Adaptive Strategies of Pesantren in Java During COVID-19: Insights into Educational Resilience and Crisis Management

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ABSTRACT

Purpose – This study investigates the adaptive strategies employed by pesantren (Islamic boarding schools) in Java, Indonesia, during the COVID-19 pandemic. It aims to understand how these institutions maintained educational standards amidst the crisis, providing insights that could benefit similar educational systems worldwide.

Design/methods/approach – A qualitative multi-case study design was used, focusing on three pesantren: Pesantren Ibnul Qoyyim Yogyakarta, Pesantren Zhilalul Qur'an Jepara, and Pesantren Putri Al-Mawaddah Ponorogo. Data collection methods included direct observations, in-depth interviews, and document analysis. Participants included heads, administrators, and teachers from each pesantren. Data were analyzed using interactive techniques involving open coding, axial coding, and comparative analysis to identify key themes.

Findings – The study revealed distinct adaptive strategies across the pesantren: 1) Pesantren Ibnul Qoyyim adopted remote learning via Zoom and implemented stringent health protocols upon students' gradual return. 2) Pesantren Zhilalul Qur'an focused on online Quran memorization and established a dedicated clinic for health monitoring. 3) Pesantren Putri Al-Mawaddah limited external interactions and used a rotating teacher system to maintain educational delivery.

Research implications – The findings highlight the resilience and adaptability of pesantren in crises, offering a model for other educational institutions. The study underscores the importance of innovation, flexibility, and cross-sector collaboration in managing educational continuity during global crises. These insights can inform policymakers and educational stakeholders in developing robust crisis management strategies.

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1. Introduction

The COVID-19 pandemic has posed unprecedented challenges to education systems worldwide, substantially impacting pedagogical strategies, student well-being, and institutional sustainability (Assa'idi, 2021; Roqib, 2021). This global crisis has necessitated rapid adaptations in educational practices to ensure the continuity and quality of learning. In Indonesia, the dynamics of learning in pesantren, or Islamic boarding schools, have become a focal point of study due to their unique educational and social roles. Understanding how these institutions maintain academic standards during the crisis has significant implications for Indonesia and similar education systems worldwide (Salim et al., 2021; Sarnoto et al., 2022). Moreover, the resilience and adaptability of pesantren can serve as a model for other educational institutions in facing future emergencies.

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The implementation of Distance Learning (PJJ) became the primary adaptive strategy mandated by the Indonesian government to continue education during the pandemic (Cahyadi et al., 2021; Mishra et al., 2020). This approach encompassed not only formal education but also non-formal institutions like pesantren, utilizing various communication media such as smartphones, laptops, and computers (Kemdikbud, 2020). Previous research indicates that the shift to online learning was crucial to maintaining educational processes in these environments (Assa'idi, 2021; Mubin et al., 2022). This transition underscores the resilience and adaptability of educational institutions in responding to external shocks (Watermeyer et al., 2021). However, the implementation of PJJ in pesantren faced unique challenges related to differing cultural and infrastructural contexts compared to formal schools.

Despite the effectiveness of Distance Learning in ensuring continuity, the educational environment in pesantren is vastly different from formal schools that operate on structured daily schedules. Education in pesantren is a 24-hour activity combining religious instruction with general education (Suyadi et al., 2021). By mid-2020, the Indonesian government cautiously resumed offline learning in these schools, with strict health protocols to mitigate the risk of COVID-19 transmission (McCartney et al., 2022). Studies have documented the psychological impact of the pandemic on students in pesantren, showing high levels of depression, anxiety, and stress (Ismail et al., 2023). Additionally, there are further challenges in consistently implementing health protocols in densely populated environments like pesantren.

The economic impact of the pandemic has driven adaptive strategies across various sectors, including education (Ariatin et al., 2023). Pesantren in West Java have modified their operational frameworks to address these economic challenges, affecting their educational services (Makaginsar et al., 2023). Furthermore, the integration of digital tools for learning reflects the evolving educational landscape within Indonesian pesantren (Sulistiyani et al., 2023). These adaptations are crucial for maintaining educational activities and meeting students' needs during the pandemic (Salim et al., 2021). However, these changes also demand significant adjustments in teaching methods and institutional management.

