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Integrating Critical Thinking and Digital Literacy into Technology Acceptance for Online Counseling: A PLS-SEM Study among Muslim University Students

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Abstract

The rapid development of digital platforms has transformed the landscape of counseling services in higher education, creating an urgent need to understand their acceptance, especially among Muslim university students in Indonesia. This study aimed to examine the influence of critical thinking and academic performance on technology acceptance in online counseling, with a focus on the mediating role of digital literacy. Using a quantitative approach, data were collected through purposive random sampling from 815 Muslim university students (49 % male; 51% female) at Universitas Negeri Padang and analyzed using Partial Least Squares-Structural Equation Modeling (PLS-SEM). The study employed validated scales for critical thinking, academic performance, digital literacy, and technology acceptance, all of which showed high reliability (Cronbach's alpha > 0.90). The findings supported the proposed hypotheses, showing that both critical thinking and academic performance significantly influenced digital literacy and technology acceptance. Digital literacy also acted as a significant mediator linking these variables to technology acceptance, confirming its central role in the model. These results underscore the importance of fostering digital competence and academic readiness in promoting effective adoption of online counseling services. The study highlights the need for culturally sensitive digital interventions that align with the ethical and spiritual values of Muslim university students.

INTRODUCTION

The rapid advancement of information and communication technology has transformed the landscape of counseling services in higher education. One of the most significant innovations is the emergence of online counseling, which allows students to receive

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psychological support through digital platforms without requiring face-to-face interactions. This transition was strongly accelerated during the Covid-19 pandemic, which prompted rapid adaptation of conventional counseling methods to technology-driven formats, and this shift has continued to shape counseling practices beyond the pandemic period (Kolbe et al., 2021; Ramachandran et al., 2022; Wang et al., 2022). Despite these developments, technology acceptance of online counseling among university students, especially within the cultural and religious context of Muslim university students in Indonesia, remains limited and underexplored (Mao & Hovick, 2022; Usman et al., 2022; Wu & Yu, 2024).

The adoption of online counseling services is not determined solely by their perceived usefulness or ease of use. Instead, it is influenced by a combination of cognitive, psychological, and contextual readiness factors. For Indonesian Muslim university students, it is likely that cultural values, religious beliefs, and everyday familiarity with digital environments shape how they perceive and engage with online counseling technologies (Faturohman et al., 2021; Garavand et al., 2022; Setiawan et al., 2024). In this context, identifying the psychosocial and digital factors that support or inhibit acceptance is essential to improving the reach and effectiveness of online counseling in culturally diverse settings.

Among these factors, critical thinking plays a fundamental role in shaping students' openness to digital counseling platforms. Critical thinking involves the ability to analyze information logically, reflectively, and receptively toward new experiences, including technological innovations in mental health care (Halpern & Dunn, 2021; Profetto-McGrath, 2003; Yulia et al., 2024). Students who think critically are more likely to consider the risks and benefits of adopting online counseling and may be better equipped to make informed and rational decisions. Moreover, critical thinkers are generally more adaptable and responsive to innovation, which positively influences their attitude toward using digital technologies in academic and personal contexts (Duong et al., 2023; Han et al., 2025; Mater et al., 2022).

Another key factor to consider is academic performance, which reflects students' learning outcomes, self-discipline, and ability to manage responsibilities. Students who demonstrate strong academic performance often exhibit greater autonomy and problem-solving ability, which can increase their confidence in using a variety of educational and psychological support tools, including online counseling platforms (Hanham et al., 2021; Law & Geng, 2019; Lee et al., 2022). Positive academic experiences also enhance students' sense of efficacy, contributing to their willingness to engage with technology for learning and emotional development (Hannan & Liu, 2023; Kara, 2022; Saif et al., 2024).

At the center of this process lies digital literacy, which encompasses not only technical proficiency in operating digital tools but also the critical and ethical ability to interact effectively in online environments (Oh et al., 2021; Peng & Yu, 2022; Tinmaz et al., 2022). Students with high digital literacy are more confident and autonomous in using online platforms, making them more receptive to digital counseling services. This study positions digital literacy not only as a direct predictor of technology acceptance but also as a mediator that strengthens the impact of both critical thinking and academic performance on technology acceptance (Caratozzolo et al., 2021; Kabakus et al., 2023; Nikou et al., 2022). In essence, even if students have strong cognitive and academic competencies, they may still resist online counseling unless they are also digitally literate and familiar with navigating such platforms.

