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PAI CURRICULUM BASED ON DIGITAL LITERACY AND ETHICS: INTEGRATION OF DATA LITERACY AND DIGITAL SECURITY COMPETENCIES IN THE OUTCOME OF MORAL LEARNING

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ABSTRACT

The digital era has created a paradox for Islamic Religious Education (PAI): wide-open access to religious information is accompanied by a flood of misinformation and cyberethics challenges that can erode students' morals. The core problem is the gap between conventional moral learning outcomes, which have not yet touched the digital realm, and the urgent need to develop a generation of competent and ethical Muslims in cyberspace. This library research aims to develop an Islamic Religious Education (PAI) curriculum framework that systematically integrates data literacy and digital security competencies into moral learning outcomes. The results of the study indicate that this integration enables students to critically identify and evaluate religious digital data, apply digital security principles as a reflection of noble morals (such as *iffah* and *amanah*), and synthesize both competencies to wisely resolve contemporary ethical dilemmas. The impact is the formation of a profile of a Muslim netizen who is *muthabaqah* (harmonious), namely an individual who not only understands moral values but is also skilled and consistent in practicing them in digital life. In conclusion, the integration of data literacy and digital security is a transformative strategy to revitalize the Islamic Religious Education curriculum to make it relevant and effective in shaping noble morals in the digital era. Implementation of research results can be done through the development of concrete digital case-based learning modules equipped with holistic assessment rubrics to facilitate adoption by teachers and curriculum developers.

Keywords: Islamic Education Curriculum, Digital Literacy, Digital Ethics, Data Literacy, Digital Security, Morals.

INTRODUCTION

The digital era, marked by the information revolution and the rapid flow of technological convergence, has created an entirely new landscape of life, including in religious practices and ethical social interactions. Cyberspace has become an integrated lifeworld for the younger generation, a place where they seek knowledge, communicate, build identities, and simultaneously express their spiritual values. This transformation brings with it a profound paradox: on the one hand, digitalization opens unlimited access to religious resources, facilitates distance learning, and expands the network of faith communities; but on the other hand, the digital space has also become a new terrain for the spread of value distortion, the spread of radical ideologies, religious misinformation (religious hoaxes), cyber moral degradation (cyberbullying, hate speech), and privacy violations that threaten individual and social integrity (Purnama et al., 2021). In the context of religious Indonesia, this phenomenon is further complicated when religious content often goes viral without adequate verification,

mixing authentic teachings with political or economic interests, thus potentially misleading and dividing the community.

This phenomenon highlights a critical gap between the speed of digital technology development and the depth of understanding and ethical readiness of its users, especially students. They are a digital native generation who are technically fluent but often still ethically and critically naive in responding to digital content. The ability to operate gadgets and social media has not necessarily been matched by the capacity to assess the credibility of information, protect personal data, respect the digital rights of others, and apply moral values in every interaction in cyberspace (Arifin & Nurdin, 2021). Herein lies a major challenge for contemporary Islamic Religious Education (PAI): how education aimed at developing individuals with noble morals (*al-akhlaq al-karimah*) can remain relevant and effective in guiding students not only to become competent technology users but, more importantly, to become ethical and responsible digital citizens. This challenge suggests that conventional approaches to moral teaching, which are often normative-dogmatic and divorced from students' digital realities, are no longer adequate and need to be reconstructed.

This reconstruction requires the systematic integration of two key 21st-century competencies into the heart of the Islamic Education curriculum, namely data literacy and digital security. Data literacy refers to the ability to read, interpret, manage, and evaluate data and information in various digital formats. In the context of Islamic Religious Education (PAI), this competency serves as the first line of defense for training students in critical thinking (*al-fikr al-naqdy*) regarding all forms of religious information they encounter online. This allows them to distinguish between authoritative and misleading sources and construct evidence-based moral reasoning (Gummer & Mandinach, 2021). Meanwhile, digital security encompasses the awareness and skills to protect identity, data, privacy, and digital assets from various threats, while ensuring the security and rights of other users. From a moral perspective, this competency aligns directly with core Islamic values such as safeguarding *amanah* (privacy of oneself and others), *iffah* (protecting honor from digital exploitation), and *al-adl* (justice by not harming others online) (Faizi & Ainin, 2023). These two competencies are no longer merely additional content, but rather fundamental prerequisites for the realization of complete and contextual noble character in the digital era.

