

**PEDAGOGICAL ADAPTATION OF ISLAMIC RELIGIOUS EDUCATION
TEACHERS IN RESPONDING TO STUDENTS' DIGITAL
MEDIA-ORIENTED LEARNING RESPONSIVENESS AT SMP
NEGERI 31 PURWOREJO**

Nur Qurotul Nabila Atikah
Sekolah Tinggi Agama Islam Nahdlatul Ulama Purworejo, Indonesia
e-mail: nabilaatikah27@gmail.com

Prawidya Lestari
Sekolah Tinggi Agama Islam Nahdlatul Ulama Purworejo, Indonesia
e-mail: prawidyalestari@stainupwr.ac.id

Abstract: The rapid development of digital technology has influenced students' learning characteristics, including those involved in Islamic Religious Education (IRE) learning. Students tend to demonstrate higher levels of attention, participation, and enthusiasm when learning activities incorporate digital media rather than conventional instructional methods. This study aimed to describe students' digital media-oriented learning responsiveness and to analyze the pedagogical adaptation of Islamic Religious Education teachers in responding to this phenomenon at SMP Negeri 31 Purworejo. The study employed a qualitative approach with a case study design. Data were collected through classroom observations, semi-structured interviews, and documentation involving one Islamic Religious Education teacher and four seventh-grade students. Data were analyzed using the interactive model of Miles, Huberman, and Saldaña, consisting of data condensation, data display, and conclusion drawing and verification. The findings revealed that students exhibited higher learning responsiveness in digital media-based learning environments, as reflected in increased attention, engagement, and enthusiasm throughout the learning process. The study also found that the teacher implemented pedagogical adaptations through adjustments in instructional strategies, the utilization of interactive digital media, more participatory classroom management, and technology-based assessment practices. This study concludes that students' digital media-oriented learning responsiveness serves as an important factor driving teachers' pedagogical adaptation. These findings contribute to the advancement of Islamic Religious Education scholarship by highlighting the importance of integrating technology, pedagogy, and content in ways that are responsive to students' learning characteristics in the digital era.

Keywords: Pedagogical Adaptation; Student Engagement; Digital Learning; TPACK; Islamic Religious Education

Abstrak: Perkembangan pesat teknologi digital telah memengaruhi karakteristik belajar siswa, termasuk mereka yang mengikuti pembelajaran Pendidikan Agama Islam (PAI). Siswa cenderung menunjukkan tingkat perhatian, partisipasi, dan antusiasme yang lebih tinggi ketika kegiatan belajar melibatkan media digital dibandingkan dengan metode pengajaran konvensional. Penelitian ini bertujuan

untuk mendeskripsikan responsivitas belajar siswa yang berorientasi pada media digital serta menganalisis adaptasi pedagogis guru Pendidikan Agama Islam dalam menanggapi fenomena ini di SMP Negeri 31 Purworejo. Penelitian ini menggunakan pendekatan kualitatif dengan desain studi kasus. Data dikumpulkan melalui observasi kelas, wawancara semi-terstruktur, dan dokumentasi yang melibatkan satu guru Pendidikan Agama Islam dan empat siswa kelas tujuh. Data dianalisis menggunakan model interaktif Miles, Huberman, dan Saldaña, yang terdiri dari pemadatan data, penyajian data, serta penarikan kesimpulan dan verifikasi. Temuan penelitian menunjukkan bahwa siswa menunjukkan responsivitas belajar yang lebih tinggi dalam lingkungan pembelajaran berbasis media digital, sebagaimana tercermin dari meningkatnya perhatian, keterlibatan, dan antusiasme sepanjang proses pembelajaran. Penelitian ini juga menemukan bahwa guru menerapkan adaptasi pedagogis melalui penyesuaian strategi pengajaran, pemanfaatan media digital interaktif, manajemen kelas yang lebih partisipatif, serta praktik penilaian berbasis teknologi. Penelitian ini menyimpulkan bahwa responsivitas belajar siswa yang berorientasi pada media digital berperan sebagai faktor penting yang mendorong adaptasi pedagogis guru. Temuan-temuan ini berkontribusi pada kemajuan kajian Pendidikan Agama Islam dengan menyoroti pentingnya mengintegrasikan teknologi, pedagogi, dan konten dengan cara yang responsif terhadap karakteristik belajar siswa di era digital.

Kata kunci: Adaptasi Pedagogis; Keterlibatan Siswa; Pembelajaran Digital; TPACK; Pendidikan Agama Islam

INTRODUCTION

Digital transformation has become one of the defining characteristics of twenty-first-century educational development, fundamentally reshaping how teachers teach, students learn, and knowledge is produced and disseminated. Advances in information technology have enabled learning processes to become more flexible, interactive, and learner-centered through the utilization of various digital platforms, audiovisual media, and internet-based learning applications. In educational contexts, digital transformation extends beyond the mere use of technology as an instructional tool; it also requires a pedagogical paradigm shift capable of accommodating the characteristics of learners who are increasingly immersed in digital environments. Previous studies have demonstrated that the integration of digital technology can enhance learning accessibility, expand learning resources, promote personalized learning, and increase student engagement when supported by adequate pedagogical

competence¹. Consequently, digital transformation has generated new demands for teachers, requiring them not only to master technological tools but also to adapt their pedagogical strategies to align with students' learning needs in the digital era.

