



CHROMEBOOK INTEGRATION IN ISLAMIC RELIGIOUS EDUCATION LEARNING TO STRENGTHEN STUDENTS' DIGITAL LITERACY AND RELIGIOUS CHARACTER

INTEGRASI CHROMEBOOK DALAM PENDIDIKAN AGAMA ISLAM UNTUK MEMPERKUAT LITERASI DIGITAL DAN KARAKTER KEAGAMAAN SISWA

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DOI: <https://doi.org/10.62567/ijis.v2i2.2337>

Abstract

The development of digital technology in education demands the integration of learning tools that not only enhance cognitive competence but also shape students' character. In the context of Islamic Religious Education, the use of digital devices needs to be directed to align with the strengthening of digital literacy and religious values. This study aims to analyze the integration of Chromebooks in Islamic Religious Education learning and its contribution to strengthening digital literacy and the religious character of students at Marga Mulya II Elementary School, North Bekasi. The study used a qualitative approach with a case study. Data were collected through participant observation, in-depth interviews, and documentation studies. Then, they were analyzed using an interactive model that included data reduction, data presentation, and conclusion drawing. The results show that Chromebook integration was implemented in a structured manner through digital-based learning planning, interactive activities, and controlled online evaluation. Students' digital literacy developed through the habit of using devices in an orderly and responsible manner. At the same time, religious character traits such as honesty, discipline, and responsibility were internalized through the association of technology use with religious values. These findings confirm that technology can be a medium for developing digital competency and character when managed through appropriate pedagogical design. This research has implications for the importance of developing technology-based, integrative, and values-oriented Islamic Religious Education learning models in elementary schools.

Keywords : *Chromebook Integration, Islamic Religious Education Learning, Digital Literacy, Religious Character, Elementary Schools.*



Abstrak

Perkembangan teknologi digital dalam pendidikan menuntut integrasi alat pembelajaran yang tidak hanya meningkatkan kompetensi kognitif tetapi juga membentuk karakter siswa. Dalam konteks Pendidikan Agama Islam, penggunaan perangkat digital perlu diarahkan agar selaras dengan penguatan literasi digital dan nilai-nilai agama. Penelitian ini bertujuan untuk menganalisis integrasi Chromebook dalam pembelajaran Pendidikan Agama Islam dan kontribusinya terhadap penguatan literasi digital dan karakter religius siswa di SD Marga Mulya II, Bekasi Utara. Penelitian ini menggunakan pendekatan kualitatif dengan studi kasus. Data dikumpulkan melalui observasi partisipan, wawancara mendalam, dan studi dokumentasi. Kemudian, data tersebut dianalisis menggunakan model interaktif yang meliputi reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa integrasi Chromebook diimplementasikan secara terstruktur melalui perencanaan pembelajaran berbasis digital, aktivitas interaktif, dan evaluasi online terkontrol. Literasi digital siswa berkembang melalui kebiasaan menggunakan perangkat secara tertib dan bertanggung jawab. Pada saat yang sama, sifat-sifat karakter religius seperti kejujuran, disiplin, dan tanggung jawab diinternalisasi melalui keterkaitan penggunaan teknologi dengan nilai-nilai agama. Temuan ini menegaskan bahwa teknologi dapat menjadi media untuk mengembangkan kompetensi digital dan karakter ketika dikelola melalui desain pedagogis yang tepat. Penelitian ini memiliki implikasi terhadap pentingnya pengembangan model pembelajaran Pendidikan Agama Islam berbasis teknologi, integratif, dan berorientasi nilai di sekolah dasar.

Kata Kunci : Integrasi Chromebook, Pembelajaran Pendidikan Agama Islam, Literasi Digital, Karakter Religius, Sekolah Dasar.

1. INTRODUCTION

Digital transformation has fundamentally changed the global educational landscape, including the way knowledge is constructed, accessed, and distributed in the classroom. The integration of information technology into learning is no longer positioned as an add-on, but rather as an inherent part of the 21st-century educational ecosystem (Mahmoodi et al., 2025). Digital literacy has become an essential competency that determines students' readiness to face increasingly complex social, cultural, and religious dynamics (Raman et al., 2025). In the context of religious education, the use of technology presents both challenges and opportunities to expand methods for internalizing values and building character (Adler et al., 2025). Islamic Religious Education (PAI) is required not only to transmit normative teachings but also to develop critical and ethical skills in the digital space (Agunbiade, 2019). Therefore, the integration of digital devices such as Chromebooks in Islamic Religious Education learning is a strategic issue that is relevant for academic study (Syukri & Rosyad, 2025).