Previous studies on online counseling have mostly focused on technical and psychological factors influencing technology acceptance, but few have investigated the role of digital literacy as a mediating variable between cognitive and academic factors. Research examining this mechanism in the context of Muslim university students in Indonesia is still very limited, even though cultural and religious values strongly shape their engagement with digital platforms. In addition, studies rarely address how cultural sensitivity influences students' readiness to adopt online counseling services, despite its relevance in Muslim-majority settings.

This gap highlights the need for a more comprehensive model that integrates digital competence and cultural considerations to better understand students' acceptance of online counseling technologies.

In light of the above, this study aims to examine the influence of critical thinking, academic performance, and digital literacy on technology acceptance in online counseling among Indonesian Muslim university students as another contribution to the growing body of research in this field. Furthermore, it examines the mediating role of digital literacy in the relationship between both critical thinking and technology acceptance and between academic performance and technology acceptance. By exploring these relationships in a culturally relevant setting, this study contributes to a more comprehensive understanding of how cognitive and digital factors interact to shape students' adoption of online counseling technologies. The findings are expected to provide practical guidance for universities, counselors, and policy makers in developing more accessible, effective, and culturally sensitive digital counseling services.

Literature Review

Online Counseling and Technology Acceptance in Higher Education

The use of online counseling has grown significantly in response to the increasing need for accessible mental health services in higher education (Hanley & Wyatt, 2021; Moussa & Asender, 2022; Naidoo & Cartwright, 2022). Online counseling platforms enable students to access psychological support without the limitations of physical distance, time, or counselor availability (Novella et al., 2022). This flexibility is especially valuable for students from religious and collectivist backgrounds, including those in Indonesia, who may prefer confidential and culturally respectful settings for mental health discussions. Several studies emphasize that online counseling is more effective when it aligns with users' personal, cultural, and ethical values (Arbulú Pérez Vargas et al., 2024; Collins et al., 2025; Velez-Cruz & Holstun, 2022). However, the effectiveness of such services is closely tied to students' acceptance of the technology itself (Mitchell, 2023). Therefore, it is necessary to investigate psychological, academic, and digital factors that shape this acceptance.

Understanding Technology Acceptance in Counseling Services

Technology Acceptance, originally proposed by Davis et al. (1989), provides a theoretical framework for understanding how users evaluate and adopt new technologies (Garavand et al., 2022; Muhammad, 2024; Srijundaree et al., 2024). It identifies perceived usefulness and perceived ease of use as the primary factors influencing user behavior (Chocarro et al., 2023). In the context of online counseling, more recent research suggests that these technical factors are not sufficient (Alshurafat et al., 2021; Békés et al., 2021; Stoumpos et al., 2023). Psychological readiness, academic background, and digital competence are also essential in determining whether students are willing to use technology-based mental health services (Sawrikar & Mote, 2022). These findings are particularly relevant in higher education environments where students engage with various digital tools as part of both academic and personal development.

Critical Thinking and Academic Performance as Predictors

Critical thinking is a cognitive skill that plays a significant role in evaluating the usefulness, reliability, and relevance of technology (Martín-Raugh et al., 2023; Rivas et al., 2023). Students with high levels of critical thinking are more likely to assess digital counseling platforms thoughtfully, considering both their functionality and ethical implications (Arbulú Pérez Vargas et al., 2024). In Muslim communities, critical reflection often includes moral and spiritual considerations. Similarly, academic performance serves as an indicator of students'

ability to engage with digital services productively (Almulla, 2023). High-performing students are generally more capable of integrating online tools into their learning routines, including those used for psychological support (Sutiani et al., 2021).

