



Beyond Digital Use: Associations Between Islamic Value Internalization and Identity Among Midwifery Students

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Abstract:

Digital technology provides increasingly broad opportunities for religious learning, but its relationship with the internalization of Islamic values and identity development among healthcare students requires further research. This study examines the relationship between digital technology utilization, internalization of Islamic values, spiritual identity, and professional identity among midwifery students. A quantitative analytical survey with a cross-sectional design was conducted in 2026 involving 53 second-semester students of the Diploma III Midwifery Study Program. Data were collected using a structured questionnaire consisting of 65 Likert scale items and analyzed through descriptive statistics and Pearson correlation. The use of digital technology was positively related to the internalization of Islamic values ($r = 0.687$, $p < 0.001$). Internalization of Islamic values was positively correlated with spiritual identity ($r = 0.551$, $p < 0.001$) and professional identity ($r = 0.593$, $p < 0.001$). The use of digital technology was related to spiritual identity but not significantly to professional identity. These findings highlight the importance of integrating digital religious literacy, Islamic mentoring, and professional ethics education. Further research is needed to test this mediation using a larger, longitudinal sample.

INTRODUCTION

The development of digital technology has transformed how university students acquire knowledge, develop religious understanding, and construct personal identities in modern society (Park et al., 2025; Wang et al., 2024). This transformation matters because higher education is responsible not only for developing academic competencies but also for fostering character, integrity, and social responsibility among young people. Students increasingly access religious content through social media, online videos, learning applications, and other digital platforms (Rahayu et al., 2025; Ryan et al., 2026). However, convenient access does not necessarily guarantee accurate understanding or the practical application of religious teachings. Therefore, digital technology utilization warrants investigation as a potential factor supporting the internalization of Islamic values and the formation of students' spiritual and professional identities (Hosna et al., 2025; Singh et al., 2022).

The central problem associated with digital technology in religious learning is the gap between information accessibility and the capacity to internalize values

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meaningfully. Students can acquire diverse Islamic knowledge rapidly, but understanding, appreciating, and applying religious teachings require reflection, role modeling, and sustained practice (Dhiba et al., 2024; Putri et al., 2025). Unverified religious information may also contribute to misunderstandings when consumed without adequate digital literacy. Within Islamic education, value internalization should produce changes in moral orientation and behavior rather than merely increase religious knowledge. Consequently, higher education institutions face the challenge of ensuring that digital technology contributes to developing religious character consistently across academic, social, and professional contexts (Hidayat et al., 2024; Kaimara, 2026). Addressing this challenge is essential for strengthening character education in contemporary digital environments.

This issue is particularly relevant to midwifery students, who are prepared to become healthcare professionals with clinical, ethical, and humanitarian responsibilities. Students in the Diploma III Midwifery Study Program at the Magetan Campus of the Surabaya Health Polytechnic, Indonesia, participate in Islamic religious mentoring as part of their spiritual and character development. In this context, digital technology may broaden access to Islamic learning materials, facilitate religious reflection, and reinforce learning beyond mentoring sessions (Marmoah et al., 2024; Tsoka, 2026). Nevertheless, the availability of digital resources and mentoring programs does not automatically demonstrate successful value internalization or the development of strong professional identities. Therefore, the relationships between digital technology utilization, Islamic value internalization, and students' spiritual and professional identities require empirical investigation (Dhananjaya et al., 2024; Qazi et al., 2024).

Previous studies have examined the role of digital technology in learning, religious literacy, and student character development (Hakim, 2025; Rawasiyah Rawasiyah, 2025). Sembiring et al. (2025) discussed digital media use among younger generations, while Sembiring et al. (2025) examined the relevance of digital media to Islamic value internalization. Research on religious mentoring has also highlighted the importance of spiritual guidance in student character development. Meanwhile, digital Islamic learning resources may expand opportunities for students to study religious teachings beyond formal learning environments (Dhouib et al., 2025; Dwi Lestari & Riatun, 2024). Although these studies provide a conceptual foundation, their findings need to be connected more systematically to explain how digital technology utilization relates to value internalization and identity formation among students in healthcare education.