In a national context, the government's school digitalization program encourages the use of cloud computing-based devices at various levels of primary and secondary education (Hadiyana & Subagio, 2025). Elementary schools, as the foundation for character building and learning habits, face demands to integrate technology without neglecting the pedagogical and values dimensions (Hadiyana & Subagio, 2025). Islamic Religious Education (PAI) teachers in elementary schools are faced with the need to design learning that adapts to technological developments while maintaining an orientation toward developing students' morals and spirituality (Firnando et al., 2025). The use of Chromebooks opens access to interactive learning resources, collaborative platforms, and a wider variety of digital religious materials (Hidayati & Sa'i, 2025). However, the effectiveness of this integration is largely determined by the learning design and pedagogical competence of teachers. This requires a comprehensive study of how this technology is implemented in Islamic Religious Education learning.

Marga Mulya II Elementary School in North Bekasi is one of the schools that has utilized Chromebooks in its learning process. The school is located in an urban community with heterogeneous



social characteristics and relatively open access to technology. Students are accustomed to interacting with digital devices in their daily lives, but not all of them are directed towards educational and religious uses. Islamic Religious Education teachers are striving to adapt learning strategies by utilizing digital platforms for material delivery and evaluation. Meanwhile, strengthening religious character remains a top priority in the school's educational vision. This situation presents a relevant research space for a more in-depth examination of technology integration in Islamic Religious Education learning.

Data from the Ministry of Education and Digital Transformation indicates that elementary school students' digital literacy still requires strengthening, particularly in internet ethics and the use of educational content (Fatmawati, 2025). Monitoring at several schools shows that the use of digital devices often focuses on operational technical aspects, while critical and ethical dimensions have not been systematically structured. Initial observations at Marga Mulya II Elementary School, North Bekasi, indicate that Chromebooks have been used in learning, but their integration into religious character building has not been conceptually designed. Teachers tend to use devices to access online materials and assignments without an explicit pedagogical framework for values (Supriatna et al., 2025). This situation indicates the need for research that examines the integration of digital devices in the context of Islamic Religious Education learning more comprehensively. The data demonstrates the urgency of strengthening digital literacy in line with religious character building starting in elementary school.

The main issue that arises is how to effectively design and implement Chromebook integration into Islamic Religious Education (PAI) learning to strengthen digital literacy while shaping the religious character of elementary school students. Undirected use of digital devices has the potential to render technology merely a technical aid without significantly contributing to the internalization of values (Jul et al., 2025). On the other hand, Islamic Religious Education learning that is not adaptive to technological developments can lose its relevance for the digital generation. This challenge demands an approach that simultaneously integrates cognitive, affective, and digital aspects. Studies are needed that can explain the process, strategies, and impact of technology integration in Islamic Religious Education learning. This focus serves as the conceptual foundation of this research.

This research was conducted at Marga Mulya II Elementary School, North Bekasi, considering that the school has implemented Chromebooks in its learning activities. This location was chosen because it represents a public elementary school in an urban area with adequate technology access and diverse student social backgrounds. Furthermore, the school is committed to strengthening character education as part of its institutional culture. The research focused on the integration of Chromebooks in Islamic Religious Education learning, specifically in efforts to strengthen digital literacy and students' religious character. Emphasis was placed on learning design, implementation practices, and their impact on students' digital behavior and skills. Therefore, this research has a clear focus in terms of both the location and the study variables.

Theoretically, the digital literacy framework proposed by Gilster in Rachma emphasizes the ability to critically understand, evaluate, and utilize digital information (Rachma, 2025), while the character education theory according to Lickona in Nengah and Armini emphasizes the importance of integrating moral knowledge, moral feelings, and moral actions in the educational process (Nengah & Armini, 2024). In the practice of Islamic Religious Education learning in elementary schools, these two frameworks often run separately without a systematic integrative design. The concept of Technological Pedagogical Content Knowledge (TPACK) developed by Mishra and Koehler in Astri et al. emphasizes that technology integration requires alignment between content, pedagogy, and technology (Astri et al., 2026). However, implementation in the field often places technology as an additional instrument without adequate pedagogical reconstruction. This indicates the need for an integrative approach that connects digital literacy, character education, and Islamic Religious Education pedagogy conceptually. This study seeks to address this need through an analysis of implementation in the elementary school context.

