



Innovative Teaching Strategies in Madrasahs: Integrating Traditional and Digital Pedagogies for Enhanced Student Engagement

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Abstract *The development of digital technology has encouraged transformation in the education system, including in madrasahs based on religious values. However, the process of integrating traditional and digital teaching methods still faces various challenges. This study aims to analyze the effectiveness of innovative teaching strategies that combine traditional and digital pedagogy to increase student engagement in madrasahs. Using a qualitative approach with a case study method, data were collected through semi-structured interviews, observations, and documentation in several madrasahs. Thematic analysis was conducted to identify patterns of student engagement and the impact of implementing hybrid teaching methods. The results show that hybrid teaching strategies not only improve student engagement and learning outcomes, but also help students understand the material more deeply through digital media that is interactive and relevant to modern learning contexts. However, challenges include limited access to technology and infrastructure readiness, which requires policy support and ongoing teacher training. This study provides practical recommendations for madrasahs to adopt an adaptive, relevant, and balanced learning model between religious values and modern technology.*

Keywords hybrid learning, student engagement, madrasahs, teaching strategies, digital integration

1. Introduction

Education in madrasahs has an important role in shaping students' character and religious values. In recent decades, technological developments and the demands of the digital age have driven innovation in education, including in madrasahs, which integrate traditional approaches with digital pedagogy to achieve higher student engagement¹. This combination not only enriches the learning experience but also

¹ Mei Agustina Sintawati and Nourma Oktaviarini, "Analysis of the Importance of Teachers' Social Competence on Character Education," *Journal of Basic Education* 2, no. 2 (2018): 1–9.

facilitates the development of students' digital skills that are increasingly needed in the era of globalization ².

The implementation of innovative teaching strategies that combine traditional and digital methods is very relevant, considering that madrasahs function as educational institutions that educate students with a holistic approach. The integration of digital methods in the context of religious education not only increases the relevance of learning but also prepares students to face the demands of the modern world ³. The urgency of this research lies in the need to understand how digital pedagogical innovations can be effectively applied in madrasah environments without sacrificing religious values.

Previous research has explored the integration of digital pedagogy in education, but few have focused on madrasahs as religious educational institutions. The use of digital technology in learning can significantly increase student motivation and participation, especially in faith-based educational institutions. In addition, the importance of pedagogical adaptation in accordance with the cultural context and religious values ⁴.

Although there have been studies related to digital learning in religious institutions, most of them only discuss the technical aspects of implementing technology without comprehensively examining the impact of a combination of traditional and digital methods on student engagement. In the context of madrasahs, this study aims to bridge this gap by identifying innovative strategies that are able to integrate these two approaches so that they are relevant for madrasah students who have strong cultural and religious backgrounds ⁵.

This research offers a new contribution by exploring an integrative approach between traditional and digital pedagogy in madrasah learning. Including the use of technology as a learning tool that is oriented to the development of students' digital skills, while maintaining the values of religious education. This approach has not been widely explored in the educational literature, thus providing new insights in the application of the balanced learning model in madrasahs ⁶.

² Hanifa Mardhiyah et al., "The Importance of Learning Skills in the 21st Century as a Demand in Human Resource Development," *Lectura : Journal of Education* 12, no. 1 (February 4, 2021): 29–40, <https://doi.org/10.31849/LECTURA.V12I1.5813>.

³ Dual. Oktaviani, Irma and Yuliani, "Validity and Readability of Science Literacy-Based Textbooks on Photosynthesis Materials for Class XII High School," *BioEdu (Periodic Scientific Biology Education)* 7, no. 2 (2018): 142–47.

⁴ Rintik Sunariati, Esti Ismawati, and Iswan Riyadi, "The Relationship Between Vocabulary Mastery and Sentence Structure with the Ability to Write Narrative Essay," *Journal of Language Education* 8, no. 2 (2019): 309–29.

⁵ Yhola Kiki Nor Faridha, Siti Hamidah, and Mutiara Nugraheni, "Spring Roll Tom Yum Tofu Sebagai Inovasi One Dish Meal Sehat," *Home Economics Journal* 7, no. 1 (2023): 1–7, <https://doi.org/10.21831/hej.v7i1.41583>.

⁶ Nur Fitriani, Maemuna Muhayyung, and Ulil Amri, "An Analysis of the Impact of Google Translate on Students' Writing Skills," *Pinisi Journal of Education* 1, no. 1 (2021): 166–69.

