

Islamic Moral Education and Character Building in the Era of IoT

Wakib Kurniawan^{1*}, Siti Annisah²

¹ Sekolah Tinggi Ilmu Tarbiyah Bustanul 'Ulum Lampung Tengah; wakib.kurniawan30@gmail.com

² Universitas Islam Negeri Jurai Siwo Lampung; sitiannisah1980@gmail.com

ABSTRACT

This study investigates the role of Akidah Akhlak teachers in shaping the noble character of students in the era of the Internet of Things (IoT), a time marked by rapid technological change and digital exposure. The research was conducted at MTs Bustanul 'Ulum Jayasakti in Central Lampung using a descriptive qualitative approach. Data were collected through observation, interviews, and documentation. The findings show that teachers not only deliver religious content but also act as moral exemplars and digital mentors. They integrate Islamic values into students' digital realities using contextual strategies such as role-modeling, project-based learning, and ethical digital supervision. Despite facing challenges like limited digital infrastructure and varying parental involvement, these educators effectively foster students' character by aligning Islamic teachings with contemporary digital contexts. The study concludes that strengthening teachers' digital literacy and pedagogical adaptability is crucial to preserving moral integrity in a digital society.

Keywords: Akidah Akhlak, Internet of Things, Islamic Education, Noble Character, Teacher's Role

How to Cite Kurniawan, W., & Annisah, S. (2025). Islamic Moral Education and Character Building in the Era of IoT. *Jurnal Al Burhan*, 5(2), 311–320. <https://doi.org/10.58988/jab.v5i2.529>

INTRODUCTION

The era of the Internet of Things (IoT), which marks the acceleration of the Fourth Industrial Revolution (Industry 4.0) and the emergence of Society 5.0, has reshaped the structure and dynamics of human life, including the educational sector. IoT refers to a network of interconnected devices that collect, exchange, and analyze data without human intervention (Yousef et al., 2020). In the context of education, IoT creates transformative opportunities: learning becomes more personalized, accessible, and efficient through digital platforms, real-time feedback systems, and smart devices. However, behind these benefits lies a paradox: while IoT enhances cognitive access, it simultaneously exposes students especially adolescents to a deluge of morally inappropriate content, such as cyberbullying, hate speech, pornography, and digital consumerism.

As digital natives, today's students engage with technology from a young age. Virtual settings are having a growing impact on their socialization, self-concept, and value systems. In the absence of robust character education, students are susceptible to moral disorientation, superficial ethics, and diminished social responsibility as a result of these digital influences. Several studies (Rahmawati et al., 2021; Sutisna, 2020) indicate that unfiltered digital exposure can erode values such as honesty, respect, modesty, and responsibility core principles in Islamic education. Islamic religious education, particularly the subject of *Akidah Akhlak*, is designed to address the spiritual, ethical, and emotional dimensions of students. *Akidah Akhlak* teachers carry the dual mandate of transmitting religious knowledge and cultivating noble character (*akhlakul karimah*). In the digital age, this role becomes increasingly complex. Teachers are no longer just classroom instructors; they must also serve as digital mentors, behavioral role models, and moral anchors who guide students in navigating a value-laden digital reality.

Literature on character education in the digital era is growing. Scholars such as Syamsuddin (2019), Hasanah and Amalia (2023), and Narwanti (2019) emphasize that teachers must integrate moral education with students' contemporary digital experiences. Furthermore, Lestari and Maulana (2022) demonstrate that Islamic teachers who master digital tools are more effective in delivering values in engaging and contextual ways. Social media platforms such as YouTube and Instagram, when used wisely, have proven to be powerful tools in moral education (Andriani, 2023). However, while these studies highlight important aspects of digital literacy and moral instruction, they generally focus on general Islamic education or the technological challenges faced by schools.

