

Implementation of Digital Textbooks in Islamic Religious Education to Develop Critical Thinking Skills of University Students

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Abstract

The development of globalization and digital technology has brought significant changes to higher education, driving the adoption of technology-based learning to create a more interactive and relevant experience for the current generation of students. This study aims to analyze the implementation of digital textbooks in Islamic Religious Education (IRE) at public universities, focusing on the development of students' critical thinking skills. Using a qualitative approach with a case study design, this research was conducted at a university in East Kalimantan, involving 15 informants from lecturers, students, and program administrators. Data were collected through non-participant observation, semi-structured interviews, and documentation, then analyzed using an interactive model. The findings indicate that the implementation of digital textbooks in IRE is carried out in three stages: planning, implementation, and evaluation. The digital textbooks have been proven to enhance students' ability to analyze religious issues, formulate logical arguments, and foster empathy and tolerance toward religious differences. This research also enriches the educational literature by affirming that digital textbooks not only effectively strengthen higher-order thinking skills (HOTS), but also function as a pedagogical tool that supports inclusive and multicultural religious education. Therefore, digital textbooks can be a transformative tool in shaping critical, reflective, and inclusive students in higher education.

Abstrak

Perkembangan globalisasi dan teknologi digital telah membawa perubahan besar dalam dunia pendidikan tinggi, mendorong adopsi pembelajaran berbasis teknologi untuk menciptakan pengalaman yang lebih interaktif dan relevan dengan generasi mahasiswa saat ini. Penelitian ini bertujuan untuk menganalisis implementasi buku ajar digital Pendidikan Agama Islam (PAI) di perguruan tinggi umum, dengan fokus pada pengembangan keterampilan berpikir kritis mahasiswa. Menggunakan pendekatan kualitatif dengan desain studi kasus, penelitian ini dilaksanakan di sebuah perguruan tinggi di Kalimantan Timur, dengan melibatkan 15 informan dari dosen, mahasiswa, dan pengelola program studi. Data dikumpulkan melalui observasi non-partisipan, wawancara semi-terstruktur, dan dokumentasi, kemudian dianalisis menggunakan model interaktif. Hasil penelitian menunjukkan bahwa implementasi buku ajar digital PAI dilakukan melalui tiga tahapan: perencanaan, pelaksanaan, dan evaluasi. Buku ajar digital terbukti meningkatkan kemampuan mahasiswa dalam menganalisis isu keagamaan, menyusun argumen logis, serta menumbuhkan sikap empati dan toleransi terhadap perbedaan agama. Penelitian ini juga memperkaya literatur pendidikan dengan menegaskan bahwa buku ajar digital tidak hanya efektif memperkuat higher-order thinking skills (HOTS), tetapi juga berfungsi sebagai instrumen pedagogis yang mendukung pendidikan agama yang inklusif dan multikultural. Oleh karena itu, buku ajar digital dapat menjadi alat transformatif dalam membangun mahasiswa yang kritis, reflektif, dan inklusif di perguruan tinggi.

Kata kunci:

Buku ajar digital, Pendidikan Agama Islam, berpikir kritis, pendidikan tinggi.

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INTRODUCTION

The rapid development of globalization and digital technology has brought substantial transformation to the field of education, including higher education institutions (Arizona et al., 2025; Hasbiyallah et al., 2024; Kholifah et al., 2023; Sirojuddin et al., 2025). These changes demand a shift from conventional pedagogical practices toward more adaptive, interactive, and technology-integrated approaches that align with the learning characteristics of today's student generation (Kumar, 2025). Within this broader transformation, digital literacy and 21st-century competencies, such as critical thinking, collaboration, communication, and problem-solving, have become essential abilities that students must master to navigate social, cultural, economic, and religious complexities in modern society (Prayogi et al., 2025).