Empirically, several previous studies have focused more on the effectiveness of digital media in improving cognitive learning outcomes in general subjects. A study by Istichoroh et al. showed that the



use of digital devices can increase student motivation and participation, but has not specifically linked this to the formation of religious character (Istichoroh et al., 2025). Arman's research in the context of Islamic Religious Education focuses more on the development of application-based media or e-learning without comprehensively integrating digital literacy dimensions (Arman et al., 2025). The reality in elementary schools shows that the use of Chromebooks is often not examined within the framework of strengthening religious values. This situation demonstrates the need for research that integrates technological and character aspects in a single analytical design. Thus, this research occupies a relevant position in the development of digital-based Islamic Religious Education studies.

Recent research indicates increasing attention to technology integration in religious education. Research conducted by Effendi emphasizes the importance of the TPACK framework in designing effective technology-based learning (Effendi, 2024). Giroth underscores the urgency of digital literacy as a core competency in the information society (Giroth et al., 2024). Fauyan & Wati emphasize that character education must be integrated into the entire learning process, not taught separately (Fauyan & Wati, 2021). Several researchers in Indonesia have also begun examining the integration of digital media in Islamic Religious Education (ISE) learning, although the focus is still limited to improving student learning outcomes or motivation. This research focuses on integrating digital literacy and religious character in Islamic Religious Education (ISE) learning using Chromebooks at the elementary school level.

The approach developed in this study integrates the TPACK framework, digital literacy, and character education into a single analytical design for the implementation of Islamic Religious Education learning. This integration aims to examine how Chromebooks function not only as a medium for accessing information but also as a means of internalizing religious values through structured digital activities. This study also positions the elementary school context as a strategic arena for the formation of ethical digital habits. The analysis focuses on the interaction between learning design, digital platform use, and student behavior. Thus, this study offers an integrative perspective that combines technological, pedagogical, and value aspects within a single conceptual framework. This approach is expected to provide a conceptual contribution to the development of digital-based Islamic Religious Education learning.

This study aims to analyze the integration of Chromebooks in Islamic Religious Education (ISE) learning and examine their contribution to strengthening digital literacy and students' religious character. This study also aims to identify pedagogical strategies used by teachers in integrating technology with religious values. Furthermore, this study seeks to evaluate the impact of Chromebook use on students' digital behavior and religious attitudes. The research direction is focused on developing a contextual and applicable implementation model in elementary schools. The research results are expected to provide strategic recommendations for the development of technology-based ISE learning. With this orientation, this research has a clear and measurable direction.

This research is crucial because the digital transformation of education demands a harmonious integration of technology and character building. Without appropriate pedagogical design, the use of digital devices has the potential to significantly impact the quality of Islamic Religious Education learning. Strengthening digital literacy from elementary school is the foundation for developing a generation that is competent, critical, and ethical in the digital space. At the same time, religious character needs to be instilled contextually in an increasingly digitalized learning environment. This study is expected to provide theoretical and practical contributions to the development of Islamic Religious Education learning in the digital era. Therefore, this research has academic and strategic relevance in the context of basic education in Indonesia.

2. RESEARCH METHOD

This research uses a qualitative approach with a case study. This qualitative approach was chosen because this research seeks to deeply understand the process of integrating Chromebooks into Islamic Religious Education (IS) learning and the meanings constructed by



teachers and students in these learning practices. Case studies allow researchers to explore phenomena contextually within a system unit tied to a specific location (Yin, 2018). This design is relevant for uncovering the dynamics of technology implementation in learning that cannot be reduced to purely quantitative variables. Furthermore, this approach aligns with the characteristics of educational research, which emphasizes understanding social processes and interactions (Creswell, 2019). Therefore, this research focuses on an in-depth analysis of technology integration practices in the real-world context of elementary schools.