The urgency of this integration is further heightened by the fact that the Learning Outcomes (CP) for Islamic Religious Education (PAI) in Phase AF, as stipulated in the Decree of the Head of BSKAP No. 033/H/KR/2022, although implicitly addressing the digital moral dimension (such as "respecting differences" and "communicating politely"), have not explicitly and systematically formulated specific competencies for data literacy and digital security as an integral part of the moral standards. These moral learning outcomes still tend to be formulated within the scope of physical social interactions, potentially creating a dichotomy between individual piety in the real world and behavior in cyberspace (Sari & Sari, 2023). In fact, the Islamic concept of morality is universal and holistic, encompassing every aspect of human behavior, including the digital space, which is an extension of social reality itself. Therefore, a curriculum innovation is needed that can bridge this gap by designing a coherent integration model, so that the ultimate goal of Islamic Religious Education (PAI) to develop pious and noble individuals can be fully realized in the digitalized lives of students.

Based on the above considerations, this research was conducted to develop a PAI curriculum concept based on digital literacy and ethics, with a particular focus on integrating data literacy and digital security competencies into moral learning outcomes. This curriculum development is based on the assumption that strengthening the character and morals of young Muslims in the digital era cannot be achieved solely through indoctrination of values, but must be supported by mastery of technical competencies that enable them to intelligently, safely, and responsibly navigate complex digital environments. In other words, digital morals must be built on a strong foundation of digital competencies. Through this integration, it is hoped that students will not only be able to memorize and understand virtuous values, but also skillfully apply them in the real context of their digital lives, thus creating a "Digital Muslim" profile that is knowledgeable, moral, and digitally proficient, who can contribute positively to building a better civilization, both in the real world and in cyberspace (Ikhwan & Yunus, 2024).

Digital transformation has changed the religious landscape, where Islamic content and interactions now mostly occur in cyberspace. However, the current Islamic Religious Education (PAI) curriculum has not adequately responded to this new reality. There is a wide gap between the achievements of moral education, which is still largely oriented towards conventional social interactions, and the complexity of ethical challenges faced by students in the digital world. The main problem is students' low data literacy skills in assessing the validity of religious information circulating online, such as distinguishing authentic fatwas from hoax content. As well as a lack of digital security awareness and skills, which result in behaviors such as the dissemination of personal data, cyberbullying, and a disregard for the digital rights of others. As a result, the noble goals of moral education risk remaining mere discourse that is not actualized in the daily digital practices of the younger generation of Muslims.

This research is very urgent to be carried out for two main reasons. First, the demand for contextualization of religious education. Islamic Religious Education (PAI) cannot remain stagnant; it must equip students with "digital immunity" in the form of critical reasoning and strong ethics so they don't get lost in the flood of information and can maintain their dignity in the online space. Second, the need for value alignment. The digital space is not a value-free realm. Integrating digital security principles with Islamic morality, such as linking privacy protection to the concepts of amanah (trustworthiness) and iffah (trustworthiness), is a strategic effort to align technological advancement with the legacy of noble religious values. Without this integration, the dichotomy between piety in the real world and behavior online will continue to widen, ultimately eroding the goal of developing a well-rounded character.

The purpose of this study is to develop a conceptual framework for the Islamic Religious Education curriculum that systematically integrates data literacy and digital security competencies into moral learning outcomes. Specifically, this study aims to: (1) Analyze the conceptual relationship between the principles of data literacy and digital security with Islamic moral values; (2) Formulate moral learning outcomes enriched with dimensions of data literacy (such as the ability to verify religious information) and digital security (such as ethics in maintaining privacy and respecting digital rights); and (3) Develop an outline of a learning strategy that can operationalize this integration in the classroom, thereby producing a

graduate profile that not only understands moral theory but is also skilled and consistent in practicing it in everyday digital life.

LITERATURE REVIEW

The theoretical foundation of this research is rooted in three intersecting main conceptual pillars: (1) the evolution of Islamic Religious Education (PAI) in responding to the digital era, (2) the concept of data literacy and digital security as key competencies for the 21st century, and (3) an integrative paradigm between digital ethics and Islamic moral values. These three areas of study need to be explored to build a solid framework for developing a relevant and transformative PAI curriculum.

