

RESEARCH PAPER

Assessing Digital Technology Integration in Islamic Religious Education: A CIPP Model Evaluation

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ABSTRACT

The rapid expansion of digital technology has transformed contemporary educational practices, including the teaching of Islamic Religious Education (IRE). However, the extent to which digital technology is effectively integrated into IRE learning environments remains insufficiently evaluated, particularly in terms of program readiness, implementation processes, and learning outcomes. This study aims to evaluate the integration of digital technology in Islamic Religious Education using the CIPP (Context, Input, Process, Product) evaluation model at SMP Muhammadiyah Al-Kautsar PK Kartasura. This research employed a qualitative evaluative design. Data were collected through in-depth interviews with Islamic Religious Education teachers and were analyzed using qualitative data analysis techniques involving data reduction, data display, and conclusion drawing. The credibility of the findings was ensured through source triangulation and systematic validation procedures. The findings reveal that digital technology integration is supported by a strong institutional commitment to developing a digital learning environment, accompanied by adequate technological infrastructure such as e-modules, multimedia resources, learning management systems, and computer-based assessments. These digital tools facilitate more interactive and flexible learning processes, enhance students' engagement, and support the development of digital literacy within the context of Islamic learning. Nevertheless, the evaluation also indicates that the assessment of students' religious character development within digitally mediated learning environments still requires more systematic measurement. The study implies that effective digital integration in Islamic Religious Education requires not only technological facilities but also pedagogical readiness and institutional support to ensure that digital learning contributes to both cognitive understanding and the internalization of Islamic values.

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INTRODUCTION

The rapid advancement of digital technology has significantly transformed various sectors of society, including education [1], [2]. The integration of digital technologies into learning environments is increasingly recognized as an essential strategy for improving the quality of education, enhancing student engagement, and developing twenty-first-century competencies such as critical thinking, collaboration, and digital literacy [3]. In response to global educational transformation, many countries have intensified efforts to digitalize their educational systems to prepare students for the challenges of the digital era [4].

In Indonesia, the government has actively promoted the digitalization of education through various policies and programs. Between 2020 and 2022, the Ministry of Education, Culture, Research, and Technology distributed over 1.25 million ICT devices to approximately 71,991 schools to support the digital transformation of learning activities [3], [5]. These initiatives aim to enhance the integration of information and communication technology (ICT) in classrooms and create more innovative and effective learning environments [6]. In addition, national strategic plans have set targets for ICT utilization in education, including the goal that more than 62.5% of junior secondary schools integrate ICT tools into their learning processes [7].

Despite these policy initiatives, several challenges remain in the implementation of digital learning in Indonesian schools [8], [9]. Data indicate that around 40% of schools in Indonesia still lack adequate internet access, which represents approximately 159,750 out of 399,376 school units nationwide. Furthermore, the adoption of technology in teaching practices remains uneven. Research has shown that about 60% of teachers still rely on conventional teaching methods, while only 40% have integrated ICT into their classroom practices [10], [11]. These findings suggest that although digital infrastructure and policy support are expanding, the effective integration of technology into learning processes remains a critical issue.

In the context of Islamic Religious Education (IRE), the integration of digital technology has become increasingly important [9], [12]. Traditional approaches to religious instruction often rely heavily on lecture-based methods and printed learning materials [13]. However, the digital era requires more interactive, multimedia-based, and student-centered learning approaches to enhance students' understanding of religious values and their relevance to contemporary life [14], [15]. Digital technologies such as learning management systems, multimedia presentations, and interactive educational applications offer new opportunities to enrich the teaching of Islamic Religious Education by facilitating access to diverse learning resources and promoting more engaging learning experiences [16], [17].

Several previous studies have explored the use of digital technology in educational settings, particularly in relation to improving student engagement, facilitating collaborative learning, and supporting blended or online learning environments [16], [18], [19], [20]. These studies demonstrate that digital technology can enhance learning effectiveness, improve accessibility to educational resources, and support innovative pedagogical approaches. Nevertheless, many of these studies focus primarily on general subjects or higher education contexts, while limited research specifically examines the systematic evaluation of digital technology integration in Islamic Religious Education at the secondary school level [21].