The research was conducted at Marga Mulya II State Elementary School, North Bekasi. This school was chosen because it has implemented Chromebooks in its learning process, including in Islamic Religious Education. The location represents a public elementary school in an urban area with relatively adequate access to technology. The study was planned to last one semester to provide a comprehensive overview of the planning, implementation, and evaluation of Chromebook-based learning. This timeframe also allowed for repeated observations of learning practices. With this duration, the data obtained is expected to be comprehensive and contextual.

The research subjects included Islamic Religious Education teachers and students in classes using Chromebooks in their learning. Islamic Religious Education teachers served as primary informants because they played the role of designers and implementers of technology integration in learning. Students were positioned as supporting informants to gain perspectives on learning experiences and their impact on digital literacy and religious character. Furthermore, school principals could be used as additional informants to provide information on school policies related to the digitalization of learning. Informants were selected purposively based on their direct involvement in Chromebook use (Sugiyono, 2023). This technique enabled researchers to obtain relevant and in-depth data aligned with the research focus.

Data collection techniques included participant observation, in-depth interviews, and documentation studies. Observations were used to directly observe the Chromebook-based Islamic Religious Education learning process, including teacher-student interactions. In-depth interviews were conducted to explore pedagogical strategies, obstacles, and perceptions regarding strengthening digital literacy and religious character. Documentation included learning tools, digital modules, student assignments, and school policies regarding Chromebook use. This combination of techniques enabled data triangulation, thus strengthening the depth of analysis (Moleong, 2019). Data collection was conducted in stages and iteratively to ensure completeness of information.

The primary research instrument was the researcher herself, a key instrument in qualitative research. The researcher played a role in designing observation and interview guidelines, which were based on indicators of digital literacy and religious character. The observation guidelines included aspects of technology integration, learning interactions, and the practice of internalizing values. The interview guidelines were designed to explore teacher and student experiences in depth. Furthermore, documentation sheets were used to record and archive supporting documents. Instrument development adhered to qualitative research principles, which prioritize flexibility and contextual sensitivity (Creswell, 2019).

The data analysis technique used an interactive analysis model that includes data reduction, data presentation, and conclusion drawing. Data obtained from observations, interviews, and documentation were reduced by sorting information relevant to the research focus. Next, the data were presented in the form of descriptive narratives and thematic matrices to facilitate interpretation. The conclusion-drawing process was carried out gradually and



continuously throughout the research. This analysis model refers to the Miles, Huberman, and Saldaña framework, which emphasizes the cyclical and interactive nature of qualitative data analysis (Miles et al., 2014). With this approach, the analysis results are expected to systematically describe the pattern of Chromebook integration in Islamic Religious Education learning.

Data validity was tested using source and technical triangulation techniques, as well as member checking. Source triangulation was conducted by comparing data from teachers, students, and the principal. Technical triangulation was conducted by comparing the results of observations, interviews, and documentation. Member checking was conducted by requesting confirmation from informants regarding the preliminary research results to ensure the appropriateness of meaning. In addition, researchers extended their participation in the field to increase data credibility. These steps are in accordance with the trustworthiness criteria in qualitative research, which include credibility, transferability, dependability, and confirmability (Guba & Lincoln, 2005).

The research procedure began with a preparatory phase, which included a literature review, proposal development, and obtaining research permits at the school. The next stage was data collection through initial observations to map the learning conditions of Chromebook-based Islamic Religious Education. Next, the researcher conducted in-depth observations and systematic interviews according to an agreed-upon schedule. The collected data were analyzed simultaneously with the data collection process to maintain clarity of interpretation. The final stage involved compiling a research report and submitting the results to the school as a form of academic contribution. This procedure was designed to ensure the research proceeds systematically and in accordance with scientific principles of educational research.

3. RESULT AND DISCUSSION

The results of this study indicate that the integration of Chromebooks in Islamic Religious Education (IS) learning at Marga Mulya II State Elementary School in North Bekasi occurred through three main patterns: digital device-based planning, interactive learning implementation, and strengthening digital literacy oriented toward religious character development. Islamic Religious Education (IS) teachers utilized Chromebooks to access platform-based learning materials, complete online assignments, and conduct digital quiz-based evaluations. This implementation was supported by school policies that encouraged the use of devices in teaching and learning activities. Classroom observations demonstrated that students were actively engaged in accessing materials, completing assignments, and discussing topics through digital media. Teaching device documentation indicated that lesson plans (RPP) were adjusted to incorporate digital media as part of the learning strategy. Overall, the integration of Chromebooks served not only as technical aids but also as part of the daily practice of IS learning.