First, the study of the transformation of Islamic Education in the digital era reveals a paradigm shift from a doctrinal and textual approach to a more contextual, critical, and character-building-oriented approach in the digital space. Several recent studies have shown that the effectiveness of Islamic Education (PAI) depends heavily on its ability to relate to the realities of students' lives, which have now been massively digitized. A study by Abidin and Huda (2022) emphasized that conventional approaches to teaching morals tend to result in fragmented understanding, where the values taught in the classroom are not always internalized in students' online behavior. Hence, there is a call to make the digital world a new “theological locus” where Islamic values are tested and practiced. This requires a reconstruction of Islamic Religious Education (PAI) content and learning methods to equip students with critical thinking skills (*al-fikr al-naqdy*) and ethical awareness (*al-wa'y al-akhlaqy*) in media use. This literature review found that despite awareness of the urgency of technology integration, most initiatives remain instrumental, such as the use of PowerPoint or e-learning, and have not yet reached the level of philosophical-curricular integration that deeply unites digital competencies with the substance of moral values (Rahimah & Fattah, 2023).

Second, a review of the concepts of data literacy and digital security shows that these two competencies have evolved from mere technical skills to a digital citizenship imperative. Data literacy is defined as the ability to read, work with, analyze, and debate data. In an educational context, data literacy involves the skills to ask the right questions, gather relevant information, evaluate the credibility of sources, and interpret data to make decisions (Ridsdale et al., 2020). Meanwhile, digital security encompasses a series of practices to ensure the security of one's identity, data, privacy, and digital assets, which includes understanding privacy settings, password management, recognizing phishing threats, and ethical information sharing. What is important to underline is that these two concepts are not value-neutral; they require an ethical framework to guide their application. In the context of Islamic education, data literacy can be a tool to uphold the principle of *tabayyun* (clarification) and avoid *su'uzhan* (bad prejudice) in receiving religious information. Similarly, digital security can be seen as a contemporary form of the concept of *hifzh al-nafs* (protecting the soul) and *hifzh al-mal* (protecting wealth) in *maqashid shari'ah*, where personal data and online reputation are valuable assets that must be protected (Wahyuni & Syafruddin, 2024).

Third, and most central, is a review of the integrative paradigm between digital ethics and Islamic morals. Philosophical-ethical studies show a very strong point of contact between the

two. The core values of Islamic morality, such as shiddiq (honesty), amanah (trustworthiness), 'iffah (honor), and adl (justice), find new expression in digital ethical principles such as academic honesty, privacy, cybersecurity, and digital equity. A conceptual study by Alhashmi and Jamil (2023) argues that the Islamic ethical framework, with its foundation in the concepts of maslahah (benefit) and dar'u al-mafasid (repelling harm), is highly compatible with and can even enrich the global discourse on technology ethics. For example, the act of spreading fake news (hoaxes) not only violates digital communication ethics in general, but also specifically violates the religious prohibitions against al-kadhib (lying) and namimah (seditious). Thus, this integration is not an attempt to impose religious values on the technological realm, but rather to reveal and operationalize the universal values already contained in Islamic teachings in a new, technology-laden context. This integrative approach is believed to result in stronger internalization of values because students see the direct relevance of religious teachings to the challenges they face daily in the digital space (Suyadi & Nuryana, 2022).

Based on the synthesis of the three fields of study, it is clear that there is a research gap which is the focus of this study. Although there have been discussions about the digitalization of Islamic Education (PAI) and the importance of digital ethics separately, there have not been many studies that specifically and systematically design the integration of data literacy and digital security competencies into the structure of the Islamic Education (PAI) curriculum, especially in the domain of moral learning outcomes. Most literature remains general, consisting of calls for action or needs analysis, without providing detailed operational curriculum models. Therefore, this study aims to fill this gap by formulating an integrative curriculum model that is conceptually robust and practically implementable. This model can serve as a reference for developing more relevant and impactful Islamic Religious Education (PAI) in the digital age (Wekke & Hamid, 2021).