Moreover, previous research often emphasizes the implementation or effectiveness of digital learning tools without comprehensively evaluating educational programs from multiple dimensions. The CIPP evaluation model (Context, Input, Process, and Product) offers a comprehensive framework for assessing educational programs by examining the relevance of program objectives, the adequacy of resources, the implementation process, and the resulting outcomes [22], [23]. However, studies

that apply the CIPP model to evaluate the integration of digital technology in Islamic Religious Education, particularly in junior secondary schools, remain limited [24], [25].

Based on this context, there is a need for a systematic evaluation of digital technology integration in Islamic Religious Education to determine how effectively digital tools support learning objectives, teaching processes, and educational outcomes [26], [27]. Such evaluation is essential to provide empirical evidence regarding the strengths and weaknesses of current implementation practices and to identify areas for improvement [28], [29].

This study addresses this need by conducting an evaluation of digital technology integration in Islamic Religious Education using the CIPP model at SMP Muhammadiyah Al-Kautsar PK. The study focuses on examining the contextual factors influencing technology integration, the availability and adequacy of supporting resources, the implementation of digital learning practices, and the outcomes achieved through the integration of digital technology in the learning process.

The urgency of this study lies in the growing demand for effective digital learning strategies in religious education. As digital transformation continues to reshape educational practices, Islamic Religious Education must adapt to ensure that its instructional approaches remain relevant, engaging, and capable of addressing the needs of contemporary learners. A comprehensive evaluation of digital technology integration is therefore essential to support evidence-based improvements in teaching practices, strengthen digital learning strategies, and contribute to the development of more effective and innovative Islamic Religious Education in the digital era.

METHODOLOGY

Research Design

This study employed a qualitative approach with a descriptive evaluative research design to examine the integration of digital technology in Islamic Religious Education (IRE) learning at SMP Muhammadiyah Al-Kautsar PK Kartasura. A qualitative design was selected because it enables an in-depth exploration of educational practices, perceptions, and contextual factors that influence the implementation of digital technology in classroom learning.

The evaluation framework used in this study was the CIPP model, which consists of four interconnected components: Context, Input, Process, and Product. This model was chosen because it provides a comprehensive framework for evaluating educational programs by examining the background and needs of the program (context), the availability and adequacy of supporting resources (input), the implementation of program activities (process), and the outcomes or impacts of the program (product). Through the application of the CIPP model, this study aimed to provide a holistic evaluation of how digital technologies are integrated into Islamic Religious Education learning practices at the school.

Participants

The participants of this study were Islamic Religious Education teachers at SMP Muhammadiyah Al-Kautsar PK Kartasura who were directly involved in the implementation of digital technology in the teaching and learning process. Participants were selected using purposive sampling to ensure that the individuals involved had relevant experience and knowledge regarding the integration of digital technology in Islamic Religious Education classes. The selection criteria for participants included teachers who actively teach Islamic Religious Education and utilize digital technologies as part of their instructional practices. Their experiences and perspectives were considered essential for obtaining in-depth insights into the implementation, challenges, and effectiveness of digital technology integration in the learning process.

Instruments

The primary research instrument in this study was a semi-structured interview guide designed based on the components of the CIPP evaluation model. The interview questions were structured to explore four major aspects: contextual factors influencing digital technology integration, the availability of supporting resources and infrastructure, the implementation of digital technology in classroom learning, and the outcomes of technology integration in Islamic Religious Education. The semi-structured format allowed the researcher to maintain consistency across interviews while also providing flexibility to explore emerging themes and obtain deeper explanations from participants. In addition to interview guidelines, field notes were used to record important contextual information during the data collection process.

Data Collection Process

Data were collected through in-depth interviews with Islamic Religious Education teachers at SMP Muhammadiyah Al-Kautsar PK Kartasura. The interviews were conducted to obtain detailed information about teachers' experiences, perceptions, and practices related to the integration of digital technology in Islamic Religious Education learning. Each interview was conducted in a structured yet flexible manner, allowing participants to elaborate on their experiences and provide examples of how digital technologies are utilized in the teaching process. The interviews were documented through audio recordings and detailed notes to ensure the accuracy and completeness of the collected data. To ensure the credibility of the data, source triangulation was applied by comparing information obtained from participants with field observations and relevant contextual information within the school environment. This triangulation process helped verify the consistency of the data and strengthen the trustworthiness of the research findings.