According to a review, the literature currently in publication does not specifically address how *Akidah Akhlak* teachers modify their teaching methods, provide an example of moral behavior, and integrate digital values in response to the technology era. The majority of research does not examine how these teachers provide morally complex character education that is firmly anchored in Islamic theology while also being sensitive to the ethical issues brought on by students' use of digital devices. This gap is significant because *Akidah Akhlak* teachers are uniquely positioned to be value transmitters in an era where values are increasingly contested.

Thus, the novelty of this study lies in its exploration of the contextual strategies employed by *Akidah Akhlak* teachers in shaping students' noble character through technologically adaptive approaches. It bridges the gap between normative Islamic teaching and the practical demands of moral formation in the age of IoT. Moreover, it highlights the importance of teacher digital competence, pedagogical transformation, and family-school collaboration in preserving Islamic values amid rapid digitalization.

This research emerges as an urgent response to the moral challenges faced by students in a highly connected, yet ethically ambiguous, digital ecosystem. The study contributes to the discourse on Islamic character education by proposing a transformative model that integrates faith-based ethics with digital awareness. The objectives of this research are to analyze the strategic role of *Akidah Akhlak* teachers in cultivating noble character, identify the pedagogical and technological strategies they employ, examine the constraints they encounter, and develop a responsive model for character education that aligns with both Islamic principles and the demands of the IoT era.

METHOD

This study employed a descriptive qualitative approach aimed at exploring the role of *Akidah Akhlak* teachers in shaping students' noble character in the era of the Internet of Things (IoT), with the research conducted at MTs Bustanul 'Ulum Jayasakti, Anak Tuha District, Central Lampung Regency. The participants consisted of nine purposively selected individuals: two *Akidah Akhlak* teachers, one principal, and six students from grades VIII and IX who were actively engaged in character education activities. Data were collected through three main techniques: observation, semi-structured interviews, and documentation. Observations were conducted in a passive participatory manner over six instructional sessions to examine teaching strategies and teacher-student interactions. In-depth interviews were conducted with each informant, lasting between 45 to 90 minutes, and were audio-recorded for accuracy. Documentation included instructional plans (RPP), modules, student-created projects, and visual records such as photographs and video footage of classroom activities.

Supplementary tools such as voice recorders and cameras were used to support field data collection. Additionally, both teachers and students utilized digital tools such as smartphones, YouTube, Canva, and PowerPoint to create and present digital da'wah content that integrated Islamic values demonstrating an adaptive approach to students' digital ecosystems (Hasanah & Amalia, 2023; Syamsuddin & Haryanto, 2021). The collected data were analyzed using the interactive model proposed by Miles, Huberman, and Saldaña (2019), which consists of three interrelated stages: data condensation (selecting, simplifying, and organizing raw data from field notes, interview transcripts, and documentation), data display (presenting information through narratives, tables, and thematic matrices), and drawing and verifying conclusions through iterative reflection. To ensure data credibility, triangulation across data sources and methods was applied, along with member checking by key informants (Bengtsson, 2016; Castleberry & Nolen, 2018; Nowell et al., 2017). The researcher was present at the research site for four consecutive weeks to observe learning processes, conduct

interviews, and gather supporting documentation in real-time. Through this comprehensive design, the study seeks to provide a replicable and in-depth account of how *Akidah Akhlak* teachers implement contextual Islamic moral values and pedagogical strategies responsive to the digital challenges of the IoT era.