Digital Literacy as a Central Mechanism

Digital literacy includes technical skills and the ability to navigate digital information responsibly (Pilav-Velić et al., 2021; Xin et al., 2025). It also involves understanding how to evaluate online content, maintain digital privacy, and interact ethically in virtual environments (AbdulKareem & Oladimeji, 2024; Potyrała & Tomczyk, 2021; Tomczyk & Potyrała, 2021). In this study, digital literacy is positioned as a mediating factor that links students' cognitive and academic strengths with their acceptance of online counseling. Students with higher digital literacy are better prepared to understand, evaluate, and trust digital platforms for mental health services. Previous studies also confirm that digital literacy improves the quality of students' interaction with online learning and support systems.

Cultural and Religious Influences in Technology Use

Among Indonesian Muslim university students, the acceptance of technology in counseling is deeply shaped by religious and cultural values (Sabrina et al., 2023). Issues such as gender appropriateness, confidentiality, and compatibility with Islamic principles influence whether students are comfortable using digital counseling platforms (Levin & Mamlok, 2021; Zaid et al., 2022). In this context, students often assess not only the technical efficiency of a platform but also its alignment with their values and beliefs. A deeper understanding of these cultural and religious dimensions is necessary to develop online counseling systems that are both effective and acceptable in Muslim-majority settings.

Rationale of the Study

This study integrates critical thinking, academic performance, and digital literacy into one model to explain technology acceptance in online counseling. While prior studies have examined these variables separately, few have explored their combined influence in a counseling context. The model provides a more holistic understanding of how cognitive and academic factors shape students' readiness to adopt digital mental health services (Caratozzolo et al., 2021; Halpern & Dunn, 2021; Law & Geng, 2019).

Originality also lies in positioning digital literacy as both a direct predictor and a mediator in the relationship between critical thinking and academic performance with technology acceptance. This mediating role is rarely studied in the context of online counseling, especially among Indonesian Muslim university students. The cultural specificity and theoretical integration contribute new insights for advancing inclusive digital counseling practices in higher education (Kabakus et al., 2023; Nikou et al., 2022; Usman et al., 2022).

Hypothesis of the Study

Based on theoretical reviews and previous research findings, this study develops a conceptual model to explain the factors that influence technology acceptance in online counseling services among Indonesian Muslim students. This model involves three main constructs, namely critical thinking, academic performance, and digital literacy, with technology acceptance as the dependent variable. Critical thinking and academic performance are expected to not only have a direct influence on technology acceptance but also an indirect influence through digital literacy as a mediating variable. The list of hypotheses proposed in this study is presented in Figure 1.

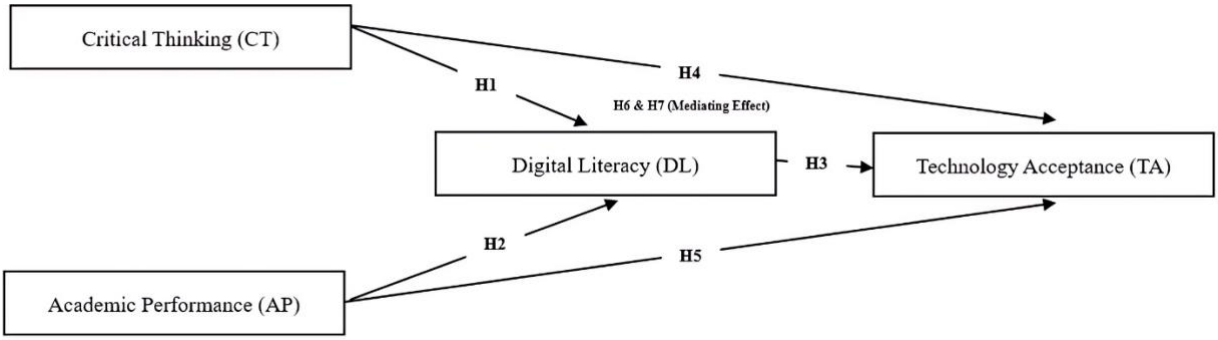

Figure 1. Conceptual Framework

The seven hypotheses in Figure 1 are designed to test both the direct and indirect effects between variables in the model. Direct effects are tested through H1 to H5, while mediating effects are tested through H6 and H7. By examining the mediating effect of digital literacy, this study aims to understand the strategic role of digital competencies in bridging the relationship between critical thinking skills and academic achievement toward technology acceptance in the context of online counseling. All hypotheses will be tested using a quantitative approach based on Partial Least Square-Structural Equation Modeling (PLS-SEM).