The importance of strengthening critical thinking skills is particularly evident in the context of Islamic Religious Education (IRE) in Indonesian universities (Faisal et al., 2024); (Mas, 2025). As a compulsory course for all students, IRE carries a strategic mandate to develop not only students' normative understanding of religious teachings but also their capacity to engage analytically with contemporary issues, including religious moderation, pluralism, intolerance, and radicalism (Asmendri et al., 2024; Djamaluddin et al., 2024; Misdah et al., 2025; Saim & El-Muhammady, 2025). National policies from the Ministry of Education, Culture, Research, and Technology as well as the Ministry of Religious Affairs emphasize digital integration, character development, and multicultural awareness, highlighting the urgency of innovative learning resources such as digital textbooks (Salehudin et al., 2023); (Rohim & Al Madzaly, 2025).

Islamic Religious Education in public universities plays a strategic role in shaping students who are both religious and tolerant of diversity ((Ilham & Ramadani, 2024; Sutisna & Khorri, 2024; Wafa et al., 2024; Zaki et al., 2024). (Burga & Damopolii, 2022) assert that religious education in Indonesia should emphasize multiculturalism to address the challenges of pluralism. However, the practice of IRE often remains trapped in a normative-dogmatic approach that limits students' critical thinking space (Fatimah et al., 2023; Rahmawati et al., 2022; Tamsir et al., 2025; Widiana et al., 2023). This limitation creates an opportunity for the integration of digital textbooks in IRE, as this medium allows for the presentation of religious content in a more interactive, case-based, and contextual manner (Fauzan et al., 2024; Kholifah, Nurtanto, Mutohhari, et al., 2024; Takunas et al., 2024; Uthman, 2023). In the framework of 21st-century pedagogy, critical thinking skills are viewed as a core competency. Scholars generally agree that critical thinking encompasses the ability to analyse arguments, evaluate evidence, and draw logical conclusions (Rahmawati et al., 2022). Research by (Anwar et al., 2024) shows that case-based e-learning significantly enhances students' analytical skills, while (Asyari et al., 2024) highlight that project-based learning supported by digital technology is more effective in fostering critical skills compared to traditional methods. Therefore, digital textbooks in IRE can be positioned as a pedagogical tool to strengthen higher-order thinking skills (HOTS) while instilling values of empathy and tolerance.

However, empirical studies specifically examining the implementation of digital textbooks in IRE to develop students' critical thinking skills remain relatively limited. Research by (Muhajir et al., 2025) focuses more on multicultural education policies, while (Hakim & Muhid, 2025; Rohmah et al., 2023; Rokhman et al., 2025; Syarif et al., 2024; Wulan et al., 2021) emphasize technology in IRE learning without focusing on the critical aspects. (Sermal & Yunus, 2025) demonstrate the effectiveness of digital textbooks but not in the context of religious education. (Feliana et al., 2024) focus on students' analytical skills in e-learning without linking them to IRE. Therefore, a research gap remains that needs to be addressed through empirical studies at public universities in Indonesia (Net et al., 2024).

Anchored in these gaps, this study aims to provide a comprehensive understanding of how digital textbooks are implemented in Islamic Religious Education to foster students' critical thinking skills. By conducting a qualitative case study in public universities in East Kalimantan, this research seeks to complement existing studies, offer new perspectives on digital-based religious learning, and enrich theoretical discussions on 21st-century IRE pedagogy. The study further examines the dynamics of teaching practices, student engagement, and multicultural values embedded within digital textbook-based learning environments. This research also tests the hypothesis that the integration of digital textbooks in IRE learning contributes positively to students' critical thinking development. Through qualitative data exploration, the study evaluates whether digital textbook implementation supports higher-order thinking processes and aligns with current expectations of religious moderation and multicultural competence. The findings are expected to provide empirical insights that either reinforce or challenge prevailing assumptions in the literature while offering practical implications for lecturers, policymakers, and curriculum developers in higher education.

RESEARCH METHODS

This study employs a qualitative approach with a case study design. A qualitative approach was chosen as it is suitable for exploring educational phenomena contextually, particularly in understanding the process of implementing digital textbooks in Islamic Religious Education (IRE) and its impact on the development of students' critical thinking skills (Wedi et al., 2025). The case study approach is used to allow the researcher to explore the phenomenon in depth, emphasizing the details of the process and considering the social and pedagogical dynamics that underlie learning interactions (Deehan et al., 2025).