The purpose of this study is to analyze the effectiveness of implementing innovative teaching strategies that integrate traditional and digital pedagogy in madrasahs. This research is expected to provide guidance for madrasahs to develop a curriculum that is responsive to the digital era without losing the essence of religious education. In addition, this research aims to identify challenges and solutions in the implementation of this innovative teaching strategy so that it can become a sustainable and relevant model in the madrasah environment.

2. Method

The main instruments in this study include semi-structured interviews, observation sheets, and learning documents. Semi-structured interviews are used to explore the views of teachers, students, and madrasah heads regarding the teaching strategies they apply and feel. Observation sheets are used to record the interaction between teachers and students in learning activities. Learning documents, such as syllabus, teaching materials, and student evaluation results, are also collected as supporting data ^{7 8}.

Data collection techniques are carried out through three main ways: in-depth interviews, direct observation, and documentation. In-depth interviews were conducted with teachers and madrasah managers to understand their perspectives on the implementation of hybrid teaching strategies. Direct observation is carried out during teaching and learning activities in the classroom to see the application of innovative teaching strategies directly. Documentation that includes syllabus and learning materials is collected to see the relationship between learning objectives and the methods used ^{9 10}.

This research began with a preparatory stage that included the manufacture of instruments and licensing at the research site. After the instrument is ready, the data collection stage is carried out for two months at the madrasah that is the object of the research. Research activities include interviews with teachers and madrasah heads, classroom observations, and the collection of learning documents. The collected data is then analyzed to find patterns and themes related to student engagement and the

⁷ Sari K. Bogdan, Robert C., & Biklen, *Qualitative Research for Education: An Introduction to Theory and Methods* (London: Pearson, 1982).

⁸ Sugiyono, *Metode Penelitian Kualitatif* (Bandung: Penerbit Alfabeta, 2018).

⁹ Annisa Algivari and Dea Mustika, "Teknik Ice Breaking Pada Pembelajaran Tematik Di Sekolah Dasar," *Journal of Education Action Research* 6, no. 4 (2022): 433–39, <https://doi.org/10.23887/jear.v6i4.53917>.

¹⁰ Rido Budiman and M.Fakhran Al Ramadhan, "Identitas Bekasi Dalam Akun Media Sosial Komunitas," *Al-Tsaqafa: Jurnal Ilmiah Peradaban Islam* 15, no. 2 (2018): 271–81, <https://doi.org/10.15575/al-tsaqafa.v15i2.3828>.

effectiveness of teaching strategies. The final stage includes the interpretation of research results and the writing of reports ^{11 12}.

Data analysis is carried out by thematic analysis methods, which include data reduction, data presentation, and conclusion drawn. The data collected from interviews, observations, and documentation are reduced to select relevant information and then presented in descriptive and thematic forms. This analysis process focuses on identifying interaction patterns in learning as well as teachers' and students' perceptions of teaching strategies. The end result is a conclusion that provides answers to the research objectives and recommendations for the development of teaching strategies in madrasahs ^{13 14 15}.

3. Result & Discussion

A. Student Involvement in Hybrid Learning in Madrasah

Student involvement in learning is an important indicator that shows the effectiveness of hybrid teaching strategies in madrasahs. Based on the results of observations and interviews, students showed higher enthusiasm when using digital media such as interactive educational applications and learning videos. This hybrid model helps students feel more connected to the material and increase their curiosity, especially in project-based learning sessions or online discussions ^{16 17}.

Teachers state that this approach allows students to be more actively participating, especially those who are usually passive in purely face-to-face teaching. The combination of traditional and digital methods also provides flexibility for students to learn according to their respective abilities ¹⁸. Challenges that arise, especially related to limited internet access and devices, are overcome by providing temporary access from schools and technical guidance for students who are not yet familiar with technology.

¹¹ John W. Creswell, *Research Design. Qualitative, Quantitative, and Mixed Methods Approaches* (Sage Publication, 2017).

¹² Norman K. Denzin, "The Research Act: A Theoretical Introduction to Sociological Methods," *The Research Act: A Theoretical Introduction to Sociological Methods*, January 1, 2017, 1–368, <https://doi.org/10.4324/9781315134543/RESEARCH-ACT-NORMAN-DENZIN>.

