

Digital Da'wah in Islamic Education: The Role of Bimasoft and Safe Exam in Enhancing Academic Integrity and Amanah Values

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Abstract

The rapid expansion of digital technology in Islamic education has created new challenges in maintaining academic integrity, particularly during computer-based examinations. This study addresses the issue of academic dishonesty in digital assessment settings and explores how technological tools can be aligned with Islamic values, especially the principle of *amanah* (trustworthiness). The purpose of this research is to analyze the implementation of Bimasoft and Safe Exam applications as an integrated strategy for preventing cheating while fostering *amanah* in students within an Islamic educational environment. Using a descriptive qualitative approach, data were collected through in-depth interviews with teachers, operators, and school management, complemented by documentation of exam procedures. The findings show that Bimasoft improves exam efficiency through streamlined question input, randomized items, and automated scoring, while Safe Exam effectively restricts access to external applications, thereby reducing opportunities for cheating. However, the success of these systems remains dependent on human factors, particularly the vigilance of exam proctors. The study implies that digital examinations can function not only as technical assessment tools but also as instruments of digital da'wah that reinforce moral discipline and accountability. The novelty of this research lies in its integration of technological exam systems with Islamic ethical formation, demonstrating how digital platforms can operationalize spiritual values in contemporary education.

Keywords: *Digital Da'wah, Islamic Education, Academic Integrity, Bimasoft, Safe Exam, Amanah.*

INTRODUCTION

The rapid development of digital technology has fundamentally transformed contemporary education systems. Within Islamic education, digitalization is not merely a growing trend but an urgent necessity to address the evolving learning environment and the ethical challenges brought by technology. Traditional paper-based examinations, once considered the standard, are increasingly viewed as inefficient, susceptible to cheating, and misaligned with digital learning demands. As highlighted by recent studies, online

assessment tools such as Safe Exam Browser have proven effective in technically minimizing cheating opportunities (Hidayat et al., 2024). However, technological safeguards alone are insufficient without a corresponding emphasis on spiritual and moral formation.

This tension becomes particularly significant in Islamic education, where the goals of instruction extend beyond knowledge transmission to the cultivation of moral integrity. Although Islamic educational institutions are expected to uphold high ethical standards, academic dishonesty persists and presents a paradox: institutions committed to forming virtuous character still struggle with dishonest exam practices. Dawson (2020) emphasizes that academic integrity remains a foundational pillar of education, requiring technological innovation to support fair assessment practices.

To address these challenges, digital examination platforms such as Bimasoft and Safe Exam have been increasingly adopted. Bimasoft facilitates item input, randomized question distribution, and automated scoring, while Safe Exam restricts device functions to prevent access to external applications. From the perspective of digital da'wah, these technologies are not value-neutral but serve as instruments for reinforcing Islamic virtues such as *amanah* (trustworthiness) and *muraqabah* (self-awareness before God). Features like real-time monitoring can be interpreted as digital manifestations of supervision that support ethical behavior, while character education continues to cultivate inner moral discipline.

Previous research underscores the dual benefit of digital examinations: enhanced efficiency for educators and improved exam reliability (Suwarna, 2016). At the same time, studies on Exam Browser-based assessments demonstrate their effectiveness in limiting cheating and improving student focus (Nusaibah, 2025). However, scholars consistently note that human supervision remains essential; students may still exploit opportunities when monitoring is weak, regardless of the robustness of the system.

Existing literature has identified several gaps. First, most research focuses on technical effectiveness but pays limited attention to the moral and theological dimensions of digital assessment within Islamic education. Second, few studies examine how digital examination systems can serve simultaneously as tools for academic integrity and as mechanisms for

internalizing Islamic ethical values. Third, the integration of digital examination systems with the concept of digital da'wah remains underexplored.

Therefore, this study investigates the implementation of Bimasoftware and Safe Exam as a dual strategy for preventing academic dishonesty and fostering amanah within the broader framework of Islamic digital education. Specifically, the study addresses the following questions: (1) How do digital examination systems contribute to maintaining academic integrity? (2) To what extent do technological interventions depend on human supervision to prevent cheating? (3) How are Islamic values, particularly amanah, embedded within digital exam procedures? and (4) What implications do these practices hold for digital da'wah in modern Islamic education?