RESEARCH METHODS

This research was developed through a qualitative literature study approach, with the main design being Library Research. This type of research was chosen because the primary objective of the study was not to generate new empirical data from the field, but rather to develop a conceptual construct or model in the form of an integrative curriculum through an in-depth analysis of existing literature. The library research approach allows researchers to explore, synthesize, and reconstruct various theories, concepts, and previous findings scattered across various written sources, thereby producing a comprehensive and in-depth framework for addressing the research problem (Sugiyono, 2021). In the context of this research, this approach is highly appropriate because curriculum development requires a strong theoretical foundation, a review of best practices, and a critical analysis of contextual needs, all of which can be systematically extracted from the documented body of knowledge.

The data sources in this study are entirely documentary, consisting of three main categories. The first category consists of textbooks and monograph references discussing the philosophical foundations of Islamic Religious Education (PAI), curriculum theory, digital literacy, digital ethics, data literacy, digital security, and moral education. These books provide a deep and structured conceptual and theoretical foundation. The second category is scientific journal articles, both nationally and internationally indexed, published between

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2020 and 2025. Journal articles are prioritized because they present the latest research findings, current conceptual discussions, and empirical study results relevant to the integration of technology in religious education, thus ensuring that the analysis is up-to-date and based on the latest scientific developments (Moleong, 2021). The third category is research reports, such as theses, dissertations, and reports from research institutions or educational organizations related to the research theme. These reports provide rich and specific secondary data on the implementation and evaluation of similar initiatives, which can serve as learning materials and references in formulating models.

The data collection technique used was documentation with a systematic literature review. This process began with the formulation of strategic keywords in Indonesian and English, such as "digital Islamic Education curriculum," "religious education data literacy," "digital security and morals," "digital ethics in Islamic education," and "data literacy curriculum." These keywords were then used to search for data sources through various platforms, including university digital library catalogs (such as iPusnas and institutional repositories), scientific journal databases (such as Google Scholar, DOAJ, Scopus, and ScienceDirect), and trusted academic search engines. The search was conducted in stages and iteratively, where each source found was then retraced through its reference list (a snowballing technique) to find other relevant sources that may have been missed in the initial search (Creswell & Creswell, 2023). Each collected document is then strictly selected based on the criteria of relevance to the research focus, source credibility (seen from the publisher, indexing, and author reputation), and publication recency, with priority on the 2020-2025 period to ensure accuracy in the context of the contemporary digital era.

The data analysis stage was carried out by applying the Qualitative Content Analysis Technique of the Miles, Huberman, and Saldana Interactive Model. This technique involves a circular process consisting of three activities carried out simultaneously: data reduction, data presentation, and drawing conclusions/verification. First, Data Reduction was carried out by marking (coding) and filtering key information from all collected data sources. These codes were grouped based on major research themes, such as: "definition and dimensions of data literacy," "digital security principles," "achievements of conventional moral learning," "moral challenges in the digital space," and "curriculum integration models." This grouping aims to simplify raw data into structured information ready for synthesis. Second, data presentation is carried out by arranging the reduced data into matrix form, conceptual relationship charts, and systematic narrative descriptions. For example, matrix presentation compares various data literacy concepts from various literatures to identify similarities and differences that can serve as the basis for formulating operational definitions in the context of Islamic Religious Education (PAI). Third, Conclusion Drawing and Verification is an interpretive process for formulating answers to research questions. Initial conclusions drawn from emerging patterns in the data are then continuously tested and verified through literature review to identify supporting evidence or exceptions, resulting in a coherent and argumentative curriculum model (Saldana, 2021).

Considering that this research is purely library research, testing the validity of the data does not use techniques such as credibility or dependability as in qualitative field research, but rather focuses on the validity of the data source and the consistency of the analysis. The validity of data sources is maintained through source triangulation, which involves comparing

and confirming information or concepts found from one type of source (e.g., journals) with information from other sources (e.g., textbooks or research reports). If differences of opinion are found, researchers conduct a more in-depth study to analyze the roots of these differences and adopt an argumentative position based on the consensus of the majority of the literature or the logical strength and relevance to the Islamic Religious Education (PAI) context. Meanwhile, the consistency of the analysis is maintained through an audit trail. Researchers document the entire research process in detail, from search keywords, sources accessed, reasons for document selection, coding, to the development of the matrix and draft conclusions. This documentation allows the analysis process to be tracked and reviewed by the researchers themselves or others to ensure that each step of the interpretation and conclusions drawn is accountable and clearly sourced from existing literature, thus avoiding speculative or subjective conclusions (Miles et al., 2020).

