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## The Strategic Role of Leadership: Realizing a Value-Based Digital Transformation in Islamic Boarding Schools

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### Abstract

This study examines the strategic role of leadership in implementing digital transformation at Pondok Pesantren Ash-Shiddiqi within the context of globalization. It emphasizes the integration of Islamic values, adaptive and exemplary leadership, human resource capacity development, external collaboration, and strategic communication. Using a qualitative case study approach, the research draws on in-depth interviews, participatory observation, and document analysis to capture a comprehensive picture of leadership practices and digitalization processes in the pesantren. The findings indicate that values-based leadership plays a crucial role in ensuring sustainable digital transformation while preserving the pesantren's institutional identity. Adaptive and exemplary leadership enhances the collective capacity of teachers and staff through collaborative learning and continuous professional development. Furthermore, collaboration with alumni, government institutions, and other stakeholders strengthens resource support and fosters institutional innovation. Transparent communication grounded in Qur'anic principles is also shown to be effective in reducing resistance to change. The study contributes to Islamic educational leadership theory by demonstrating that value-based, adaptive, and exemplary leadership can function as a contextual model for managing digital transformation in pesantren. Practically, it proposes a replicable framework that integrates value-oriented leadership, participatory human resource development, strategic communication, and phased digital transformation aligned with the pesantren's vision and mission, ensuring harmony between technological innovation and spiritual values.

### Keywords

Strategic leadership; Digital transformation; Islamic boarding school.

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## Introduction

The management of education has always undergone changes from time to time (Basri & Arifin, 2021). Education in Islamic boarding schools (pondok pesantren) has gradually experienced shifts and various changes as a result of multiple demands, both internal and global external ones (Jannah, 2021). In Indonesia, pesantren, as the oldest Islamic educational institution, is currently facing the digital era (Supriani et al., 2023; Hastasari et al., 2022; Van Es, 2019). However, the world of pesantren has not yet fully realized the various educational challenges it is facing. According to (Zuhri & Huda, 2024), the inability of pesantren to face the digital era of the 21st century while maintaining their traditional systems raises significant questions.

The sustainability of Islamic boarding schools today cannot be separated from their willingness and ability to adapt to external influences to maintain their relevance and identity with the developments of the times (Nasir et al., 2024). Pesantren continue to make improvements in all aspects in order to remain relevant. Nevertheless, the dynamics within pesantren environments are still often marked by negative perceptions as well as debates and differing opinions regarding their existence (Maghfuri, 2020). As part of the educational system, Islamic boarding schools (pondok pesantren) also play an important role and need to take part in the process of digital transformation (Darmawan et al., 2025). However, in reality, many Islamic boarding schools (pondok pesantren) still rely on conventional approaches (Sadali, 2020). This condition has encouraged educational institutions, including pesantren, to undergo a transformation toward digitalization. However, this does not mean completely abandoning conventional methods, rather, it is an effort to develop and adapt in order to keep pace with the speed of globalization and the process of modernization.

Digital transformation is an important factor in the advancement of an educational institution (Jin et al., 2024). According to Rahmawati et al. (2023), digital transformation is not only a change that occurs within an institution's structure but also a transformation of its working system through the empowerment of advanced technology. Digital technologies such as computers, the internet, mobile devices, and applications have transformed various aspects of life (Muzakky et al., 2023). Therefore, a pesantren needs to adapt by utilizing digitalization as a means to support its various activities. Digital transformation in pesantren not only involves the adoption of information and communication technology to improve management, enhance the quality of teaching, and optimize the benefits of information technology. Pesantren can wisely use technology to enhance both education and overall institutional management.

The *Kyai* remains a central figure and the key decision maker in pesantren education policies (Rofiq & Sutopo, 2022). The *Kyai*, in his role as the leader of the pesantren, possesses a distinctive style of leadership. As the head of the pesantren, the *Kyai* is responsible for developing the Islamic education curriculum, establishing norms and regulations, designing evaluation methods, and supervising the teaching of religious sciences within the pesantren (Falakhina & Hernawati, 2025). Thus, as the leader of the pesantren, the *Kyai* must take strategic steps in transforming the digital development of the pesantren he leads. In addition, the *Kyai* also serves as a driving force in facing the challenges of modernization and digitalization within the pesantren environment. The *Kyai*'s leadership becomes a key factor in guiding the pesantren to maintain its Islamic values while transforming toward a more modern and efficient system. Through his strategic role, the *Kyai* is able to foster a religious digital culture without losing the

distinctive character of the pesantren as an educational institution rooted in Islamic tradition. (Haris, 2023; Saputra & Sirozi, 2025).