METHODS

Designs

This study employed a quantitative cross-sectional design using PLS-SEM to examine the relationships among the studied variables based on data collected at a single point in time. This research design enables a systematic and comprehensive analysis of the complex interactions among variables within the context of Indonesian Muslim university students engaging in online counseling.

Population and Sample

The population in this study were all students at Universitas Negeri Padang, and a total of 815 participants were selected using a purposive random sampling technique based on the minimum sample adequacy requirements for PLS-SEM analysis. Students at Universitas Negeri Padang were considered relevant for this study because they have prior exposure to technology-based learning environments and institutional access to online counseling services, making

Table 1. Demographics of Research Respondents

Demography	N	Percentage
Gender		
Male	402	49.33
Female	413	50.67
Duration of Internet Access Time		
< 3 Hours	448	54.97
3-8 Hours	219	26.87
> 8 Hours	148	18.16
Device		
Smartphone	815	100
Laptop	815	100
Tablet	122	14.97
Personal Computer	36	4.42
Device Ownership Status		
Owned	754	92.52
Rental	61	7.48

them suitable for examining technology acceptance. The inclusion criteria required participants to be Muslim students who were actively engaged in digital-based lectures and had experience using online counseling services. Furthermore, the sample was selected using a purposive sampling technique, in which participants were deliberately chosen based on specific criteria relevant to the research objectives (Creswell, 2009). The sampling criteria required participants to be Muslim students who actively participated in digital-based lectures and had prior experience using online counseling services, ensuring they had sufficient exposure to both digital learning environments and counseling platforms to meaningfully reflect on the measured variables of critical thinking, academic performance, digital literacy, and technology acceptance. The demographic profile of respondents can be seen in Table 1.

Based on Table 1, the respondents in this study consisted of 815 Muslim university students, a sample size determined to meet the minimum adequacy requirements for PLS-SEM analysis. There were slightly more women than men, and most respondents used the internet for less than 3 hours each day, although quite a number also used it between 3 to 8 hours. All respondents used smartphones and laptops as the main devices for attending digital-based lectures, while a small number also used tablets and personal computers (PCs). The majority of students use their own devices, which indicates that students in this sample have good personal technology readiness to support technology acceptance in online counseling services.

Instruments

The research instruments in this study were developed based on an in-depth theoretical study of the variables of critical thinking, academic performance, digital literacy, and technology acceptance. Each instrument was compiled referring to relevant and theoretically tested indicators, then tested on a limited sample of 100 Padang State University students to ensure validity and reliability. This instrument trial resulted in an average loading factor value and Cronbach's Alpha value which indicated that the instrument had convergent validity and high reliability. The instrument measurement scale uses a Likert scale with five alternative

Table 2. Outline of Research Instrument

Instruments	Indicators	References	Average Loading Factos	Average Cronbach's Alpha
Technology Acceptance Scale	1. Perceived Usefulness 2. Perceived Ease of Use 3. Attitude Toward Using 4. Behavioral Intention to Use	Lin & Yu (2023)	0.947	0.962
Academic Performance Scale	1. Improved skills in dealing with problems after taking the course. 2. Improved critical thinking skills after attending courses. 3. Good overall assessment of the course in the last semester.	Law & Geng (2019)	0.962	0.919
Digital Literacy Scale	1. Ability to use apps such as Google Docs that can be accessed for sharing. 2. Ability to upload files (visual or audio) to digital platforms. 3. Awareness of social responsibility to act ethically on online platforms.	Caratozzolo et al. (2021)	0.932	0.924
Critical Thinking Scale	1. General Skepticism 2. Open-mindedness 3. Cautious Thinking 4. Self-reflectiveness	Profetto-McGrath (2003)	0.944	0.960

treatments, namely: (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly Agree. Complete instrument details can be seen in Table 2.