A limitation of previous research is the insufficient integration of digital technology utilization, Islamic value internalization, spiritual identity, and professional identity within a single empirical model focused on midwifery students participating in religious mentoring (Hosna et al., 2025; Ogondiek, 2026; Salam et al., 2026). Studies examining digital literacy or religiosity separately do not adequately explain the mechanisms connecting digital experiences with the development of professional identities among future healthcare practitioners (Majeed & Ahmad, 2025; Temirkhanova et al., 2024; Udeogalanya, 2022). Furthermore, quantitative evidence concerning relationships among these variables in this specific context requires further development. This research gap

is important because healthcare professionals need clinical competence alongside empathy, honesty, accountability, and respect for human dignity. Accordingly, this study examines Islamic value internalization as a potentially important process linking digital technology utilization with the development of students' spiritual and professional identities (Hosna et al., 2025; Ogondiek, 2026).

The novelty of this study lies in testing a quantitative model connecting digital technology utilization, Islamic value internalization, spiritual identity, and professional identity among Diploma III midwifery students participating in Islamic religious mentoring. The model positions Islamic value internalization as a potential mechanism through which digital technology utilization relates to students' identity formation. Unlike studies focusing separately on media use or religiosity, this research integrates technological engagement, value formation, and professional identity within a unified analytical framework. This approach is important for extending understanding of Islamic values-based character education in the digital era while providing empirical evidence to inform the development of more context-sensitive learning and mentoring practices. The findings may also support efforts to integrate digital learning with spiritual and professional development in healthcare education.

Based on this rationale, this study aims to analyze the influence of digital technology utilization on Islamic value internalization and examine how this process relates to the spiritual and professional identities of second-semester students in the Diploma III Midwifery Study Program at the Magetan Campus of the Surabaya Health Polytechnic, Indonesia. The study proposes that purposeful and relevant digital technology utilization may support the internalization of Islamic values, which may subsequently be associated with stronger spiritual and professional identities. However, these relationships cannot be assumed to occur automatically because they may depend on information quality, student engagement, and the context of religious guidance. Therefore, empirical testing is necessary to examine the relationships among the study variables and evaluate the relevance of digital technology in supporting the character development of future healthcare professionals.

RESEARCH METHODS

This study employed a quantitative analytical survey with a cross-sectional design to examine the relationships between digital technology utilization, Islamic value internalization, spiritual identity, and professional identity among midwifery students (Kusumawat & Fauzia, 2019; Maharani et al., 2026). This design was selected because it enables the simultaneous measurement of the study variables at a single point in time and the statistical examination of relationships among them. The study was conducted in 2026 at the Diploma III Midwifery Study Program, Magetan Campus, Surabaya Health Polytechnic, Indonesia. This location was selected because the institution implements Islamic religious mentoring as part of its student character development and spiritual guidance program, providing a relevant context for examining the relationship between digital technology utilization and students' religious and professional development.

The study population comprised 60 second-semester midwifery students who had participated in Islamic religious mentoring. The minimum sample size was calculated using Slovin's formula with a 5% margin of error, yielding approximately 53 respondents. Simple random sampling was used to provide eligible students with equal opportunities for selection. Eligible participants were active second-semester students who had completed the mentoring program, were Muslim, and voluntarily provided informed consent. Data were collected through a structured, self-administered questionnaire distributed directly to selected respondents after institutional permission had been obtained. The questionnaire comprised 65 statements measured on a five-point Likert scale, covering digital technology utilization (15 items), Islamic value internalization (20 items), spiritual identity (15 items), and professional identity (15 items). Data collection focused on students' patterns of digital technology use, their internalization of Islamic values, and their perceptions of spiritual and professional identity.

Data analysis involved data preparation, descriptive statistics, inferential analysis, and verification of the findings (Maharani et al., 2026; Najiburrahman et al., 2025). During data condensation, questionnaire responses were checked, coded, and organized according to the four study variables, while incomplete responses were handled according to the predetermined exclusion criteria. Data display involved presenting respondent characteristics and variable distributions through frequencies, percentages, means, standard deviations, and minimum and maximum scores, as appropriate. Instrument validity was assessed using Pearson product-moment correlations, while internal consistency was evaluated using Cronbach's alpha, with a coefficient of at least 0.70 considered acceptable. Bivariate analysis employed Pearson correlation to examine relationships among the variables, provided that the relevant assumptions were satisfied. Conclusions were verified by examining the consistency of statistical results, significance levels, and the direction and strength of the observed relationships. Statistical significance was established at $p < 0.05$. Any mediation analysis would require an additional procedure specifically designed to test indirect effects.