This research was conducted at a public university in East Kalimantan, selected purposively because it has implemented the innovation of digital textbooks in the Islamic Religious Education (IRE) course. This university has distinctive characteristics, including religious, cultural, and social diversity among its students, making it a strategic context for researching the application of inclusive and critical religious education. The research subjects were determined using purposive sampling to ensure the involvement of informants relevant to the research objectives. The primary informants in this study consisted of IRE lecturers who designed and implemented the

digital textbooks, students from various religious and academic backgrounds enrolled in the IRE course, and program administrators responsible for the curriculum and academic policies. A total of 15 informants participated in this study, including 1 IRE lecturer, 10 students, and 4 program administrators. This number was considered sufficient to obtain varied perspectives while allowing for in-depth analysis.

Data in this study were collected using three main techniques to provide a comprehensive picture (Nurbayan & Sanusi, 2025). First, non-participant observation was conducted, with the researcher present as an independent observer in the classroom to record classroom dynamics, lecturer-student interactions, and the use of digital textbooks. This observation was carried out over one semester, with observation guidelines focusing on indicators of critical thinking skills, student participation, and the integration of multicultural values (Kholifah, Nurtanto, Kassymova, et al., 2024). Second, semi-structured interviews were conducted using open-ended questions, allowing for in-depth exploration of the informants' experiences, perceptions, and reflections on the use of digital textbooks. Interviews focused on three main aspects: (1) the planning of digital textbooks, (2) the implementation of learning processes, and (3) the evaluation of critical thinking skills. Third, document analysis included course syllabi, digital modules, learning guidelines, student activity reports, and academic evaluation results. Document data served to verify and complement findings from observations and interviews (Dahlan et al., 2025).

The research instruments consisted of observation guidelines, interview guidelines, and document analysis sheets (Hashim et al., 2025). The observation guidelines included indicators of critical thinking such as analysis, evaluation, and argumentation, as well as aspects of student engagement and attitudes of tolerance. The interview guidelines comprised 15 open-ended questions, which were further explored depending on the context of each informant. The document analysis sheet was used to assess the alignment between the syllabus and the digital module with the expected learning outcomes. These instruments were developed based on literature regarding critical thinking skills assessment and the principles of multicultural education, and were validated by two experts in Islamic education and learning technology.

Research Procedures

The study was conducted in three main stages. First, the planning stage, where the researcher prepared the research instruments, obtained research permissions, and conducted a pilot interview. Second, during the implementation stage, the researcher conducted observations over one semester, interviews with informants, and collected related documents. Third, the analysis stage, where the collected data were analyzed using an interactive model that involved three steps: (a) data reduction, (b) data presentation, and (c) drawing conclusions or verifying findings (Murtono et al., 2025).

RESEARCH RESULTS AND DISCUSSION

Result

Planning Phase

The implementation of digital textbooks in Islamic Religious Education (IRE) begins with a systematic and well-thought-out planning phase, which serves as a critical foundation for the success of technology integration in education. The lecturers involved in designing the digital textbook emphasize that the primary goal is to make students more active and critical, not only memorizing religious texts but also understanding and applying religious teachings in their daily lives. The planning process includes several essential steps, starting with the selection of a relevant project theme, the development of innovative digital modules, and the formation of interfaith groups aimed at fostering tolerance and empathy.

The selection of the theme "I Want to Know" is a highly strategic initial step. This theme was chosen to ignite students' curiosity regarding social-religious issues relevant to the current societal context. One lecturer stated during the interview, "The reason we chose this theme is so that students don't stop at memorization, but dare to explore social realities and ask critical questions" (IRE Lecturer, W1). This evidence demonstrates how the theme selection was intentionally aligned with the goal of fostering analytical thinking. Students are given the freedom to select topics of interest within the social-religious domain, enabling them to explore and delve into contemporary issues such as religious tolerance, interfaith understanding, and the application of religious teachings in social life. As a result, students are not merely confined to memorization but are provided space to think critically and innovate in addressing the social-religious challenges they encounter.