Digital transformation at Pondok Pesantren Ash-Shiddiqi began in 2018 as an effort to shift from a manual system to modern, technology based management. Previously, activities such as student registration, data recording, and financial management were carried out traditionally, making them less efficient. Today, the pesantren has adopted an online system for registration, digital data storage, and information dissemination through online platforms. During the pandemic, the learning process also transitioned to e-learning using Zoom and Google Meet. This change has been supported by visionary and adaptive leadership, making digitalization not only a technical innovation but also a strategic effort to strengthen the competitiveness and sustainability of the pesantren in the modern era.

Previous research, as stated by Taufikin et al. (2017), focused on the technical aspects of digital learning and has not yet highlighted leadership strategies in formulating a comprehensive digital vision for pesantren. Meanwhile, Khoir & Hidayat (2025) linked leadership and digitalization aspects, but their focus remained limited to the internal context of schools without exploring long term strategies and the global dimensions of digital transformation. In addition, the study by Wahidmurni et al. (2024), discussed teachers' challenges and resistance to curriculum changes as part of the educational transformation process.

Unlike previous studies, this research examines the strategic role of leadership in realizing digital transformation at Pondok Pesantren Ash-Shiddiqi, emphasizing technology integration, human resource development, external collaboration, communication, role modeling, and Islamic values. The purpose of this study is to understand the strategic role of leadership in implementing value-based digital transformation at Pondok Pesantren Ash-Shiddiqi.

## Method

This research employs an interpretive paradigm with a phenomenological approach, aiming to understand the meaning of the subjective experiences of individuals within the environment of Pondok Pesantren Ash-Shiddiqi during the digital transformation process. This paradigm is based on the view that social reality is shaped by interactions, experiences, and individuals' interpretations of the changes that occur.

The research was conducted at Pondok Pesantren Ash-Shiddiqi, located in Batang Hari Regency, Jambi Province. This pesantren was selected purposively because it has undergone a digital transformation process since 2018, implementing online based administrative systems, e-learning, and digital data management. The context of this study highlights the dynamics of change within the pesantren, which strives to balance technological modernization with the preservation of religious values. The research participants consisted of the pesantren leader (*Kyai*), deputy leader, teachers, and administrative staff. Data collection techniques included in-depth interviews, participant observation, and documentation (Creswell, 2015). The interviews were conducted in a semi-structured manner using open ended guidelines to gain a contextual understanding of the leadership's strategic role in digital transformation. Participant observation was carried out to directly observe digitalization activities within the pesantren, such as data management, the use of online platforms, and technology based communication patterns. Meanwhile, documentation included the examination of archives, activity reports,

internal policies, as well as the pesantren's digital content on social media and its official website.

The collected data were analyzed using thematic analysis through three main stages: data reduction, data presentation, and conclusion drawing (Cohen et al., 2017). To ensure the validity and credibility of the data, the research applied source and method triangulation, member checking with key informants, and peer debriefing with fellow researchers. These steps were carried out to maintain objectivity and ensure that the interpretations produced genuinely reflect the empirical reality observed in the field.

## Findings

Based on the research conducted at Pondok Pesantren Ash-Shiddiiqi, digital transformation has been implemented gradually and systematically to support activities in *dakwah* (religious outreach), learning, and management. The study found that the pesantren has successfully integrated modern technology without neglecting Islamic values. The process of digital transformation at Pondok Pesantren Ash-Shiddiiqi is presented in the table below.