RESULTS AND DISCUSSION

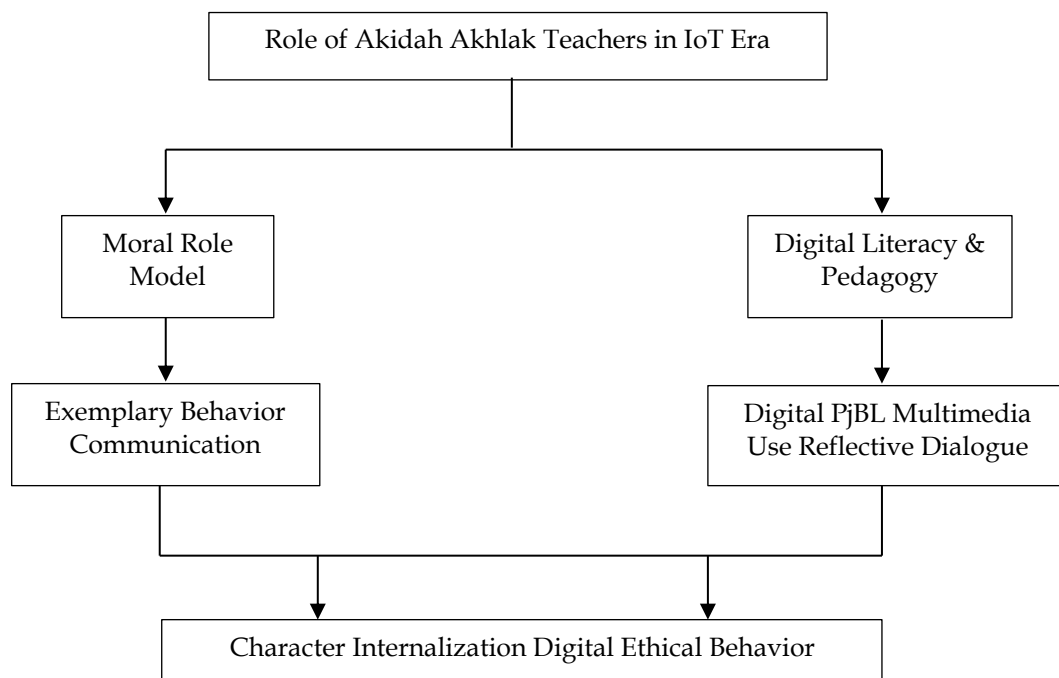


Figure 1. Scheme of Akidah Akhlak Teachers' Role in the IoT Era

This conceptual model uses two integrated dimensions—digital literacy with pedagogy and moral role modelling to show how Akidah Akhlak teachers strategically shape students' noble character in the Internet of Things (IoT) era. In addition to providing Islamic knowledge in a normative manner, these educators have the duty of modeling moral behavior in both digital and real-world contexts. This role modeling is reflected in their consistent actions and speech, respectful communication, and wise use of technology. In this regard, teachers serve as *uswah hasanah* (exemplary figures) for students, aligning with Bandura's Social Learning Theory, which emphasizes the importance of learning through observing trusted role models.

However, teachers must also be highly proficient in digital literacy in order to create contextualized teaching methods that represents to students' current technological lifestyles. This entails using Islamic multimedia resources (such as podcasts, animations, and short films) to conduct digital project-based learning—such as creating brief dakwah videos or online moral campaigns—and encouraging thoughtful conversations about moral quandaries present in digital environments. These strategies reflect Carl Rogers' Humanistic Learning Theory,

which prioritizes learner-centered approaches grounded in empathy and real-life relevance.

The implementation of these two core dimensions results in two primary outcomes. First, students demonstrate the internalization of Islamic values such as *ṣidq* (truthfulness), *ḥayā'* (modesty), and *iḥtirām* (respect), which are cultivated through daily moral practices and direct value-based instruction. Second, students develop ethical behavior in digital spaces, such as respectful communication on social media, avoiding harmful content, and maintaining digital etiquette and privacy. This concept demonstrates how integrating digital pedagogical engagement with moral exemplification can develop students' character in a comprehensive way while increasing the applicability and efficacy of moral education in the face of swift technology advancement. This concept concludes by stating that Akidah Akhlak teachers need to become both spiritual mentors and digital educators who bridge Islamic ideals with the reality of the digital age. This approach not only sustains the relevance of character education in the IoT era but also prepares a generation of Muslim youth who are intellectually competent, spiritually grounded, and ethically responsible in both real and virtual worlds.