RESULTS AND DISCUSSION

Research result

Mastery of Data Literacy Competencies in the Context of Moral Assessment and Religious Values

Based on an in-depth literature review, this study reveals that the integration of data literacy into the Islamic Religious Education curriculum forms an essential critical foundation for students in facing the flood of religious information in the digital era. The ability to identify the sources and types of digital data related to morals, such as lecture content, online fatwas, or religiously nuanced news, is a basic competency supported by an understanding of the authority of Islamic knowledge (ulama) and the credibility of digital platforms (Pangrazio & Sefton-Green, 2020). Trained students not only passively receive information but also proactively trace the origins of data, track down authors, and examine the context of publication, thus eroding the attitude of blind imitation in the digital space. The data evaluation process then takes on a more complex dimension, where students are encouraged to cross-check moral or legal claims encountered by referring to valid primary Islamic sources (the Quran and Hadith) through trusted digital portals, and comparing them with the views of recognized scholars (Bawden & Robinson, 2022). Data literacy in this context transforms the way students assess an issue; for example, in response to viral content about the "haram" of vaccines, they do not immediately believe or reject it, but instead seek out vaccine safety statistics from official health institutions, trace the original source of the religious narrative, and compare it with the official fatwa of the Indonesian Ulema Council. The use of evaluated data for evidence-based moral reasoning is the culmination of this integration. Literature research shows that students develop the ability to construct moral arguments (ilzam) that not only touch on spiritual aspects, but are also supported by accountable data and facts, such as using data on the negative impact of gossip on social media on mental health to strengthen the avoidance of such behavior from the perspective of maqashid shari'ah (protecting the soul and mind) (Koltay, 2021). Thus, data literacy competency is no longer merely a technical skill, but has become an important tool in purifying faith and maturing morals in the midst of a digital world full of information distortion.

Implementation of Digital Security Principles in Social Interactions Based on Islamic Morals

A study of various literature sources indicates that the concept of digital security has a strong and deep resonance with the values of noble morals, especially in framing social interactions in cyberspace. Literature study findings indicate that understanding privacy protection (*hifzh al-sirr*) is not merely viewed as a technical necessity, but as a manifestation of the values of *iffah* (protecting honor) and *amanah* (trustworthiness) in Islam (Al Arif, 2021). Students who understand this will not easily share personal data, location, or family information that could endanger themselves and others, because they realize that such actions can be categorized as *sufaha* (carelessness), which is prohibited. Furthermore, the principle of respecting others' digital rights is operationally manifested in the awareness to not spread disgrace (*fadihah*), not to engage in *ta'rif* (revealing evil), and always seek permission before sharing other people's content, which is a derivation of the prohibition of backbiting, *namimah* (provoking conflict), and violation of property rights (*haqq al-milkiyyah*) in Islamic ethics (Irfani, 2022). Practices such as tagging friends in inappropriate content or sharing screenshots of private conversations without permission are analyzed as forms of violation of digital ethics and morals. The aspect of maintaining information integrity is a concrete elaboration of the values of *shidq* (honesty) and *amanah*. Students are encouraged to become *muzakki al-hadith* (information filters) amidst the flow of information, by always verifying before spreading (*tabayyun*) as instructed in QS. Al-Hujurat: 6, and strongly rejecting the practice of falsifying information (*al-kazib*) or spreading dubious news (*syakk*) (Shukla, 2023). The results of the literature review confirm that a successful curriculum will present concrete examples: how maintaining passwords is part of a mandate, how comments in social media columns are subject to the law of *qadhif* (accusation without evidence) if they contain slander, and how securing accounts from hacking is a form of responsibility to prevent misuse that can cause harm to the community. Thus, digital security is no longer seen as a rigid technical rule, but as the outer skin of the core of universal Islamic morals.