**Tabel 1. The Digital Transformation Process at Pondok Pesantren Ash-Shiddiiqi**

No	Research Question	Key Findings
1	Main vision of digital transformation	Adaptive to modern developments, supporting da'wah, learning, and management; most programs have been implemented.
2	Start & main stages	Started in 2019: digital administration → e-learning (iPad 2022) → digital communication & social media → system integration.
3	Priority areas	Administration (data/finance), learning (e-learning), da'wah (social media/YouTube).
4	Policy implementation	Digital Team guides device usage, data security, and ethics; policies ratified by leadership.
5	Budget & resources	Gradual allocation from internal funds, donors, alumni; focus on devices, internet, and HR training.
6	Platform selection	Based on needs, simplicity, security; piloted before use.
7	Managerial challenges	Changing HR mindset, internet limitations; continuous mentoring & socialization.
8	Success indicators	Administrative efficiency, improved learning quality, active technology use, faster data processing, broader reach.
9	Future development plans	Integrated Pesantren Information System, expanded internet coverage, senior students trained as digital ambassadors.

Digital transformation at Pondok Pesantren Ash-Shiddiqi has taken place gradually and systematically, starting from administrative digitalization, e-learning using iPads, and communication through digital media, to system integration. This process has been supported by clear policies, planned budget allocation, and appropriate platform selection, while also addressing challenges such as changes in human resource mindsets and limited internet access through continuous mentoring. The success of this transformation can be seen in administrative efficiency, improved learning quality, active use of technology, and the broader outreach of the pesantren.

The *Kyai*, as the leader of the Islamic boarding school, plays a strategic and decisive role in directing the process of digital transformation at Pondok Pesantren Ash-Shiddiqi in Batang Hari Regency, Jambi Province. The digital transformation at Ash-Shiddiqi does not only involve technological changes but also reflects a shift in organizational culture and the pesantren's governance system. As stated by the pesantren's leader, *"We used to record finances and student data manually, but now everything is application based. All of this was done so that the pesantren would not be left behind by the times."*

The leader of Pondok Pesantren Ash-Shiddiqi possesses a clear and long-term institutional vision in facing the digital era. In an interview, the *Kyai* stated, *"Digitalization is not meant to change the soul of the pesantren, but to strengthen da'wah and work efficiency."* This statement reflects the leadership's policy direction, which positions technology as a supporting tool for enhancing da'wah activities and improving the quality of educational management.

The Pesantren's leadership demonstrates a well-developed and long-term institutional vision in responding to digital transformation. Digitalization is not viewed as a change in the Pesantren's identity or spiritual values but as a strategy to strengthen da'wah, improve efficiency, and enhance educational management. This approach illustrates visionary leadership that is adaptive to technological developments while remaining consistent in preserving the traditional values of the pesantren.

Pondok Pesantren Ash-Shiddiqi has implemented concrete steps to realize its long-term digitalization vision. The *Kyai* emphasized that digitalization is not intended to change the school's spiritual values, but rather as a tool to strengthen preaching and improve work efficiency. Field observations support this assertion, as evidenced by the use of digital systems in various aspects of the school's management. All administrative processes, from student registration and academic data management to activity documentation, are conducted online through an internal system managed by the school's team. In addition, da'wah and educational activities have also begun to utilize digital platforms, such as sharing religious study materials through social media or online learning videos, allowing the pesantren to reach more students and the wider community without being limited by space and time. The use of this technology also enhances the efficiency and transparency of pesantren management. Student data and activities can be monitored in real time, facilitating strategic decision making and minimizing the risk of administrative errors. Thus, observations indicate that digitalization in the pesantren is not merely technical in nature but also serves as a managerial strategy aligned with the leader's vision to strengthen the pesantren's role in education and da'wah in the digital era.

The leader of Pondok Pesantren Ash-Shiddiqi applies an adaptive and exemplary leadership style. As revealed in an interview with one of the teachers, it was stated, *“He (the Kyai) always leads by example. When there is training on using digital platforms, he learns together with us.”* This demonstrates that the leader does not merely give instructions but also actively participates in the digitalization process. Observations also note that the Kiai is present at various training activities and frequently engages in discussions with young teachers about developing digital learning content.

