Munaddhomah: Jurnal Manajemen Pendidikan Islam
e-ISSN: 2775-2933
Volume 7, Issue 1, 2026, pp. 92-108

Bridging Religiosity and Digital Competence: The Mediating Role of Digital Ethics in Higher Education

Lina Rifda Naufalin[1], Cicilia Dyah Sulistyaningrum Indrawati*[2], Mintasih Indriayu[3], Leny Noviani[4]

[1] *Universitas Sebelas Maret, Surakarta, Indonesia*
[2*] *Universitas Sebelas Maret, Surakarta, Indonesia*
[3] *Universitas Sebelas Maret, Surakarta, Indonesia*
[4] *Universitas Sebelas Maret, Surakarta, Indonesia*

Corresponding E-mail: ciciliadyah@staff.uns.ac.id

Submitted: 02-08-2025 Revised : 23-12-2025 Accepted: 21-01-2026

ABSTRACT. Digital competence is essential to teacher professionalism in the 21st century, yet few have examined how religiosity shapes it through digital ethics, particularly in Islamic higher education. To fill this gap, the research uses a quantitative survey approach to investigate the mediating role of digital ethics between religiosity and digital competence among pre-service teachers. The sample of 164 students of the social and humanities field education study program at Islamic universities in Java Island, Indonesia was obtained by purposive sampling method. Data analysis was conducted using the PLS-SEM method to test the direct and indirect effects between variables. The results shows that religiosity positively and significantly influenced digital ethics ($t = 11.351$; $f^2 = 1.232$) and digital competence ($t = 2.066$; $f^2 = 0.035$). Digital ethics also strongly predicted digital competence ($t = 12.543$; $f^2 = 0.958$). The indirect test confirmed that religiosity influenced digital competence through digital ethics ($t = 7.832$), with an overall $R^2 = 0.738$, indicating a strong predictive model. This finding confirms that internalizing religious values through digital ethics learning can strengthen students' digital competence. Theoretically, this study extends digital competence theory by incorporating moral and spiritual dimensions through the lens of Bandura's social cognitive theory. The study urges Islamic higher education institutions to integrate these values into practice-based curricula, such as microteaching, to develop digital competencies that are both technically proficient and ethically grounded.

Keywords: *Digital Competency, Religiosity, Digital Ethics, Teacher Candidate Education, Higher Education*

https://doi.org/10.31538/munaddhomah.v4i2.351

How to Cite Hasanah, M. (2021). The Effect of Two Stay Two Stray Cooperative Learning Model on Mathematics Communication Ability. *Chalim Journal of Teaching and Learning,* Volume 1(1), 1-5.

INTRODUCTION

The acceleration of digital transformation in the 21st century has changed the global education landscape, requiring teachers to master digital competencies as part of their professional identity (Instefjord & Munthe, 2016). A global study of 33 countries on the digital competence of prospective teacher students found that students generally master communication and collaboration skills, but still lack pedagogical integration, digital assessment, and digital ethics (Çebi et al., 2022; McGarr & McDonagh, 2021; Tomczyk, 2024). These challenges highlight that digital competence is not only about technical skills, but also involves ethical and pedagogical dimensions based on critical awareness and responsible digital behaviour. Digital competence in learning involves higher-order thinking skills consisting of five areas of competence, namely 1) information

and data literacy, 2) communication and collaboration, 3) digital content creation, 4) safety, and 5) problem solving (Ferrari, 2012).

Indonesia is the country with the largest Muslim population in the world with more than 239 million inhabitants (Pew Research Center, 2025), digital transformation has rapidly affected higher education. (Restalia & Khasanah, 2025). However, preliminary evidence in local teacher-education programs indicates persistent weaknesses in students' data security, privacy management, and ethical digital engagement, suggesting the need to connect moral-spiritual formation with digital pedagogy more explicitly. In line with these research results, a preliminary study of 75 students in the economics education study program in Central Java showed that students were not maximizing the use of digital communication and collaboration platforms for learning practices, lacked attention to data security when creating digital learning content, and did not understand how to protect data privacy and take precautions to protect digital devices (Figure 1).

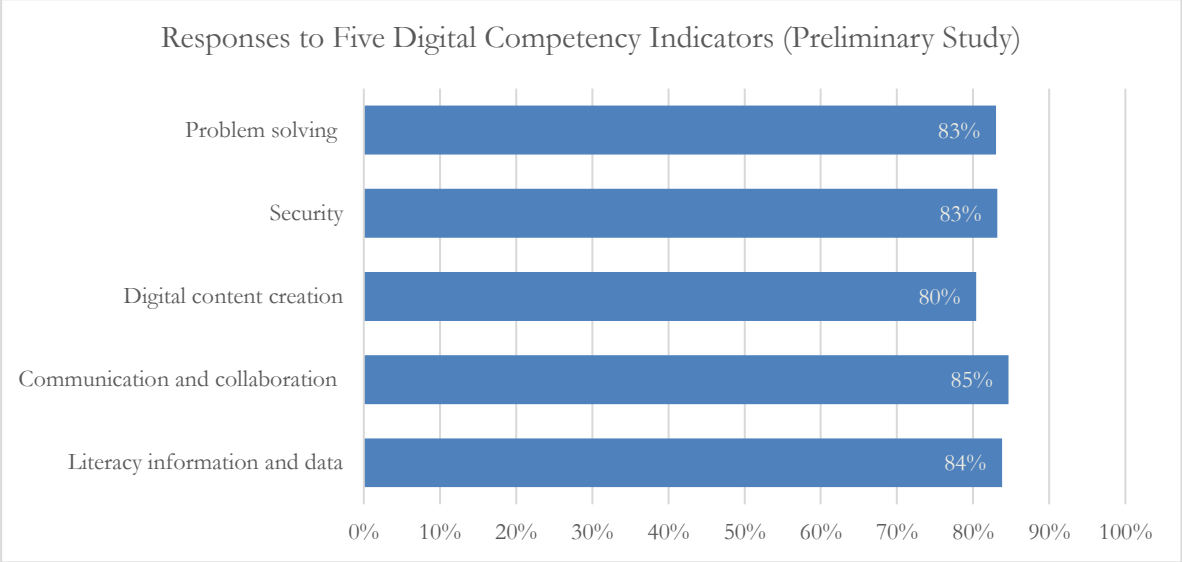

Figure 1 Respondents' Responses to the Initial Data Analysis of the Research on Five Digital Competence Indicators

The digital competence of prospective teacher students can be influenced by several factors, both internal and external. One of these factors is ethical behavior, which develops through self-regulation and reciprocal interactions between cognition, environment, and behavior (Bandura, 1991). Internal factors include readiness to accept digital developments (Lie et al., 2020), self-efficacy (Dai, 2023; Narelle & Susanne, 2015), technology ethics (Guillén-Gámez et al., 2019), digital literacy (García-Martín & García-Sánchez, 2017), ethics in the use of digital technology (Deng & Zhang, 2023), technology attitudes (Gurer, 2021), technological competence(Luque-Jiménez & García-Ruiz, 2024; Tondeur et al., 2018). External factors include digital competency training (Galindo-Domínguez & Bezanilla, 2021; García-Sampedro et al., 2024; Huertas-Abril, 2019), gender (Zhao et al., 2021), infrastructure (Dai, 2023; Tomczyk, 2024). Religiousness is also currently a factor that other researchers have found to be a variable that influences digital ethics (Anriani et al., 2022; Arli et al., 2017; Casidy et al., 2016; Massijaya et al., 2025; Wicaksono, 2022).