Integrating Data Literacy and Digital Security in Resolving Religious Ethical Dilemmas

The findings of this literature review reveal that the most crucial and applicable meeting point of the digital literacy-based Islamic Education curriculum lies in the ability of students to resolve contemporary ethical dilemmas by synthesizing technical skills and moral-religious considerations. Case studies highlighted in the literature, such as the spread of edited Islamic preaching recordings, the use of deepfakes for religious content, or participation in digital boycotts of certain products based on the Palestinian issue, require a multifaceted approach (Ridsdale et al., 2021). To address these issues, students are first encouraged to analyze these dilemmas using a data literacy scalpel: they collect data from various sources, evaluate their credibility, and try to understand the motives behind the content's creation. For example, in the case of hate speech videos attributed to religious figures, students are trained to track the original source of the video, examine the metadata, and compare it with the full recording, if available. In parallel, the principle of digital security reminds them of the risks of disseminating unverified content, both from a positive legal perspective and from the perspective of the sin of spreading falsehood (Sutrisno, 2023). Synthesis occurs when these two competencies are used as a basis for addressing dilemmas from the perspective of Islamic Religious Education (PAI) teachings. Students refer to Islamic jurisprudence principles such

as dar'u al-mafasid muqaddamun 'ala jalb al-mashalih (avoiding harm takes precedence over seeking benefit) and al-hukmu 'ala al-syai' far'un 'an tashawwurihi (establishing the law on something is a branch of correctly imagining it). With valid data and a comprehensive understanding of risk, they can arrive at wiser decisions: perhaps choosing not to share, reporting content, or making evidence-based clarifications, rather than simply reacting emotionally (Dijk et al., 2020). This study found that this integration is effective in training al-fiqh al-waqi' (contextual understanding) and collective ijihad among students, where technology and data become tools, while divine values become a compass that directs their use for benefit (jalb al-mashalih) and prevention of harm (dar'u al-mafasid).

The Impact of Integrated Curriculum on Achieving Noble Moral Profiles in the Digital Space

A comprehensive evaluation of a range of literature shows that the implementation of an Islamic Religious Education (PAI) curriculum that systematically integrates data literacy and digital security has a significant, transformative impact on the development of the noble moral profiles of Muslim netizens. This impact extends not only to cognitive (knowledge) and psychomotor (skills) but also primarily to the affective (attitude and character) domains. First, there is a stronger internalization of values because students understand the 'illat (rational reasons) behind many religious recommendations and prohibitions in the digital space. The prohibition on spreading hoaxes, for example, is no longer understood simply as a "prohibition," but as something that damages social order (ifsad), assassinates character (qatl al-syahshiyah), and contradicts the command to uphold the truth (Reynhout, 2022). Second, there is the formation of automatic moral awareness (al-damir al-akhlaqi) in every digital interaction. Before sharing content, students who have gone through this learning will automatically conduct a brief check for the accuracy and ethics of the content, a reflection born of habits (malakah) formed through repeated practice in the curriculum. Third, there is the emergence of positive agency or agency (al-syai'iyah al-ijabiyah) in the digital space. Students are no longer passive objects or victims of the flow of information, but have become active subjects who contribute to creating a healthy digital ecosystem (hayyiz digital raqi). They become anti-hoax ambassadors, creators of creative and safe educational content, and givers of polite, data-based advice (nasihah) in the comments section (Nurani, 2024). Overall, the desired final profile, namely netizens with Islamic morals, is realized in individuals who are muthabaqah (harmonious): between their inner convictions, spoken words, and digital actions. They are individuals who are not only faqih (faith-based) in the traditional sense, but also digitally literate; not only salimul aqidah (righteous belief), but also amine al-ma'lumat (trustworthy in managing information); not only matinul khuluq (sturdy morals), but also qadirun 'ala al-taufiq ma'a al-hadharah al-raqmiiyah (able to interact positively with digital civilization). Thus, this integrated curriculum successfully addresses the challenges of the times while remaining rooted in eternal Islamic values, producing a generation of Muslims who are spiritually and technically resilient in the virtual world (Zed, 2023).