In relation to human resource development and external networking, documentation data shows that the pesantren has collaborated with the Department of Communication and Information Technology (Dinas Kominfo) and several alumni working in the field of information technology. One administrative staff member mentioned, *“The Kyai asked us to attend digital training sessions conducted by IT alumni. Now we can manage databases and finances more efficiently.”* This demonstrates a systematic effort to strengthen internal digital competence. In addition, external collaboration has been utilized to expand financial support and improve the pesantren’s digital infrastructure. Furthermore, the communication and exemplary leadership of the Kiai have been highlighted as key factors in the success of this transformation. Based on field observations conducted by the researcher, the Kyai routinely delivers messages about digitalization during weekly meetings and teachers’ religious study sessions. In one of his statements, he emphasized, *“We must not reject progress, but progress must always remain within the framework of Islamic values.”* This exemplary leadership has led to increased awareness and participation among all elements of the pesantren in the digital transformation process. Periodic evaluations conducted by the digitalization team also indicate improved efficiency and accuracy in administrative management.

Thus, field data indicate that the digital transformation at Pondok Pesantren Ash-Shiddiqi has progressed through a gradual and participatory process, driven by visionary and value-oriented leadership. The results of observations and interviews illustrate tangible changes in management systems, the enhancement of human resource capacity, and the application of technology across various aspects of pesantren activities. These findings provide a factual depiction of strategic leadership practices within the context of the pesantren’s digital transformation, as reflected through the Kyai’s actions, policies, and exemplary conduct in the daily life of the institution.

## Discussion

The leadership of the *Kyai* at Pondok Pesantren Ash-Shiddiqi plays a strategic role as a driving agent of digital transformation an integration of institutional vision, technological adaptation, human resource development, external networking, communication, and exemplary conduct. The findings of Kareem et al., (2023) support and expand the literature on transformational leadership in the educational context, emphasizing that visionary and inspirational leaders can foster innovation and organizational commitment. Within this comprehensive leadership framework, the strategic role of the *Kyai* can be analyzed through four interrelated key dimensions, as follows.

### Value Based Leadership

The *Kyai*, as the leader, formulates digitalization policies that preserve Islamic identity, reflecting the concept of *values-based leadership* within the context of religious institutions. This leadership approach, which places institutional and religious values at the core of decision-making, enables digital transformation to progress while maintaining

the “spirit” of the pesantren in line with its mission. This aligns with the findings of [Foppen & van Saane \(2024\)](#), who emphasize the importance of values based leadership in faith based organizations, showing that the effectiveness of religious leadership is often measured by the alignment between managerial actions and the organization’s spiritual or missional goals. The pesantren leader actively drives technical changes in education while simultaneously preserving and nurturing the existing values of the pesantren ([Saleh, 2025](#)).

Educational leaders not only drive technical changes but also uphold the values of *kepesantrenan* (Islamic boarding school traditions), which is supported by empirical evidence. According to [Nurkhin et al. \(2024\)](#), pesantren must be able to balance technical innovation with the preservation of religious and cultural values inherent in the pesantren tradition. [Pennell \(2023\)](#) emphasizes that change efforts will be more sustainable when leaders in this case, the *Kyai* integrate organizational values and culture into the transformation process, ensuring that change does not become merely a formality or lead to the loss of the pesantren’s identity.

Within the framework of transformational leadership, the transformation of institutional values in pesantren such as fostering a culture of innovation, building trust, and promoting a forward looking orientation often emerges as a central theme. According to [Toprak et al. \(2023\)](#), transformational leadership in the field of education is closely related to the development of an innovative culture and a future oriented vision that helps institutions navigate structural and technological changes. Similar findings have been reported in empirical studies highlighting the role of transformational leadership in promoting educational innovation and enhancing educators’ commitment. [Faisal et al. \(2022\)](#), further note that transformational pesantren leaders are capable of cultivating a culture of innovation, strengthening trust, and guiding their institutions toward a better future. Such leaders not only drive technical change but also preserve and further develop the existing institutional values of the pesantren.

### **Adaptive Leadership and Exemplary Leadership**

The adaptive character of leadership, in which the *Kiai* is directly involved in digital training and encourages teachers to learn together, represents the practice of *adaptive leadership*. This approach requires leaders not only to manage but also to be responsive to environmental challenges while facilitating collective learning. The findings of [Safitri et al. \(2025\)](#) reinforces the concept that adaptive leadership has become highly relevant in the digital era. This is further supported by the findings of research conducted by [Khozaini et al. \(2024\)](#), that educational institutions (pesantren) need to implement adaptive awareness and rapid response strategies to support digital transformation among staff and administrators. Initiatives to enhance digital literacy within educational settings (pesantren) require leaders who are capable of facilitating *collective learning*, rather than merely imposing top-down training ([Ibadullaeva, 2025](#)).