Data Analysis

The data obtained from interviews were analyzed using qualitative data analysis techniques following the interactive model proposed by Miles and Huberman. The analysis consisted of three main stages: data reduction, data display, and conclusion drawing. Data reduction involved selecting, simplifying, and organizing relevant information obtained from the interview transcripts. During this stage, the researcher identified key themes and categorized the data according to the four components of the CIPP evaluation model.

The second stage, data display, involved presenting the organized data in a systematic form to facilitate interpretation and understanding. This process enabled the researcher to identify patterns, relationships, and important findings related to the integration of digital technology in Islamic Religious Education.

Finally, the conclusion drawing stage involved interpreting the analyzed data to generate meaningful insights and evaluative conclusions regarding the effectiveness of digital technology integration in the learning process. The conclusions were continuously verified throughout the analysis process to ensure their consistency with the collected data and the research objectives.

CIPP Evaluation Indicators

The evaluation of digital technology integration in Islamic Religious Education was conducted based on indicators derived from the four components of the CIPP model. These indicators served as the analytical framework guiding data collection, categorization, and interpretation during the evaluation process.

Table 1. CIPP Indicators

CIPP Component	Evaluation Focus	Indicators
Context	Educational environment and program relevance	School policies supporting digital learning, needs for digital technology in Islamic Religious Education, alignment with curriculum objectives
Input	Resources supporting digital integration	Availability of digital infrastructure, access to internet and devices, teachers' digital competencies, availability of digital learning materials
Process	Implementation of digital learning	Teaching strategies using digital technology, student engagement in digital learning activities, integration of digital tools in classroom instruction
Product	Outcomes of digital integration	Improvement in learning effectiveness, student participation, development of digital literacy and understanding of Islamic values

RESULTS

The findings of this study reveal that the integration of digital technology in Islamic Religious Education (IRE) at SMP Muhammadiyah Al-Kautsar PK Kartasura has been implemented systematically and is closely connected to the institutional vision of developing a digitally oriented learning environment. Based on the interview data, the integration of digital technology in IRE learning is not an isolated initiative by individual teachers but rather a strategic policy aligned with the school's broader vision of becoming a digital-based educational institution. The transition toward a digital learning system has occurred gradually, beginning with the initial adoption of digital learning platforms and subsequently expanding to more integrated learning management systems and digital learning resources.

One of the main initiatives undertaken by the school is the transformation of traditional printed textbooks into digital learning modules (e-modules). These digital modules allow teachers to incorporate multimedia elements such as videos, quizzes, and interactive assignments that can be accessed through students' devices. This policy reflects the school's effort to create a more dynamic and engaging learning environment. As explained by one of the Islamic Religious Education teachers, the transformation toward digital learning has been a gradual process that developed alongside leadership changes within the school: *"Actually, the transformation toward a digital curriculum did not happen instantly. We started the transition gradually. It began around 2021 when the previous principal was replaced by the current one. The concept of a digital school became the new principal's branding, and since then it has gradually developed, starting from the use of Edmodo and later evolving into e-modules and the learning management system."*

This statement indicates that the integration of digital technology in IRE learning is supported by institutional leadership and long-term planning. The alignment between school policy and the integration of digital technology has created a supportive context for the implementation of digital learning in Islamic Religious Education. In addition, the curriculum structure implemented in the school remains aligned with national curriculum standards but is enriched with Islamic values and institutional programs that emphasize religious practices, moral development, and responsible technology use.

The findings also show that the school has provided sufficient supporting resources to facilitate the integration of digital technology into classroom learning. The availability of digital infrastructure such as laptops for students, internet connectivity, smart televisions, and various digital platforms has enabled teachers to incorporate digital tools into their instructional activities. Teachers reported that digital modules are used not only in Islamic Religious Education but also across other subjects, reflecting the school's commitment to digital learning integration across the curriculum. One teacher described the use of digital modules and learning platforms as follows: *"We changed the textbooks into e-modules, and this applies not only to Islamic Religious Education but to all subjects. This has become one of our flagship products because in the e-module we can insert many elements, such as videos, quizzes, Google Classroom integration,*

and other features. We also use the LMS through Google Classroom, which covers various aspects including assignments, and Islamic Religious Education is also included there."

The availability of these digital resources has enabled teachers to design more varied and interactive learning experiences. In addition to the technological infrastructure, teacher competence in utilizing digital technology also plays an important role in the implementation of digital learning. The study found that many teachers at the school are relatively young and therefore more adaptable to digital technologies. Teachers regularly participate in internal training programs and workshops organized by the school to improve their technological and pedagogical competencies.