The shift towards a hybrid education model that combines online and face-to-face learning presents new pedagogical approaches and student engagement opportunities (Syarif & Moenada, 2020). Nevertheless, challenges such as unstable internet connectivity pose significant barriers to effective online learning (Giatman et al., 2020). Additionally, the financial burden associated with digital devices and internet subscriptions exacerbates educational inequalities (Beaunoyer et al., 2020). Addressing these challenges is essential for the successful implementation of the hybrid learning model in pesantren (Watermeyer et al., 2021). The hybrid education model also requires specialized training for teachers to optimize the use of technology in teaching.

Although existing literature provides valuable insights into various aspects of education in pesantren during the COVID-19 pandemic, there are still gaps in understanding how these institutions maintain the quality of their educational services (Assa'idi, 2021; Roqib, 2021). The lack of research on pedagogical dynamics in pesantren and how they uphold academic standards amid the crisis creates a research void that needs to be filled (Salim et al., 2021). Additionally, the specific adaptive strategies used by different pesantren and their long-term effectiveness have not been extensively explored. This study aims to fill these gaps by offering a comprehensive analysis of adaptive educational practices in pesantren during the pandemic. This is crucial for providing clear guidance for other educational institutions in future crises.

This research investigates the adaptive strategies implemented by three specific pesantren in Java, Indonesia—Pesantren Ibnul Qoyyim Yogyakarta, Pesantren Zhilalul Qur'an Jepara, and Pesantren Al-Mawaddah—to address the challenges of the COVID-19 pandemic. By examining their educational policies and practices, this study aims to provide a holistic view of how these institutions

maintain the quality of their educational services. The findings of this research can contribute to formulating effective strategies for education stakeholders and policymakers in Indonesia and offer valuable lessons for similar educational systems globally. Insights from this study can help enhance the resilience and adaptability of educational institutions in facing future crises. Furthermore, the results of this research are expected to enrich the academic literature on adaptive educational strategies in emergencies.

2. Methods

This study employs a qualitative multi-case study design to explore the complexities of educational services in pesantren (Islamic boarding schools) in Java during the COVID-19 pandemic. This approach was chosen because it allows for an in-depth analysis of the specific contexts and dynamics within each pesantren, providing a holistic understanding of the challenges and adaptations undertaken during the pandemic.

2.1. Participants/Sample

Three pesantren were purposively selected based on the diversity of their educational philosophies: Pesantren Ibnul Qoyyim Bantul, Pesantren Zhilalul Qur'an Jepara, and Pesantren Putri Al-Mawaddah Ponorogo. The total number of participants in this study is 30, with 10 individuals from each pesantren. Participants include the Head of Pesantren, administrators, and teaching staff, chosen to provide comprehensive insights into the educational adaptations during the pandemic.

2.2. Data Collection

The data collection procedures include direct observation, in-depth interviews, and document analysis. Direct observation was conducted to understand the daily dynamics and interactions within the pesantren. In-depth interviews were carried out with the Head of Pesantren, administrators, and teaching staff, using digital voice recorders to ensure data accuracy. These interviews were conducted one-on-one using purposive sampling methods (Cresswell, 2017) to explore participants' views and experiences in detail. Document analysis, including the Emergency Curriculum for COVID-19, was performed to understand the context of the educational policies implemented during the pandemic.

2.3. Data Analysis

The collected data were analyzed using interactive analysis techniques, following the methods described by Miles & Huberman, A. Michael, and Saldana (2018). The analysis process involves three main stages:

a. Open Coding: Relevant segments of data were initially coded.
b. Axial Coding: Initial codes were developed and modified to find relationships between categories.
c. Comparative Analysis: Codes were integrated into key themes consistent with the research objectives.

To enhance reliability and validity, this study employed source and methodological triangulation strategies. Source triangulation involves using various data sources to ensure the consistency of findings, while methodological triangulation uses multiple data collection methods to strengthen the validity of the research results.