The practice of exemplary leadership becomes especially important in the context of digitalization. When a leader in this case, the *Kyai* or institutional head personally uses digital systems, actively participates in training, demonstrates diligence in learning, and is willing to seek help or discuss matters with teachers, it creates moral and spiritual legitimacy. These concrete actions help reduce the symbolic distance between the leader and staff, while enhancing trust and organizational commitment (buy-in) from members. In transformational leadership literature, the dimension of “*idealized influence/modeling*

*the way*” is considered critical, as leaders must serve as role models to ensure that change is not perceived as mere empty rhetoric (Heenan et al., 2023).

In addition, the concept of a learning organization and institutional innovation can also be strengthened through adaptive leadership. According to Chughtai et al. (2023), adaptive leadership functions as a moderator in the relationship between the structure of a learning organization, self-change efficacy, and institutional innovation. In other words, the role of an adaptive leader in facilitating organizational learning is crucial for fostering innovation.

Thus, for Pondok Pesantren Ash-Shiddiqi, which is undergoing digital transformation, the combination of adaptive leadership and exemplary leadership becomes highly relevant. A leader (the Kyai) who actively participates in digital training while maintaining Islamic values demonstrates that technical transformation and value-based transformation do not have to conflict, but can progress simultaneously. This practice not only strengthens the moral legitimacy of the leader but also builds collective capacity among teachers and staff to face digital challenges together.

### **Human Resource Development, External Networking and Institutional Innovation**

The Findings related to the empowerment of teachers and staff through digital training and external collaboration (with alumni and the Department of Communication and Information Technology) indicate that the digital transformation of Pondok Pesantren Ash-Shiddiqi cannot proceed in isolation without the support of an external educational ecosystem. In the educational management literature, transformational leadership is associated with a leader’s ability to facilitate *knowledge sharing* and organizational innovation through networks (Al-Husseini et al., 2021).

In the context of pesantren, external collaboration whether with alumni, local and central government, the Department of Communication and Information Technology, or related institutions strengthens infrastructure, as well as the moral, financial, and social capital support that is critically needed. According to Yuwanda et al. (2023), digital transformation in pesantren heavily depends on the learning of teachers and staff, their creativity and collaboration both internally and externally, as well as the support of leaders (the Kyai) who are capable of building external relationships to access necessary resources.

External collaboration at Pondok Pesantren Ash-Shiddiqi is utilized to strengthen infrastructure as well as moral and financial support, reinforcing the argument that a pesantren’s capacity for innovation often depends on its connections with external parties. This is particularly relevant in Islamic educational institutions like pesantren, which frequently face limitations in internal resources, including budget, human resources, and technology. According to Happyana et al. (2025), a pesantren can be considered successful when it employs collaborative strategies with external parties as part of its transformation management. Adaptive leadership and international or inter-institutional collaboration become inseparable components for Islamic educational institutions that aim to remain relevant and competitive in the era of technology and globalization (Rhendica, 2024).

### **Communication and Harmonization of Values and Technology**

The Kyai actively promotes digital transformation through weekly meetings and teachers’ study sessions, while emphasizing that progress must remain within the framework of Islamic values. This demonstrates that strategic communication and moral leadership are

central elements in the digital transformation process at Pondok Pesantren Ash-Shiddiqi. The digital transformation at the pesantren is not only focused on technological mastery but also on preserving spiritual values and Islamic ethics, ensuring that change does not lose its moral direction. According to [Rahman \(2023\)](#), leadership communication in the digital era must be able to bridge value-laden messages with the use of technology so that these messages can be delivered to the wider community effectively and meaningfully. In this context, the leader acts as a connector between religious vision and digital realities, utilizing Qur'anic principles of communication such as *qaulan sadīdan* (truthful speech), *qaulan ma'rūfan* (good speech), and *qaulan layyinan* (gentle speech).

In addition, communication strategies that are transparent, persuasive, and educational have proven effective in mitigating resistance to innovation. Research published on *ResearchGate* and *MDPI* shows that open and participatory communication by transformational leaders has a significant impact on change acceptance and the strengthening of organizational culture in the education sector ([Heenan et al., 2023](#)).