¹³ V. Clarke, V., & Braun, "Teaching Thematic Analysis: Overcoming Challenges and Developing Strategies for Effective Learning," *The Psychologist* 26, no. 2 (2013): 120–23.

¹⁴ M. B. Miles and A. M. Huberman, *Qualitative Data Analysis* (Beverly Hills: Sage Publication, 1984).

¹⁵ M. Q Patton, *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*. (Sage Publication, 2015).

¹⁶ Creswell, *Research Design. Qualitative, Quantitative, and Mixed Methods Approaches*.

¹⁷ I K Seken, "Glocal English Teaching: Foreign Language Education Under the Umbrella of National Culture," *Prasi: Journal of Language, Art, and Teaching* 10, no. 19 (2015): 4–17.

¹⁸ Sintawati and Oktaviarini, "Analysis of the Importance of Teachers' Social Competence on Character Education."

TABLE 1. Student Engagement Levels in Hybrid Learning in Madrasah

Forms of Learning	High Engagement Rate (%)	Medium Engagement Rate (%)	Low Engagement Rate (%)
Face-to-face	55%	30%	15%
Online	70%	20%	10%

B. The Effectiveness of Innovative Teaching Methods in Improving Learning Outcomes

The effectiveness of innovative teaching methods that integrate digital and traditional approaches is also demonstrated in student learning outcomes. Data from student grade documents showed an increase in the average score of students who participated in hybrid learning by 12% compared to conventional learning. Teaching strategies that utilize educational videos and interactive applications not only improve the comprehension of the material, but also sharpen students' critical thinking skills ¹⁹.

Teachers note that digital materials help students understand abstract concepts that are difficult to explain through face-to-face methods only. For example, Islamic history material or basic scientific knowledge can be delivered with attractive visuals, which improves students' memory and comprehension ²⁰. However, some teachers suggest that the use of technology be limited to certain sessions to maintain a balance with traditional learning that emphasizes memorization and religious discussion ²¹.

C. Challenges in Implementation and Implemented Solutions

The implementation of hybrid teaching strategies in madrasas faces several challenges, especially related to the limitations of technological infrastructure. The results of the interviews showed that about 35% of students had difficulty accessing digital devices and stable internet, which hindered their participation in online learning sessions. This challenge requires madrasas to find creative solutions, such as providing loan kits and working with local internet providers for more affordable access ²².

¹⁹ Abdul Haris Faisal, NFn Zuriyati, and Eva Leiliyanti, "Learning Media for Writing Poetry Based on Android Application for High School Students," *Kwangsan: Journal of Educational Technology* 8, no. 1 (2020): 1, <https://doi.org/10.31800/jtp.kw.v8n1.p1-18>.

²⁰ Murni and B. Sumardjoko, "Analysis of Continuous Professional Development of Teachers at SMK Muhammadiyah 3 and 6 Gemolong Sragen" (Muhammdiyah University of Surakarta, 2015).

²¹ H Suaedi, "ICT-Based Learning Media with Powtoon Application on Identification of Intrinsic Elements of Drama Texts," *Angewandte Chemie International Edition*, 6(11), 951–952., 2013, 1–9.

²² Atika Dwi Meilisa and Suci Megawati, "Implementation of Hybrid Learning Model in Limited Face-to-Face Learning at SMA Negeri 13 Surabaya," *Publika* 11, no. 1 (2023): 1629–42, <https://doi.org/10.26740/publika.v11n1.p1629-1642>.

In addition, teachers' readiness to use technology is another significant challenge. Some teachers who are unfamiliar with digital learning apps need additional training to improve their skills. For this reason, madrasas hold regular training that focuses on improving teachers' digital skills, especially in using tools and applications that support hybrid learning.

D. Integration of Religious Values in Digital Learning

One of the important aspects of learning in madrassas is maintaining the integrity of religious values in the learning process, both traditionally and digitally ²³. Teachers stated that although technology helps enrich the learning experience, they still prioritize the integration of religious values in every learning activity. These values are reinforced through digital content that is specifically designed to fit Islamic values, such as learning apps that contain daily prayers or prophetic stories.

The use of digital content with religious nuances supports the creation of a learning environment that is in accordance with the vision of the madrasah, which not only pursues academic achievement but also character building. This approach allows students to stay connected to their spiritual aspects while learning through media that are engaging and relevant to the modern era ²⁴.