Within the context of Islamic Religious Education (IRE), digital transformation presents more complex challenges because learning is directed not only toward the acquisition of knowledge but also toward character formation, the internalization of Islamic values, and the development of students' spirituality. Several studies have shown that integrating digital technology into IRE instruction can improve learning effectiveness through the use of interactive media, digital learning platforms, and more contextualized instructional strategies². Furthermore, technology utilization supported by teachers' pedagogical competence can create more engaging learning experiences, enhance students' learning motivation, and strengthen their participation in the learning process³. Research on the transformation of IRE learning also highlights that successful technology integration largely depends on teachers' ability to balance technological, pedagogical, and content-related dimensions through the Technological Pedagogical and Content Knowledge (TPACK) framework⁴. Therefore, changes in digital learning environments require IRE teachers to continuously develop adaptive capacities to ensure that learning remains relevant to students' evolving characteristics while maintaining the objectives of Islamic education.

These changes in learning environments have contributed to the emergence of learner characteristics that differ from those of previous generations. Contemporary students grow up in technology-rich environments and tend to respond more positively to learning experiences that incorporate visual media, interactive videos,

¹ Asmayawati, Yufiarti, and E. Yetti. "Pedagogical Innovation and Curricular Adaptation in Enhancing Digital Literacy: A Local Wisdom Approach for Sustainable Development in Indonesia Context." *Journal of Open Innovation: Technology, Market, and Complexity* 10, no. 1 (2024): 100233. <https://doi.org/10.1016/j.joitmc.2024.100233>.

² Fanani, M. I., A. R. Alfauzi, and Sutiah. "Urgensi Optimalisasi Media Digital untuk Pembelajaran PAI di Lingkungan Pendidikan." *Jurnal Pendidikan Islam* 9 (2024): 270–83.

³ Rahmi, R., and Safrida. "Urgensi Kompetensi Guru dalam Pelaksanaan Pembelajaran Berbasis Digital Pendidikan." *Jurnal Pendidikan* 2 (2023): 69–78.

⁴ Ritonga, M. S., S. T. Sumanti, and N. Anas. "Analisis Kemampuan Guru Pendidikan Agama Islam (PAI) dalam Mengimplementasikan Technological Pedagogical and Content Knowledge (TPACK) di Sekolah Dasar." *Jurnal Pendidikan* 9, no. 2 (2023): 722–32.

educational games, digital quizzes, and activities that encourage active participation⁵.emphasized that understanding students' characteristics is a fundamental prerequisite for designing effective learning experiences. From the perspective of student engagement, learning responsiveness is reflected in students' behavioral, emotional, and cognitive involvement throughout the learning process⁶. Preliminary observations conducted at SMP Negeri 31 Purworejo revealed that students demonstrated higher levels of attention, enthusiasm, and participation when teachers employed digital media such as instructional videos, Quizizz, Wordwall, and interactive presentations than when conventional teaching methods were used. This condition indicates a shift in learning responsiveness patterns that requires teachers to adjust instructional strategies in order to maintain effective, meaningful, and learner-centered educational experiences.

Research on digital learning in Islamic Religious Education has expanded considerably in recent years. Broadly speaking, previous studies can be categorized into three major trends. First, studies have focused on teachers' pedagogical competence and professional development in response to educational changes in the digital era⁷. Second, a growing body of research has examined digital technology integration and the implementation of TPACK in IRE learning as efforts to improve instructional quality and the effectiveness of technology use⁸. Third, scholars have investigated the use of digital media, innovative pedagogies, and adaptive instructional strategies to enhance student engagement in technology-based learning environments⁹. Collectively, these studies suggest that digital technology holds substantial potential for

⁵ Hajar, S., and N. Nanning. "Pentingnya Pendidik untuk Memahami Karakteristik Peserta Didik sebagai Acuan dalam Melaksanakan Perencanaan Konsep Pembelajaran." *Dialektika: Jurnal Pendidikan Agama Islam* 1, no. 2 (2022): 10–18. <https://doi.org/10.35905/dialektika.v1i2.4333>.

⁶ Gladisia, N., N. Laily, and N. S. E. Puspitaningrum. "Gambaran Student Engagement dalam Pembelajaran di Era New Normal." *Jurnal Ilmiah Fakultas Psikologi Universitas Yudharta Pasuruan* 9, no. 1 (2022): 1–21.

⁷ Baskara, A., and N. Sutarni. "Kompetensi Pedagogik Guru SMA di Indonesia: Sebuah Systematic Literature Review." *Jurnal Pendidikan* 13, no. 3 (2024): 3481–96.