Based on the mapping of the internal and external factors influencing the digital competence of prospective teachers, this study focuses on religiosity and digital ethics because they are the values most closely aligned with digital competence indicators. Religiosity shapes students' values and self-control (Arli et al., 2017). These values are reflected in digital ethics, including security, responsibility, the ethical use of technology, digital awareness, digital responsibility, and digital rights (Choi, 2016). Digital ethics is positioned as a mediator that conveys religiosity's influence on digital competence.

The conceptual basis of this research is based on the theory of intrinsic–extrinsic religiosity (Allport & Ross, 1967), which explains how internalised religious commitment guides ethical reasoning and behaviour. Religiosity refers to personal beliefs about loving God and humans. It includes attending religious activities, being kindhearted, maintaining regular prayer as a religious observance, educating others, and promoting good habits (Anriani et al., 2022). Islam is the largest religion among Indonesian citizens. The level of commitment to and obedience of religious teachings and practices serves as a reference for daily behavior. Findings show that the dimensions of belief and religious practice influence citizens' socio-political attitudes and actions (Setiawan et al., 2020). Religion shapes a country's economic, political, and cultural values, as well as an individual's values, ethics, and way of life (Colbran, 2010). In Indonesia, Islamic higher education institutions influence students' attitudes and ethics by promoting religious values in their learning (Taofik, 2020).

Several earlier researchers introduced the concept of digital ethics in the integration of technology use in education. Digital ethics in learning is related to attitudes and integrity in using technology in accordance with applicable academic rules (Asamoah, 2019). Digital ethics also involves knowledge of the ethical issues and principles that must be considered when designing, adapting, and creating learning materials with advanced technology (Deng & Zhang, 2023). In teacher education, digital ethics emphasizes not only compliance with applicable rules and principles but also pedagogical aspects and student needs in learning (Hakimi et al., 2021). Digital ethics encompasses the safe and ethical use of technology, digital literacy, digital responsibility, and digital rights (Choi, 2016).

Previous research on religiosity and its relationship with digital ethics has yielded varying results. Religiosity has been found to influence digital ethics (Al-Rafee & Rouibah, 2010). Specifically, studies have examined the relationship between intrinsic religiosity and digital ethics, revealing positive and significant outcomes (Anriani et al., 2022; Arli et al., 2017; Casidy et al., 2016; Massijaya et al., 2025). Other studies have found that intrinsic religiosity negatively affects digital ethics (Sulaiman et al., 2022; Wicaksono, 2022).

Meanwhile, previous studies analyzing the influence of religiosity on digital competence have found differences in social media behavior between groups with different levels of religiosity. These findings confirm the influence of religiosity on online interaction patterns (Jablonska, 2022). Additionally, research reveals that religious beliefs influence perceptions of bullying and cheating, supporting the link between religious values and ethical behavior in the digital space (Teo et al., 2024; Yadav & Yadav, 2018). However, other findings show that religious aspects negatively influence the ability to discern information; people with fundamentalist religiosity are more likely to believe fake news (Bronstein et al., 2019).

Various studies confirm that digital ethics strengthen the digital competence of prospective teachers and promote the integration of technology into learning (Skantz-Åberg et al., 2022). Prospective teachers can design meaningful technology-based learning with digital competence accompanied by ethical awareness (Novella-García & Cloquell-Lozano, 2021). Recent research shows that technology ethics is significantly related to prospective teachers' digital competence in problem-solving, suggesting that strengthening ethics could support their abilities in this area (Chu et al., 2023). Contrary to previous findings, however, attitudes toward the use of educational social media are not correlated with awareness of data privacy policies (Marín et al., 2021). Among prospective teachers, a weak understanding of social media privacy policies can lead to excessive caution and inconsistent usage practices, reducing opportunities for optimal digital learning (Marín et al., 2023).

The various research results presented above demonstrate that research on digital competence remains inconsistent. Research on digital competence influenced by religiosity has rarely been examined through the lens of mediation variables (Allport & Ross, 1967). In comparison, previous studies have examined related constructs such as moral judgment, ethical decision-making, or academic integrity as intermediating factors between religiosity and digital behavior (Al-Rafee &

Rouibah, 2010; Widiastuti et al., 2025); explicit investigation of digital ethics as a mediator remains limited. Digital ethics, defined as a set of behaviors grounded in awareness, responsibility, honesty, integrity, and moral values, has been shown to significantly influence one's digital performance and competence (Chu et al., 2023; Li, 2024). Religiosity, meanwhile, provides the foundational moral framework that shapes individual ethical reasoning and behavior in digital contexts. In contemporary contexts, this framework remains relevant for understanding moral regulation in digital environments (Arli et al., 2017; Sulaiman et al., 2022). Thus, religiosity is positioned as a psychological source of ethical awareness, which in turn shapes responsible digital practices and enhances digital competence. Therefore, examining digital ethics as a mediating variable offers a nuanced pathway to understand how religiosity may indirectly contribute to developing digital competence in higher education settings.

The novelty of this study is that digital ethics are placed as a mediating variable, whereas in previous studies, digital ethics or religiosity were tested separately. Additionally, this study comprehensively explores five indicators of digital competence, which has not been done in other studies. This study aims to: 1) analyze the direct influence of religiosity on the digital competence of prospective teachers; 2) analyze the direct influence of religiosity on the digital ethics of prospective teachers; 3) analyze the direct influence of digital ethics on the digital competence of prospective teachers; and 4) analyze the influence of religiosity on digital competence as mediated by digital ethics of prospective teacher students.

METHOD

This study uses a quantitative approach with a survey method. The instruments used to test each construct were religiosity (Allport & Ross, 1967; Maltby & Lewis, 1996), digital ethics (Choi, 2016), and digital competence (Reisoğlu & Çebi, 2020). The population in this study includes the number of education students in five study programs, namely two economics education programs, one accounting education program, and teacher education programs with entrepreneurship courses. However, because the number of students is unknown, the sampling criteria uses the assumption that considers the number of arrows in the model connected to the dependent variable construct (Cohen, 1992). In this study, the number of arrows indicating the number of causalities leading to the dependent variable is 2. Based on Cohen's table, if the number of causalities is 2, the minimum sample size is 158. Because there are five study programs, to meet this minimum number, 40 questionnaires were distributed to each study program. The survey is an online questionnaire using Google Forms with a 1-5 Likert scale. Purposive sampling was used for the sample, with the criteria of students familiar with using technology in the following learning process. There were 164 respondents who were willing to participate and complete the questionnaire. The respondents were predominantly female students (76.21%) from the 2022 (40.24%) and 2023 (27.43%) cohorts, which means that the respondents had experience with the use of technology in learning because they had taken microteaching courses. The complete demographics of the respondents can be seen in Table 1.