Research trustworthiness was supported through systematic questionnaire administration, consistent measurement procedures, instrument validity and reliability testing, and transparent documentation of data processing and statistical decisions. Before the main analysis, the suitability of the measurement instruments and the assumptions underlying Pearson correlation were examined. Where relevant, the distribution of composite scores, linearity, and influential observations were assessed; alternative statistical procedures would be considered if the assumptions were not met. Ethical principles, including autonomy, confidentiality, beneficence, and justice, were observed throughout the study. Participants received information about the research objectives, procedures, potential benefits, confidentiality protections, and their right to withdraw without academic consequences. Participation was voluntary and based on informed consent. Approval from the relevant institutional ethics committee and the corresponding ethical clearance number should be reported once obtained. Because the study used a cross-sectional design, the findings were interpreted as evidence of statistical relationships rather than definitive proof of causal effects.

RESULTS AND DISCUSSION

Results

Descriptive Statistics of the Study Variables

Descriptive statistical analysis was conducted to characterize the distribution of scores for digital technology utilization, Islamic value internalization, spiritual identity, and professional identity among 53 respondents. The analysis included the mean, standard deviation, minimum, and maximum scores for each variable. The results are presented in Table 1.

Table 1. Descriptive Statistics of the Study Variables (n = 53)

Study Variable	Mean $\pm$ SD	Minimum	Maximum
Digital Technology Utilization	59.43 $\pm$ 7.59	37	73
Islamic Value Internalization	75.79 $\pm$ 8.26	49	90
Spiritual Identity	53.70 $\pm$ 6.18	35	64
Professional Identity	52.49 $\pm$ 6.05	41	65

Note. SD = standard deviation. Scores represent the total scores obtained for each construct.

Table 1 shows that internalization of Islamic values had a mean score of 75.79 (SD = 8.26), followed by utilization of digital technology (M = 59.43, SD = 7.59), spiritual identity (M = 53.70, SD = 6.18), and professional identity (M = 52.49, SD = 6.05). These statistics illustrate the distribution of scores observed in the sample. However, because the constructs contain different numbers of questionnaire items, their raw mean scores should not be directly compared to determine which construct has the highest level. Standard scores or item mean scores would be more appropriate for comparisons between constructs.

Normality Assessment

The Shapiro–Wilk test was used to assess whether the distributions of the composite scores differed significantly from a normal distribution. The results are presented in Table 2.

Table 2. Shapiro–Wilk Normality Test

Study Variable	W	p-value	Interpretation
Digital Technology Utilization	0.966	0.136	No significant departure from normality
Islamic Value Internalization	0.965	0.127	No significant departure from normality
Spiritual Identity	0.972	0.248	No significant departure from normality
Professional Identity	0.979	0.472	No significant departure from normality

Note. The significance threshold was set at $p < 0.05$

Table 2 shows that the Shapiro–Wilk results indicate that none of the four composite variables deviated significantly from a normal distribution, with p-values ranging from 0.127 to 0.472. All p-values exceeded the predetermined significance threshold of 0.05. Thus, the results do not provide sufficient evidence to reject the assumption of normality for the distribution of the individual composite scores. This finding supports proceeding with parametric analysis, taking into account additional assessments of linearity, influential observations, and other relevant assumptions of the Pearson correlation.

Instrument Validity and Reliability

Instrument validity was assessed using corrected item–total correlations. According to the reported results, all questionnaire items had corrected item–total correlation coefficients greater than 0.30, meeting the specified criterion for item discrimination and supporting their retention for subsequent analysis. The actual item-level coefficients should be reported in a validity table to enable independent evaluation of this result. Internal consistency was assessed using Cronbach’s alpha. The results are presented in Table 3.

Table 3. Internal Consistency of the Research Instruments

Study Variable	Number of Items	Cronbach’s Alpha	Interpretation
Digital Technology Utilization	15	0.943	Excellent Internal Consistency
Islamic Value Internalization	20	0.932	Excellent Internal Consistency
Spiritual Identity	15	0.904	Excellent Internal Consistency
Professional Identity	15	0.898	Good to Excellent Internal Consistency

Note. Cronbach’s alpha values of 0.70 or higher were considered acceptable.