Conceptually, the integration of value-based communication, moral exemplarity, and technological adaptation forms a pattern of harmonizing values and innovation, in which Pondok Pesantren Ash-Shiddiqi not only adapts to the flow of digitalization but also imparts a spiritual meaning to these changes. This aligns with the view of [Muchlis et al. \(2025\)](#) digital communication in the Islamic context must remain grounded in Qur'anic ethics so that technology serves as a means for da'wah and learning, rather than merely as a tool for efficiency.

## Conclusion

This study emphasizes that the strategic role of leadership (the Kyai) is key to the success of digital transformation at Pondok Pesantren Ash-Shiddiqi. Value-based leadership preserves the pesantren's Islamic identity and values, while adaptive and exemplary leadership enhances the collective capacity of teachers and staff through collaborative learning. External collaboration with alumni, government, and relevant institutions strengthens access to resources, innovation, and moral legitimacy, whereas strategic communication based on Qur'anic principles mitigates resistance to change. The integration of religious values, moral exemplarity, and technological adaptation creates a harmonization between digital innovation and spiritual orientation, ensuring sustainable transformation. Theoretically, this study expands the literature on transformational and adaptive leadership in Islamic education, and practically provides guidance for other pesantren in managing digitalization in alignment with institutional missions. Future research can explore the impact of digital leadership on learning outcomes and institutional innovation.

## References

- Al-Husseini, S., Beltagi, I. El, & Moizer, J. (2021). Transformational Leadership and Innovation: The Mediating Role of Knowledge Sharing Amongst Higher Education Faculty. *International Journal of Leadership in Education*, 24(5), 670–693. <https://doi.org/10.1080/13603124.2019.1588381>
- Falakhina, A. N., & Hernawati, S. (2025). Peran Kiai dalam Kepemimpinan Pesantren. *Risalah :Jurnal Pendidikan dan Studi Islam*, 11(1), 13–23. [https://doi.org/10.31943/jurnal\\_risalah.v11i1.1621](https://doi.org/10.31943/jurnal_risalah.v11i1.1621).
- Basri, H. & Z. Arifin. (2021). Islamic Education Authonomy: Challenges And

- Expectations. *136 | Potensia: Jurnal Kependidikan Islam*, 7(2), 136–153.
- Chughtai, M. S., Syed, F., Naseer, S., & Chinchilla, N. (2023). Role of Adaptive Leadership in Learning Organizations to Boost Organizational Innovations with Change Self-Efficacy. *Current Psychology (New Brunswick, N.J.)*, 1–20. <https://doi.org/10.1007/s12144-023-04669-z>
- Cohen, L., Manion, L., & Marrison, K. (2017). Research Methods in Education. *In Research Methods in Education*.
- Creswell, J. (2015). *Penelitian Kualitatif & Desain Riset* (1st ed.). Pustaka Pelajar.
- Darmawan, Nurdin, M. Z. (2025). Sistem Pendidikan Pesantren di Era 4.0. *HOLD : Jurnal Studi Islam*, 2(1), 12–26.
- Faisal, A., Pabbajah, M., Abdullah, I., Muhammad, N. E., & Rusli, M. (2022). Strengthening Religious Moderatism Through the Traditional Authority Of Kiai in Indonesia. *Cogent Social Sciences*, 8(1). <https://doi.org/10.1080/23311886.2022.2150450>
- Foppen, A., & van Saane, J. W. (2024). Assessing Religious Leadership: A Scoping Review of Leadership Effectiveness Criteria and Current Trends in the Academic Literature. *Pastoral Psychology*, 73(1), 1–21. <https://doi.org/10.1007/s11089-023-01113-8>
- Happyana, L., Istiqomah, F. Z., Khasanah, M., & Hussin, M. (2025). Integration of Tradition and Technology: Digitalization Strategies in Islamic Education at Pesantren in Banyuwangi, Indonesia. *Journal of Islamic Education Research*, 6(1), 1–18. <https://doi.org/10.35719/jier.v6i1.446>
- Haris, M. A. (2023). Urgensi Digitalisasi Pendidikan Pesantren di Era Society 5.0: Peluang dan Tantangannya di Pondok Pesantren Al-Amin Indramayu. *Islamic Management: Jurnal Manajemen Pendidikan Islam*, 6(01), 49–64.
- Hastasari, C., Setiawan, B., & Aw, S. (2022). Students' Communication Patterns of Islamic Boarding Schools: The Case of Students in Muallimin Muhammadiyah Yogyakarta. *Heliyon*, 8(1), e08824. <https://doi.org/https://doi.org/10.1016/j.heliyon.2022.e08824>
- Heenan, I. W., Paor, D. De, & Lafferty, N. (2023). Staff and School Culture in Primary Schools — A Systematic. *Societies*, 13(133), 1–27.
- Ibadullaeva, S. (2025). Beyond Screens: An Adaptive Leadership Approach to Addressing Digital Distortions and Student Well-Being. *Journal of Cases in Educational Leadership*, 28(2), 119–134. <https://doi.org/10.1177/15554589251320850>
- Jannah, Y. (2021). Potret Pendidikan Entrepreneur di Pesantren Portrait Of Entrepreneur Education at Islamic Boarding School. *Potensia: Jurnal Kependidikan Islam*, 7(1), 86–110.
- Jin, Y., Zhu, X., Zhang, X., Wang, H., & Liu, X. (2024). Business Model Innovation of 3D-Printing Garment Enterprises in Digital Transformation: Business Model Innovation Canvas Approach. *European Journal of Innovation Management*, 28(6), 2251–2284. <https://doi.org/10.1108/EJIM-03-2023-0223>
- Kareem, J., Patrick, H. A., Prabakaran, N., B, V., Tania, V., M. P. M., P. K., & Mukherjee, U. (2023). Transformational Educational Leaders Inspire School Educators' Commitment. *Frontiers in Education*, Volume 8-. <https://doi.org/10.3389/educ.2023.1171513>
- Khoir, N., & Hidayat, S. (2025). Development of an E-Book on Madrasah Principal