Table 1 Summary of respondent demographics

Demographics		Number of Respondents	Percentage (%)
Gender	Male	39	23.78
	Female	125	76.22
Cohort	2020	1	0.61
	2021	27	16.46
	2022	61	37.20
	2023	45	27.44
	2024	28	17.07
	2025	2	1.22
Have taken microteaching	Have taken	120	73.17
	Not yet	44	26.83

A structural equation modeling (SEM) approach using Partial Least Squares (PLS) was applied to analyze survey data from participants which is appropriate for predictive and exploratory models with complex relationships among latent variables and relatively small sample size. The quality of the structural model was evaluated by the coefficient of determination (R^2) and by assessing convergent validity, discriminant validity, and reliability within the measurement model. During structural evaluation, the analysis examined and predicted causal relationships among latent variables, employing bootstrapping for parameter estimation and significance testing. The modeling further assessed effect sizes (f^2), R^2, and Q^2 to establish predictive relevance. Hypothesis testing drew on t-statistics to determine the significance of relationships among constructs, considering both partial and simultaneous effects among the latent variables, religiosity, digital ethics, and digital competence (Agus Purwanto & Yuli Sudargini, 2021; Fauzan et al., 2023; Fawaid et al., 2022).

RESULTS AND DISCUSSION

Results

This study involved three variables, namely religiosity, digital ethics, and digital competence. Each variable contained research indicators and was translated into 47 statement items used to explore the respondents' answers in the study. The respondents' answers were then analyzed based on the average score for each variable and grouped according to students who had and had not taken the microteaching course. This was done to help explain the role of practical learning in the three variables studied. The average scores of the respondents' answers for each variable are summarized in Table 2 below:

Table 2 Average Scores of Respondents' Answers for each variable

Variable	Have not taken Microteaching	Have taken Microteaching
Digital Competence	4.22	4.30
Religiosity	4.28	4.28
Digital Ethics	4.35	4.52

Based on Table 2, it can be seen that students who have undergone microteaching have higher average scores in digital competence and digital ethics. Further identification was conducted using an independent t-test to determine whether there were differences in digital competence, religiosity, and digital ethics between students who had and had not completed microteaching. The t-test results are presented in Table 3.

Table 3 Result of Independent Sample t Test

Variabel	Sig. (2-tailed)		Information
	Equal variances assumed	Equal variances not assumed	
Religiosity	0,091	0,120	There is no significant difference
Digital Ethics	0,000	0,002	There is a significant difference
Digital Competencies	0,000	0,000	There is a significant difference

The results of the independent sample t-test revealed significant differences in digital ethics and digital competence, indicating that students who participated in microteaching demonstrated higher ethical awareness and digital skills, which were a result of effective practice-based learning in shaping the professionalism of prospective teachers. Different results were found in the religiosity variable, which means that students' religious values were relatively similar in both groups who had and had not participated in microteaching.

Outer Model

The next step is to measure the validity and reliability of the statement items to ensure that each statement item is suitable for use in the study. The results of the validity and reliability tests are presented in Table 4 below:

Table 4 Results of Validity and Reliability Measurements for Each Indicator

Variable	Item Measurement	Outer Loading	AVE	Cronbach Alpha	Composite Reliability
Religiosity					
Meaning	R1	0.839	0.650	0.922	0.937
	R2	0.820			
Commitment	R3	0.851			
	R4	0.812			
Centrality	R5	0.842			
	R6	0.684			
Devotion	R7	0.791			
	R8	0.797			
Digital Ethics					
Safe, Responsible, and	SRE1	0.799	0.684	0.975	0.977
Ethical Use of	SRE2	0.755			
Technology	SRE3	0.818			
	SRE4	0.863			
	SRE5	0.857			
Digital Awareness	DA1	0.870			
	DA2	0.843			
	DA3	0.822			
	DA4	0.849			
	DA5	0.839			
Digital Responsibilities	DR1	0.822			
	DR2	0,849			
	DR3	0,883			
	DR4	0,847			
	DR5	0.676			
Digital Rights	DGR1	0.828			
	DGR2	0.824			
	DGR3	0.809			
	DGR4	0.799			
	DGR5	0.860			
Digital Competencies					
Literacy information and	LID1	0.700	0.557	0.955	0.960
data	LID2	0.714			
	LID3	0.615			
	LID4	0.717			
	LID5	0.857			
Communication and	CC1	0.745			
collaboration	CC2	0.630			
	CC3	0.771			
	CC4	0.726			
	CC5	0.702			
Digital content creation	DCC1	0.787			
	DCC2	0.827			
	DCC3	0.627			
Security	S1	0.817			
	S2	0.703			
	S3	0.809			
Problem solving	PS1	0.830			
	PS2	0.804			
	PS3	0.736			

In the Religiosity variable, all indicators show high outer loading values, with most indicators above 0.8. Indicators with outer loading values within this range can still be retained as long as they do not significantly reduce construct reliability (Hair et al., 2017). Therefore, all religiosity indicators can be declared valid and remain in use. The digital ethics variable also shows excellent results, with almost all indicators above 0.8. However, there are several indicators with relatively low values, namely LID3 (0.615), KK2 (0.630), and PKD3 (0.627). Nevertheless, these values are still within the minimum acceptable limits.

Based on Table 4, the Average Variance Extracted (AVE) value of each variable shows results above the threshold of 0.5. A value of up to 0.5 is still acceptable in the model analysis for the outer loading value in the construct discriminant validity test (Fornell & Larcker, 1981). This means that each construct is able to explain more than half of the variance of its indicators. The test results show that all constructs in this study can be declared to meet convergent validity. This means that the indicators used are consistent in representing the constructs being measured.

The reliability of the construct was evaluated using Cronbach's Alpha and Composite Reliability values. A construct is considered to have good reliability if the composite reliability value exceeds 0.70, while a Cronbach's Alpha value greater than 0.60 also indicates adequate internal reliability. Based on Table 4, the Composite Reliability and Cronbach's Alpha values for each variable are above 0.70 and 0.60, respectively, so it can be concluded that all constructs in this study are reliable.

The testing continued with discriminant validity testing to ensure that different construct measures were not highly correlated. Discriminant validity was performed using the Heterotrait-Monotrait Ratio of Correlations (HTMT) approach. Based on the results in Table 5, all HTMT values are below the threshold of 0.90 as recommended (Henseler et al., 2015). This shows that each construct in the model can be distinguished well from other constructs.

Table 5 Heterotrait-Monotrait Ratio of Correlations (HTMT) Value

Variable	Digital Competencies	Digital Ethics	Religiosity
Digital Competencies			
Digital Ethics	0.875		
Religiosity	0.740	0.776	

The HTMT values obtained ranged from 0.740 to 0.875. The lowest value was found in the relationship between Intrinsic Religiosity and Digital Competencies at 0.740, while the highest value was found in the relationship between Digital Ethics and Digital Competencies at 0.875. Although 0.875 is the highest value, it is still below the tolerance limit of 0.90, so it can be declared valid. The test results show that this research model has met the criteria for discriminant validity. This means that each construct used has clear conceptual and empirical differences, so the measurement instruments can be considered suitable for use.

