Reduces administrative workload, but necessitates strict Digital Records Policy and system interoperability.	Maintains a direct, tangible audit trail; still dominant for key legal and *pesantren* disciplinary records.
Character Development (P5)	Strategy for strengthening *Adab* (Ethics) and the P5 (Project for Strengthening the Profile of Pancasila Students).	Supports the documentation and reflection phases of P5 projects; aids in tracking digital literacy skills.	Excels in Embodied Practice (modelling behavior) and intensive face-to-face mentorship, central to *pesantren* values

The data confirms that the institution has adopted a Hybrid Leadership Model. Digital leadership serves primarily as a tool for managerial efficiency (e.g., internal communication, basic administration, and mandatory PMM reporting), corresponding to the Substitution and Augmentation levels of the SAMR model. In contrast, non-digital leadership remains the foundation of Instructional and Moral Leadership, directly supporting the school's core mission of character building and strict discipline aligned with its pesantren identity. This juxtaposition illustrates a critical strategic choice: the school integrates digital tools where they offer administrative benefits, but deliberately limits their penetration into core pedagogical and character-building activities to preserve the traditional values deemed most effective for their specific context.

4. Discussion

The findings of this research demonstrate that the principal leadership at SMA Islam Al-Bahjah is inherently adaptive and contextual. The principal acts as a facilitator of change by combining digital and non-digital approaches proportionally. Non-digital leadership remains dominant, particularly in the form of face-to-face communication, manual meetings, and physical document-based administration. This dominance is considered necessary to align with the *pesantren* culture, ensuring discipline, emotional proximity, and direct behavioral control.

Meanwhile, the adoption of digital leadership is evident in the utilization of the Platform Merdeka Mengajar (PMM), WhatsApp, Zoom, and Google Meet, which are employed primarily for administrative efficiency, teacher training, and limited coordination. This finding aligns with the study by Kurniawan and Puspitasari, which suggests that *pesantren*-based schools prioritize direct communication patterns to

maintain character values, even as technology is gradually introduced.[16] However, this study differentiates itself from research by Maftuhah et al., which found teacher resistance to be the main obstacle to digitalization in general schools.[17] Our findings suggest that cultural factors within the pesantren, such as collectivity and discipline, are key in controlling technology use, ensuring that adoption is not rejected outright but is instead guided by selective and restricted policies.

The discovery of the hybrid leadership model at SMAIQU Al-Bahjah supports the argument made by Asmoro and Hariyadi regarding the importance of adaptive leadership in Merdeka Curriculum implementation.[18] The principal demonstrates a crucial role as a change facilitator by combining digital and non-digital practices according to the school's context. This reinforces the idea that the implementation of the Merdeka Curriculum is not uniform but must be adjusted based on the specific social, cultural, and infrastructural conditions of each institution.[19] This hybrid model represents a distinctive *pesantren* adaptation to the demands of the Merdeka Curriculum. The approach allows the school to preserve core *pesantren* educational values—such as discipline, direct control, and character development—while simultaneously leveraging digital technology for administrative efficiency and teacher professional development. Thus, this research asserts that the implementation of the Merdeka Curriculum need not be entirely digital; rather, it can be effective by strategically combining contextual non-digital approaches with selective technological utilization. This finding serves as an alternative model for other *pesantren*-based schools facing the dilemma between tradition and modernization.

This study underscores the importance of implementing hybrid leadership in *pesantren* settings. Principals should utilize digital technology for administrative efficiency (e.g., rapid coordination, teacher training) while steadfastly maintaining non-digital practices for character building and emotional connection. Continuous mentoring for teachers in using digital platforms must also be enhanced to facilitate gradual adaptation. Theoretical Contribution: This finding expands upon the theories of situational and transformational leadership within a digital-religious context. Principals are not only required to be adaptive to technological advancements but also must balance them with profound cultural and religious values. This highlights that leadership theory cannot be detached from the socio-cultural context in which it is applied. For Policy Makers: The results emphasize the need for specific guidelines concerning the implementation of the Merdeka Curriculum in pesantren-based schools. Uniform, digitally-centric policies may be unsuitable for institutions that prioritize traditional discipline. Therefore, policies must be more flexible and contextual, incorporating adequate digital infrastructure support alongside teacher training programs tailored to local conditions.