Despite these supporting factors, several limitations were also identified in relation to more advanced technologies. For example, although teachers recognize the potential of technologies such as Virtual Reality (VR) to enhance Islamic Religious Education learning, practical constraints such as limited time and technical preparation have restricted their implementation in the classroom.

The implementation of digital technology in Islamic Religious Education learning is carried out through a blended learning approach that combines face-to-face instruction with digital learning tools. Teachers use laptops, smart televisions, and digital platforms to deliver instructional content, while students engage in various digital learning activities during the learning process. Digital technologies are also utilized for administrative and assessment purposes, including the monitoring of students' learning activities and the implementation of computer-based testing. As explained by one teacher: *"In practice, we use laptops in almost all learning activities. Students also apply various technologies, such as filling out daily monitoring reports. For examinations we also use computer-based tests. We display learning videos, quizzes, and sometimes use technologies such as Google Maps to show locations, especially when discussing historical topics. Artificial intelligence also helps me in developing teaching materials. Actually, VR would be very suitable for Islamic Religious Education, but the time and facilities are not yet sufficient to support it."*

The use of various digital tools during classroom instruction allows teachers to diversify their teaching methods. In practice, teachers combine traditional instructional approaches with digital media and interactive activities. Teaching methods used in Islamic Religious Education classes include lectures, group discussions, project-based assignments, and digital educational games. Teachers also encourage students to develop digital literacy skills by creating digital learning products such as presentations, infographics, or videos. One teacher described the implementation of these activities as follows: *"I once created a learning game where students determined the order of activities using balloons. We used various applications available on the internet. Through these tools, students can participate in group discussions, exchange ideas, and complete assignments such as making simple infographics, PowerPoint presentations, or even videos. This approach helps improve the students' digital skills."*

The integration of digital technology also influences the learning assessment process. Teachers utilize various digital platforms such as Google Classroom, Google Forms, and computer-based testing systems to conduct both formative and summative assessments. Cognitive evaluation is generally conducted through online tests and written examinations, while affective aspects are observed through students' participation, attitudes, and engagement during learning activities. Psychomotor aspects are assessed through practical religious activities such as prayer practices, Qur'anic recitation, and project-based assignments.

However, the findings indicate that project-based evaluation activities remain relatively limited in scope. Most digital projects involve tasks such as creating videos, posters, or PowerPoint presentations related to Islamic learning topics. Although these projects help enhance students' creativity and digital literacy, they have not yet been fully developed into authentic projects that involve deeper reflection on Islamic values or long-term religious practices.

In terms of learning outcomes, the integration of digital technology in Islamic Religious Education appears to have generated several positive impacts. At the cognitive level, teachers reported that students

demonstrate improved understanding of learning materials when content is delivered through digital media such as e-modules, videos, and visual presentations. The use of multimedia learning resources helps students grasp complex religious concepts more easily.

At the affective level, digital learning has contributed to increased student motivation and engagement in Islamic Religious Education classes. Interactive learning activities, including educational games and multimedia resources, create a more stimulating learning atmosphere that encourages student participation. In addition, the use of digital platforms to monitor religious activities such as daily worship and Qur'anic memorization has helped strengthen students' religious discipline and commitment.

At the psychomotor level, students have developed practical skills in utilizing digital tools to support their learning activities. Students are accustomed to completing assignments through digital platforms, participating in online assessments, and creating digital learning products. Furthermore, certain aspects of religious practices such as Qur'anic recitation, memorization activities, and daily worship monitoring are documented through the school's digital system.

DISCUSSION

Digital Technology Integration in Islamic Religious Education within the Framework of TPACK

The findings of this study indicate that the integration of digital technology in Islamic Religious Education (IRE) at SMP Muhammadiyah Al-Kautsar PK Kartasura reflects a dynamic interaction between technological tools, pedagogical practices, and Islamic subject content. This interaction can be effectively interpreted through the framework of Technological Pedagogical Content Knowledge (TPACK), which emphasizes that effective technology integration in education occurs when teachers are able to combine technological knowledge, pedagogical strategies, and subject-matter expertise in a coherent instructional design [30], [31]. According to Koehler and Mishra, the TPACK framework highlights that technology integration should not be viewed merely as the use of digital tools but rather as a process in which technology supports pedagogical goals and enhances the delivery of disciplinary knowledge [32], [33].