Table 3 shows that Cronbach’s alpha coefficients ranged from 0.898 to 0.943, exceeding the minimum acceptable threshold of 0.70. Utilization of digital technology recorded the highest coefficient ($\alpha = 0.943$), followed by internalization of Islamic values ($\alpha = 0.932$), spiritual identity ($\alpha = 0.904$), and professional identity ($\alpha = 0.898$). These results indicate good to excellent internal consistency across the four scales. However, high internal consistency does not independently establish construct validity or indicate that each instrument measures a single underlying dimension.

Pearson Correlation Analysis

Pearson product–moment correlation analysis was performed to examine the direction, strength, and statistical significance of the relationships among digital technology utilization, Islamic value internalization, spiritual identity, and professional identity. The findings are presented in Table 4.

Table 4. Pearson Correlations Among the Study Variables (n = 53)

Variable Relationship	r	P-value	Interpretation
Digital technology utilization–Islamic value internalization	0.687	< 0.001	Positive, strong
Islamic value internalization–spiritual identity	0.551	< 0.001	Positive, moderate
Islamic value internalization–professional identity	0.593	< 0.001	Positive, moderate
Digital technology utilization–spiritual identity	0.357	0.009	Positive, weak
Digital technology utilization–professional identity	0.262	0.058	Positive, not statistically significant
Spiritual identity–professional identity	0.319	0.020	Positive, weak

Note. r = Pearson correlation coefficient. Statistical significance was evaluated at $p < 0.05$. Strength classifications are descriptive conventions and should be interpreted in context.

Table 4 shows that the strongest correlation observed was between digital technology utilization and internalization of Islamic values ($r = 0.687$, $p < 0.001$), indicating that higher digital technology utilization scores were associated with higher internalization scores of Islamic values. Internalization of Islamic values was also positively correlated with spiritual identity ($r = 0.551$, $p < 0.001$) and professional identity ($r = 0.593$, $p < 0.001$). These findings suggest that students who reported stronger internalization of Islamic values also tended to report stronger spiritual and professional identities.

Digital technology utilization was positively correlated with spiritual identity ($r = 0.357$, $p = 0.009$), although the association was weaker than its correlation with internalization of Islamic values. In contrast, the correlation between digital technology utilization and professional identity did not reach statistical significance ($r = 0.262$, $p = 0.058$). Although the coefficient is positive, the available evidence is insufficient to establish a statistically significant relationship at the 0.05 level. Finally, spiritual identity showed a weak but statistically significant positive correlation with professional identity ($r = 0.319$, $p = 0.020$).

Overall, the findings indicate that digital technology utilization is significantly associated with both internalization of Islamic values and spiritual identity, while its direct bivariate relationship with professional identity is not statistically significant. Internalization of Islamic values is positively associated with both identity outcomes. These results identify a pattern of relationships that warrants further investigation; however, the correlational design does not prove causality or confirm that internalization of Islamic values mediates the relationship between digital technology utilization and either identity outcome.

Discussion

The findings indicate a strong positive association between digital technology utilization and the internalization of Islamic values ($r = 0.687$; $p < 0.001$). This finding is consistent with Hilman (2025), Hilman (2025), and Susanti et al. (2024), who highlight digital technology as a supporting medium for learning and religious education. Through social media, learning applications, podcasts, educational videos, and digital Qur'an applications, students gain broader access to Islamic knowledge. However, this finding does not imply that technology use automatically strengthens religious internalization. As emphasized by Shalehah & Saehudin (2026) digital literacy and appropriate guidance remain essential to ensure that religious information is interpreted critically, evaluated for credibility, and used responsibly. Thus, technology should complement, rather than replace, structured religious education.

The internalization of Islamic values was positively associated with spiritual identity ($r = 0.551$; $p < 0.001$) and professional identity ($r = 0.593$; $p < 0.001$). These findings support character education perspectives that emphasize habituation, role modelling, experience, and self-reflection as processes underlying identity development (Cinantya et al., 2025; Salsabila et al., 2026). Among midwifery students, values such as honesty, trustworthiness, responsibility, and compassion

may provide a foundation for spiritual awareness and professional orientation. This interpretation is also consistent with discussions by Shalehah & Saehudin (2026) and Aziz et al. (2024) regarding the importance of moral values in health professional education. Nevertheless, the observed correlations do not establish causality or confirm that the religious mentoring programme directly produces changes in students' spiritual or professional identities.