Inner Model

The inner model or structural model is used to explain the relationship between latent variables that have been determined in the study. This model serves to test the direction, strength, and significance of direct and indirect influences between variables in accordance with the proposed hypothesis. Determination coefficient (R^2) analysis is used to evaluate the extent to which independent variables can explain the variation in dependent variables. The R^2 value provides an overview of the predictive power of the model. R^2 value of 0.75 is categorized as substantial, 0.50 as moderate, and 0.25 as weak (Hair et al., 2017).

Table 6 R Square

Variable	R-square	R-square adjusted	Effect Size
Digital Competencies	0.738	0.735	Moderat
Digital Ethics	0.552	0.549	Moderat

Source: Primary data processed(2025)

Based on the results in Table 6, the digital competencies construct has an R^2 value of 0.738 with an adjusted R^2 of 0.735. This means that approximately 73.8% of the variation in students' digital competencies can be explained by the independent variables in the model, specifically digital ethics and religiosity. This value is above the moderate category, indicating that the model has a fairly strong predictive ability for the digital competencies variable.

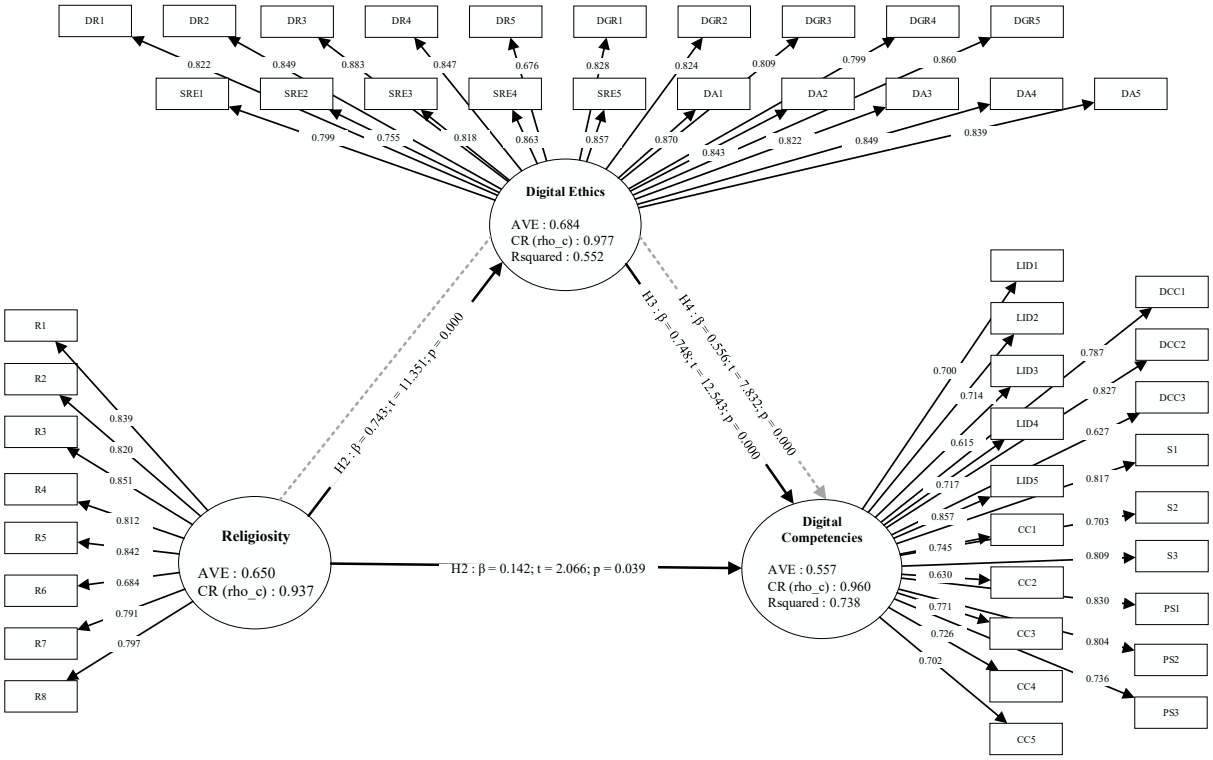

Figure 2 Measurement and Structural Model Results

The f-square (f^2) value is used to assess the magnitude of the partial influence of each predictor variable on the endogenous variable in the structural model. An f^2 value of 0.02 indicates a small effect, 0.15 a moderate effect, and 0.35 a large effect (Hair et al., 2017). Based on the results in Table 7, the digital ethics construct has a large effect on digital competencies with an f^2 value of 0.958. This indicates that digital ethics plays a dominant role in shaping students' digital competencies.

Table 7 F Square

Path	f-square
Digital Ethics -> Digital Competencies	0.958
Religiosity -> Digital Competencies	0.035
Religiosity -> Digital Ethics	1.232

Source: Primary data processed(2025)

Hypothesis Testing

The research hypothesis related to the direct relationship between variables in this study was tested using a path coefficient test, which aims to determine the significance of the direct relationship between constructs in the research model. The testing was conducted using the bootstrapping method with a significance level of 5% ($\alpha = 0.05$). A relationship is considered significant if the p-value is < 0.05 and the t-statistic value is > 1.96.

Table 8 Path Coefficient

Path	Original sample (O)	T statistics	P values	Decision
Digital Ethics -> Digital Competencies	0.748	12.543	0.000	Accepted
Religiosity -> Digital Competencies	0.142	2.066	0.039	Accepted
Religiosity -> Digital Ethics	0.743	11.351	0.000	Accepted

Source: Primary data processed(2025)

Based on the results in Table 8, it was found that digital ethics had a positive and significant effect on digital competencies with a t-statistic of 12.543 and a p-value of 0.000. This indicates that the higher the level of digital ethical awareness among prospective teachers, reflected in the safe and ethical use of technology, digital literacy, digital responsibility, and respect for digital rights, the greater their ability to manage information, collaborate effectively, create digital content, protect data security, and solve problems in digital learning environments. Furthermore, the results of direct testing of the religiosity variable on digital Competencies showed a t-statistic of 2.066 and a p-value of 0.039, which can be interpreted as religiosity having a positive and significant effect on the digital competencies of prospective teacher students. Direct testing of the religiosity variable on digital ethics showed a t-statistic of 11.351 and a p-value of 0.000, which can be interpreted as religiosity having a positive and significant effect on digital ethics.

The indirect effect of religiosity on digital competence through digital ethics, as presented in Table 8, shows a t-statistic of 7.832 and a p-value of 0.000. This means that religiosity has an indirect effect on digital competence by increasing understanding of digital ethics. This reinforces the role of digital ethics as a variable that mediates the relationship between religiosity and digital competence.