In the context of Islamic Religious Education, the integration of technology requires careful consideration because the subject involves not only cognitive understanding but also the internalization of religious values, moral attitudes, and practical religious skills [34], [35]. The findings of this study show that teachers have begun to integrate digital technologies such as e-modules, multimedia presentations, learning management systems, and online quizzes to support the delivery of Islamic learning materials. These tools allow teachers to present content in more interactive and engaging formats while also enabling students to access learning resources beyond the conventional classroom environment [36].

From the perspective of technological knowledge, teachers demonstrate the ability to utilize various digital platforms and applications in the learning process [37]. Technologies such as e-modules, video-based learning materials, online quizzes, and digital assessment platforms provide opportunities for more flexible and interactive learning experiences [38]. Previous research suggests that the integration of multimedia learning resources can significantly enhance student comprehension because visual and auditory elements support deeper cognitive processing [39].

In terms of pedagogical knowledge, teachers adopt various instructional strategies that combine traditional teaching approaches with digital learning activities [40], [41]. Methods such as group discussions, collaborative assignments, project-based learning, and educational games are integrated into the digital learning environment. These approaches align with constructivist learning theory, which emphasizes that knowledge is constructed through active participation, interaction, and reflection. Digital tools in this context serve as mediating instruments that facilitate collaborative learning and encourage student-centered learning experiences [42].

The integration of technology with Islamic subject content reflects the dimension of technological content knowledge, where digital tools are used to represent and contextualize Islamic concepts. For example, the use of multimedia resources, digital maps, and visual learning materials allows teachers to explain historical and contextual aspects of Islamic civilization in more engaging ways. Such practices demonstrate how technology can enhance the representation of complex religious content and support students' understanding of Islamic history, teachings, and practices.

More importantly, the findings of this study indicate that teachers have begun to demonstrate elements of technological pedagogical content knowledge, where technology, pedagogy, and subject content are integrated into a unified instructional approach [43]. Students are encouraged to create digital artifacts such as presentations, infographics, and educational videos related to Islamic learning topics. These activities not only strengthen students' understanding of Islamic teachings but also develop their digital literacy and creative skills [44]. The integration of such activities reflects an emerging form of digital pedagogy in which technology functions as a medium for knowledge construction rather than merely as a tool for information delivery. To clarify the relationship between the empirical findings and the components of the TPACK framework, the integration of digital technology in Islamic Religious Education observed in this study can be summarized as tabel 2 below.

Table 2. Alignment of Digital Learning Practices with the TPACK Framework

TPACK Component	Description in Theory	Empirical Evidence from the Study	Pedagogical Implication
Technological Knowledge (TK)	Teachers' ability to use digital tools and technologies in learning	Use of e-modules, Google Classroom, Quizizz, CBT, learning videos, and digital platforms	Technology supports interactive and flexible learning environments
Pedagogical Knowledge (PK)	Teachers' understanding of instructional methods and learning strategies	Use of discussion methods, project-based learning, digital games, and collaborative learning	Learning becomes more student-centered and participatory
Content Knowledge (CK)	Teachers' mastery of Islamic Religious Education subject matter	Delivery of Islamic teachings, Islamic history, and religious practices through structured learning materials	Content remains aligned with curriculum and Islamic educational objectives
Technological Pedagogical Knowledge (TPK)	Integration of technology with teaching strategies	Multimedia learning, digital quizzes, online assignments, and LMS-based learning	Technology enhances engagement and interaction in learning
Technological Content Knowledge (TCK)	Use of technology to represent and explain subject content	Use of videos, digital maps, and visual media to explain Islamic history and concepts	Complex religious content becomes more accessible to students
Technological Pedagogical Content Knowledge (TPACK)	Integrated use of technology, pedagogy, and content	Students produce digital projects such as presentations, infographics, and educational videos related to Islamic learning topics	Supports deeper learning, digital literacy, and collaborative knowledge construction

The table demonstrates that the integration of digital technology observed in this study reflects multiple dimensions of the TPACK framework. Teachers not only possess the technical ability to use digital tools but also incorporate these tools into pedagogical strategies and subject-specific learning activities [30], [45]. However, the findings also indicate that the integration remains at a

developing stage, where technology is primarily used to enhance engagement and accessibility rather than to fully transform the epistemological structure of Islamic Religious Education learning.