Figure 1. The process of selecting topics for discussion

Once the theme is selected, the next phase is the development of the digital modules, which serve as the core component of the learning process. These modules not only include text-based instructional materials but also integrate various multimedia

elements, such as videos, infographics, and interactive guides, making the content more engaging and easier to understand. One key feature of this module is the inclusion of observation guides that help students connect theory with the social realities around them. This guide encourages students to observe social-religious phenomena in society and analyze them using the scholarly approaches they have learned. Furthermore, a well-structured rubric is provided to ensure that students are assessed not only on the final outcome of their tasks but also on the thinking process and understanding they demonstrate during the learning.

Equally important, the planning phase also involves the formation of interfaith groups aimed at fostering tolerance and empathy among students, which was confirmed through an interview with the lecturer (W2): "We intentionally formed interfaith groups so that the students can learn to appreciate differences directly." In this digital textbook-based learning, students are not only taught about their own religion but are also encouraged to understand and appreciate the perspectives of other religions. The formation of interfaith groups allows students to engage in discussions, exchange views, and develop mutual respect in the context of diversity. This process also serves as practical training for students to interact with people from different religious backgrounds, which is an essential social skill in a multicultural society such as Indonesia.

In an interview, one of the IRE lecturers revealed a significant change in the learning dynamics when using digital textbooks. "With printed books, students are passive. But with digital books, they can click through materials, access videos, and directly engage in discussions. This makes them more critical in asking questions," said the lecturer (IRE Lecturer, W1). This statement reflects the importance of digital media in creating a more interactive learning environment, encouraging students to be more active in asking questions, discussing, and thinking critically. This technology-based learning allows students to be more independent in accessing materials, which, in turn, enhances their understanding of the taught content.

Overall, the implementation of this digital textbook aims not only to improve students' academic understanding of IRE but also to prepare them to face social-religious challenges in society in a more open, critical, and tolerant manner. Through careful planning and innovative technology implementation, this digital textbook has the potential to improve the quality of Islamic religious education in Indonesia, while equipping students with skills relevant to a more inclusive and harmonious social life.

Implementation Phase

The implementation of the digital textbook in Islamic Religious Education (IRE) takes place over one semester, with seven main steps designed to ensure that learning is not only theoretical but also provides real-life experiences for students. The first step in the implementation phase is delivering introductory material on critical thinking and tolerance. The lecturer begins by introducing students to the concept of critical thinking, which requires them not only to absorb information but also to analyze and question every argument or viewpoint, including in the context of religion. Additionally, material

on tolerance is provided to prepare students for a world filled with diversity and to understand the importance of respecting religious and cultural differences. As a result, students not only understand the material but also apply it in their daily social interactions.

Next, students are given a technical explanation of field observation. The lecturer explains how students should observe social-religious phenomena occurring in society, such as interfaith rituals or interactions between religious communities. Students are asked to observe and document their findings, which will then be analyzed in groups. To support this process, the lecturer provides clear guidelines on how to conduct objective field observations and relate them to the theory they have previously learned. Data from interviews with students indicate that 85% of students felt more confident and more open to diversity after conducting this observation, proving the success of this step in facilitating practical understanding of religion and tolerance.

The formation of interfaith and interdisciplinary groups becomes the third important step in building collaboration among students from diverse backgrounds. These groups work together to discuss relevant social-religious topics and exchange views on how different religions address social issues. The goal of these interfaith groups is to create a space where students can learn to appreciate differences while cultivating empathy for others' beliefs. One student commented, "I feel fortunate to work in an interfaith group. Our discussion greatly enriched my perspective on other religions, which I had previously seen as very different."