⁸ Ritonga, M. S., S. T. Sumanti, and N. Anas. "Analisis Kemampuan Guru Pendidikan Agama Islam (PAI) dalam Mengimplementasikan Technological Pedagogical and Content Knowledge (TPACK) di Sekolah Dasar." *Jurnal Pendidikan* 9, no. 2 (2023): 722–32.

⁹ Agustina, M. T., and S. Amaliyah. "Student Engagement di Era Blended Learning." *Jurnal Pendidikan dan Konseling* 5 (2023): 5608–12.

improving educational quality when accompanied by adequate teacher competence and appropriate pedagogical strategies.

Nevertheless, a review of previous research indicates that most studies have primarily focused on pedagogical competence, technology integration, TPACK implementation, or the use of digital media as the central object of inquiry. In contrast, students' learning responsiveness has often been positioned merely as an outcome of technology-enhanced learning. In practice, however, changes in students' learning characteristics may serve as a driving force behind teachers' pedagogical adjustments. Moreover, research on the pedagogical adaptation of IRE teachers has largely been conducted within the contexts of educational digitalization policies, teacher competency development, or general instructional innovation¹⁰. Limited attention has been given to examining how students' digital media-oriented learning responsiveness influences the forms of pedagogical adaptation employed by teachers in junior secondary school Islamic Religious Education classrooms. This limitation reveals a significant knowledge gap regarding the relationship between students' learning characteristics and teachers' responses within digital learning environments.

Addressing this gap, the present study offers a different perspective by positioning students' learning responsiveness as the primary point of departure for understanding teachers' pedagogical adaptation. The novelty of this study lies in its analysis of the relationship between students' digital media-oriented learning characteristics and the pedagogical adaptations undertaken by teachers during instructional processes. Unlike previous studies that primarily focused on technology integration or teachers' digital competencies, this research examines how teachers adjust instructional strategies, teaching methods, learning media, classroom management, and assessment practices in response to increased student engagement in digital media-based learning. Therefore, this study aims to describe students' learning responsiveness in digital media-based Islamic Religious Education learning and to analyze the pedagogical adaptations implemented by IRE teachers in responding to such responsiveness at SMP Negeri 31 Purworejo. The findings are

¹⁰ Akbar, M. A., and S. Arifin. "Adaptive Strategies of Islamic Education (PAI) Teachers toward Digital-Based Islamic Education Policies: A Case Study at SMAN 1 Selong." *ISLAMIKA* 8, no. 1 (2026): 180–215. <https://doi.org/10.36088/islamika.v8i1.6020>.

Ilmuna: Jurnal Studi Pendidikan Agama Islam I Vol. 8, No.2 September (2026)
ISSN: 2715-9981. EISSN: 2715-9434. DOI: <https://doi.org/10.54437/ilmuna>.

expected to enrich the discourse on digital pedagogy in Islamic Religious Education while providing practical insights for the development of more adaptive instructional strategies.

This study is grounded in the assumption that changes in students' learning characteristics in the digital era require not only teachers' technological proficiency but also pedagogical adaptability that is responsive to learners' needs. The greater the level of students' responsiveness toward digital media-based learning, the greater the need for teachers to adjust instructional strategies in order to sustain and further develop student engagement. Within this framework, pedagogical adaptation is understood as teachers' ability to integrate pedagogical competence, technology utilization, understanding of learner characteristics, and instructional objectives into contextualized teaching practices. Accordingly, this article argues that the pedagogical adaptation of Islamic Religious Education teachers is a responsive process shaped not only by technological advancement but also by changing patterns of student learning that increasingly orient toward digital media. This perspective offers a new understanding that the success of Islamic Religious Education in the digital era depends not merely on the use of technology itself, but on teachers' ability to translate students' learning responsiveness into appropriate pedagogical decisions.

METHOD

A. Research Design

This study employed a qualitative approach with a case study design to investigate the pedagogical adaptation of Islamic Religious Education (IRE) teachers in responding to students' digital media-oriented learning responsiveness. A case study design was selected because it enables researchers to explore a phenomenon in depth within its real-life context, thereby providing a comprehensive understanding of participants' experiences, actions, and interactions¹¹. The qualitative approach was deemed appropriate because the study sought to understand and interpret social phenomena related to teachers'

¹¹ Yin, Robert K. *Case Study Research and Applications: Design and Methods*. 6th ed. (Thousand Oaks, CA: Sage Publications, 2018)

pedagogical practices and students' responses in Islamic Religious Education learning within the digital era¹².

B. Research Site and Context

The study was conducted at SMP Negeri 31 Purworejo, Central Java, Indonesia, from May to June 2026. The research site was purposively selected because the school had incorporated various digital media into its instructional practices, particularly in Islamic Religious Education classes. Preliminary observations indicated that students demonstrated higher levels of attention, participation, and enthusiasm when learning activities involved digital media such as instructional videos, interactive quizzes, and multimedia presentations. These conditions made SMP Negeri 31 Purworejo a relevant context for examining how teachers adapt their pedagogical practices in response to students' learning characteristics within a digital learning environment.