Islamic Religious Education teachers designed lessons utilizing Chromebooks for the apperception, material exploration, and evaluation stages. In the initial stage, teachers used online learning videos and presentation materials to stimulate student discussion. In the core stage, students accessed the materials through a pre-prepared learning platform and then worked on digital worksheets, either independently or in groups. Evaluation was conducted through online quizzes, providing direct feedback to students. Observations showed that device use was structured according to the allocated learning time. The lesson plan document included a specific column listing digital media as part of the learning strategy.

In an interview, an Islamic Education teacher stated, *"Chromebooks help me present more varied material. The students are more focused because they are directly practicing and not just listening."*



This statement indicates that the use of devices is seen as a means to increase the variety of learning methods. Classroom observations support this, where students appear more responsive when the material is presented through visual and interactive media. Furthermore, documentation of student assignments shows that most students are able to complete digital worksheets on time. This pattern indicates a shift from lecture-dominated learning to digital activity-based learning. The integration of devices appears to be designed as part of the pedagogical strategy, not simply as an add-on.

From the statement above, it can be understood that teachers position Chromebooks as a tool to increase student focus and participation. The use of the term "more varied" indicates a shift in the previously more conventional learning approach. Observational data shows that media variation has an impact on increasing student engagement during the learning process. The relatively orderly completion of digital assignments indicates student adaptation to device use. This demonstrates that technology integration is carried out in a planned and structured manner. Thus, Chromebook-based learning strategies have become part of the routine practice of Islamic Religious Education (IS) teaching.

The use of Chromebooks in Islamic Religious Education (ISE) learning provides space for the development of students' digital literacy, particularly in information management and ethical device use. Students are accustomed to accessing materials from teacher-designated sources and are instructed not to access pages outside of the lesson. Observations indicate that teachers regularly remind students about responsible internet use. Classroom discipline documents outline rules for device use during learning. Additionally, students are trained to upload assignments through designated platforms. These activities demonstrate the development of basic digital skills within the context of ISE learning.

One student stated, *"If you use a Chromebook, you must only open what the teacher tells you to open, no other."* This statement illustrates an awareness of the rules for device use. Observations showed that most students complied with these instructions throughout the lesson. The teacher also occasionally checked students' screens to ensure activities remained aligned with the learning objectives. Documentation of assignment results showed that students were able to access and submit assignments through their respective accounts. This situation demonstrates a learning process that focuses not only on Islamic Religious Education material but also on skills in the targeted use of technology.

Based on the interview results above, it appears that students understand the limitations of device use during learning. This awareness indicates a consistent internalization of the rules conveyed by teachers. Observational data supports that supervision and habituation are part of the learning strategy. Students' ability to access and upload assignments reflects basic digital skills developed through routine practice. This suggests that digital literacy is not taught in isolation but is integrated into Islamic Religious Education learning activities. Thus, Chromebook use contributes to shaping students' digital behavior patterns in the classroom.

The integration of Chromebooks in Islamic Religious Education (IS) learning also focuses on developing religious character through digital content and activities. Teachers utilize videos of exemplary stories, demonstrations of religious practices, and digital reflections as part of the learning process. Observations show that after watching the videos, students are asked to write down values they can emulate through digital platforms. Furthermore, teachers link technology use to the values of responsibility and honesty when completing assignments. Assessment documents show an attitude assessment column filled in based on observations during digital learning. These activities demonstrate that religious character remains an integral part of technology-based learning.

An Islamic Education teacher stated, *"I always remind students that using a Chromebook is also part of a trust, so they must be honest and not cheat."* This statement demonstrates the link between device use and religious values. Observations showed that the teacher emphasized honesty during online quizzes. Some students were seen reminding each other not to open other tabs during the assessment. Documentation of student reflections showed an understanding of the values of responsibility and discipline. This demonstrates that the use of technology is used as a means of instilling values in learning practices.