2.4. *Research Ethics*

Ethical considerations were prioritized, with all participants providing informed consent after being adequately informed about the study's aims and procedures. Additionally, ethical approval was obtained from the appropriate institutional review board to ensure that the research was conducted following ethical standards.

3. Results

This study aims to analyze how three pesantren in Java, namely Pesantren Ibnul Qoyyim Yogyakarta, Pesantren Zhilalul Qur'an Jepara, and Pesantren Al-Mawaddah Ponorogo, adapted their educational policies and practices during the COVID-19 pandemic. The research employs a multi-site case study method with data collected through interviews, observations, and document analysis. The primary objective is to uncover the adaptive strategies implemented by these pesantren to sustain education amidst global challenges.

3.1. *Pesantren Ibnul Qoyyim, Bantul, Yogyakarta*

a. Initial Policy: During the initial phase of the pandemic, all students were sent home for about three months, and distance learning was conducted via platforms such as Zoom.
b. Return to Pesantren: After two months, second-year students were allowed to return under strict conditions, including health tests and mandatory vaccination.
c. Health Protocols: Collaboration with health departments and hospitals provided nutritious food, medical teams, and safety measures such as hand washing, masks, and hand sanitizers.
d. Learning Adjustments: Face-to-face sessions were shortened to 30 minutes, and evening activities were initially suspended but resumed in the second year of the pandemic.

The head of the pesantren stated, "We collaborated with health departments and hospitals to ensure all health protocols were properly implemented. Every student was required to undergo health tests before returning to the pesantren and had to be vaccinated" (Source: Interview with Head of Pesantren Ibnul Qoyyim, 2021).

3.2. *Pesantren Zhilalul Qur'an, Jepara, Central Java*

a. Policy Compliance: Based on the Ministry of Education and Culture Regulation No. 4 of 2020, this institution prohibited face-to-face learning and implemented distance learning through Zoom, focusing on Qur'an memorization.
b. Transition and Return: After the emergency phase of the pandemic eased, all students were recalled with proof of being COVID-19-free and strict adherence to health protocols, with a dedicated clinic established within the pesantren.
c. Class Adjustments: Learning was divided into morning and afternoon sessions to reduce class density, and continuous evaluations were conducted to ensure student performance.

A teacher at this pesantren stated, "Distance learning is not optimal for Qur'an memorization, but we did our best using Zoom and small groups to monitor the students' progress" (Source: Interview with Teacher at Pesantren Zhilalul Qur'an, 2021).

3.3. *Pesantren Putri Al-Mawaddah, Ponorogo, East Java*

a. Interaction Restrictions: Policies were implemented to limit interactions with the outside community, banning visits to students and exit permits, with all necessities delivered directly to the pesantren.

b. Teacher Adjustments: Teachers living outside the pesantren were not allowed to teach face-to-face and used a rotating teaching system, while teachers residing within the pesantren continued in-person teaching.

c. Learning Supervision: Teachers outside the pesantren were assisted by supervisors (musyrifah) residing in the pesantren to deliver materials to students.

The head of the pesantren stated, "We strictly regulate interactions with the outside community to protect our students. All necessities are supplied directly to the pesantren so that no member of the pesantren needs to leave" (Source: Interview with Head of Pesantren Al-Mawaddah, 2021).

3.4. *Comparative Analysis of Adaptive Educational Strategies*

The comparative analysis of adaptive educational strategies in the selected pesantren in Java during the COVID-19 pandemic reveals various approaches to maintaining educational continuity and safety protocols. Pesantren Ibnul Qoyyim adopted distance learning through Zoom and reduced the duration of face-to-face sessions, while Zhilalul Qur'an followed government guidelines, focused on Qur'an memorization, and established a dedicated clinic. Al-Mawaddah limited external interactions but continued face-to-face instruction for resident teachers.

Each pesantren demonstrated a unique combination of adaptive strategies, such as utilizing technology, modifying curricula, and implementing strict health protocols, with the common goal of ensuring educational continuity and protecting the health of students and staff. These findings illustrate the resilience and adaptability of pesantren in facing the challenges of the pandemic and significantly contribute to the discourse on academic resilience during crises.