C. Participants and Informants

Participants were selected using purposive sampling based on their relevance to the objectives of the study¹³. The primary informant was an Islamic Religious Education teacher responsible for teaching the class that served as the focus of the research. To obtain diverse perspectives on students' learning responsiveness, four seventh-grade students from Class VII D were also involved as supporting informants. The selection of students considered variations in their levels of participation and engagement during classroom learning activities, enabling the researcher to gain a more comprehensive understanding of students' responses to digital media-based learning. The combination of data obtained from both the teacher and students facilitated a deeper understanding of the phenomenon under investigation.

D. Data Collection

Data were collected through observation, semi-structured interviews, and documentation. Observations were conducted to directly examine the learning

¹² Creswell, John W., and Cheryl N. Poth. *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. 4th ed. (Thousand Oaks, CA: Sage Publications, 2018).

¹³ Patton, Michael Quinn. *Qualitative Research & Evaluation Methods*. 4th ed. (Thousand Oaks, CA: Sage Publications, 2015)

process, students' learning responsiveness, and the pedagogical adaptation practices employed by the teacher during Islamic Religious Education lessons. Semi-structured interviews were carried out with both the teacher and students to explore their experiences, perspectives, and perceptions regarding the use of digital media and the instructional strategies implemented in the classroom. This interview format was chosen because it allowed the researcher to explore information in greater depth while maintaining alignment with the research focus¹⁴. Documentation was used to complement observational and interview data through the collection of relevant documents, including teaching modules, learning media, instructional materials, photographs of classroom activities, and other supporting documents. The use of multiple data collection techniques enabled a more comprehensive understanding of the phenomenon being studied.

E. Data Analysis

The data were analyzed using the interactive model developed by Miles, Huberman, and Saldaña, which consists of data condensation, data display, and conclusion drawing and verification¹⁵. During the data condensation stage, data obtained from observations, interviews, and documentation were selected, focused, simplified, and organized. Subsequently, the data were systematically displayed through categories and emerging themes to facilitate interpretation. The final stage involved drawing and verifying conclusions continuously throughout the research process. Data analysis was conducted iteratively, allowing themes related to students' learning responsiveness and teachers' pedagogical adaptation to be identified, refined, and continuously verified. The analysis focused on two primary themes: students' learning responsiveness in digital media-based Islamic Religious Education learning and the pedagogical adaptation of IRE teachers in responding to such responsiveness.

¹⁴ Merriam, Sharan B., and Elizabeth J. Tisdell. *Qualitative Research: A Guide to Design and Implementation*. 4th ed. (San Francisco: Jossey-Bass, 2016)

¹⁵ Miles, Matthew B., A. Michael Huberman, and Johnny Saldaña. *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. (Thousand Oaks, CA: Sage Publications, 2014)

F. Trustworthiness

The trustworthiness of the study was established through the criteria of credibility, transferability, dependability, and confirmability proposed by Lincoln and Guba. Credibility was enhanced through source triangulation and methodological triangulation by comparing data obtained from observations, interviews, and documentation, as well as from different informants involved in the study¹⁶. Transferability was addressed by providing a detailed description of the research context and participant characteristics, enabling readers to assess the applicability of the findings to similar contexts. Dependability was maintained through systematic documentation of the research process, while confirmability was ensured by grounding all findings and interpretations in empirical data collected from the field. Through these procedures, the study sought to ensure the trustworthiness and reliability of its findings.

DISCUSSION

The findings revealed that digital media-based Islamic Religious Education (IRE) learning not only influenced students' learning responsiveness but also encouraged teachers to undertake various forms of pedagogical adaptation. This discussion is grounded in the two principal findings of the study: the increased learning responsiveness of students in digital media-based learning environments and the emergence of teachers' pedagogical adaptation as a response to changing student learning characteristics. These findings are analyzed through the lenses of Student Engagement, pedagogical adaptation, and the Technological Pedagogical and Content Knowledge (TPACK) framework to explain the relationship between students' learning characteristics and teachers' instructional practices in the context of Islamic Religious Education.

A. Learning Responsiveness as a Manifestation of Student Engagement in Digital Media-Based Islamic Religious Education

The first finding indicates that students demonstrated higher levels of attention, participation, and enthusiasm when Islamic Religious Education

¹⁶ Lincoln, Yvonna S., and Egon G. Guba. *Naturalistic Inquiry*. (Beverly Hills, CA: Sage Publications, 1985)

learning incorporated digital media compared to conventional instructional approaches. This finding suggests that digital media function not merely as instructional tools but also as factors that enhance students' engagement in the learning process. In the context of this study, learning responsiveness, reflected in students' attention to instructional materials, active participation in quizzes and educational games, and enthusiasm throughout the learning process, can be interpreted as a form of student engagement fostered through more interactive and participatory learning experiences.