Based on Table 2 above, all research instruments show convergent validity values with an average loading factor above 0.9 and high reliability with an average Cronbach's Alpha value above 0.9. This indicates that the instruments used have been able to measure the variables in question consistently and accurately. Thus, this instrument is considered suitable for measuring the relationship between variables in research related to technology acceptance in Padang State University students who take part in online counseling.

Data Collection and Ethical Clearance

Data collection in this study was carried out through two methods, namely directly (offline) and online. A total of 502 respondents filled out the research instrument directly after being met by researchers in the Padang State University environment, while 313 other respondents filled out the instrument online through the SurveyMonkey application. To minimize potential bias from combining online and offline responses, the same instrument, instructions, and informed consent procedures were used across both modes. Data from both groups were merged only after confirming that they showed consistent reliability and validity, ensuring measurement equivalence and reducing mode-related bias. Before filling out the instrument, all respondents were given informed consent which contained information about the purpose of the research, participant rights, and data confidentiality guarantees. This research has also obtained ethical clearance from the Ethics Committee of Padang State University with the number 00402113712112520230227222, dated February 27, 2024, as a form of compliance with applicable research ethical standards. Thus, the entire data collection process was carried out ethically and according to scientific procedures.

Data Analysis

Data analysis in this study used the Partial Least Square-Structural Equation Modeling (PLS-SEM) technique to test the relationship between complex variables in the research model. PLS-SEM was chosen because it is suitable for models that are predictive, involve many latent constructs, and have a complex path structure (Sarstedt et al., 2021). Data were analyzed using the PLS-SEM approach with SmartPLS 4.0 to evaluate the measurement and structural models. The analysis process begins with evaluating the fit model to ensure that the research model meets the eligibility criteria before proceeding to the outer model and inner model evaluation stages. Evaluation of model feasibility includes several indicators such as Standardized Root Mean Square Residual (SRMR) value, d_ULS, d_G, Chi-square, and Normed Fit Index (NFI). The results of the model fit evaluation are shown in Table 3.

As shown in Table 3, all model fit indices met the recommended cut-off criteria (SRMR < 0.08, NFI > 0.70, and acceptable values for d_ULS, d_G, and Chi-square) as suggested by Hair et al. (2021). These results indicate that the model demonstrates a good fit and is appropriate for further analysis. After ensuring that the research model is suitable for further analysis, the next stage is the outer model evaluation which includes testing convergent validity, discriminant validity, and construct reliability. Convergent validity is assessed based on the loading factor value and Average Variance Extracted (AVE), while construct reliability is

Table 3. Model Fit Evaluation

	Saturated model	Estimated model
SRMR	0.051	0.051
d_ULS	0.235	0.235
d_G	1.298	1.298
Chi-square	4349.776	4349.776
NFI	0.761	0.761

evaluated using Cronbach's Alpha and Composite Reliability (CR) values. Then, proceed with the inner model evaluation to test the structural relationship between variables, including testing the direct effect and mediating effect in accordance with the previously formulated research hypothesis. This analytical approach allows an in-depth interpretation of the factors that influence Technology Acceptance in online counseling among Indonesian Muslim university students.

RESULTS AND DISCUSSION

Results

Outer Model

The purpose of evaluating the outer model is to assess the validity of the variables in the structural model. To evaluate this outer model, convergent and discriminant validity tests are used (Hair et al., 2021). In addition, in the outer model evaluation process, the reliability of the variables in the research structural model is also tested (Hair & Alamer, 2022). The results of this outer model evaluation can be seen in Figure 2.