- Leadership Based on Pesantren Culture To Train Students' Digital Literacy. *At-Ta'dib*, 20(1), 84–91.
- Khozaini, F. Al, & Mundiri, A. (2024). Mewujudkan Transformasi Digital Berbasis Kearifan Lokal; Strategi Cerdas Menuju Sistem Tata Kelola Unggul. *JlIP - Jurnal Ilmiah Ilmu Pendidikan*, 7(1), 383–392. <https://doi.org/10.54371/jiip.v7i1.3636>
- Maghfuri, A. (2020). Synergic Management of Pesantren-Madrasa in The Modern Era as an Alternative of Indonesian Islamic Education. *Potensia: Jurnal Kependidikan Islam*, 6(1), 51–71.
- Muchlis, Kgs M Choirul Rusli, Risan Islamdini, M. (2025). Konsep Etika Komunikasi dalam Al-Qur'an dan Relevansinya Terhadap Praktik Komunikasi Digital Abad Ke-21: Studi Tafsir Tematik. *Journal of Multidisciplinary Islamic Studies*, 2(1), 110–129.
- Muzakky, R. M. R., Mahmuudy, R., & Faristiana, A. R. (2023). Transformasi Pesantren Menghadapi Era Revolusi Digital 4 . 0. *Aladalah: Jurnal Politik, Sosial, Hukum Dan Humaniora Vol.*, 1(3), 241–255.
- Nasir, M., Rizal, S., Basri, & Pabbajah, M. (2024). Revolutionizing Teungku Dayah Learning Model: Exploring the Transformative Impact of Technological Advancements on Islamic Education in Aceh. *Cogent Education*, 11(1). <https://doi.org/10.1080/2331186X.2024.2335720>
- Nurkhin, A., Rohman, A., & Prabowo, T. J. W. (2024). Accountability of Pondok Pesantren; A Systematic Literature Review. *Cogent Business and Management*, 11(1). <https://doi.org/10.1080/23311975.2024.2332503>
- Pennell, L. (2023). *Transformational Leadership in Education: A Comprehensive Approach to Educational Success*. <https://doi.org/10.13140/RG.2.2.28815.56489>
- Rahman, R. (2023). Konsep Komunikasi Kepemimpinan Era Digital. *Jurnal Ilmiah Al-Muttaqin*, 9(1), 1–9. <https://doi.org/10.37567/al-muttaqin.v9i1.1927>
- Rahmawati, D., Thaha, A. R., Priyanto, A. (2023). Financial Literacy, Digital Transformation Adoption, And Their Significance To The Msmes Performance In Bandung City. *Jurnal Manajemen Bisnis dan Kewirausahaan*, 7(1), 213–223. <https://doi.org/https://doi.org/10.24912/jmbk.v7i1.20702>
- Rhendica, K. (2024). Transformasi Manajemen Pendidikan Islam. *An Najah: Jurnal Pengembangan dan Sosiologi Keagamaan*, 03(02), 46.
- Rofiq, A., & Sutopo, S. (2022). Konseling Kiai terhadap Manajemen Pesantren. *CONSEILS: Jurnal Bimbingan dan Konseling Islam*, 2(1), 14–39. <https://doi.org/10.55352/bki.v2i1.566>
- Sadali. (2020). Eksistensi Pesantren Sebagai Lembaga Pendidikan Islam. *Atta'dib: Jurnal Pendidikan Agama Islam*, 1(2), 53–70.
- Safitri, I., Wahyuni, A., Permatasari, I., Mualimin, S., & Suzara, D. (2025). Model Kepemimpinan Adaptif di Era Digital: Tinjauan Sistematis terhadap Strategi Kepala Sekolah dalam Menghadapi PerubahanModel Kepemimpinan Adaptif di Era Digital: Tinjauan Sistematis terhadap Strategi Kepala Sekolah dalam Menghadapi Perubahan. *Journal of Innovation in Teaching and Instructional Media*, 6, 215–238. <https://doi.org/10.52690/jitim.v6i1.1146>
- Saleh, M. N. I. (2025). Perceptions of Pesantren Leaders Towards Islamic Moderation Approaches in Combating Radicalism and Terrorism. *Cogent Arts and Humanities*, 12(1). <https://doi.org/10.1080/23311983.2025.2474826>
- Saputra, D. E., & Sirozi, M. (2025). Strategi Penguatan Daya Saing Pesantren di Era