Summary of Main Findings

The findings of this study reveal that Akidah Akhlak teachers at MTsS Bustanul 'Ulum Jayasakti play a multidimensional and transformative role in shaping students' noble character amidst the challenges of the Internet of Things (IoT) era. Their responsibilities extend beyond the mere delivery of religious instruction to include moral mentoring, ethical supervision of students' digital behavior, and consistent role modeling of Islamic values in both real-life and virtual contexts. As such, Akidah Akhlak teachers serve not only as educators but also as spiritual mentors and character builders in the digital age.

Role Modeling as the Core Strategy

One of the most impactful strategies identified in this study is role modeling (*uswah hasanah*). Teachers deliberately position themselves as moral exemplars by demonstrating integrity, discipline, politeness, and wisdom in both face-to-face and online interactions. This finding aligns with Bandura's Social Learning Theory, which posits that individuals learn through observation and imitation of trusted and credible figures. Students were found to internalize core Islamic values such as *ṣidq* (truthfulness), *ḥayā'* (modesty), and *iḥtirām* (respect) by observing their teachers' ethical conduct during digital learning sessions, online discussions, and social media use. These values are nurtured not only through formal lessons but also through teachers' everyday interactions and informal conversations, which help cultivate students' moral awareness and spiritual sensitivity.

Contextual Pedagogical Strategies in the IoT Era

Teachers have adopted a variety of pedagogical strategies that integrate Islamic values into students' digital realities. These include: (1) Digital Project-Based Learning (PjBL): Students are encouraged to create short Islamic videos, digital posters, and moral storytelling content using mobile applications. This approach enhances engagement and reinforces value internalization through creative and practical learning experiences; (2) Reflective Group Dialogues: Teachers facilitate discussions on moral dilemmas arising from online behavior such as cyberbullying, hoaxes, and oversharing anchoring them in Islamic teachings. These dialogues are guided by references to Qur'anic verses and prophetic traditions; (3) Digital Media Utilization: Teachers incorporate Islamic podcasts, animations, and short moral films into lessons to capture students' interest and connect abstract religious values with relatable, real-life contexts; and (4) Moral Supervision in Digital Spaces: Teachers take an educational rather than punitive approach to managing students' digital conduct, emphasizing adab (Islamic etiquette) in digital communication, responsible content sharing, and discernment in media consumption. These instructional strategies resonate with Carl Rogers' Humanistic Learning Theory, which advocates for empathetic, student-centered teaching that fosters internal motivation and value-based self-regulation.

Challenges in Digital Character Formation

Despite the implementation of innovative strategies, Akidah Akhlak teachers face several critical challenges in shaping students' character in the digital age: (1) Limited Digital Literacy; (2) Weak School-Family Collaboration; and (3) Infrastructural Limitations. Not all teachers possess adequate skills in using digital tools, which hinders the effective integration of moral values into engaging and interactive learning methods. The lack of parental supervision over students' digital activities at home undermines the consistency and reinforcement of moral education provided at school. Constraints such as limited internet connectivity and insufficient access to digital devices reduce the full potential of technology-enhanced character education. These findings affirm Sumarni's (2021) assertion that successful character education in the digital era requires a collaborative ecosystem involving educators, families, and institutions.

Theoretical Integration and Implications

The findings of this study support the need for an integrated character education model that combines: (1) Moral Exemplification; (2) Digital Literacy Integration; and (3) Contextual Religious Engagement. This model aligns with the views of Zainuddin et al. (2020), who argue that character education in the digital age must incorporate technological fluency while maintaining strong ethical and spiritual foundations. Moreover, this study contributes to the field of Islamic education by proposing a practical transformation in the role of Akidah Akhlak

teachers from conventional religious instructors to “Digital Moral Educators” who skillfully combine pedagogy, piety, and digital competence.