This research contributes theoretically by bridging technological assessment systems with Islamic ethical formation, and practically by offering a model of digital examination aligned with the moral objectives of Islamic education. In doing so, it highlights the limitations of technology in character formation and reaffirms the essential role of educators as exemplars of amanah.

METHOD

This study employed a descriptive qualitative approach to examine the implementation of digital examinations using Bimasoftware and Safe Exam within an Islamic educational context. Data were collected through in-depth interviews with teachers, system operators, and school administrators who were directly involved in the digital assessment process. Additional data were obtained from institutional documents, including technical logs, exam schedules, and procedural guidelines for application use.

The data analysis followed a thematic analysis procedure, beginning with data reduction through the transcription and organization of interview and documentation records. The information was then coded and categorized into key themes such as system effectiveness, technical challenges, the role of human supervision, and the integration of amanah values in digital assessment practices. These themes were subsequently interpreted in relation to existing theories and previous scholarly findings, enabling a comprehensive

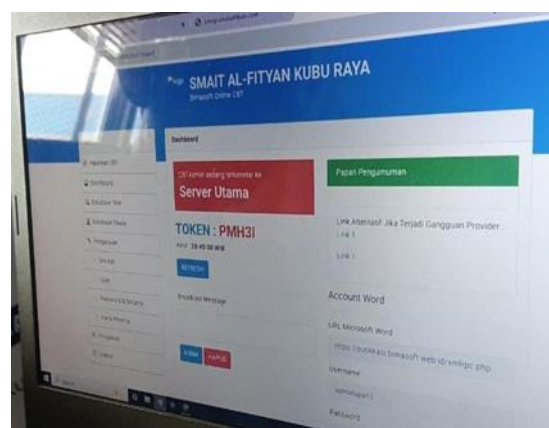
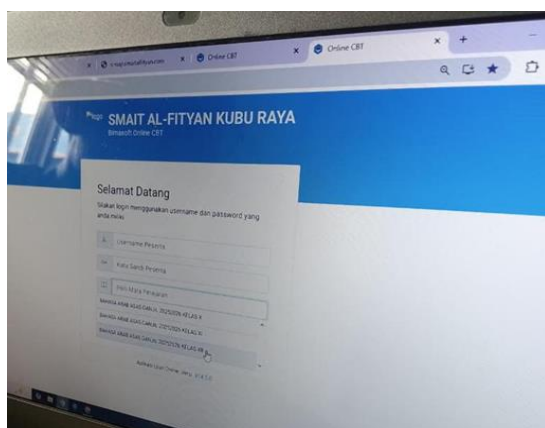
understanding of how digital examination systems support both academic integrity and Islamic ethical formation.

RESULT

Implementation of Bimasoft and Safe Exam

Field findings show that Bimasoft functions as the primary digital examination system, while Safe Exam serves as a supportive application that locks students' devices during assessments. Through Bimasoft, teachers can upload questions prepared in Word or Excel and publish them in digital exam format. Features such as item randomization and shuffled answer options reduce opportunities for collaboration or answer sharing among students. Safe Exam further reinforces exam integrity by restricting access to browsers and other applications, ensuring students remain within the exam interface.

This dual-system model was introduced during the COVID-19 pandemic, when paper-based exams became impractical and insufficient for ensuring exam security. Teachers and examination operators recognized the limitations of manual supervision and adopted digital tools as a more reliable alternative. Over time, the system expanded beyond routine school examinations to include entrance selection tests, demonstrating that digital assessment has become part of the institution's long-term evaluation strategy rather than an emergency adaptation.