Table 1: Comparative Analysis of Adaptive Educational Strategies in Selected Pesantren in Java During the COVID-19 Pandemic

No	Name of Pesantren	Policy	Implementation
1	Ibnul Qoyyim	1. All students are sent home.	1. All students are sent home.
		2. Distance learning via Zoom.	2. Distance learning via Zoom.
		3. Students returned with strict protocols.	3. Students returned with strict protocols.
		4. Mandatory vaccination.	4. Mandatory vaccination.
2	Zhilalul Qur'an	1. Compliance with Ministry of Education Regulation No. 4 of 2020.	1. Qur'an memorization mandated.
		2. Students sent home.	2. Distance learning via Zoom.
		3. Distance learning.	3. Face-to-face learning with COVID-19 curriculum.
		4. Dedicated clinic for students.	4. Dedicated clinic.
3	Al-Mawaddah	1. Limiting external interactions.	1. Face-to-face learning for resident teachers.
		2. Ban on visits and exit permits.	2. Coordination of materials by supervisors (musyrifah) for outside teachers.
		3. Adjustments for external teachers.	3. Strict protocols.

This research provides valuable insights into how pesantren can effectively manage education during a global health crisis without compromising their values and educational objectives.

4. Discussion

This research aimed to examine how pesantren (Islamic boarding schools) in Java adapted to the challenges posed by the COVID-19 pandemic, focusing on Pesantren Ibnul Qoyyim Yogyakarta, Pesantren Zhilalul Qur'an Jepara, and Pesantren Putri Al-Mawaddah. The pandemic has compelled

educational institutions worldwide to implement adaptive strategies to maintain the quality of education services. Pesantren, as a religious-based educational institution, faces unique challenges because it emphasize not only academic education but also spiritual development (Salam et al., 2023; Sulistiyani et al., 2023). This study is highly relevant in a global context to understand how religious educational institutions navigate global health crises.

The findings reveal that the three pesantren adopted various adaptive strategies to address the pandemic challenges. Pesantren Ibnul Qoyyim implemented an emergency curriculum and remote learning via Zoom before gradually reintroducing students with strict health protocols. Pesantren Zhilalul Qur'an adopted online Quran memorization and established a special clinic for students. Pesantren Putri Al-Mawaddah restricted external interactions and used a rotating teacher system to ensure the continuity of learning. These strategies demonstrate a commitment to continuing educational activities without compromising the institution's core values and objectives.

These findings align with some previous studies but also offer new insights. The increased use of remote learning tools like Zoom supports Sulistiyani et al.'s (2023) findings on the surge in smartphone use for online learning in pesantren. However, this study demonstrates a more comprehensive approach compared to the limited awareness and knowledge of COVID-19 prevention measures found in other research (Salam et al., 2023). The holistic approach adopted by the pesantren indicates a focus not only on academic aspects but also on the health and well-being of students. Additionally, active collaboration with health departments and local governments underscores the importance of cross-sector cooperation in managing crises.

The implementation of an emergency curriculum by Pesantren Ibnul Qoyyim showcases a high level of adaptability, rarely highlighted in previous studies (Ariatin et al., 2023). The phased approach in reintroducing students demonstrates a responsive policy capable of adapting to the evolving pandemic situation. Pesantren Zhilalul Qur'an's maintenance of online Quran memorization and the establishment of a special clinic exceed government guidelines and show meticulous preventive measures (Ngabiyanto et al., 2021). This reflects that pesantren are not just following basic protocols but also taking additional initiatives to ensure students' health and safety. This underscores the importance of innovation and flexibility in facing global crises (Assa'idi, 2021).

However, it is essential to interpret these findings cautiously as the research was limited to three specific pesantren and may not represent the entire spectrum of Islamic educational institutions in Indonesia. Therefore, these findings need to be examined further in a broader context to ensure more comprehensive generalizations. Interpretation of the results should also consider the local and specific dynamics of each pesantren.

The significance of these findings lies in the pesantren's ability to adapt to crises while maintaining the essence of their educational mission. Factors such as the phased approach to reintroducing students, emergency curriculum, and cross-sector collaboration show a high level of resilience (Fathurrochman, 2021; Hanafi et al., 2021). This is crucial as it demonstrates that with proper management, pesantren can function effectively even in highly challenging conditions.