Table 8 Specific Indirect Effect

Path	Original sample (O)	T statistics	P values	Decision
Religiosity -> Digital Ethics -> Digital Competencies	0.556	7.832	0.000	Accepted

Discussion

Research findings on religiosity, digital ethics, and digital competence reveal that prospective teachers who have undergone microteaching have higher scores than those who have not in terms of digital ethics and competence. These results suggest that teaching experience increases ethical awareness in technology use, including responsible attitudes, academic honesty, and data privacy protection. It also strengthens digital competence in information and data literacy, communication and collaboration, digital content creation, security, and problem-solving. This finding aligns with the view that microteaching serves as an experiential learning platform enabling students to apply digital ethics theory in real-world contexts (Skantz-Åberg et al., 2022). Thus, microteaching plays a strategic role in shaping digital ethical behavior and enhancing the digital competence of prospective teachers. The data confirms the need for teacher education institutions, especially Islamic schools and colleges, to design microteaching programs that explicitly integrate digital ethics such as preparing digital ethics modules, practical assessments, or integration into microteaching rubrics. This will ensure that prospective teachers are technologically proficient and prepared to become professional educators who can instill moral and ethical values in digital learning environments.

The Influence of Religiosity on the Digital Competence of Prospective Teachers

The results of this study indicate that religiosity, as a belief system that guides individual attitudes and behavior, has a positive and significant effect on the digital competence of student teachers. However, although the relationship is statistically significant, the strength of the effect is relatively small, so religiosity is not a major factor directly determining students' digital competence. This indicates that the contribution of religiosity is more indirect, namely through the formation of moral values, responsibility, and integrity, which are then manifested in ethical behavior when using digital technology. In other words, religiosity plays a role in building a foundation of values that encourages caution and honesty in information literacy and the use of valid and trustworthy digital sources.

These findings are consistent with research indicating that religious values enhance responsible digital behavior (Gün-TosiK et al., 2023). However, they differ from studies showing that high religiosity may increase susceptibility to fake news, a variation that can be explained by several contextual factors (Bronstein et al., 2019). First, Bronstein et al.'s research was conducted in Western societies with a more individualistic religiosity, while the context of this study is Indonesia as a country with a collectivistic culture and strong social religiosity, where religious values are more integrated into the education system and campus life. Second, the students in this study mostly came from Islamic universities that systematically instill moral values and digital ethics through academic and religious activities, so their religiosity dimension is more reflective and constructive towards digital behavior. Third, the characteristics of the respondents as student teachers make them more accustomed to values-based learning and pedagogical practices, which also mediate the influence of religiosity on how they access, verify, and use digital information. Religiosity also promotes ethical digital communication and collaboration and encourages the creation of digital content that is creative and morally valuable. These results align with findings that religiousness influences online interaction patterns, leading individuals to be more careful, ethical, and aware of bullying in digital spaces (Jablonska, 2022; Teo et al., 2024).

The results of this study indicate that prospective teacher students who are religious are more focused and careful when using digital tools for learning, which improves every aspect of digital competence. Students who have undergone microteaching demonstrate high digital competence scores, showing that practical learning can bridge media etiquette values to form strong digital competence. Islamic universities that offer social education programs should take these findings into consideration, as internalizing and strengthening religious values significantly impacts students' digital competence.

The Influence of Religiosity on the Digital Ethics of Prospective Teacher Students

Digital ethics are fundamental to maintaining professionalism in 21st-century learning environments (Cruvinel Júnior et al., 2026). The results of the study indicate that religiosity directly and significantly influences the digital ethics of prospective teachers. This finding supports the global discourse that moral belief systems serve as internalized regulators of ethical digital behavior, consistent with moral internalization theory (Bandura, 1991). This shows that religious beliefs serve as the main guideline for attitudes and behaviour in the digital world and encourage positive attitudes when using social media, applications, and digital technology. Islamic values applied in every digital activity form the basis of ethics in communication, information sharing, and the use of digital resources. The Islamic faith held by students helps prospective teachers understand how to behave ethically in the digital world, such as respecting privacy, avoiding hoaxes, and maintaining good manners in the digital world. In the context of Indonesian Islamic universities, religiosity acts as a moral compass that shapes ethical awareness and strengthens responsibility when engaging in digital communication, content creation, and data use. Islamic values embedded in every digital activity form the foundation for ethical conduct in communication, information sharing, and digital resource utilization. These values align with the notion of intrinsic religiosity, which emphasizes internalized moral guidance rather than external ritual compliance (Allport & Ross, 1967).

The results of this study confirm the findings that more religious student groups tend to be less involved in cyberbullying and are more socially and morally cautious in the digital space (Yadav & Yadav, 2018). In the realm of academic integrity, an important part of digital ethics in teacher training colleges shows that religiosity correlates with a decrease in academic cheating among prospective teachers in Indonesia. This shows the contribution of religious values in controlling ethical control when using learning technology (Ridwan & Diantimala, 2021; Widiastuti et al., 2025). On the other hand, the results of this study reject the negative findings that religiosity among Gen-Z in Indonesia has no effect on piracy activities (Abida & Muttaqin, 2025; Bahtiar et al., 2025; Wicaksono, 2022).

Prospective teachers studying at Islamic universities on the island of Java have demonstrated an attitude of avoiding copyright infringement and taking responsibility for information obtained in the digital space. Descriptive analyses of respondents indicate that students who have undergone microteaching achieve higher scores, suggesting that digital ethics is not merely theoretical. Microteaching practices can sharpen students' awareness of security, responsibility, ethical technology use, digital literacy, and copyright respect. Thus, the results of this study imply that Islamic-based teacher education should combine strengthening religiosity with learning digital ethics, accompanied by guidance that emphasizes digital ethics assessment in practical education.

The Influence of Digital Ethics on the Digital Competence of Prospective Teachers

The results of the analysis of digital ethics' influence on digital competence show a positive and significant impact on prospective teacher students' digital competence. This can be interpreted as digital ethics playing a guiding role in prospective teachers' decision-making when using ICT, thereby encouraging an increase in digital competence in each indicator. These findings align with studies in teacher education that emphasize the importance of integrating the ethical dimension into digital competence. Additionally, empirical evidence suggests that incorporating digital ethics into teaching improves digital competence (Amalia, 2026; Novella-García & Cloquell-Lozano, 2021). From a theoretical perspective, this relationship supports the TPACK framework (Mishra & Koehler, 2006), where technological mastery must be integrated with pedagogical and ethical reasoning to achieve meaningful digital teaching practices.

Cross-national evidence from Spain (Torres-Hernández & Gallego-Arrufat, 2022) and Finland (Skantz-Åberg et al., 2022) similarly demonstrates that digital ethics enhances teachers' capacity to evaluate information critically, communicate responsibly, and safeguard digital privacy. Across all dimensions of digital competence, ethical awareness transforms technical ability into ethically grounded performance. Principles such as integrity, accountability, and respect for others guide pre-service teachers to verify information accuracy, communicate safely, create original content, and protect data privacy. The findings of this study are consistent with research suggesting that technology ethics is strongly associated with the digital competence of prospective teachers (Chu et al., 2023; Lie et al., 2020). Specifically, the findings confirm that the security dimension of digital ethics, covering privacy, copyright, and responsible use, is essential for improving the digital competence of prospective teachers (Torres-Hernández & Gallego-Arrufat, 2022). These results imply that digital ethics must be incorporated into performance-based learning experiences to provide prospective teachers with a more in-depth understanding of digital competence.