TABLE 2. Examples of Digital Content with Religious Nuances in Learning in Madrasah

Digital Content		Description
Daily Prayer App		Apps that help students memorize daily prayers
Prophet's Story	Video	Educational videos about prophetic stories
E-Book Tafsir Al-Qur'an		A digital book that provides explanations of Qur'anic verses

The results of this study have important implications for madrasas in developing a balanced curriculum between traditional and digital pedagogy. Hybrid teaching strategies are proven to improve student engagement and learning outcomes, but they require infrastructure support and digital skills for teachers. Therefore, it is recommended that madrasas strengthen collaboration with technology providers to support the implementation of digital learning.

In addition, policies that support regular teacher training in learning technology can improve their skills in facing the demands of digitalization. The study also suggests the use of digital content that is specifically designed to harmonize religious

²³ Asmuni Zain and Zainul Mustain, "Strengthening Spiritual Values and Morality in the Digital Era through Islamic Religious Education," *JEMARI: Journal of Education Madrasah Ibtidaiyah* 6, no. 2 (2024): 94–103.

²⁴ Noor Amirudin, "Digital Literacy in Shaping the Religious Character of the Millennial Generation (Study on the Formation of the Character of PAI Students of the University of Muhammadiyah Gresik)," *Journal of Islamic Education* 8, no. 1 (2022): 87–99, <https://doi.org/10.37286/ojs.v8i1.132>.

values in every aspect of learning. Thus, madrasas can adopt adaptive and relevant teaching strategies, bridging the academic and spiritual needs of students in a sustainable manner.

With this approach, this study provides practical guidance for madrasas in implementing innovative teaching strategies that are relevant to the digital era, while still maintaining the religious values that are at the core of madrasah education.

4. Conclusion

This research reveals that innovative teaching strategies that combine traditional and digital approaches can significantly improve student engagement and learning outcomes in madrasas. The hybrid learning model allows students to be more actively engaged, especially through the use of interactive and educational digital media. The integration of traditional teaching and digital technology creates a more flexible and adaptive learning environment, meeting the needs of students in the modern era while still maintaining the fundamental religious values in the madrasah.

Although these teaching strategies show high effectiveness, the study also identifies several challenges, such as limited access to technology and infrastructure readiness. This challenge can be overcome through policy support that focuses on providing internet access and devices for students in need, as well as improving digital training for teaching staff. The results of this study imply that the application of the hybrid learning model in madrasahs can be a relevant and sustainable long-term solution, especially if supported by policies that support technology integration and teacher capacity building.

Overall, this research makes a practical contribution to madrasas in developing a curriculum that is responsive to the demands of the digital era without ignoring religious values. This innovative teaching approach is expected to be widely adopted to improve the quality of education in madrasahs and prepare students to face future challenges while remaining based on religious principles.

5. Declaration of Conflicting Interests

The authors state that there is no conflict of interest in the publication of this article.