This finding aligns with the concept of student engagement proposed by Fredricks, Blumenfeld, and Paris¹⁷, who conceptualized student engagement as comprising behavioral, emotional, and cognitive dimensions. In this study, behavioral engagement was evident in students' active participation in answering questions and engaging in digital learning activities. Emotional engagement was reflected in their enthusiasm and interest in learning, while cognitive engagement was demonstrated through increased concentration and a better understanding of learning materials delivered through digital media. Therefore, the learning responsiveness identified in this study indicates that digital media can simultaneously facilitate these three dimensions of student engagement.

The findings also corroborate those of Gladisia et al, who argued that student engagement increases when learning environments provide opportunities for active participation and meaningful learning experiences¹⁸. Similarly, Agustina and Amaliyah found that technology-integrated learning approaches enhance student engagement by offering learning experiences that are more appealing and relevant to the characteristics of the digital generation¹⁹. The present study not only supports previous findings but also extends existing knowledge by demonstrating that increased engagement in Islamic Religious Education is

¹⁷ Fredricks, Jennifer A., Phyllis C. Blumenfeld, and Alison H. Paris. "School Engagement: Potential of the Concept, State of the Evidence." *Review of Educational Research* 74, no. 1 (2004): 59–109. <https://doi.org/10.3102/00346543074001059>.

¹⁸ Gladisia, N., N. Laily, and N. S. E. Puspitaningrum. "Gambaran Student Engagement dalam Pembelajaran di Era New Normal." *Jurnal Ilmiah Fakultas Psikologi Universitas Yudharta Pasuruan* 9, no. 1 (2022): 1–21.

¹⁹ Agustina, Menik Tetha, and Shofwatun Amaliyah. "Student Engagement di Era Blended Learning." *Jurnal Pendidikan dan Konseling* 5, no. 1 (2023): 5608–12. <https://doi.org/10.31004/jpdk.v5i1.11972>.

influenced not merely by the presence of technology itself, but by the ability of digital media to foster interaction, provide varied learning activities, and create more contextualized learning experiences.

Interestingly, the findings revealed that although students were still capable of participating in conventional learning, they exhibited more positive responses when instruction was delivered through digital media. This condition suggests that changes in students' learning characteristics do not diminish the relevance of traditional instructional methods; rather, they necessitate a greater variety of instructional strategies that are aligned with the learning needs of the digital generation. Academically, this finding implies that learning responsiveness should be considered an important indicator in evaluating the effectiveness of Islamic Religious Education instruction. Practically, teachers should take students' characteristics into account when selecting instructional media and strategies to optimize learning engagement.

B. Teachers' Pedagogical Adaptation as a Response to Changes in Students' Learning Characteristics

The second finding demonstrates that increased student responsiveness to digital media encouraged Islamic Religious Education teachers to implement various forms of pedagogical adaptation, including modifications to instructional methods, the utilization of digital media, more participatory classroom management practices, and the development of technology-based assessment strategies. This finding indicates that pedagogical adaptation extends beyond the mere ability to use technology; rather, it represents a process of adjusting instructional practices in response to evolving student characteristics and learning needs.

From the perspective of pedagogical adaptation, these actions reflect teachers' capacity to make instructional decisions based on actual classroom conditions. The adaptations undertaken by the teacher indicate that pedagogical practice is dynamic and contextual rather than a fixed set of procedures applied uniformly across all learning situations. This finding supports Baskara and Sutarni's argument that teachers' pedagogical competence is demonstrated through their ability to understand student characteristics and translate this

understanding into relevant instructional strategies²⁰. Likewise, Manik et al²¹. and Mubarakah et al. emphasized that instructional effectiveness is strongly influenced by teachers' ability to align learning approaches with students' needs²².

When analyzed through the TPACK framework, the teacher's pedagogical adaptation reflects the integration of technological, pedagogical, and content knowledge. The teacher did not merely use digital media as a tool for presenting content but employed it to create more interactive learning activities through instructional videos, digital quizzes, educational games, and smartboard-based instruction. This finding is consistent with the studies of Ritonga et al²³. Maskanah²⁴, and Saputro et al, which highlighted that TPACK implementation enables teachers to develop more effective instruction because technology is integrated in alignment with pedagogical objectives and instructional content. In this study, technology functioned as a means of enhancing learning interactions rather than as an end in itself²⁵.

The findings further support those of Fanani et al.²⁶, Rahmi and Safrida²⁷, and Maulani and Inayati, who reported that the integration of digital media in Islamic Religious Education enhances students' learning experiences. However, this study extends previous research by demonstrating that the use of digital media

²⁰Baskara, A., and N. Sutarni. "Kompetensi Pedagogik Guru SMA di Indonesia: Sebuah Systematic Literature Review." *Jurnal Pendidikan* 13, no. 3 (2024): 3481–96.