The Influence of Religiosity on Digital Competence Mediated by Digital Ethics in Prospective Teacher Students

The results indicate that religiosity positively and significantly affects digital competence, with digital ethics as a mediating variable. This suggests that religiosity establishes the foundation for ethical behavior when using technology, including trustworthiness, honesty, and responsibility. These behaviors are then demonstrated in daily digital ethics practices (Sahayu et al., 2026; Teo et al., 2024). Students with high levels of religiosity tend to avoid plagiarism, maintain data privacy, and communicate digitally in a way that respects others (Novella-García & Cloquell-Lozano, 2021).

These values are reinforced through practice-based learning such as microteaching, which provides students with the opportunity to apply digital ethics in real-world contexts while honing their technological skills.

This process is in line with Vygotsky's social constructivism theory, which emphasizes that learning is most effective when it occurs in the zone of proximal development (ZPD), that is, when students are guided to internalize values and skills through social interaction and guided practice (Vygotsky, 1980). When ethical habits in utilizing digital resources, such as verifying information, citing sources, maintaining account security, and interacting politely, are practiced consistently, they develop into stronger digital competencies. Thus, digital ethics becomes an important bridge that transforms religious values into measurable digital skills, such as the ability to assess information, effective online collaboration, original digital content creation, secure data management, and appropriate technological problem solving (Chu et al., 2023; Sartini et al., 2025).

CONCLUSION

This study contributes to a deeper theoretical understanding of how religiosity and digital ethics interact to shape the digital competence of prospective teachers in the context of 21st-century education. The results show that religiosity directly and significantly positively affects digital competence. This is reflected in the careful selection of sources, academic honesty, and a sense of responsibility when using technology. Further research shows that religiosity has a direct, positive, and significant effect. Digital ethics form the basis of prospective teachers' professionalism and are reinforced by religiosity, shaping trustworthy, honest, and responsible behavior. Religious values encourage respect for privacy, rejection of hoaxes and plagiarism, and ethical communication in the digital space.

Furthermore, digital ethics directly and significantly affects digital competence. The findings of this study suggest that digital ethics guide decisions about technology use in learning. These findings align with previous studies and empirical evidence that emphasize the importance of ethics in digital competence, demonstrating a direct relationship between technology ethics and digital teaching competence. Digital ethics should be integrated into teacher education through practical implementations such as a dedicated digital ethics module, ethical assessment criteria in microteaching rubrics, and scenario-based exercises on source verification, citation, and data protection to strengthen prospective teachers' digital competence.

This study's final finding is that religiosity positively affects digital competence, with digital ethics as a mediating variable. This suggests that religiosity influences students' ethical behavior when using technology, including trustworthiness, honesty, and responsibility. These behaviors are then manifested in daily digital ethics practices during learning activities. However, this study has limitations. It was only conducted at Islamic universities on the island of Java, and only in social sciences and humanities programs. Additionally, the religiosity variable was limited to indicators of internal religiosity. The respondents in this study were predominantly female. The use of technology in learning and ethical values may be influenced by gender. Future research should include an examination of gender moderating variables to understand the individual process of developing digital competencies with ethical considerations. This study also included the variable of religiosity, which may have different meanings for men and women.

ACKNOWLEDGMENT

The researcher would like to express her deepest gratitude to the Directorate of Research, Technology, and Community Service of the Ministry of Higher Education, Science, and Technology of the Republic of Indonesia for providing funding through the 2025 Doctoral Dissertation Research Scheme. This support was instrumental in ensuring the research ran smoothly and was successful. The researcher is honored by the trust and opportunity to participate in developing science in this field.

REFERENCES

Abida, N. L., & Muttaqin, A. I. (2025). The Post-Disaster Social Dynamics and the Role of Islamic Education for Children in Relocation Areas: A Systematic Literature Review. *Journal of Islamic Education Research*, *6*(3), 343–351. https://doi.org/10.35719/jier.v6i3.513

Agus Purwanto & Yuli Sudargini. (2021). Partial Least Squares Structural Squation Modeling (PLS-SEM) Analysis for Social and Management Research: A Literature Review. *Journal of Industrial Engineering & Management Research*, *2*(4), 114–123. https://doi.org/10.7777/jiemar.v2i4.168

Allport, G. W., & Ross, J. M. (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology*, *5*(4), 432. https://doi.org/10.1037/h0021212

Al-Rafee, S., & Rouibah, K. (2010). The fight against digital piracy: An experiment. *Telematics and Informatics*, *27*(3), 283–292. https://doi.org/10.1016/j.tele.2009.12.002

Amalia, E. R. (2026). Leadership Dynamics in Islamic-Based Schools: A Systematic Review of Southeast Asia (2015–2025). *At-Tadzkir: Islamic Education Journal*, *5*(1), 1–21. https://doi.org/10.59373/attadzkir.v5i1.231

Anriani, H. B., Sari, H., Junaidi, J., & Hamka, H. (2022). Investigating the relationship between moral and ethical: Does extrinsic and intrinsic religiosity improve people's mental health? *FWU Journal of Social Sciences*, *16*(3), 52–67. https://doi.org/10.51709/19951272/Fall2022/4

Arli, D., Kubacki, K., Tjiptono, F., & Morenodiez, S. (2017). Religiousness and digital piracy among young consumers in an emerging market. *Young Consumers*, *18*(1), 40–53. https://doi.org/10.1108/YC-08-2016-00627

Asamoah, M. K. (2019). TPACKEA model for teaching and students' learning. *Journal of Academic Ethics*, *17*(4), 401–421. https://doi.org/10.1007/s10805-019-09326-4

Bahtiar, A., Rizal, S., Roisyah, H., & Angkananon, C. (2025). Integrating Eco-Sufi Values into Environmental Education through the Adiwiyata Madrasah Program. *Journal of Islamic Education Research*, *6*(3), 261–274. https://doi.org/10.35719/jier.v6i3.486

Bandura, A. (1991). Social cognitive theory of self-regulation. *Theories of Cognitive Self-Regulation*, *50*(2), 248–287. https://doi.org/10.1016/0749-5978(91)90022-L

Bronstein, M. V., Pennycook, G., Bear, A., Rand, D. G., & Cannon, T. D. (2019). Belief in Fake News is Associated with Delusionality, Dogmatism, Religious Fundamentalism, and Reduced Analytic Thinking. *Journal of Applied Research in Memory and Cognition*, *8*(1), 108–117. https://doi.org/10.1016/j.jarmac.2018.09.005

Casidy, R., Phau, I., & Lwin, M. (2016). Religiosity and Digital Piracy: An Empirical Examination. *Services Marketing Quarterly*, *37*(1), 1–13. https://doi.org/10.1080/15332969.2015.1112172