Research Discussion

This literature review research has identified four key themes that form the core of integrating data literacy and digital security into the Islamic Religious Education (PAI) curriculum. Discussion of these themes reveals a significant paradigm shift, where digital competency is

no longer viewed as a separate technical skill, but rather as a new medium and means for actualizing, testing, and deepening Islamic moral values in the context of modern life. These findings demonstrate that systematic and contextual integration has significant potential to address concerns about religious education, which is often criticized for being lagging behind in responding to the dynamics of the digital era.

Mastery of Data Literacy Competencies in the Context of Moral Assessment and Religious Values is a crucial first foundation. In a digital world filled with diverse religious information, from the authoritative to the misleading, the ability to critically navigate and assess data is a prerequisite for forming solid faith and morals. This competency transforms students from passive consumers of information into active evaluators. They no longer simply accept viral preaching messages or legal claims, but are trained to trace original sources, verify the credibility of statements, and distinguish between personal opinions and teachings based on valid evidence. Data literacy, in this context, functions as a filter that protects the purity of religious understanding from contamination by hoaxes and distortions. The process of *tabayyun* (clarification) commanded in QS. Al-Hujurat: 6 finds its concrete operational form through digital verification techniques and the search for primary religious sources through trusted platforms. Students are encouraged to construct moral decisions, for example, in addressing the issue of halal-haram (permissible) products or the validity of a practice based on accountable data evidence, both religiously (through biblical references) and empirically (through scientific data), thus avoiding emotional or simply following the crowd (List, 2023).

Furthermore, the study findings reveal that the Application of Digital Security Principles in Social Interactions Containing Islamic Morals has succeeded in establishing a symbiotic relationship between technological ethics and Islamic ethics. This study found that each digital security principle has a direct equivalent to the concept of noble character, so that its internalization becomes deeper and more meaningful. Maintaining the confidentiality of passwords and personal data, for example, is no longer merely a technical instruction, but rather a manifestation of the values of *amanah* (guarding trusts) and *'iffah* (protecting one's honor). Similarly, the attitude of not sharing others' personal information without permission, or not posting content that could be embarrassing, is a direct derivative of the prohibitions on *ghibah* (gossip), *namimah* (incitement), and *fadhi al-sirr* (revealing shame). The concept of digital security thus serves as an operational framework that protects moral practices from violations in cyberspace. Students who understand this will see that securing their social media accounts from hacking is an obligation (*dharuriyat*) to prevent their accounts from being misused to spread evil (Yusuf & Sukmawati, 2024). This awareness builds a more responsible digital culture, where every interaction is measured by moral standards, thus avoiding the currently rampant acts of cyberbullying, doxing, and privacy violations.

The most dynamic and applicable intersection lies in the findings regarding the Integration of Data Literacy and Digital Security in Resolving Religious Ethical Dilemmas. This is where these two competencies synergize to address the real challenges facing the digital Muslim generation. Dilemmas such as the spread of Islamic preaching videos that are cut to twist meaning, the use of deepfake technology for religious content, or participation in digital boycott campaigns require complex analysis. Data literacy provides tools for dissecting information: tracing origins, comparing versions, and seeking supporting facts. Meanwhile, digital security provides a risk perspective: the potential for the spread of misinformation,

copyright infringement, or provocation of conflict. Both are then synthesized under the light of Islamic Religious Education (PAI) teachings, with reference to Islamic ethical principles such as *dar'u al-mafasid muqaddamun 'ala jalb al-mashalih* (avoiding harm takes precedence over seeking benefit). For example, when faced with an invitation to share sensitive religious news, students are not only trained to verify its truth (data literacy), but also to consider the social and legal impacts of its dissemination (digital security), and then decide to refrain (*al-hazr*) if potential harm is detected, as a form of implementing *hifzh al-nafs* (protecting the soul) and *hifzh al-mal* (protecting wealth) in a modern context (Cervetti & Damico, 2021). This approach trains *al-fiqh al-waqi'* (contextual understanding) and encourages the birth of digital social *ijtihad* among students.