²¹Manik, Y. M., N. E. Prasetyo, and S. Sulisty. "Analyzing Education Quality in Papua Province Using Education Indicators." *Jurnal Kependidikan: Jurnal Hasil Penelitian dan Kajian Kepustakaan di Bidang Pendidikan, Pengajaran, dan Pembelajaran* 9, no. 1 (2023): 40–55. <https://doi.org/10.33394/jk.v9i1.6989>.

²²Mubarakah, S. F., P. Rahmania, N. Budiylanti, A. Helmy, and A. W. Batula. "Peran Kompetensi Pedagogis Guru PAI dalam Implementasi Kurikulum Merdeka." *Jurnal Pendidikan Islam* 8, no. 3 (2025): 1341–58.

²³Ritonga, M. S., S. T. Sumanti, and N. Anas. "Analisis Kemampuan Guru Pendidikan Agama Islam (PAI) dalam Mengimplementasikan Technological Pedagogical and Content Knowledge (TPACK) di Sekolah Dasar." *Jurnal Pendidikan* 9, no. 2 (2023): 722–32.

²⁴Maskanah, U. "Integration of TPACK in PAI Learning in the Digital Age: A Literature Review." *Ar-Raudhab: Journal of Islamic Religious Education* 1, no. 1 (2025): 9–21.

²⁵Saputro, Y. M., L. Asmara, and Z. Fiddarain. "Implementation of the TPACK Approach in Islamic Religious Education Learning at SMA Negeri Karanganyar." *Multicultural Islamic Education Review* 3, no. 1 (2025): 87–98. <https://doi.org/10.23917/mier.v3i1.10079>.

²⁶Fanani, M. I., A. R. Alfauzi, and Sutiah. "Urgensi Optimalisasi Media Digital untuk Pembelajaran PAI di Lingkungan Pendidikan." *Jurnal Pendidikan Islam* 9 (2024): 270–83.

²⁷Rahmi, R., and Safrida. "Urgensi Kompetensi Guru dalam Pelaksanaan Pembelajaran Berbasis Digital Pendidikan." *Jurnal Pendidikan* 2 (2023): 69–78.

cannot be separated from students' learning responsiveness²⁸. In other words, teachers' decisions to engage in pedagogical adaptation are driven not solely by the demands of educational digitalization but also by changes in students' learning patterns, which are increasingly responsive to digital media-based instruction.

A significant pattern emerging from the findings is the reciprocal relationship between students' learning responsiveness and teachers' pedagogical adaptation. The greater students' responsiveness to digital media, the stronger the motivation for teachers to develop more varied, interactive, and participatory instructional strategies. Conversely, teachers' pedagogical adaptations further strengthen student engagement in learning. This finding implies that professional development for Islamic Religious Education teachers in the digital era should focus not only on technological proficiency but also on the ability to understand student characteristics and translate them into appropriate pedagogical decisions. Thus, pedagogical adaptation can be understood as a form of professional responsiveness to the evolving dynamics of contemporary learning environments.

Overall, the findings indicate that students' learning responsiveness and teachers' pedagogical adaptation are two interrelated aspects of digital media-based Islamic Religious Education (IRE) learning. Increased student engagement through digital media serves as a driving force that encourages teachers to make various adjustments to instructional strategies, teaching methods, learning media, classroom management, and assessment practices. These findings contribute to the development of Islamic Religious Education scholarship by demonstrating that the success of digital learning is determined not only by the availability of technology but also by teachers' ability to respond to students' learning characteristics through adaptive pedagogical practices. From a practical perspective, this study highlights the importance of strengthening pedagogical competence and technology integration skills in the professional development of Islamic Religious Education teachers. Although this study was limited to one teacher and four students within the context of a case study conducted at SMP

²⁸ Maulani, D. R., and N. L. Inayati. "Digital Technology Integration in Islamic Religious Education." *Journal of Islamic Education* 11, no. 1 (2026): 30–52. <https://doi.org/10.35723/jie.v11i1.700>.
Ilmuna: Jurnal Studi Pendidikan Agama Islam I Vol. 8, No.2 September (2026)
ISSN: 2715-9981. EISSN: 2715-9434. DOI: <https://doi.org/10.54437/ilmuna>.

Negeri 31 Purworejo, the findings provide in-depth insights into the relationship between learning responsiveness and pedagogical adaptation in Islamic Religious Education. Future research may extend the scope of investigation to different educational levels, locations, and a more diverse range of participants in order to develop a more comprehensive understanding of the dynamics of Islamic Religious Education learning in the digital era.

CONCLUSION

This study demonstrates that students' digital media-oriented learning responsiveness constitutes an important characteristic of Islamic Religious Education (IRE) learning at SMP Negeri 31 Purworejo. Students exhibited higher levels of attention, participation, and enthusiasm when learning activities incorporated digital media compared to conventional instructional methods. These conditions encouraged the Islamic Religious Education teacher to undertake various forms of pedagogical adaptation, including adjustments to instructional strategies, the use of interactive digital media, more participatory classroom management, and the implementation of technology-based assessment practices. Accordingly, this study successfully achieved its objectives by describing students' digital media-oriented learning responsiveness and analyzing the forms of pedagogical adaptation employed by teachers in response to these learning characteristics.