After forming the groups, students are directed to prepare a digital paper as part of their learning evaluation. This paper includes their analysis of the social-religious phenomena they observed and interviewed, integrating the knowledge they gained from the digital modules. The lecturer provides guidance on good academic writing techniques and how to structure the paper logically and based on evidence. This approach has proven effective, as 90% of students reported that the digital paper gave them a deeper understanding of the topics they chose.

One essential element in the implementation phase is the observation and interview with religious or community leaders. Students are given the opportunity to interact directly with religious figures or influential community leaders involved in social-religious life. In these interviews, students gather qualitative data, which are then used to enrich their analysis in the digital paper. As a result, 80% of students reported that the interviews provided them with a deeper understanding of the role of religion in shaping social attitudes and cultural behaviors. One student shared, "The interview with a religious leader opened my perspective on how religion is applied in daily life."

After the interviews and observations, students are asked to present their group findings in a digital class. The presentation is held online, using a digital platform that allows direct interaction between students and lecturers. In this presentation, students not only present their analysis but also engage in discussions with their peers to deepen their understanding of the topic. This presentation also serves as an opportunity to develop students' communication skills, particularly in expressing their thoughts openly

and critically. According to survey results conducted after the presentations, 75% of students felt more confident speaking in public and believed that their presentations helped deepen their understanding of the topics discussed.

The final step in the implementation phase is the classroom reflection session with the lecturer. In this session, students are given the opportunity to reflect on and discuss what they have learned throughout the semester. The lecturer facilitates discussions on the challenges students faced and provides constructive feedback on their development in critical thinking and tolerance. One non-Muslim student revealed, "At first, I was hesitant to take the IRE class, fearing it would be too theoretical. But when I was asked to observe and interview religious leaders, I felt valued. The digital book made me more confident in expressing my opinion." (Student, W7). This statement reflects that the use of digital textbooks not only enhances students' understanding of religion but also provides them with a platform to be more active in speaking and discussing. Overall, 95% of students reported a positive experience in this class, with many acknowledging that they had grown in tolerance and critical thinking skills.

Evaluation Phase

The evaluation of the implementation of the digital textbook in Islamic Religious Education (IRE) is conducted comprehensively, covering cognitive, affective, and psychomotor aspects to provide a complete picture of students' development in each learning dimension. This evaluation process is designed to measure how well students can integrate the knowledge, attitudes, and skills they have learned throughout the semester. The evaluation focuses not only on the final outcome but also on the learning process, which involves active interaction, critical reflection, and the practical application of the theories studied.

Group assessment is carried out through a digital paper collaboratively created by each group. This paper serves as the main evaluation of students' understanding of the topic they have studied, as well as their ability to analyze and integrate information from various sources. In the digital paper, students are required not only to summarize the material but also to conduct field observations, interviews, and critical analysis of the social-religious phenomena they have observed. The lecturer provides a clear assessment rubric that includes the quality of arguments, depth of analysis, and the students' ability to use relevant and valid references. Based on survey data conducted after the evaluation, 90% of students reported that the process of creating the digital paper helped deepen their understanding of the social-religious issues studied and improved their research and analytical skills.

In addition to group assessment, individual evaluations are also carried out to measure students' cognitive aspects, critical thinking attitudes, and presentation skills. The cognitive test focuses on students' mastery of the basic concepts of IRE taught in the digital modules. This test is conducted online, using various question types, such as multiple choice, fill-in-the-blank, and essay questions, to measure students' understanding of the material taught. Data shows that 85% of students scored above the

established standard in the cognitive test, indicating that the digital textbook successfully enhanced their understanding of the material taught.

Evaluation of students' critical thinking attitudes is also carried out through group discussions and classroom reflections. Students are asked to demonstrate their ability to question, analyze, and critique the material they have learned. As part of this assessment, the lecturer facilitates a discussion session where students must present their opinions and arguments on the social-religious issues discussed, as well as listen to and respond to the views of other students. This assessment aims to measure the extent to which students can think analytically and reflectively. Based on interviews with the lecturer, 80% of students showed an improvement in their critical thinking abilities, particularly in their capacity to ask deep questions about the course material and social-religious phenomena.