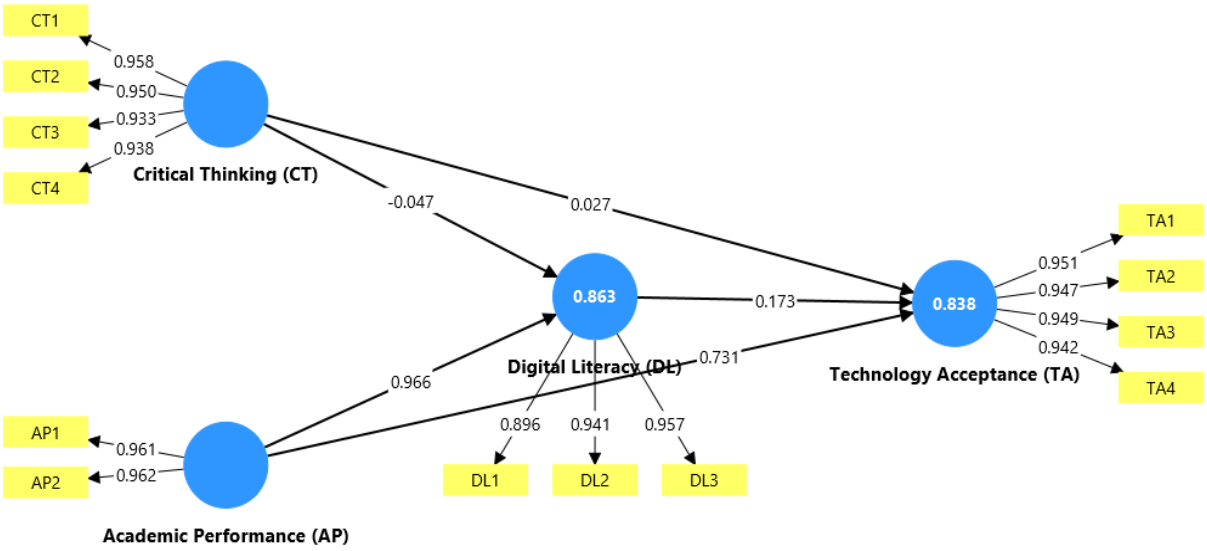

Figure 2. Research Model Evaluation

Convergent Validity

The convergent validity test assesses how variable indicators can validly measure the intended construct (Hair & Alamer, 2022). Indicators have good convergent validity if the load factor value exceeds 0.7 (Sarstedt et al., 2021). The results of this convergent validity test can be seen in Table 4.

Based on the information in Table 4, it is known that each indicator of the research variable has a load factor value greater than 0.7. Therefore, all indicators of each research variable are valid when measuring these constructs.

Discriminant Validity

The discriminant validity test assesses the differences between variables (Sarstedt et al., 2021). Fornell-Lacker criteria were used to test discriminant validity. A variable is considered to have sufficient differentiation from other variables if its loading value differs from other variables' loading values (Afthanorhan et al., 2021). The results of the discriminant validity test on the research variables can be seen in Table 5. Based on Table 5, it can be seen that each variable has a different loading value, so it can be concluded that each variable has sufficient differentiation.

Table 4. Convergent Validity Test Results

	Academic Performance (AP)	Critical Thinking (CT)	Digital Literacy (DL)	Technology Acceptance (TA)
AP1	0.961			
AP2	0.962			
CT1		0.958		
CT2		0.950		
CT3		0.933		
CT4		0.938		
DL1			0.896	
DL2			0.941	
DL3			0.957	
TA1				0.951
TA2				0.947
TA3				0.949
TA4				0.942

Reliability

The reliability test of the research variables aims to assess the reliability of the variables in forming the structural model. The Cronbach's alpha value is used to determine the reliability of the research variables. A variable is considered reliable if its Cronbach's alpha value exceeds 0.7 (Sarstedt et al., 2021). The results of the reliability test of the research variables can be seen in Table 6.

As shown in Table 6, all constructs demonstrated high reliability and convergent validity. The Cronbach's alpha values ranged from 0.919 to 0.962, exceeding the recommended threshold of 0.70. Similarly, the rho_a and rho_c values for all constructs were above 0.90, indicating strong internal consistency. The AVE values, which ranged from 0.869 to 0.925, were also above the 0.50 cut-off, confirming that the indicators adequately explained the variance of their respective constructs (Sarstedt et al., 2021). These results confirm that the measurement model has satisfactory reliability and convergent validity. Based on Table 6, it can be seen that all research variables have Cronbach's alpha values above 0.7, which indicates that each variable has good reliability.