Çebi, A., Bahçekapılı Özdemir, T., Reisoğlu, İ., & Çolak, C. (2022). From digital competences to technology integration: Re-formation of pre-service teachers' knowledge and understanding. *International Journal of Educational Research*, *113*. https://doi.org/10.1016/j.ijer.2022.101965

Choi, M. (2016). A concept analysis of digital citizenship for democratic citizenship education in the internet age. *Theory & Research in Social Education*, *44*(4), 565–607. https://doi.org/10.1080/00933104.2016.1210549

Chu, J., Lin, R., Qin, Z., Chen, R., Lou, L., & Yang, J. (2023). Exploring factors influencing pre-service teacher's digital teaching competence and the mediating effects of data literacy: Empirical evidence from China. *Humanities and Social Sciences Communications*, *10*(1), 1–11. https://doi.org/10.1057/s41599-023-02016-y

Cohen, J. (1992). Statistical power analysis. *Current Directions in Psychological Science*, *1*(3), 98–101. https://doi.org/10.1111/1467-8721.ep10768783

Colbran, N. (2010). Realities and challenges in realising freedom of religion or belief in Indonesia. *The International Journal of Human Rights*, *14*(5), 678–704. https://doi.org/10.1080/13642980903155166

Cruvinel Júnior, L., Héctor Ascama, O., & Marques Da Silva, M. (2026). AI Ethics in Higher Education: A Review of Ethical Challenges. In I. Alvarez, M. Arias-Oliva, A.-H. Dediu, & N. Silva (Eds), *Ethical and Social Impacts of Information and Communication Technology* (Vol. 15939, pp. 192–203). Springer Nature Switzerland. https://doi.org/10.1007/978-3-032-01429-0_17

Dai, W. (2023). An empirical study on English preservice teachers' digital competence regarding ICT self-efficacy, collegial collaboration and infrastructural support. *Heliyon*, *9*(9). https://doi.org/10.1016/j.heliyon.2023.e19538

Deng, G., & Zhang, J. (2023). Technological pedagogical content ethical knowledge (TPCEK): The development of an assessment instrument for pre-service teachers. *Computers and Education*, *197*. https://doi.org/10.1016/j.compedu.2023.104740

Fauzan, A., Triyono, M. B., Hardiyanta, R. A. P., Daryono, R. W., & Arifah, S. (2023). The Effect of Internship and Work Motivation on Students' Work Readiness in Vocational Education: PLS-SEM Approach. *Journal of Innovation in Educational and Cultural Research*, *4*(1), 26–34. https://doi.org/10.46843/jiecr.v4i1.413

Fawaid, M., Triyono, M. B., Sofyan, H., Nurtanto, M., Mutohhari, F., Jatmoko, D., Majid, N. W. A., & Rabiman, R. (2022). Entrepreneurial Intentions of Vocational Education Students in Indonesia: PLS-SEM Approach. *And TrainingJournal of Technical Education*, *14*(2 SPECIAL ISSUE), 91–105. https://doi.org/10.30880/jtet.2022.14.02.009

Ferrari, A. (2012). *Digital competence in practice: An analysis of frameworks* (Vol. 10). Publications Office of the European Union Luxembourg. https://dx.doi.org/10.2791/82116

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39–50. https://doi.org/10.2307/3151312

Galindo-Domínguez, H., & Bezanilla, M. J. (2021). Digital competence in the training of pre-service teachers: Perceptions of students in the degrees of early childhood education and primary education. *Journal of Digital Learning in Teacher Education*, *37*(4), 262–278. https://doi.org/10.1080/21532974.2021.1934757

García-Martín, J., & García-Sánchez, J. N. (2017). Pre-service teachers' perceptions of the competence dimensions of digital literacy and of psychological and educational measures. *Computers and Education*, *107*, 54–67. https://doi.org/10.1016/j.compedu.2016.12.010

García-Sampedro, M., Agudo Prado, S., & Torralba-Burrial, A. (2024). Pre-service teachers' skills development through educational video generation. *European Journal of Teacher Education*. https://doi.org/10.1080/02619768.2024.2323925

Guillén-Gámez, F. D., Lugones, A., Mayorga-Fernández, M. J., & Wang, S. (2019). ICT use by pre-service foreign languages teachers according to gender, age and motivation. *Cogent Education*, *6*(1). https://doi.org/10.1080/2331186X.2019.1574693

Gün-TosiK, E., Bertiz, Y., & Hebebci, M. T. (2023). Individuals' Habits of Trust and Verification in Social Media News and their Literacy. *Journal of Learning and Teaching in Digital Age*, *8*(2), 169–175. https://doi.org/10.53850/joltida.1108655

Gurer, M. D. (2021). Examining technology acceptance of pre-service mathematics teachers in Turkey: A structural equation modeling approach. *Education and Information Technologies*, *26*(4), 4709–4729. https://doi.org/10.1007/s10639-021-10493-4

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (Eds). (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (Second edition). Sage.

Hakimi, L., Eynon, R., & Murphy, V. A. (2021). The ethics of using digital trace data in education: A thematic review of the research landscape. *Review of Educational Research*, *91*(5), 671–717. https://doi.org/10.3102/00346543211020116

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Huertas-Abril, C. A. (2019). Implementation of Cooperative Learning Strategies to Create 3D-Videos in EFL Teacher Training. In *Theoretical and Practical Approaches to Innovation in Higher Education* (pp. 17–41). IGI Global. https://doi.org/10.4018/978-1-7998-1662-1.ch002

Instefjord, E., & Munthe, E. (2016). Preparing pre-service teachers to integrate technology: An analysis of the emphasis on digital competence in teacher education curricula. *European Journal of Teacher Education*, *39*(1), 77–93. https://doi.org/10.1080/02619768.2015.1100602

Jablonska, M. R. (2022). Online Social Behaviors in the Context of Religiosity: A Neural-Networks-Supported Approach to Theists and Atheists. *Religions*, *13*(11), 1021. https://doi.org/10.3390/rel13111021

Li, W. (2024). A Study on Factors Influencing Designers' Behavioral Intention in Using AI-Generated Content for Assisted Design: Perceived Anxiety, Perceived Risk, and UTAUT. *International Journal of Human-Computer Interaction*. https://doi.org/10.1080/10447318.2024.2310354

Lie, A., Tamah, S. M., Gozali, I., Triwidayati, K. R., Utami, T. S. D., & Jemadi, F. (2020). Secondary School Language Teachers' Online Learning Engagement During the Covid-19 Pandemic in Indonesia. *Journal of Information Technology Education: Research*, *19*, 803–832. https://doi.org/10.28945/4626

Luque-Jiménez, J., & García-Ruiz, C. (2024). Digital competence of Secondary Education Teachers in initial training: Levels of perception and transfer to practice. *Bordon. Revista de Pedagogia*, *76*(2), 65–86. https://doi.org/10.13042/Bordon.2024.99976