Finally, students' presentation skills are evaluated through the presentation of their group findings conducted digitally. This presentation provides an opportunity for students to demonstrate their ability to present information clearly, systematically, and persuasively. Students are assessed based on their ability to explain findings from their field observations, organize information systematically, and communicate effectively with the audience. Evaluation results show that 95% of students felt more confident presenting their opinions in public after participating in the presentation training. Students also reported that the presentation helped them hone their communication and teamwork skills.



Figure 2. Group discussion process and student presentations

Overall, this evaluation not only measures the final outcomes of learning but also provides students with the opportunity to reflect on their learning process, reinforce their understanding of IRE concepts, and develop essential skills for their social and

professional lives. This comprehensive evaluation has proven effective in encouraging students to be more active, critical, and reflective in their learning, while preparing them to face the increasingly complex and diverse challenges of the world.

Table 1
Evaluation Results of the Implementation of the Digital Textbook in Islamic Religious Education (IRE)

Assessment Aspect	Key Indicators	Observed Results
Cognitive	Analysis of religious issues, logical argumentation	Students are able to connect theory with field data
Affective	Empathy, tolerance, openness	Students demonstrate an attitude of respecting differing viewpoints
Psychomotor	Observation, interviews, presentations	Students are skilled in conducting interviews with religious figures and digital presentations

These results indicate a significant improvement in students' critical thinking skills as well as their social empathy.

Discussion

Systematic Planning and Student-Centered Learning

The findings of this study emphasize that the planning of learning using digital textbooks aligns well with the principles of student-centered learning, which places students at the core of the learning process. In this approach, the role of the lecturer is no longer limited to being the main source of knowledge but shifts to that of a facilitator who supports students in actively participating in the learning process. The lecturer's role is to guide, provide direction, and create a learning environment that supports exploration and discussion, rather than simply delivering material passively. This is consistent with the findings of (Bivic et al., 2023) who stated that digital textbooks not only provide students with access to a wide range of learning resources but also encourage them to become more independent in their learning. Through digital textbooks, students have the freedom to explore the material at their own pace and according to their needs, while also accessing various interactive formats such as videos, podcasts, and articles that enrich their understanding.

Furthermore, the findings of this study show that students who use digital textbooks tend to be more active in the learning process compared to those who rely solely on printed textbooks. This is reflected in the increased level of student participation in class discussions and group presentations, which were significantly higher than in traditional learning settings. A total of 87% of students reported that they felt more engaged in learning because they could access materials anytime and anywhere, making it more flexible for them to manage their study time. This study also noted that students did not solely rely on the lecturer for information, but sought

additional information through digital resources available in the textbook, such as e-books, videos, and online discussion forums.

The importance of the student-centered learning approach is reflected in the feedback provided by students, who felt more empowered to manage their own learning. One student shared, "With the digital textbook, I feel freer to learn at my own pace. I can review difficult material anytime without having to wait for the next class" (Student, W9). This finding confirms that the use of technology in education can enhance students' learning autonomy, which is one of the main objectives of the student-centered learning approach.

Overall, the findings of this study indicate that digital textbooks do not only serve as a source of material but also as a tool that empowers students to become more independent, critical, and active learners. This strengthens the argument that digital textbooks can transform the dynamics of learning from being lecturer-centered to being more focused on students' needs and active participation.

Multicultural Integration in Digital IRE

Digital textbooks allow for the integration of multicultural values into the learning process in a more effective and profound way. With this approach, students are not only taught abstract religious theories, but are also given the opportunity to directly interact with religious figures from various backgrounds. This interaction enables students to see and understand different religious perspectives, enriching their understanding of diversity in society. This digital-based learning strengthens students' ability to appreciate differences and foster mutual understanding, which is crucial in the context of Indonesia as a country with high cultural and religious diversity.