The findings contribute to the advancement of Islamic Religious Education scholarship, particularly in understanding the relationship between students' learning responsiveness and teachers' pedagogical adaptation in the digital era. Theoretically, this study reinforces the concept of student engagement, encompassing students' behavioral, emotional, and cognitive involvement, and demonstrates that pedagogical adaptation represents a professional response to evolving student learning characteristics. Furthermore, the study extends understanding of the TPACK framework in Islamic Religious Education by showing that the integration of technology, pedagogy, and content knowledge is influenced not only by technological developments but also by students' responsiveness to the learning process. Practically, these findings highlight the importance of teachers' ability to design adaptive,

interactive, and learner-centered instruction through the pedagogically meaningful use of digital media.

The central message of this study is that the success of Islamic Religious Education in the digital era is not determined solely by the availability or use of technology, but rather by teachers' ability to understand students' learning characteristics and translate that understanding into appropriate pedagogical decisions. Therefore, professional development programs for Islamic Religious Education teachers should focus not only on improving digital literacy but also on strengthening pedagogical adaptation skills that enable teachers to design meaningful, participatory, and contextualized learning experiences. Future studies may investigate teachers' pedagogical adaptation across different educational levels, subject areas, or institutional contexts to gain broader insights into the dynamics of learning in the digital age.

This study has several limitations that should be acknowledged. First, the research was conducted in only one school and involved one Islamic Religious Education teacher and four student informants; therefore, the findings are not intended to be generalized broadly. Second, the case study approach focused on obtaining an in-depth understanding of a specific context, meaning that the findings were closely influenced by the social and instructional conditions of the research setting. Third, the relatively short research period limited the observation of long-term changes in students' learning responsiveness and teachers' pedagogical adaptation. Consequently, future research is recommended to involve a larger number of participants, more diverse school contexts, and longer research periods to generate a more comprehensive understanding of the relationship between students' learning responsiveness and teachers' pedagogical adaptation in Islamic Religious Education learning.

REFERENCE

- Afendi, A. R. "Pengembangan Profesional Guru di Era Digital: Strategi Mengintegrasikan Teknologi dan Pedagogi (Studi Kasus di MAN Insan Cendekia Paser Kalimantan Timur)." *Idarah Tarbiyah: Journal of Management in Islamic Education* 5, no. 5 (2024): 490–513. <https://doi.org/10.32832/itjmie.v5i5.18096>.

- Agustina, M. T., and S. Amaliyah. "Student Engagement di Era Blended Learning." *Jurnal Pendidikan dan Konseling* 5 (2023): 5608–12.
- Akbar, M. A., and S. Arifin. "Adaptive Strategies of Islamic Education (PAI) Teachers toward Digital-Based Islamic Education Policies: A Case Study at SMAN 1 Selong." *ISLAMIKA* 8, no. 1 (2026): 180–215. <https://doi.org/10.36088/islamika.v8i1.6020>.
- Amalia, A. C., N. Zalwira, A. R. A. Ghani, F. Firdaus, et al. "Madrasa and Digital Learning Transformation: Integrating Technological Pedagogical and Content Knowledge and Makarim Sharia into Fostering Madrasa Teachers' Teaching Skills." *Journal of Instruction and Islamic Religious Education* 2, no. 1 (2026): 36–52. <https://doi.org/10.63826/jiire.v2i1.166>.
- Asmayawati, Yufiarti, and E. Yetti. "Pedagogical Innovation and Curricular Adaptation in Enhancing Digital Literacy: A Local Wisdom Approach for Sustainable Development in Indonesia Context." *Journal of Open Innovation: Technology, Market, and Complexity* 10, no. 1 (2024): 100233. <https://doi.org/10.1016/j.joitmc.2024.100233>.
- Baskara, A., and N. Sutarni. "Kompetensi Pedagogik Guru SMA di Indonesia: Sebuah Systematic Literature Review." *Jurnal Pendidikan* 13, no. 3 (2024): 3481–96.
- Creswell, John W., and Cheryl N. Poth. *Qualitative Inquiry and Research Design: Choosing among Five Approaches*. 4th ed. Thousand Oaks, CA: Sage Publications, 2018.
- Dadang, D., A. Mahendra, P. Publik, and S. Syarip. "A Systematic Literature Review on the Development of Pedagogical Competencies among Islamic Religious Education Teachers in the Digital Age." *Edukasi Islami: Jurnal Pendidikan Islam* 15, no. 2 (2026): 737–49. <https://doi.org/10.30868/ei.v15i02.10194>.
- Fanani, M. I., A. R. Alfauzi, and Sutiah. "Urgensi Optimalisasi Media Digital untuk Pembelajaran PAI di Lingkungan Pendidikan." *Jurnal Pendidikan Islam* 9 (2024): 270–83.
- Firnando, H. G., N. Khair, and C. Setiawati. "Religious Education 5.0: Concept, Design, and Implementation of Adaptive Pedagogy in Islamic Religious Education for the Society 5.0 Era." *Indonesian Journal of Islamic Educational Review* 2, no. 3 (2025): 241–54. <https://doi.org/10.58230/ijier.v2i3.404>.
- Gladisia, N., N. Laily, and N. S. E. Puspitaningrum. "Gambaran Student Engagement dalam Pembelajaran di Era New Normal." *Jurnal Ilmiah Fakultas Psikologi Universitas Yudharta Pasuruan* 9, no. 1 (2022): 1–21.
- Hajar, S., and N. Nanning. "Pentingnya Pendidik untuk Memahami Karakteristik Peserta Didik sebagai Acuan dalam Melaksanakan Perencanaan Konsep