The association between digital technology utilization and spiritual identity was positive but relatively weak ($r = 0.357$; $p = 0.009$), whereas its association with professional identity was not statistically significant ($r = 0.262$; $p = 0.058$). These results suggest that access to digital resources does not necessarily correspond to stronger identity development (Fahriansyah et al., 2025; Baharun et al., 2025). Unlike the relatively strong association between digital technology utilization and Islamic value internalization, the direct association with professional identity was not statistically supported (Hosna et al., 2025; Singh et al., 2022). This difference suggests that identity formation involves more complex processes than technology use alone, including academic experiences, social interactions, lecturer role modelling, and clinical practice. Given the cross-sectional design, the possibility that Islamic value internalization mediates these relationships requires further investigation through an appropriate mediation analysis (Singh et al., 2022; Sunarjo et al., 2024).

Theoretically, this study contributes to digital religious education research by examining digital technology utilization, Islamic value internalization, spiritual identity, and professional identity within a single analytical framework (Amrullah, 2023; Kia & Majesty, 2025; Wedi & Mardiana, 2025). The observed correlation patterns suggest that value internalization may represent a relevant pathway for understanding the relationship between technology use and student identity development. However, the mediating role of internalization cannot be considered established based solely on bivariate correlations. Practically, health education institutions could integrate digital religious literacy into mentoring programmes, provide verified learning resources, and connect religious learning with clinical simulations and professional experiences (Muzaki & Nurhayati, 2026; Pendidikan et al., 2024; Rochim & Khayati, 2023). Such an approach may help strengthen the relationship between religious knowledge, spiritual reflection, and professional conduct. These implications should be interpreted as directions for educational development rather than evidence of confirmed causal effects.

The findings highlight the importance of educational strategies that integrate digital technology, religious development, and professional ethics throughout students' education. Study programme administrators could develop mentoring activities that address not only Islamic teachings but also their application to therapeutic communication, respect for patients, professional responsibility, and ethical decision-making (Gonzalez & Heidari, 2025; Moch, 2025; Secreto et al., 2025). Lecturers and clinical supervisors could facilitate case-based reflection to help students connect Islamic values with midwifery practice. The study's contribution lies in providing preliminary empirical evidence of the associations among these constructs in a Diploma III Midwifery student population. Nevertheless, the relatively small sample drawn from a single campus limits the generalizability of the findings. Future research should involve multiple

institutions, use larger and more diverse samples, and apply appropriate analytical methods to examine mediation and clarify the relationships among the variables.

CONCLUSION

This study indicates that digital technology utilization is positively associated with the internalization of Islamic values, while such internalization is associated with the spiritual and professional identities of midwifery students. The main lesson is that digital technology should not merely serve as a source of information but should also support the meaningful internalization of religious values and the development of professional character. Scientifically, this study contributes by integrating digital technology utilization, Islamic value internalization, spiritual identity, and professional identity within a single empirical framework in midwifery education. Practically, health education institutions should integrate digital religious literacy, Islamic religious mentoring, and professional ethics education to prepare future healthcare professionals who demonstrate competence, integrity, and a commitment to humanistic care. However, this study is limited by its relatively small sample, single-campus setting, and cross-sectional design, which precludes causal conclusions. Furthermore, the association between digital technology utilization and professional identity was not statistically significant. Future research should involve larger and more diverse samples, employ longitudinal designs, and test the mediating role of Islamic value internalization using appropriate mediation analysis to clarify the mechanisms underlying the relationships among these variables.

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CONFLICTS OF INTEREST

The author confirms that there are no conflicts of interest, financial or otherwise, that could have influenced the conduct or reporting of this research.

USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY

AI-assisted tools were utilized during manuscript preparation to facilitate language editing, improve the clarity and coherence of the text, and refine its academic presentation. The author critically evaluated and edited all AI-assisted outputs to ensure their appropriateness and accuracy. The author retains full responsibility for the content, originality, scientific validity, and integrity of the final manuscript.

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