However, the long-term impact of these measures on the quality of education and students' well-being still requires further research to ensure the effectiveness and sustainability of these policies in the long run (Hidayah et al., 2022; Makmur et al., 2024; Ngabiyanto et al., 2021). Future research could also explore how these strategies can be adapted by other educational institutions beyond pesantren.

The implications of these findings are extensive. They provide a blueprint for educational policymakers to understand how flexibility and adaptability can be integrated into educational systems facing unforeseen challenges. The study highlights the importance of cross-sector cooperation, showing that a collaborative approach can be an effective strategy for ensuring educational continuity during global crises like the pandemic (Castro-Kemp & Samuels, 2022; Turnbull et al., 2021). Therefore,

educational policies focusing on adaptability and cross-sector collaboration can help mitigate the impact of future crises.

It is important to acknowledge the limitations of this study, which was confined to three pesantren. This limitation may affect the generalization of the findings across the diverse landscape of Islamic educational institutions in Indonesia. Future studies should consider a wider range of pesantren and possibly other religious-based educational institutions to provide a more holistic understanding.

In conclusion, the findings offer practical insights for other educational institutions in developing adaptive strategies to face emergencies. Future research should continue to investigate the long-term effects of these adaptive strategies on educational quality and student well-being and explore their applicability to other educational contexts.

5. Conclusion

This study provides a comprehensive analysis of how three pesantren in Java—Pesantren Ibnul Qoyyim Yogyakarta, Pesantren Zhilalul Qur'an Jepara, and Pesantren Putri Al-Mawaddah—adapted to the educational challenges posed by the COVID-19 pandemic. The pandemic necessitated rapid and innovative responses to maintain educational continuity, particularly in institutions with unique educational and spiritual missions such as pesantren.

The key findings highlight the adaptive strategies implemented by each pesantren:

a. Pesantren Ibnul Qoyyim initially adopted remote learning via Zoom and enforced strict health protocols upon the gradual return of students. The phased reintroduction of students, combined with health collaborations, ensured both educational continuity and student safety.

b. Pesantren Zhilalul Qur'an focused on online Quran memorization and established a special clinic for health monitoring, demonstrating meticulous preventive measures beyond government guidelines.

c. Pesantren Putri Al-Mawaddah limited external interactions and implemented a rotating teacher system to maintain educational delivery, showing a high level of resilience and adaptability.

These strategies not only ensured the continuation of educational activities but also maintained the core values and objectives of the pesantren. The findings underscore the importance of innovation, flexibility, and cross-sector cooperation in managing crises.

The study offers significant practical implications for educational institutions and policymakers. It demonstrates that pesantren can effectively navigate crises through adaptive strategies that encompass health protocols, remote learning, and cross-sector collaboration. This approach can serve as a blueprint for other educational institutions facing similar challenges, highlighting the importance of preparedness and adaptability in crisis management.

While the study provides valuable insights, it is limited to three specific pesantren, which may not fully represent the diversity of Islamic educational institutions in Indonesia. Future research should broaden the scope to include a wider range of pesantren and other religious-based educational institutions to enhance the generalizability of the findings.

Further research is needed to examine the long-term impact of these adaptive strategies on educational quality and student well-being. Understanding the sustainability and effectiveness of these measures in the long term will be crucial for informing future educational policies and practices.

In summary, the adaptive strategies employed by the pesantren in this study showcase their resilience and capacity to maintain educational continuity during a global health crisis. These findings contribute to the academic discourse on educational resilience and provide practical insights for other educational institutions. Future research should continue to explore the long-term implications of these strategies and their potential applications in various educational contexts.

Declarations

Author contribution statement

Sabarudin made substantial contributions to the conception or design of the work. Muhammad Nurul Mubin was responsible for the acquisition, analysis, or interpretation of data and critically revised the work for important intellectual content. Ahmad Maulana Asror and Riska Wahyu Nurcendani collected data and conducted field research.

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Data availability statement

The datasets generated during and analyzed during the current study are available from the corresponding author upon reasonable request.

Declaration of Interest's statement

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

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