6. Funding Information

None

7. Acknowledgment

None

8. References

- Algivari, Annisa, and Dea Mustika. "Teknik Ice Breaking Pada Pembelajaran Tematik Di Sekolah Dasar." *Journal of Education Action Research* 6, no. 4 (2022): 433-39. <https://doi.org/10.23887/jear.v6i4.53917>.
- Amirudin, Noor. "Literasi Digital Dalam Membentuk Karakter Religius Generasi Milenial (Studi Tentang Pembentukan Karakter Mahasiswa PAI Universitas Muhammadiyah Gresik." *Jurnal Pendidikan Islam* 8, no. 1 (2022): 87-99. <https://doi.org/10.37286/ojs.v8i1.132>.
- Bogdan, Robert C., & Biklen, Sari K. *Qualitative Research for Education: An Introduction to Theory and Methods*. London: Pearson, 1982.
- Budiman, Rido, and M.Fakhran Al Ramadhan. "Identitas Bekasi Dalam Akun Media Sosial Komunitas." *Al-Tsaqafa: Jurnal Ilmiah Peradaban Islam* 15, no. 2 (2018): 271-81. <https://doi.org/10.15575/al-tsaqafa.v15i2.3828>.
- Clarke, V., & Braun, V. "Teaching Thematic Analysis: Overcoming Challenges and Developing Strategies for Effective Learning." *The Psychologist* 26, no. 2 (2013): 120-23.
- Creswell, John W. *Research Design. Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publication, 2017.
- Denzin, Norman K. "The Research Act: A Theoretical Introduction to Sociological Methods." *The Research Act: A Theoretical Introduction to Sociological Methods*, January 1, 2017, 1-368. <https://doi.org/10.4324/9781315134543/RESEARCH-ACT-NORMAN-DENZIN>.
- Faisal, Abdul Haris, NFn Zuriyati, and Eva Leiliyanti. "Media Pembelajaran Menulis Puisi Berbasis Aplikasi Android Untuk Siswa Sma." *Kwangsan: Jurnal Teknologi Pendidikan* 8, no. 1 (2020): 1. <https://doi.org/10.31800/jtp.kw.v8n1.p1-18>.
- Faridha, Yhola Kiki Nor, Siti Hamidah, and Mutiara Nugraheni. "Spring Roll Tom Yum Tofu Sebagai Inovasi One Dish Meal Sehat." *Home Economics Journal* 7, no. 1 (2023): 1-7. <https://doi.org/10.21831/hej.v7i1.41583>.
- Fitriani, Nur, Maemuna Muhayyang, and Ulil Amri. "An Analysis of the Impact of Google Translate on Students' Writing Skills." *Pinisi Journal of Education* 1, no. 1 (2021): 166-69.
- Mardhiyah, Hanifa, Sekar Nurul, Fajriyah Aldriani, Febyana Chitta, and Rizal Zulfikar. "Pentingnya Keterampilan Belajar Di Abad 21 Sebagai Tuntutan Dalam Pengembangan Sumber Daya Manusia." *Lectura: Jurnal Pendidikan* 12, no. 1 (February 4, 2021): 29-40. <https://doi.org/10.31849/LECTURA.V12I1.5813>.
- Meilisa, Atika Dwi, and Suci Megawati. "Implementasi Model Pembelajaran Hybrid Pada Pembelajaran Tatap Muka Terbatas Di SMA Negeri 13 Surabaya." *Publika* 11, no. 1 (2023): 1629-42. <https://doi.org/10.26740/publika.v11n1.p1629-1642>.
- Miles, M. B., and A. M. Huberman. *Qualitative Data Analysis*. Beverly Hills: Sage Publication, 1984.
- Murni, and B. Sumardjoko. "Analisis Pengembangan Keprofesian Berkelanjutan Guru Di SMK Muhammadiyah 3 Dan 6 Gemolong Sragen." Universitas Muhammadiyah Surakarta, 2015.
- Oktaviani, Irma, Dwi., and Yuliani. "Validitas Dan Keterbacaan Buku Ajar Berbasis

- Literasi Sains Pada Materi Fotosintesis Kelas XII SMA." *BioEdu (Berkala Ilmiah Pendidikan Biologi)* 7, no. 2 (2018): 142-47.
- Patton, M. Q. *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*. Sage Publication, 2015.
- Seken, I K. "Pengajaran Bahasa Inggris Glokal: Pendidikan Bahasa Asing Di Bawah Payung Budaya Nasional." *Prasi: Jurnal Bahasa, Seni, Dan Pengajarannya* 10, no. 19 (2015): 4-17.
- Sintawati, Mei Agustina, and Nourma Oktaviarini. "Analisis Pentingnya Ompetensi Sosial Guru Terhadap Pendidikan Karakter." *Jurnal Bidang Pendidikan Dasar* 2, no. 2 (2018): 1-9.
- Suaedi, H. "Media Pembelajaran Berbasis Ict Dengan Aplikasi Powtoon Pada Materi Identifikasi Unsur Intrinsik Teks Drama." *Angewandte Chemie International Edition*, 6(11), 951-952., 2013, 1-9.
- Sugiyono. *Metode Penelitian Kualitatif*. Bandung: Penerbit Alfabeta, 2018.
- Sunariati, Rintik, Esti Ismawati, and Iswan Riyadi. "Hubungan Antara Penguasaan Kosakata Dan Struktur Kalimat Dengan Kemampuan Menulis Karangan Narasi." *Jurnal Pendidikan Bahasa* 8, no. 2 (2019): 309-29.
- Zain, Asmuni, and Zainul Mustain. "Penguatan Nilai-Nilai Spiritual Dan Moralitas Di Era Digital Melalui Pendidikan Agama Islam." *JEMARI: Jurnal Edukasi Madrasah Ibtidaiyah* 6, no. 2 (2024): 94-103.