- Digital. *Pendas: Jurnal Ilmiah Pendidikan Dasar*, 10(1), 85–99.
- Supriani, Y., Basri, H., & Suhartini, A. (2023). Leadership Role in the Formation of Students' Morals. *Munaddhomah*, 4(3), 528–538. <https://doi.org/10.31538/munaddhomah.v4i3.296>
- Taufikin, Sri Nurhayati, Ahmad Falah, Moh. Sholihuddin, H. B. (2017). Integrating Creative Digital Content in Pesantren: Improving Santri's Digital Literacy And Islamic Learning. *Edukasia Islamika*, 10(1), 35–54. <https://doi.org/10.28918/jei.v10i1.10326>
- Toprak, M., Karakus, M., & Chen, J. (2023). Transformational School Leadership: A Systematic Review of Research in a Centralized Education System. *Journal of Educational Administration*, 61. <https://doi.org/10.1108/JEA-10-2022-0185>
- Van Es, M. A. (2019). Muslim Women as 'Ambassadors' of Islam: Breaking Stereotypes in Everyday Life. *Identities*, 26(4), 375–392. <https://doi.org/10.1080/1070289X.2017.1346985>
- Wahidmurni, W., Susilawati, S., & Abidin, A. A. (2024). Resistance to Curriculum Changes among Teachers of Madrasah Ibtidaiyah in Indonesia. *Nidhomul Haq: Jurnal Manajemen Pendidikan Islam*, 9(1), 16–27. <https://doi.org/10.31538/ndh.v9i1.4300>
- Yuwanda, T., Fadhlani, A., & Bundo, M. (2023). Digitalization of Pesantren: A Perspective from Human Capital. *Dayah: Journal of Islamic Education*, 6(1), 29. <https://doi.org/10.22373/jie.v6i1.15973>
- Zuhri, H. H., & Huda, M. (2024). Enhancing Educational Ecosystems: Implementing Peter Senge's Learning Organization Model in Islamic Boarding Schools. *Munaddhomah*, 5(2), 222–234. <https://doi.org/10.31538/munaddhomah.v5i2.1030>