From this statement, it can be understood that teachers integrate religious values into every use of digital devices. The use of the term "amanah" indicates that technology is positioned within a



framework of religious values. Observations of students' behavior reminding each other demonstrate the reinforcement of values through social interaction. Documentation of student reflections indicates an understanding of the meaning of honesty and responsibility. These data demonstrate that digital learning does not eliminate the affective dimension of Islamic Religious Education. Thus, religious character is still developed through Chromebook-based learning practices.

Table Research Findings

Focus/Subfocus	Indicators	Implementation Method	Data Sources
Integration Strategy	Digital planning	Lesson Plans Include Chromebooks	Documents
Integration Strategy	Interactive learning	Videos, Online Quizzes, Digital Student Worksheets	Observations
Digital Literacy	Digital compliance	Restricted Page Access	Interviews & Observations
Digital Literacy	Task management	Uploading Assignments Through Student Accounts	Documentation
Religious Character	Digital fairness	Provision During Online Quizzes	Observations
Religious Character	Responsibility	Reflection on Grades Through the Platform	Documentation

Research findings indicate that device integration strategies, strengthening digital literacy, and developing religious character are interconnected. Chromebook-based learning planning serves as the foundation for implementing structured digital activities. These activities not only increase student engagement but also foster habits of disciplined technology use. Familiarization with digital rules contributes to strengthening the values of responsibility and honesty in the context of Islamic Religious Education (PAI) learning. Interactions between teachers and students during device use demonstrate both supervision and value guidance. Overall, Chromebook integration creates a learning pattern that integrates cognitive aspects, digital skills, and religious attitudes.

The results of the study indicate that the integration of Chromebooks in Islamic Religious Education learning at Marga Mulya II Elementary School, North Bekasi, has been implemented through a structured planning and implementation strategy. The use of devices supports the strengthening of students' digital literacy through habituation of information access, task management, and compliance with digital rules. At the same time, religious character values such as honesty, responsibility, and discipline are still instilled through digital-based learning activities. Observation, interview, and documentation data indicate an integration between technology use and value formation. These findings have answered the research focus on how Chromebook integration contributes to students' digital literacy and religious character. Furthermore, these results will be further analyzed in the discussion chapter to see their implications and conceptual meaning.

Discussion

This study found that the integration of Chromebooks in Islamic Religious Education learning not only serves as a technical support medium, but also creates a learning pattern that simultaneously integrates digital literacy and religious character. The findings indicate a shift in learning strategies from conventional models to interactive, activity-based digital learning. Students' digital literacy develops through habituation to directed and controlled device use. At the same time, religious values such as honesty, responsibility, and discipline are internalized in the digital learning process. The most prominent trend is the integration of religious values into technology use practices, rather than a separation between cognitive and affective aspects. This suggests that Chromebook-based Islamic Religious Education learning can be designed as a space for the simultaneous development of digital competency and character.

The findings of this study indicate that the success of technology integration is largely determined by teachers' pedagogical design. Chromebooks do not automatically improve digital literacy or shape



religious character, but rather function effectively when managed through structured learning strategies. The process of familiarizing students with device usage rules, monitoring during online evaluations, and reflecting on values after using digital media indicate consistent pedagogical intervention. This explains why students' digital literacy develops within the corridors of ethics and responsibility. In other words, technology becomes a medium for internalizing values when consciously guided in lesson planning. The significance of this finding lies in the integration of digital practices with the affective dimension, which is rarely systematically integrated at the elementary school level.

Furthermore, these findings demonstrate that religious character formation in a digital context occurs through concrete practices, not simply the delivery of normative material. When teachers link Chromebook use to the concepts of trustworthiness and honesty, students understand that digital activities have moral consequences. Social interactions among students, who remind each other during online assessments, demonstrate collective value reinforcement. This process reflects the internalization of values that occurs in authentic situations. The uniqueness of these findings lies in the integration of religious contexts with students' everyday digital practices. Thus, technology-based Islamic Religious Education (PAI) learning does not shift value orientations but rather expands the space for their actualization.