Table 5. Discriminant Validity Test Results

	Academic Performance (AP)	Critical Thinking (CT)	Digital Literacy (DL)	Technology Acceptance (TA)
Academic Performance (AP)	0.962			
Critical Thinking (CT)	0.794	0.944		
Digital Literacy (DL)	0.928	0.720	0.932	
Technology Acceptance (TA)	0.913	0.732	0.871	0.947

Table 6. Reliability Test Results

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Academic Performance (AP)	0.919	0.919	0.961	0.925
Critical Thinking (CT)	0.960	0.961	0.971	0.892
Digital Literacy (DL)	0.924	0.935	0.952	0.869
Technology Acceptance (TA)	0.962	0.962	0.972	0.897

Table 7. Hypothesis Test Results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Decision
Direct Effect						
Critical Thinking (CT) -> Digital Literacy (DL)	-0.047	-0.047	0.017	2.695	0.007	H1 Accepted
Academic Performance (AP) -> Digital Literacy (DL)	0.966	0.966	0.014	70.767	0.000	H2 Accepted
Digital Literacy (DL) -> Technology Acceptance (TA)	0.173	0.172	0.038	4.549	0.000	H3 Accepted
Critical Thinking (CT) -> Technology Acceptance (TA)	0.027	0.028	0.024	1.108	0.268	H4 Rejected
Academic Performance (AP) -> Technology Acceptance (TA)	0.731	0.731	0.047	15.488	0.000	H5 Accepted

Inner Model

Inner model evaluation aims to assess the relationship between variables in the research structural model. The internal model evaluation process consists of two stages: hypothesis testing and R-square value analysis (Hair & Alamer, 2022; Sarstedt et al., 2021).

Hypothesis Testing

Hypothesis testing in this study was conducted through inner model analysis using the Partial Least Square-Structural Equation Modeling (PLS-SEM) approach. Hypothesis testing aims to see the direct effect and mediating effect between the variables of critical thinking, academic performance, digital literacy, and technology acceptance. Testing is done by looking at the T-statistics value and P-values, where the hypothesis is accepted if the T-statistics value> 1.96 and P-values < 0.05 (Sarstedt et al., 2021). The complete results of hypothesis testing can be seen in Table 7.

Based on Table 7, six of the seven proposed hypotheses were supported, while one was not. Critical thinking significantly affected digital literacy (H1 accepted) but not technology acceptance directly (H4 rejected), whereas academic performance significantly influenced both digital literacy (H2 accepted) and technology acceptance (H5 accepted). Digital literacy showed a significant positive effect on technology acceptance (H3 accepted). The mediating effect analysis further revealed that digital literacy mediated the relationship between critical thinking and technology acceptance (H6 accepted) as well as between academic performance and technology acceptance (H7 accepted). These results indicate that digital literacy plays a pivotal role in linking students' cognitive and academic abilities with their willingness to adopt online counseling technologies.

R-Square

After testing the hypothesis, the analysis continued by evaluating the R-square (R^2) value to measure the proportion of variance in the dependent construct that can be explained by the independent construct in the research model. The R-square value provides information about the predictive power of the model. According to Sarstedt et al. (2021), an R-square value of 0.75 is considered substantial, 0.50 is considered moderate, and 0.25 is considered weak. Thus, the higher the R-square value, the greater the ability of the predictor construct to explain the predicted variable. The R-square and adjusted R-square values for each dependent construct in this study are presented in Table 8 below.

Table 8. R-Square Test Results

	R-square	R-square adjusted
Digital Literacy (DL)	0.863	0.863
Technology Acceptance (TA)	0.838	0.837

Table 8 shows that the digital literacy construct has an R-square value of 0.863, which means that critical thinking and academic performance can explain 86.3 percent of the variance in digital literacy. This indicates that both variables have a very large contribution to the improvement of students' digital literacy. Meanwhile, the R-square value for technology acceptance is 0.838, indicating that critical thinking, academic performance, and digital literacy together explain 83.8 percent of the variance in technology acceptance. These two values indicate that the research model has very strong predictive power and is relevant in the context of Indonesian Muslim students who use online counseling services.