Maltby, J., & Lewis, C. A. (1996). Measuring intrinsic and extrinsic orientation toward religion: Amendments for its use among religious and non-religious samples. *Personality and Individual Differences*, *21*(6), 937–946. https://doi.org/10.1016/S0191-8869(96)00154-7

Marín, V. I., Carpenter, J. P., & Tur, G. (2021). Pre-service teachers' perceptions of social media data privacy policies. *British Journal of Educational Technology*, *52*(2), 519–535. https://doi.org/10.1111/bjet.13035

Marín, V. I., Carpenter, J. P., Tur, G., & Williamson-Leadley, S. (2023). Social media and data privacy in education: An international comparative study of perceptions among pre-service teachers. *Journal of Computers in Education*, *10*(4), 769–795. https://doi.org/10.1007/s40692-022-00243-x

Massijaya, M. A., Mohamed, R., & Bali Mahomed, A. S. (2025). The role of risk, religiosity, fairness, and norms on attitude and intention of movie piracy: Insight from the perspective of young Indonesian users. *Cogent Business & Management*, *12*(1), 2505278. https://doi.org/10.1080/23311975.2025.2505278

McGarr, O., & McDonagh, A. (2021). Exploring the digital competence of pre-service teachers on entry onto an initial teacher education programme in Ireland. *Irish Educational Studies*, *40*(1), 115–128. https://doi.org/10.1080/03323315.2020.1800501

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, *108*(6), 1017–1054. http://dx.doi.org/10.1111/j.1467-9620.2006.00684.x

Narelle, L., & Susanne, G. (2015). Self-belief and confidence to teach arts and digital technology in K-6 classrooms: Perspectives from pre-service teachers. In *Revolutionizing Arts Education in K-12 Classrooms through Technological Integration* (pp. 106–124). IGI Global. https://doi.org/10.4018/978-1-4666-8271-9.ch005

Novella-García, C., & Cloquell-Lozano, A. (2021). The ethical dimension of digital competence in teacher training. *Education and Information Technologies*, *26*(3), 3529–3541. https://doi.org/10.1007/s10639-021-10436-z

Pew Research Center. (2025). *Muslim population change* (How the Global Religious Landscape Changed From 2010 to 2020) [Research report]. Pew Research Center. https://www.pewresearch.org/religion/2025/06/09/muslim-population-change/

Reisoğlu, İ., & Çebi, A. (2020). How can the digital competences of pre-service teachers be developed? Examining a case study through the lens of DigComp and DigCompEdu. *Computers & Education*, *156*, 103940. https://doi.org/10.1016/j.compedu.2020.103940

Restalia, W., & Khasanah, N. (2025). Transformation of Islamic education in the digital age: Challenges and opportunities. *Tadibia Islamika*, *4*(2), 85–92. https://doi.org/10.28918/tadibia.v4i2.8964

Ridwan, R., & Diantimala, Y. (2021). The positive role of religiosity in dealing with academic dishonesty. *Cogent Business & Management*, *8*(1), 1875541. https://doi.org/10.1080/23311975.2021.1875541

Sahayu, W., Triyono, S., & Ungu, N. K. (2026). Digital Technology in Differentiated English Language Teaching: A Systematic Review with Bibliometric Insights. *Indonesian Journal of Science and Technology*, *11*(1), 167–188. https://doi.org/10.17509/ijost.v11i2.89685

Sartini, S., Triyono, S., & Triastuti, A. (2025). Unveiling maritime English communication needs for seafarer: Strategic reformation for classroom instructional design. *Maritime Technology and Research*, *7*(2). https://doi.org/10.33175/mtr.2025.271921

Setiawan, T., De Jong, E. B., Scheepers, P. L., & Sterkens, C. J. (2020). The relation between religiosity dimensions and support for interreligious conflict in Indonesia. *Archive for the Psychology of Religion*, *42*(2), 244–261. https://doi.org/10.1177/0084672419878824

Skantz-Åberg, E., Lantz-Andersson, A., Lundin, M., & Williams, P. (2022). Teachers' professional digital competence: An overview of conceptualisations in the literature. *Cogent Education*, *9*(1), 2063224. https://doi.org/10.1080/2331186X.2022.2063224

Sulaiman, R., Toulson, P., Brougham, D., Lempp, F., & Haar, J. (2022). The Role of Religiosity in Ethical Decision-Making: A Study on Islam and the Malaysian Workplace. *Journal of Business Ethics*, *179*(1), 297–313. https://doi.org/10.1007/s10551-021-04836-x

Taofik, A. (2020). Lembaga Pendidikan Islam di Indonesia. *Indonesian Journal of Adult and Community Education*, *2*(2), 1–9. https://doi.org/10.17509/ijace.v2i2.30874

Teo, T., Huang, F., Hue, M.-T., & Cheung, H.-Y. (2024). The influence of religious beliefs on bullying and cheating among secondary school students in Hong Kong. *Acta Psychologica*, *251*, 104563. https://doi.org/10.1016/j.actpsy.2024.104563

Tomczyk, Ł. (2024). Digital competence among pre-service teachers: A global perspective on curriculum change as viewed by experts from 33 countries. *Evaluation and Program Planning*, *105*, 102449. https://doi.org/10.1016/j.evalprogplan.2024.102449

Tondeur, J., Aesaert, K., Prestridge, S., & Consuegra, E. (2018). A multilevel analysis of what matters in the training of pre-service teacher's ICT competencies. *Computers & Education*, *122*, 32–42. https://doi.org/10.1016/j.compedu.2018.03.002

Torres-Hernández, N., & Gallego-Arrufat, M.-J. (2022). Indicators to assess preservice teachers' digital competence in security: A systematic review. *Education and Information Technologies*, *27*(6), 8583–8602. https://doi.org/10.1007/s10639-022-10978-w

Vygotsky, L. S. (1980). *Mind in Society: Development of Higher Psychological Processes* (M. Cole, V. Jolm-Steiner, S. Scribner, & E. Souberman, Eds). Harvard University Press. https://doi.org/10.2307/j.ctvjf9vz4

Wicaksono, A. P. (2022). *Does Religiousness Matter to Intention to Commit Digital Piracy?* 746–753. https://doi.org/10.2991/978-94-6463-008-4_94

Widiastuti, I., Munawati, R., Gustina, E., & Estriyanto, Y. (2025). Academic Integrity, Religiosity, and Morality of Indonesian Pre-Service Teachers: Does Field of Study Matter? *International Journal*, *15*, e2025138. https://doi.org/10.22521/edupij.2025.15.138

Yadav, M., & Yadav, R. (2018). Impact of spirituality/religiousness on cyber bullying and victimization in university students: Mediating effect of emotional intelligence. *Journal of Religion and Health*, *57*(5), 1961–1979. https://doi.org/10.1007/s10943-018-0637-8

Zhao, Y., Sánchez Gómez, M. C., Pinto Llorente, A. M., & Zhao, L. (2021). Digital competence in higher education: Students' perception and personal factors. *Sustainability (Switzerland)*, *13*(21). https://doi.org/10.3390/su132112184