Another important implication of the findings relates to the role of institutional leadership in facilitating the development of teachers' TPACK competencies. The school's vision of becoming a digital-oriented institution has created an enabling environment for technology integration [46]. Policies such as the transformation of printed textbooks into digital modules and the adoption of learning management systems have encouraged teachers to explore new forms of digital pedagogy. Institutional support, professional development opportunities, and collaborative learning among teachers play an important role in strengthening teachers' capacity to integrate technology meaningfully into the learning process.

Pedagogical Transformation of Islamic Religious Education in the Digital Learning Environment

The findings of this study reveal that the integration of digital technology in Islamic Religious Education (IRE) at SMP Muhammadiyah Al-Kautsar PK Kartasura has contributed to a noticeable transformation in pedagogical practices. Traditionally, Islamic Religious Education in many educational contexts has relied heavily on teacher-centered instruction, characterized by lecture-based teaching, textual learning materials, and memorization-oriented assessments. However, the increasing integration of digital technologies has encouraged a shift toward more interactive, student-centered, and collaborative learning environments [47].

This transformation aligns with the principles of constructivist learning theory, which posits that learners actively construct knowledge through interaction, experience, and reflection rather than passively receiving information from teachers [37], [48]. In digitally supported learning environments, technology functions as a cognitive tool that enables students to explore information, collaborate with peers, and engage in meaningful learning activities. In this study, teachers combined traditional instruction with digital learning activities such as online quizzes, collaborative discussions, project-based assignments, and multimedia-based learning resources [7]. These practices illustrate a gradual transition from knowledge transmission toward knowledge construction.

The implementation of blended learning represents a key aspect of this pedagogical transformation. Blended learning integrates face-to-face instruction with digital learning tools, enabling teachers to maintain direct interaction with students while simultaneously utilizing technological resources to enrich the learning process [49]. In the observed learning practices, teachers used digital modules, learning management systems, and multimedia presentations to support classroom instruction [50]. These digital resources provided students with additional opportunities to access learning materials, review concepts independently, and participate in digital learning activities.

Research in digital pedagogy suggests that blended learning environments can significantly improve student engagement, motivation, and learning autonomy. By combining physical classroom interaction with digital learning tools, teachers are able to create more flexible and adaptive learning environments that respond to diverse student needs [43], [36]. In the context of Islamic Religious Education, this approach is particularly valuable because it allows students to explore religious knowledge through various media formats, including visual narratives, historical maps, and interactive learning activities.

Another important aspect of the pedagogical transformation identified in this study is the increasing emphasis on student engagement and collaborative learning. The integration of digital technologies has enabled teachers to implement learning activities that encourage active

participation and interaction among students. Digital educational games, online quizzes, and collaborative assignments create opportunities for students to engage with learning content in more dynamic ways [46]. Such practices correspond with contemporary theories of student engagement, which emphasize the importance of behavioral, emotional, and cognitive involvement in the learning process.

Behavioral engagement is reflected in students' active participation in digital learning activities such as completing online assignments, participating in interactive quizzes, and contributing to collaborative discussions. Emotional engagement emerges when students experience enjoyment and motivation while interacting with digital learning tools, particularly through educational games and multimedia resources. Cognitive engagement is developed when students are required to analyze information, create digital artifacts, or present their understanding of Islamic concepts through projects and presentations.

In addition, the integration of digital technology encourages the development of digital literacy skills among students. Digital literacy is increasingly recognized as a crucial competence for learners in the twenty-first century, encompassing the ability to access, evaluate, and create information using digital technologies. In this study, students were encouraged to produce digital learning outputs such as presentations, infographics, and educational videos related to Islamic learning topics. These activities not only reinforce students' understanding of religious concepts but also develop their technological and creative skills.

The pedagogical transformation observed in this study can be summarized in terms of several key changes in instructional practices. The following table 3 illustrates the shift from conventional teaching approaches toward digitally supported pedagogical practices in Islamic Religious Education.