---

[16] M. Agus Kurniawan and Ema Puspitasari, "Metamorfosis Santri Digital: Tranformasi Pembelajaran Kitab Kuning Melalui Podcast Interaktif Pesantren Modern," *Indonesian Society and Religion Research* 2, no. 2 (2025), https://doi.org/10.61798/isah.v2i2.249.

[17] Maftuhah et al., "Transformasi Kelembagaan Pesantren Tremas Aabtasi Dan Inovasi Di Era Digital," *Jurnal Pendidikan Islam* 11, no. 1 (2025): 1–21, https://doi.org/10.37286/ojs.v11i1.269.

[18] Sudrajat Dangu Asmoro and Ahmad Hariyadi, "Perspektif Dan Pengalaman Kepala Sekolah Penggerak Di Kabupaten Grobogan Dalam Memimpin Transformasi Kurikulum Merdeka," *Scientia* 3, no. 2 (2024), https://doi.org/10.51773/sssh.v3i2.333.

[19] Inda Fani Azzahra et al., "Kurikulum Merdeka: Telaah Potensi Dan Tantangan Implementatif Dalam Mewujudkan Pendidikan Fleksibel Di Indonesia," *Jurnal Pendidikan Indonesia : Teori, Penelitian, Dan Inovasi* 5, no. 3 (2025), https://doi.org/10.59818/jpi.v5i3.1530.

5. Conclusion

This study aimed to identify the characteristics of digital and non-digital leadership in the implementation of the Merdeka Curriculum at SMA Islam Al-Bahjah Cirebon. Non-digital leadership remains dominant due to its relevance to *pesantren* character, while digital leadership is selectively applied for administrative efficiency. The combination forms a contextual and flexible hybrid leadership model. The major finding is that the digital style excels in efficiency, while the non-digital style is effective in fostering discipline and emotional engagement, highlighting the gap between *pesantren* culture and digitalization demands. The results imply that principals in *pesantren* need to develop adaptive leadership that integrates technology without compromising fundamental Islamic educational values. The study is limited as a single case study and did not include student/parent participation. Future research should include a comparative study across different Islamic schools, quantitative research to measure hybrid model effectiveness, and a longitudinal study to track the continuity of digital leadership application in this context.

6. References

Administrator. "Indonesia.go.id - Digitalisasi Pendidikan Percepat Capaian Merdeka Belajar." June 14, 2024. https://indonesia.go.id/kategori/editorial/8293/digitalisasi-pendidikan-percepat-capaian-merdeka-belajar?lang=1.

Arnov, Yoharmen, Ernawati Ernawati, and Jonni Mardizal. "Strategi kepemimpinan kepala sekolah untuk mewujudkan merdeka belajar dalam konteks digitalisasi pendidikan kejururuan." *JPGI (Jurnal Penelitian Guru Indonesia)* 9, no. 2 (2024): 1–5. https://doi.org/10.29210/024897jpgi0005.

Asmoro, Sudrajat Dangu, and Ahmad Hariyadi. "Perspektif Dan Pengalaman Kepala Sekolah Penggerak Di Kabupaten Grobogan Dalam Memimpin Transformasi Kurikulum Merdeka." *Scientia* 3, no. 2 (2024). https://doi.org/10.51773/sssh.v3i2.333.

Azzahra, Inda Fani, Muhammad Rizky Al Farel, and Rani Rahmadhani. "Kurikulum Merdeka: Telaah Potensi Dan Tantangan Implementatif Dalam Mewujudkan Pendidikan Fleksibel Di Indonesia." *Jurnal Pendidikan Indonesia : Teori, Penelitian, Dan Inovasi* 5, no. 3 (2025). https://doi.org/10.59818/jpi.v5i3.1530.