The results of this study align with the Technological Pedagogical Content Knowledge (TPACK) framework proposed by Effendi, which emphasizes the importance of integrating content, pedagogy, and technology in learning (Effendi, 2024). The integration of Chromebooks in this study demonstrates that technology is effective when combined with pedagogical strategies appropriate to the characteristics of Islamic Religious Education materials. These findings also support Giroth et al.'s view of digital literacy as the ability to critically understand and utilize information, as students not only access materials but are also guided toward responsible use (Giroth et al., 2024). Furthermore, this study expands the concept of character education according to Lickona in Nengah & Armini, which emphasizes the integration of moral knowing, moral feeling, and moral action, by demonstrating that these three aspects can be developed through digital activities (Nengah & Armini, 2024). Thus, the results of this study not only support existing theory but also demonstrate its implementation context at the elementary school level. The integration of religious values into digital practice demonstrates the actualization of theory in concrete learning situations.

This research also relates to previous studies on digital media in Islamic Religious Education (ISE) learning, which highlighted improvements in motivation and cognitive learning outcomes. Several previous studies have shown that the use of digital devices increases student participation, but have not explicitly linked this to the formation of religious character. In this context, this study extends previous findings by demonstrating that device use can be directed towards strengthening values. Furthermore, studies on digital literacy in elementary schools generally emphasize operational technical skills, while this study adds the dimensions of ethics and religiosity as integral components. These findings demonstrate that digital literacy and character education can operate within the same learning framework. Thus, this study makes an empirical contribution to the development of integrative studies on technology and digital literacy.

The research findings discussed above indicate that the integration of Chromebooks into Islamic Religious Education (PAI) learning contributes to strengthening digital literacy and students' religious character. A structured learning strategy addresses the question of how this integration process is implemented in the classroom. Strengthening digital literacy is evident in students' ability to access, manage, and use information in an orderly manner. Religious character development is evident in the practice of honesty and responsibility during device use. Thus, the findings of this study address the research problem and achieve the research objectives formulated from the outset. Technology integration in Islamic Religious Education learning has been shown to simultaneously encompass both cognitive and affective dimensions.

The results of this study provide important implications for the development of Islamic Religious Education (ISE) learning in the digital era. Teachers need to design technology integration not only as a visual aid, but also as a medium for internalizing values. The curriculum can consider developing



guidelines for integrating digital literacy and religious character in every subject, particularly Islamic Religious Education (ISE). For schools, device usage policies need to be accompanied by strengthening digital ethics and pedagogical supervision. This research also opens up space for the development of a more systematic, technology-based ISE learning model. Theoretically, these findings enrich the discourse on the integration of character education in the context of digital learning at the elementary school level.

This study is limited by its scope, which only covered one elementary school, so generalizations of the findings should be made with caution. The limited duration of the study, which was one semester, also precluded the possibility of observing the long-term impact of technology integration on students' religious character. Furthermore, this study focused on a qualitative approach, thus failing to quantitatively measure the level of improvement in digital literacy or religious character. Further research could employ a mixed-method approach to obtain a more comprehensive picture. Comparative studies between schools with different characteristics could also be conducted to examine variations in implementation. Therefore, future research is expected to broaden the scope and depth of analysis regarding technology integration in Islamic Religious Education learning.

4. CONCLUSION

Based on the research results above, it can be concluded that the integration of Chromebooks into Islamic Religious Education learning at Marga Mulya II State Elementary School, North Bekasi, has been implemented in a structured manner through targeted digital-based planning, implementation, and evaluation. This integration not only encourages strengthening students' digital literacy in aspects of information management, compliance with device usage rules, and independent learning, but also contributes to the development of religious character traits such as honesty, responsibility, and discipline in the context of digital learning. The findings indicate that the success of technology integration is largely determined by teachers' pedagogical design, which consistently links device use with religious values. Scientifically, this research contributes to the development of integrative studies between educational technology, digital literacy, and character education in the context of Islamic Religious Education in elementary schools. Practically, the results of this study can serve as a reference for teachers and schools in designing technology-based learning that remains value-oriented, while also opening up space for the development of more systematic implementation models in broader contexts. Future researchers are advised to expand the scope of the study to include several schools with different characteristics to obtain a more comprehensive comparative picture. A mixed-method approach could also be used to quantitatively measure the level of improvement in students' digital literacy and religious character.

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