Table 3. Comparison of Conventional and Digitally Supported Pedagogical Practices

Dimension of Learning	Conventional Approach	Digital Learning Approach Observed in the Study	Pedagogical Impact
Learning Orientation	Teacher-centered instruction	Student-centered and interactive learning	Increased student participation and engagement
Learning Resources	Printed textbooks and verbal explanation	E-modules, videos, digital presentations, online resources	Richer and more diverse learning materials
Learning Methods	Lectures and memorization	Discussions, project-based learning, digital games	More active and collaborative learning
Student Role	Passive recipients of information	Active participants and creators of digital learning products	Development of critical thinking and creativity
Assessment Methods	Paper-based tests	Online quizzes, digital assignments, CBT systems	More flexible and technology-supported evaluation
Learning Environment	Physical classroom only	Blended learning environment	Greater learning flexibility and accessibility

The transformation illustrated in the table demonstrates that digital technology has expanded the pedagogical possibilities within Islamic Religious Education. Learning activities are no longer confined to conventional classroom interactions but are enriched through multimedia resources, digital collaboration, and technology-supported assessments.

However, the findings also indicate that this pedagogical transformation is still in a developmental stage. While digital tools have successfully increased student engagement and diversified teaching strategies, the integration of technology has not yet fully reached the level of deep digital pedagogy, where technology fundamentally reshapes the learning experience. For example, project-based learning activities remain relatively simple and often focus on producing digital artifacts such as presentations or videos rather than engaging students in long-term inquiry or reflective learning related to Islamic values and practices.

Evaluative Implications of the CIPP Model for Improving Digital Islamic Education

The findings of this study can be further interpreted through the lens of the CIPP evaluation model, which emphasizes the importance of evaluating educational programs comprehensively through four interconnected dimensions: context, input, process, and product. Developed by Stufflebeam, the CIPP model is designed not merely to assess program outcomes but also to support decision-making and continuous program improvement [21]. Applying this framework to the integration of digital technology in Islamic Religious Education (IRE) provides valuable insights into both the strengths and areas requiring further development in the implementation of digital learning practices.

From the context perspective, the findings indicate that the integration of digital technology in Islamic Religious Education at SMP Muhammadiyah Al-Kautsar PK Kartasura is strongly supported by the institutional vision of developing a digital-based school environment. The school leadership has positioned digital transformation as a strategic priority, encouraging all subject areas, including Islamic Religious Education, to incorporate digital learning tools into instructional practices. This contextual alignment is crucial because the success of educational innovation often depends on the extent to which institutional policies, curriculum structures, and organizational culture support the implementation of new learning approaches [17].

In addition to institutional support, the integration of digital technology also reflects the broader educational demands of contemporary learners. Students in the digital era are accustomed to interacting with technology in their daily lives, and therefore educational practices that incorporate digital tools can enhance learning relevance and engagement. In this sense, the contextual foundation of the digital learning initiative at the school aligns with current educational trends that emphasize digital literacy, technological competence, and innovative learning environments.

From the input dimension, the findings show that the school has made significant efforts to provide adequate technological infrastructure and human resources to support digital learning [44]. Facilities such as student laptops, internet connectivity, smart televisions, and digital learning platforms enable teachers to integrate technology into classroom instruction. In addition, teachers have access to internal training programs and workshops designed to strengthen their technological competencies. These inputs play a critical role in ensuring that teachers possess the necessary resources and skills to implement digital learning effectively [49].

However, the study also identifies certain limitations related to the input dimension. Although the basic digital infrastructure is available, more advanced technologies such as virtual reality or immersive learning environments are not yet fully implemented due to constraints related to time, technical preparation, and resource availability [22]. This finding suggests that while the school has established a strong foundation for digital learning, further investment in technological innovation and teacher training may enhance the depth and diversity of digital learning experiences in the future.

The process dimension of the evaluation reveals that digital technology integration has significantly influenced the implementation of Islamic Religious Education learning activities.

Teachers employ a blended learning approach that combines face-to-face instruction with digital learning resources, allowing students to engage with learning materials through multiple formats. Multimedia resources, digital modules, online quizzes, and collaborative learning platforms contribute to a more interactive and dynamic learning environment [13].

Moreover, the integration of digital tools has enabled teachers to diversify instructional methods. Activities such as group discussions, project-based assignments, digital games, and multimedia presentations encourage students to participate actively in the learning process. These practices align with contemporary pedagogical approaches that emphasize student-centered learning and collaborative knowledge construction.