- Pembelajaran.” *Dialektika: Jurnal Pendidikan Agama Islam* 1, no. 2 (2022): 10–18. <https://doi.org/10.35905/dialektika.v1i2.4333>.
- Hakim, A. R. “Innovative Teaching Strategies in Madrasahs: Integrating Traditional and Digital Pedagogies for Enhanced Student Engagement.” *Islamic Journal of Teaching and Learning* 1, no. 1 (2025): 32–40. <https://doi.org/10.59784/jtlim.v1i1.4>.
- Khotima, H., Waspodo, and M. Fauzi. “Technology, Pedagogy, and Content Integration in Islamic Cultural History Education: TPACK Implementation and Its Implications for Student Engagement.” *Journal of Innovation and Research in Primary Education* 5, no. 2 (2026): 3063–71. <https://doi.org/10.56916/jirpe.v5i2.3705>.
- Koswara, A., D. Darmanto, I. Wigati, and Suhadi. “Digital Transformation in Islamic Religious Education: Opportunities, Challenges, and Strategic Solutions.” *Sustainable* 9, no. 2 (2026): 1–12. <https://doi.org/10.32923/2br4mg47>.
- Lincoln, Yvonna S., and Egon G. Guba. *Naturalistic Inquiry*. Beverly Hills, CA: Sage Publications, 1985.
- Manik, E., S. Nasution, and S. T. Sumanti. “Analisis Kompetensi Pedagogik Guru pada Proses Pembelajaran.” *Munaddhomah: Jurnal Manajemen Pendidikan Islam* 4, no. 3 (2023): 659–68. <https://doi.org/10.31538/munaddhomah.v4i3.464>.
- Maskanah, U. “Integration of TPACK in PAI Learning in the Digital Age: A Literature Review.” *Ar-Raudhab: Journal of Islamic Religious Education* 1, no. 1 (2025): 9–21.
- Maulani, D. R., and N. L. Inayati. “Digital Technology Integration in Islamic Religious Education.” *Journal of Islamic Education* 11, no. 1 (2026): 30–52. <https://doi.org/10.35723/jie.v11i1.700>.
- Merriam, Sharan B., and Elizabeth J. Tisdell. *Qualitative Research: A Guide to Design and Implementation*. 4th ed. San Francisco: Jossey-Bass, 2016.
- Miles, Matthew B., A. Michael Huberman, and Johnny Saldaña. *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. Thousand Oaks, CA: Sage Publications, 2014.
- Mubarokah, S. F., P. Rahmania, N. Budiyaniti, A. Helmy, and A. W. Batula. “Peran Kompetensi Pedagogis Guru PAI dalam Implementasi Kurikulum Merdeka.” *Jurnal Pendidikan Islam* 8, no. 3 (2025): 1341–58.
- Patton, Michael Quinn. *Qualitative Research & Evaluation Methods*. 4th ed. Thousand Oaks, CA: Sage Publications, 2015.

- Rahmi, R., and Safrida. "Urgensi Kompetensi Guru dalam Pelaksanaan Pembelajaran Berbasis Digital Pendidikan." *Jurnal Pendidikan* 2 (2023): 69–78.
- Ritonga, M. S., S. T. Sumanti, and N. Anas. "Analisis Kemampuan Guru Pendidikan Agama Islam (PAI) dalam Mengimplementasikan Technological Pedagogical and Content Knowledge (TPACK) di Sekolah Dasar." *Jurnal Pendidikan* 9, no. 2 (2023): 722–32.
- Saputro, Y. M., L. Asmara, and Z. Fiddarain. "Implementation of the TPACK Approach in Islamic Religious Education Learning at SMA Negeri Karanganyar." *Multicultural Islamic Education Review* 3, no. 1 (2025): 87–98. <https://doi.org/10.23917/mier.v3i1.10079>.
- Suriati. "Integrasi Media Pembelajaran Digital dalam Meningkatkan Kompetensi Guru PAI." *Jurnal Pendidikan Islam* 3, no. 1 (2025): 266–71.
- Yin, Robert K. *Case Study Research and Applications: Design and Methods*. 6th ed. Thousand Oaks, CA: Sage Publications, 2018.