Finally, this study successfully maps the Impact of the Integrated Curriculum on the Achievement of the Noble Moral Profile in the Digital Space. The identified impacts are holistic, spanning the cognitive, affective and psychomotor domains. First, a deepening of understanding occurs, where moral values are not only memorized but also understood through their philosophical legal justifications in the digital space. The prohibition on spreading hoaxes, for example, is understood as an effort to maintain the unity of the community (*hifzh al-nasl*) and the honor of others (*hifzh al-'ird*). Second, a digital moral habitus is formed, namely habits or automatic moral reflexes in interacting online. Before pressing the share or comment button, an internal awareness arises to conduct a brief check and ethical consideration. Third, students develop into agents of positive change (positive digital agency). They are no longer passive, but actively become *muzakki al-hadith* (news filterers) by creating educational content, reporting negative content, or correcting misinformation in a polite and data-driven manner (Warschauer & Tate, 2023). The final profile produced is a digital Muslim with complete integrity (*shakhshiyah mutakamilah*): a firm belief (*salim al-'aqidah*), upright and polite digital behavior (*matin al-khuluq*), and competent and trustworthy information management (*al-maharah al-raqmiyyah al-aminah*). They are digital citizens who are not uprooted from their Islamic values, but instead use their digital skills to spread benefits (*jalb al-mashalih*) and prevent harm (*dar' al-mafasid*) in the global community. Thus, this integrated curriculum has proven capable of shaping relevant and resilient Muslim characters in facing the complexities of the 21st-century world (Mardhiyah et al., 2021).

CONCLUSION

Based on an in-depth literature review, it can be concluded that the integration of data literacy and digital security competencies into the Islamic Religious Education (PAI) curriculum is not just the addition of technical content, but rather a transformative and contextual pedagogical response to moral challenges in the digital era. This integration has succeeded in building a strong bridge between 21st century digital skills and universal Islamic moral values. Data literacy competencies equip students with the critical skills to identify, evaluate, and use religious information responsibly, thus shifting moral judgment from a passive-dogmatic realm to an understanding based on evidence and common sense. Meanwhile, digital security principles are found to have an inherent alignment with the concepts of *iffah* (protecting honor), *amanah* (trustworthiness), and *shidq* (honesty), thus transforming practices such as maintaining privacy and respecting others' digital rights into concrete manifestations of noble character. The synthesis of these two competencies is most evident in resolving

contemporary ethical dilemmas, where students are trained to use data and risk analysis as a foundation for applying Islamic jurisprudence and ethics, resulting in wiser and more contextual decisions. Ultimately, this integrated curriculum impacts the formation of a profile of Muslim netizens who are *muthabaqah* (in harmony) combining digital skills with spiritual resilience who not only understand religious prohibitions and recommendations, but also internalize the *'illat* (philosophical reasons) behind them, and possess automatic moral awareness and positive agency to actively shape a healthy and civilized digital ecosystem. Thus, this study confirms that this integrative approach is a vital strategy for maintaining the purity of faith and moral maturity of the Muslim generation amidst the complexity and distortion of the digital space, while also answering the call to be *rahmatan lil 'alamin* in cyberspace.

The implementation of the results of this research can be realized through the development of a Digital Case-Based Islamic Education Learning Module that can be directly adopted by teachers and curriculum developers. This module is designed as a practical supplement containing learning packages for each semester, with a focus on integrating data literacy and digital security into key moral themes. Each unit in the module centers on an authentic "Contemporary Digital Dilemma", such as dealing with hate speech content with SARA nuances, the virality of fatwas without clear sanad, or cases of doxing (personal data leaks) on social media. This module not only provides normative explanations, but guides students through Ethical-Framed Applicative Steps. For example, in the case of hate speech, students will be invited to: (1) Identify & Evaluate Data by tracing the original source of the news, checking facts through verification sites, and confirming the context as a practice of *tabayyun*; (2) Analyze Risks & Impacts by weighing potential harm such as division (*ifساد*) and violation of the rights of others (*haqq al-adami*); and (3) Developing a Moral-Based Response by designing polite and data-based clarifications, or creating counter content that calls for peace, as a digital form of *nasihah* and *amar ma'ruf nahi munkar*. To support teachers, this module is equipped with a Holistic Assessment Rubric which measures not only conceptual understanding (cognitive) but also verification skills (psychomotor) and attitude consistency in online interaction simulations (affective). With a ready-to-use and contextual format, it is hoped that this module can become an effective operational tool for translating research findings into real practice in the classroom, directly forming students' habits (*malakah*) in Islamic digital ethics.

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