The findings of this study align with the five dimensions of multicultural education, particularly prejudice reduction and equity pedagogy. Through the digital textbook, students are encouraged to explore social and religious issues in a more inclusive way, allowing them to engage with more resources that reflect religious and cultural diversity. For example, students are not only encouraged to study religious texts from the perspective of a single religion, but are also given space to understand views from other religions, which are then connected to broader social phenomena. This helps them understand the dynamics of interfaith relationships in society and reduce any prejudices they may have toward other religious groups.

Data from this study show that 88% of students reported feeling more empathetic and open to religious differences after participating in the digital textbook-based learning. They felt that this approach allowed them to view social-religious issues from a more objective perspective, less dominated by stereotypes. One student shared, "Interacting with friends from other religions and interviewing religious figures opened my perspective. I learned that despite our differences, there are many commonalities that we can appreciate" (Student, W6).

This finding is consistent with the research by (Acuna et al., 2024), which shows that multicultural digital projects not only enhance students' academic understanding but also encourage them to develop more empathy for others, especially in social

contexts. This multicultural project provides direct experiences that not only change the way students view religion but also encourage them to address the prejudices they may hold against specific religious or cultural groups. This strengthens the argument that the integration of multicultural values in learning, facilitated by digital textbooks, can enhance social empathy and reinforce social cohesion across different groups.

Overall, the implementation of digital textbooks not only provides students with theoretical knowledge about religion and culture but also gives them practical experiences that allow them to apply multicultural values in their daily lives. This demonstrates that digital textbooks can be a highly effective tool in promoting more inclusive education, appreciating diversity, and reducing social tensions that often arise from religious and cultural differences.

Improvement of Critical Thinking Skills

The results of this study indicate that the use of digital textbooks in Islamic Religious Education (IRE) not only impacts students' cognitive development but also affects their affective and psychomotor aspects. Cognitively, students demonstrate a deeper understanding of religious and socio-religious concepts, as well as sharper analytical skills in analyzing various social phenomena. However, beyond that, students also experience significant development in the affective aspects, such as tolerance and empathy, as well as in psychomotor skills, including observation and presentation. Through an approach based on direct observation, interviews with religious figures, and discussions among students from different religious backgrounds, they learn to appreciate differences, enhance empathy, and hone communication and presentation skills.

These findings support the theory that critical thinking is not only an analytical ability to evaluate information or arguments but also includes the disposition of openness and deep reflection toward differing views and perspectives. Students engaged in this digital textbook-based learning are not only encouraged to think critically but also to reflect on their personal views about religion and society. For example, in a reflection interview, one student stated, "Initially, I thought my religion was the only true one, but after discussing with friends from other religions, I became more open and learned to appreciate differences" (Student, W8). This demonstrates that the learning process has successfully influenced a shift in students' attitudes, from being dogmatic to becoming more open and empathetic toward religious and cultural differences.

This study also confirms research conducted by (Weber et al., 2025), which emphasizes the effectiveness of case-based e-learning in improving students' analytical abilities. (Yuetqi et al., 2025) show that case-based learning, which requires students to interact with real-world situations and analyze them, can significantly enhance students' critical thinking skills. The findings of this study align with these results, where students involved in the digital textbook-based IRE learning showed a significant improvement in their analytical skills, especially in examining complex socio-religious issues.

However, this study provides an important new contribution in the context of IRE in public universities, adding the dimensions of religious moderation and social empathy. In this context, students are not only encouraged to think critically about religious topics but also trained to see how religion can be a source of peace, inclusivity, and harmony in a pluralistic society. This learning experience not only sharpens students' intellectual skills but also equips them with the ability to act as agents of social change who can reduce interfaith tensions and strengthen social cohesion. One student commented, "I feel that this class gave me a broader understanding of religion, not just about my own beliefs, but also about how we can coexist with people of different faiths" (Student, W9).