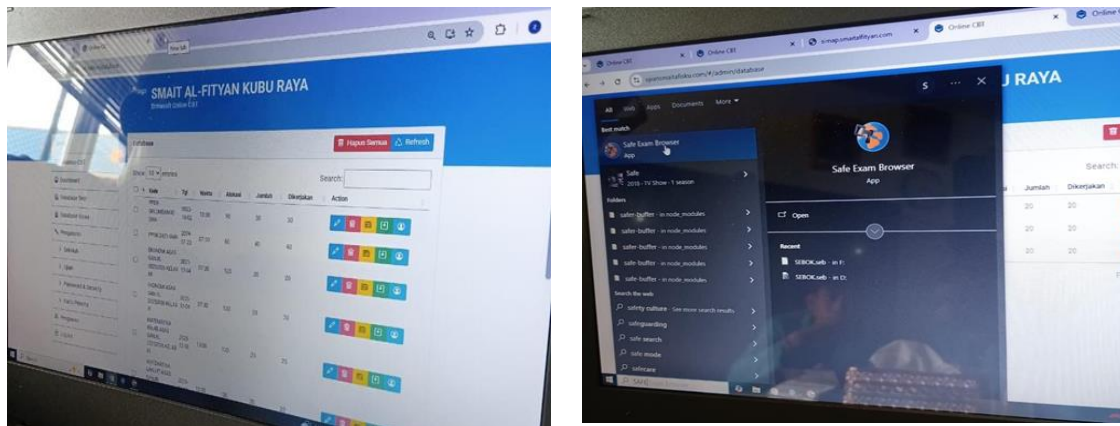


Figure 1.

Integrated illustration of the digital examination system: (a) Bimasoft interface during exam implementation, (b) teacher workflow for uploading and managing test items in Bimasoft, (c) automated scoring output generated by Bimasoft, and (d) Safe Exam Browser interface used to lock student devices and restrict access to external applications during assessments.

Effectiveness of Digital Systems in Preventing Cheating

The digital examination system proved effective in reducing academic dishonesty. Randomized items minimized answer sharing, and Safe Exam's locked environment prevented students from accessing external resources. However, the findings also reveal that technological solutions cannot fully eliminate cheating. Human factors remain critical: inattentive proctors, procedural errors (such as openly entering passwords), or inconsistent enforcement of rules still enable cheating opportunities.

These findings align with the conclusions of Cardina, Kristiani, and Sangka, who argue that digital assessment technologies can close technical loopholes but cannot replace the ethical responsibility of human supervision. Thus, digital systems must operate alongside strict proctoring and a strong culture of academic honesty. The present study reinforces this view, demonstrating that even well-designed systems remain vulnerable if human oversight is weak.

Cultivating Amanah Through Digital Examinations

The institution's digital exam implementation goes beyond technical efficiency and explicitly incorporates the Islamic value of *amanah*. Orientation sessions for teachers and students emphasize that examinations function as a medium for practicing honesty, discipline, and accountability. Exam regulations are rigorously applied, including uniform requirements, appropriate conduct, and strict prohibitions on unauthorized devices. Students caught cheating face immediate consequences, intended to instill deterrence and reinforce moral learning.

This approach shows that digital examinations serve a dual purpose: they provide academic evaluation while simultaneously acting as a platform for Islamic character formation. The findings strengthen the argument that technology alone cannot create honest behavior; rather, honesty must be cultivated through consistent moral guidance. Consequently, the integration of Bimasoft and Safe Exam supports both academic integrity and the internalization of *amanah* as a core ethical value in Islamic education.

Technical and Non-Technical Challenges

Despite its benefits, the digital system presents several challenges. Technical issues include unstable internet connections, user input errors such as confusion between similar characters (e.g., "0" and "O"), and students' devices that lack compatibility with Safe Exam. Non-technical challenges involve varying levels of digital literacy among teachers, operators, and students. Some users initially struggled with operating the system, although ongoing training and repeated exposure have reduced these obstacles.

These challenges illustrate that successful digital transformation requires sufficient infrastructure and human resource readiness. Dawson's work on academic integrity in online assessment supports this conclusion, noting that digital examination systems depend not only on software reliability but also on institutional competence in providing stable networks, compatible devices, and adequate training.