Nevertheless, the findings also reveal certain challenges related to the evaluation process within digital learning environments. While technology is widely used to facilitate assignments and assessments, the evaluation of learning outcomes tends to focus primarily on cognitive achievement and technical task completion [46]. Project-based assessments, although implemented in some learning activities, remain relatively limited in scope and often emphasize the production of digital artifacts rather than deeper reflection on Islamic values and moral development. This observation highlights the need for more comprehensive evaluation strategies that integrate digital technology with value-oriented assessment practices.

From the product dimension, the findings demonstrate that the integration of digital technology has generated several positive outcomes in Islamic Religious Education learning. Students show improved comprehension of learning materials when concepts are presented through multimedia resources such as videos, visual presentations, and interactive digital modules. These tools help clarify complex religious concepts and provide students with more engaging learning experiences [37], [48].

In addition to cognitive outcomes, the integration of digital technology has contributed to increased student motivation and participation in learning activities. Interactive learning tools such as educational games and online quizzes create a more stimulating classroom environment that encourages students to engage actively with the learning material [34], [35]. Furthermore, the use of digital platforms for monitoring religious practices, such as daily worship activities and Qur'anic memorization, supports the development of students' religious discipline and moral responsibility.

However, despite these positive outcomes, the findings suggest that the long-term impact of digital learning on students' religious character development has not yet been systematically evaluated. While digital platforms provide tools for monitoring religious activities, there is still a need for more structured and sustained evaluation mechanisms that assess the internalization of Islamic values and the development of students' spiritual and moral character. To synthesize the evaluative implications of the findings, the relationship between the four components of the CIPP model and the observed outcomes in this study can be summarized as table 4 below.

Table 4. Evaluation Outcomes of Digital Learning Integration in IRE

CIPP Component	Key Findings	Strengths	Areas for Improvement
Context	Digital learning initiative aligned with school vision of becoming a digital-oriented institution	Strong institutional support and policy alignment	Need for clearer indicators of success for digital Islamic education
Input	Adequate technological infrastructure and teacher digital competence	Availability of laptops, internet access, LMS platforms, and teacher training	Limited use of advanced educational technologies

Process	Implementation of blended learning and technology-supported instruction	Diverse teaching strategies and interactive digital learning activities	Limited development of authentic project-based and value-oriented assessments
Product	Positive impact on students' comprehension, motivation, and digital literacy	Increased engagement and improved understanding of learning materials	Lack of systematic evaluation of long-term religious character development

The table 4 illustrates that the integration of digital technology in Islamic Religious Education at SMP Muhammadiyah Al-Kautsar PK Kartasura has established a strong contextual and infrastructural foundation. However, further improvements are needed in the areas of pedagogical implementation and outcome evaluation, particularly in relation to the assessment of students' moral and spiritual development.

CONCLUSION

This study evaluated the integration of digital technology in Islamic Religious Education (IRE) at SMP Muhammadiyah Al-Kautsar PK Kartasura using the CIPP evaluation model. The findings indicate that digital technology integration is supported by the school's vision of developing a digital learning environment. Adequate technological infrastructure, including e-modules, learning management systems, multimedia resources, and computer-based assessments, enables teachers to implement blended learning and more interactive instructional practices.

The integration of digital technology has contributed positively to students' learning experiences. Digital learning tools help improve students' understanding of Islamic learning materials, increase their motivation to participate in learning activities, and support the development of digital literacy skills. However, the evaluation of learning outcomes remains largely focused on cognitive aspects, while the systematic assessment of students' religious character development in digital learning environments still requires further strengthening.

Practically, the findings suggest that successful digital integration in Islamic Religious Education requires institutional support, adequate technological infrastructure, and continuous teacher professional development. Teachers are encouraged to design digital learning activities that not only enhance engagement but also support the internalization of Islamic values. This study is limited to a single school context and primarily relies on teachers' perspectives. Future research is recommended to involve multiple institutions and include students' perspectives in order to gain a broader understanding of digital learning implementation in Islamic Religious Education.

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Author Contribution

Shofia Fadila Nur Husna contributed to the conceptualization of the study, research design, data collection, and manuscript drafting. Rasya Raesita Prasanti contributed to data analysis and interpretation of the findings. Nisa Amaliah contributed to the literature review and data organization. Fitri Nur Husniyah assisted in data validation and manuscript editing. Naufal Qameer provided critical revisions and supervised the overall research process. All authors read and approved the final version of the manuscript.

Conflicts of Interest

All authors declare no conflict of interest.

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