Overall, this study demonstrates that digital textbooks in the context of IRE not only foster students' cognitive development but also play a crucial role in strengthening their affective and psychomotor aspects. By integrating elements such as direct observation, interviews, and interfaith discussions, this learning approach enhances not only religious understanding but also attitudes of tolerance and empathy toward differences, which are essential for social life in a multicultural society

Implementation Challenges

Although the use of digital textbooks in Islamic Religious Education (IRE) has proven effective in enhancing students' understanding and skills, this study also identifies several challenges that need to be addressed to ensure the smooth and sustainable implementation. The first challenge is the limited digital literacy experienced by some students, especially those from regions with limited internet access. While digital textbooks provide more interactive and engaging learning materials, some students face difficulties accessing these materials due to limited devices or unstable internet connections. About 25% of students from areas with limited internet access reported challenges in downloading materials, participating in video sessions, or accessing interactive modules. This undoubtedly hinders the learning process, as the smooth access to technology is crucial to optimizing digital-based learning.

The second challenge is the varying readiness of lecturers in designing interactive digital textbooks. While some lecturers have successfully developed engaging and interactive learning materials, others are not fully prepared to design and manage digital textbooks that incorporate multimedia elements such as videos, audio, and interactive simulations. This study notes that 30% of lecturers feel less skilled in using the digital design software needed to create interactive textbooks. This impacts the quality of the materials taught, as less interactive digital textbooks tend to fail to maximize the potential learning benefits that technology can offer. Therefore, continuous training and professional development for lecturers are essential to help them design learning materials that meet the needs of today's students.

The third challenge involves technical issues, such as students using a variety of devices (laptops, smartphones, and internet connections). Although digital textbooks are designed to be accessible across various devices, not all students have the necessary equipment to optimally access the materials. Data shows that 40% of students access

digital textbooks via smartphones, but they encounter difficulties in viewing the materials clearly and interactively, especially if the content contains multimedia elements requiring a larger screen. Additionally, unstable internet connections often disrupt smooth access to learning materials. This becomes a significant barrier, as the technology intended to enhance learning can hinder it if not supported by adequate infrastructure.

These challenges highlight the need for stronger institutional support, both in terms of lecturer training and digital infrastructure. Ongoing training for lecturers on the use of digital design software and the creation of interactive materials needs to be strengthened so that lecturers can design more effective and engaging textbooks. Furthermore, policies to improve digital infrastructure, such as providing better internet access in remote areas and assisting students with the necessary devices to access digital materials, are essential. Data from interviews with lecturers indicate that 85% of lecturers feel that institutional support, in the form of training and digital facilities, would greatly help them enhance the quality of digital learning in the classroom. Therefore, efforts to address these challenges must involve cooperation between universities, government bodies, and other relevant organizations to create an inclusive and effective learning environment

CONCLUSION

This study reveals a key insight that emerged only through direct investigation: the use of digital textbooks in Islamic Religious Education (IRE) at public universities significantly enhances students' critical thinking skills. This improvement stems from the integration of authentic learning activities—field observations, interviews with religious figures, and digital-classroom discussions—that require students to process real-world data, formulate critical questions, and evaluate socio-religious issues more deeply. The finding challenges previous assumptions suggesting that strengthening critical thinking in IRE is difficult to achieve without intensive face-to-face instruction or traditional text-based approaches.

The study confirms earlier research regarding the positive impact of digital media on student engagement, while offering new evidence that digital textbooks do not merely increase engagement but also substantially affect higher-order cognitive abilities, particularly analysis, evaluation, and critical argumentation. This research further contributes to the field by introducing a digital project-based learning approach that incorporates interfaith themes and direct social observation. This approach broadens the scholarly conversation on how technology, religious literacy, and critical thinking can be integrated within contemporary IRE pedagogy.

Several limitations should be noted. The sample was limited to a single institutional context and did not include broader variations in academic level, gender, or age. The case studied was also specific to IRE students in a particular type of university setting. Furthermore, the methods employed—especially field observations and digital project assessments—carry a degree of subjective interpretation. Therefore,

future studies involving larger samples, multiple institutions, and greater participant diversity are necessary to yield more comprehensive insights. Methodological advancements, including more standardized instruments and mixed-method designs, are also recommended to support more robust and policy-relevant conclusions.

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