Dewi, Anita Candra, Abdurrahman Arfah Maulana, Adelia Nururrahmah, Ahmad Ahmad, A. Muh Farid Naufal, and Muhammad Fadhil S. "Peran Kemajuan Teknologi Dalam Dunia Pendidikan." *Journal on Education* 6, no. 1 (2023): 1. https://doi.org/10.31004/joe.v6i1.4588.

Hidayat, Rais, and Yuyun Elizabeth Patras. "Digital Leadership of School Principals in Indonesia: Strategic Interventions Needed." *Pedagogia: Jurnal Ilmiah Pendidikan* 16, no. 1 (2024): 32–42. https://doi.org/10.55215/pedagogia.v16i1.10209.

J. W., Creswell, and Poth C. N. *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. Sage, 2018.

Kurniawan, M. Agus, and Ema Puspitasari. "Metamorfosis Santri Digital: Tranformasi Pembelajaran Kitab Kuning Melalui Podcast Interaktif Pesantren Modern." *Indonesian Society and Religion Research* 2, no. 2 (2025). https://doi.org/10.61798/isah.v2i2.249.

Maftuhah, Khoeron, Tobroni, and Faridi. "Transformasi Kelembagaan Pesantren Tremas Aabtasi Dan Inovasi Di Era Digital." *Jurnal Pendidikan Islam* 11, no. 1 (2025): 1–21. https://doi.org/10.37286/ojs.v11i1.269.

Marpaung, Amelia Stephani, Ester Ella Paulina, Agus Lestari, and Bradley Setiyadi. "Inovasi Manajemen Kurikulum Merdeka: Membangun Landasan yang Kokoh untuk Pendidikan Abad ke-21." *Jurnal BELAINDIKA (Pembelajaran dan Inovasi Pendidikan)* 6, no. 2 (2024): 2. https://doi.org/10.52005/belaindika.v6i2.164.

Milles, Matthew B., and A. Michael Huberman. *Qualitative Data Analysis: An Expanded Sourcebook*. Sage, 1994.

Mutmainah, Siti, Khurin'In Ratnasari, and Dukan Jauhari F Ratnasari. "Building Digital Skills and Introducing AI for Santri Through a Training Program at the As-Sunniyah Islamic Boarding School in Kencong Jember." *International Journal of Community Service Learning* 8, no. 1 (2024): 115–21. https://doi.org/10.23887/ijcsl.v8i1.76313.

Purwanti, Heni Agus, and Nina Oktarina. *The Influence of PMM Literacy and Teacher Learning Leadership on Teacher Performance: The Mediating Role of Professional Learning Community Effectiveness*. 42, no. 1 (2025).

Pustikayasa, I. Made, Imam Permana, Fitriani Kadir, et al. *Tranformasi Pendidikan : Panduan Praktis Teknologi di Ruang Belajar*. PT. Sonpedia Publishing Indonesia, 2023.

Rahim, Abd, and Bambang Ismaya. "Pendidikan Karakter Dalam Kurikulum Merdeka Belajar: Tantangan Dan Peluang." *JSE Journal Sains and Education* 1, no. 3 (2023): 3. https://journal.sabajayapublisher.com/index.php/jse/article/view/234.

Saely, Elfina, and Sukiman. "Analisis Kritis Perbedaan Kurikulum 2013 Dan Kurikulum Merdeka." *Edudikara: Jurnal Pendidikan Dan Pembelajaran* 8, no. 1 (2023): 1. https://doi.org/10.32585/edudikara.v8i1.316.

Zahroh, Ulfa Malikatuz, Dwi Dimiati Hartini, Mirza Gunawan Wibisono, and Hilal Al. *Inovasi Organisasi di Era Digital: Peran Transformasi Teknologi, Kepemimpinan Adaptif, dan Budaya Berbasis Nilai Islam*. n.d.