Answering Research Objectives and Questions

This research clearly addresses its main objectives and research questions: (1) What is the role of Akidah Akhlak teachers in the IoT era?: They act as mentors, moral role models, digital behavior supervisors, and strategists in character development; (2) What strategies do they employ?: Role modeling, digital project-based learning, reflective discussions, and multimedia integration; and (3) What challenges do they face?: Gaps in digital literacy, limited home-school collaboration, and infrastructural deficiencies. These findings are not merely descriptive; they offer analytical and theoretical insights that are highly relevant to the evolving demands of education in the digital era.

CONCLUSION

This study confirms that teachers of Akidah Akhlak have a transformative as well as strategic role in helping students develop moral character in the Internet of Things (IoT) era. The results show that role modeling, in which educators continuously exhibit Islamic moral principles in both offline and online settings, is the most successful method for developing students' character. With this method, children experience internalizing values through concrete examples and routine behaviors rather than just verbal instruction. Furthermore, teachers have adopted contextual pedagogical strategies, including the integration of Islamic ethics into digital literacy education, the facilitation of reflective dialogues to address digital moral dilemmas, and the implementation of project-based learning that encourages students to produce positive Islamic digital content. These practices indicate a shift in the role of *Akidah Akhlak* teachers—from traditional religious instructors to digital moral mentors.

Despite these advancements, the study also identifies several critical challenges, such as limited digital literacy among teachers, inadequate infrastructure, and the lack of parental involvement in supervising students' digital behavior. These factors hinder the consistency and effectiveness of character education in an increasingly complex digital landscape. The scientific contribution of this study lies in its proposal of a holistic model of Islamic character education that combines moral exemplification, contextual instruction, and adaptive digital integration. Effective character education in the IoT era demands not only spiritual and pedagogical depth but also technological adaptability, thus making the role of *Akidah Akhlak* teachers more complex yet increasingly vital.

Based on these findings, the study offers several recommendations. First, educational institutions should provide continuous professional development programs to enhance *Akidah Akhlak* teachers' digital competencies, especially in utilizing educational media and ethical digital platforms. Second, stronger

collaboration between schools and parents is essential to ensure that moral supervision at home complements the school environment. Third, policymakers and school administrators must support character education initiatives by providing adequate digital infrastructure and institutional backing to enable the integration of Islamic values into 21st-century learning. Fourth, future research should explore the development of Islamic digital curriculum frameworks and evaluate the long-term effectiveness of integrated moral education strategies across diverse educational settings. Fifth, it is recommended that future researchers apply the findings of this study in broader educational contexts – such as pesantren, urban Islamic schools, and integrated Islamic institutions – to assess the transferability and scalability of the proposed character education model.

REFERENCES

- Andriani, R. (2023). Efektivitas Penggunaan Media Sosial sebagai Sarana Pendidikan Akhlak. *Jurnal Pendidikan Islam dan Teknologi*, 5(1), 45–59. <https://doi.org/10.1234/jpit.v5i1.2023>
- Bengtsson, M. (2016). *How to plan and perform a qualitative study using content analysis*. *NursingPlus Open*, 2, 8–14.
- Bazeley, P. (2021). *Analyzing Qualitative Data: More Than 'Identifying Themes'*. SAGE Publications.
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597.
- Castleberry, A., & Nolen, A. (2018). Thematic analysis of qualitative research data: Is it as easy as it sounds? *Currents in Pharmacy Teaching and Learning*, 10(6), 807–815.
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (4th ed.). Sage Publications.
- Flick, U. (2018). *An Introduction to Qualitative Research* (6th ed.). Sage Publications.
- Hasanah, U., & Amalia, R. (2023). Character Education Strategies in the Digital Age: Integrating Islamic Values in Teaching Practices. *Journal of Moral and Civic Education*, 7(1), 34–46.
- Lestari, S., & Maulana, A. (2022). Tantangan Pendidikan Islam di Era IoT: Studi Kasus pada Madrasah Tsanawiyah. *Jurnal Teknologi dan Pendidikan Islam*, 4(2), 101–115. <https://doi.org/10.1234/jtpi.v4i2.2022>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2019). *Qualitative Data Analysis: A Methods Sourcebook* (4th ed.). Sage Publications.
- Neale, J. (2020). Thematic analysis and its reconceptualization as ‘reflexive thematic analysis’. *International Journal of Social Research Methodology*, 23(6), 667–681.

- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1–13.
- Narwanti, E. (2019). Character Formation in the Era of Digital Society. *Jurnal Pendidikan Karakter*, 9(2), 210–224.
- Okfalisa, O., Darmi, T., & Kusumastuti, R. (2022). The Impact of Internet of Things (IoT) in Education: Opportunities and Challenges. *Journal of Educational Technology*, 16(3), 212–223. <https://doi.org/10.21831/jet.v16i3.2022>
- Putri, R. D., & Nurhidayah, T. (2021). The Role of Teachers in Digital Moral Education. *Indonesian Journal of Educational Research and Review*, 4(3), 420–432.
- Rahmawati, N., Hidayatullah, M. F., & Azzahra, S. (2022). Digital Literacy and Moral Education: Case Study in Islamic Junior High Schools. *Jurnal Pendidikan Islam*, 11(2), 156–170.
- Ravitch, S. M., & Carl, N. M. (2021). *Qualitative Research: Bridging the Conceptual, Theoretical, and Methodological* (3rd ed.). Sage Publications.
- Rahmawati, F., Nurhadi, N., & Zulkifli, A. (2021). Integrasi Pendidikan Karakter dalam Kurikulum Pendidikan Islam di Era Digital. *Jurnal Pendidikan Agama Islam*, 9(2), 134–150. <https://doi.org/10.21009/jpai.092.04>
- Syamsuddin, S. (2019). Peran Guru dalam Menanamkan Nilai Akhlak pada Siswa Sekolah Dasar di Era Teknologi. *Jurnal Pendidikan Karakter*, 10(1), 83–97. <https://doi.org/10.21831/jpk.v10i1.2019>
- Sutisna, D. (2020). Pengaruh Penggunaan Media Digital terhadap Perilaku Sosial Remaja di Sekolah Menengah Pertama. *Jurnal Psikologi Pendidikan dan Konseling*, 6(2), 77–89. <https://doi.org/10.24042/jppk.v6i2.2020>
- Silverman, D. (2021). *Interpreting Qualitative Data* (6th ed.). Sage Publications.
- Sumarni, S. (2021). Parental Involvement in Character Education: Collaboration Between School and Home. *International Journal of Educational Research Review*, 6(4), 567–579.
- Tilaar, H. A. R. (2015). *Standar Nasional Pendidikan: Telaah Kritis Dalam Rangka Mencerdaskan Bangsa Indonesia*. Jakarta: Rineka Cipta.
- Tracy, S. J. (2020). *Qualitative Research Methods: Collecting Evidence, Crafting Analysis, Communicating Impact* (2nd ed.). Wiley-Blackwell.
- Wuryandani, W. (2020). Relevansi Pendidikan Karakter di Era Digital. *Jurnal Ilmu Pendidikan*, 26(2), 101–110.
- Yousef, A. M. F., Chatti, M. A., & Schroeder, U. (2020). Internet of Things in Educational Settings: Challenges and Potentials. *International Journal of Emerging Technologies in Learning*, 15(17), 4–21. <https://doi.org/10.3991/ijet.v15i17.2020>

Zainuddin, Z., Habibi, A., & Mutakinati, L. (2020). How Digital Technologies Affect Character Education. *Education and Information Technologies*, 25(6), 5125–5146.



© 2025 by the authors. Submitted for possible open-access publication under the terms and conditions of the Creative Commons Attribution (CC-BY-SA) license (<https://creativecommons.org/licenses/by-sa/4.0/>).