DISCUSS

Implications for Digital Da'wah and Islamic Education

The implementation of Bimasoft and Safe Exam carries broader implications for digital da'wah within Islamic education. First, the findings demonstrate that technology can serve as an effective medium for cultivating *amanah* and academic integrity, illustrating that moral education can be embedded within digital assessment practices. Second, the digitalization of examinations enhances efficiency, transparency, and accountability, thereby strengthening public trust in Islamic educational institutions. Third, this model offers a practical reference for other schools seeking to integrate technology within their assessment systems while maintaining a strong ethical framework.

More broadly, digital examinations can be understood as part of contemporary da'wah. Da'wah is no longer confined to sermons or verbal instruction; it also encompasses the institutional practices that shape learners' behavior and internalize Islamic values through consistent, structured processes. In this context, examination operators play an active role in enforcing ethical conduct. Their actions reflect the prophetic guidance narrated in Sahih Muslim, emphasizing the responsibility to prevent wrongdoing through action, speech, or inner conviction. By using Safe Exam to restrict access to unauthorized resources, operators engage in a form of "da'wah through authority," ensuring that students avoid dishonest behavior during assessments.

Thus, Bimasoft and Safe Exam operate not merely as technical tools but as instruments of Islamic ethical formation that resonate with the digital habits of contemporary learners.

Critical Analysis and Comparative Perspectives

Compared with existing studies, the digital examination model examined in this research offers several unique insights. Prior literature on digital da'wah—such as *Islamic Communication in the Era of Technology*—primarily focuses on social media and online content as vehicles for religious messaging. The present findings extend this understanding by showing that digital da'wah can also be embedded in educational systems, particularly through assessment mechanisms that reinforce honesty and responsibility.

Likewise, research on *Cheating in Online Exams: Causes and Prevention Strategies* highlights students' tendency to seek loopholes regardless of the technological safeguards in place. The present study confirms this tendency, noting that human supervision remains the decisive factor in determining the effectiveness of digital examination systems. This supports the argument that academic integrity is shaped by the interaction between technological design, institutional culture, and proctor behavior.

A critical comparison also reveals inherent vulnerabilities in hybrid digital–human proctoring models. While Bimasoft and Safe Exam successfully close technical gaps, their final effectiveness depends heavily on the consistency and attentiveness of human supervisors. Instances of operational negligence—such as entering passwords in front of students or insufficient monitoring—can compromise the integrity of the entire system. These findings reinforce evidence from studies such as Lancaster and Cotarlan (2021), which argue that anti-cheating technologies must be complemented by holistic integrity strategies and strong human oversight.

CONCLUSION

The findings of this study demonstrate that the integration of Bimasoft and Safe Exam provides an effective technological framework for enhancing academic integrity within Islamic educational settings. Bimasoft facilitates efficient exam administration through streamlined question input, randomized item generation, and automated scoring, while Safe Exam ensures a secure testing environment by restricting access to external applications. Together, these systems significantly reduce opportunities for cheating, although their ultimate effectiveness remains closely tied to the consistency and attentiveness of human supervision.

Beyond technical outcomes, the study highlights the broader pedagogical and spiritual implications of digital examinations. The implementation of these tools serves not only as an assessment mechanism but also as an instrument of digital da'wah, reinforcing essential Islamic values such as *amanah*, discipline, and accountability. Through structured exam regulations, character-based enforcement, and the integration of moral education into digital

practices, the examination process becomes a medium for shaping ethical behavior. This reinforces the potential of digital technology to support both academic quality and character formation in Islamic education.

Despite its contributions, the study acknowledges several limitations. Technical challenges—including unstable internet connectivity, device incompatibility, and operational errors—pose obstacles to seamless implementation. Non-technical limitations, such as varying levels of digital literacy among teachers and students, also affect system performance. These limitations suggest the need for stronger infrastructure, continuous capacity building, and more robust institutional readiness. Future research should explore comparative models across different educational institutions and examine long-term behavioral changes to further evaluate the role of digital examination tools in promoting integrity and Islamic ethical values.

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