DISCUSSION

The findings of this study provide a comprehensive and nuanced understanding of the relationships among critical thinking, academic performance, digital literacy, and technology acceptance in the context of online counseling for Muslim university students in Indonesia. As the demand for digital mental health services continues to grow in higher education, particularly within communities that uphold strong religious and cultural values, it becomes increasingly important to examine how students perceive, evaluate, and adopt such technologies (Faturohman et al., 2021; Setiawan et al., 2024; Usman et al., 2022).

First, the results indicate that critical thinking has a positive and significant influence on digital literacy. This supports previous research which states that individuals with strong critical thinking skills tend to be more capable in analyzing, interpreting, and applying digital information effectively (Halpern & Dunn, 2021; Profetto-McGrath, 2003; Yulia et al., 2024). For Muslim university students, critical thinking is not only an academic competence but also a cognitive process shaped by religious principles such as reflective reasoning and ethical discernment (Garavand et al., 2022; Han et al., 2025; Mater et al., 2022).

Similarly, academic performance was found to have a significant positive effect on digital literacy. Students who perform well academically often demonstrate stronger digital competencies due to their proactive learning behaviors and better access to digital tools (Hanham et al., 2021; Law & Geng, 2019; Lee et al., 2022). Within the Islamic academic tradition, excellence in learning is closely tied to spiritual responsibility, which may further motivate students to develop digital capabilities that support both academic and personal growth (Kara, 2022; Saif et al., 2024).

The analysis also revealed that digital literacy has a strong and significant effect on technology acceptance. This finding aligns with studies showing that students with higher digital literacy tend to be more confident and independent when interacting with digital platforms, including those used for online counseling (Caratozzolo et al., 2021; Peng & Yu, 2022; Tinmaz et al., 2022). In the Indonesian Muslim context, this confidence is particularly important, as students must evaluate not only the technical aspects of the platform but also its alignment with cultural norms such as gender boundaries, confidentiality, and religious appropriateness (Faturohman et al., 2021; Ramachandran et al., 2022; Usman et al., 2022).

Interestingly, critical thinking did not have a significant direct effect on technology acceptance (H4). This finding differs from several studies that reported a positive association between critical thinking and students' readiness to adopt educational technologies (Han et al., 2025; Martín-Raugh et al., 2023). One possible explanation is that while students with strong critical thinking skills can evaluate information thoroughly, they may also become more cautious or skeptical toward new digital platforms, especially in sensitive areas such as counseling. In the context of Muslim university students in Indonesia, this cautious stance may

be amplified by cultural and religious considerations related to privacy, gender interaction, and ethical appropriateness (Sabrina et al., 2023; Zaid et al., 2022). Therefore, critical thinking alone may not be sufficient to increase technology acceptance unless accompanied by strong digital literacy and trust in the platform's cultural alignment.

One of the most important findings of this study is the mediating role of digital literacy in linking critical thinking and academic performance with technology acceptance. The results show that critical thinking did not directly influence technology acceptance, but it contributed indirectly through digital literacy, while academic performance affected technology acceptance both directly and indirectly. This suggests that even students with strong cognitive skills may be reluctant to use online counseling if they lack digital competence. These findings extend the Technology Acceptance Model by highlighting the importance of digital readiness in religious and collectivist cultures, where personal trust and moral clarity are often prerequisites for technological adoption (Hwang & Oh, 2021; Kabakus et al., 2023; Nikou et al., 2022).

The predictive strength of the research model is also supported by the R square values, with digital literacy having a value of 0.863 and technology acceptance having a value of 0.838. These values indicate that critical thinking and academic performance are strong predictors of the dependent constructs, especially when digital literacy is considered as a mediating variable. This result confirms the robustness of the model and its relevance in understanding how Muslim students navigate online psychological support services in a digitally transforming academic environment.

Taken together, these findings emphasize that promoting technology acceptance in online counseling among Muslim university students cannot be separated from digital literacy development. Institutions must ensure that digital interventions are not only technically accessible but also culturally responsive, ethically guided, and aligned with the students' values. Educational efforts that enhance digital competence, critical reasoning, and academic discipline are therefore essential for increasing meaningful engagement with counseling services in the digital age (Emmelkamp & Meyerbröker, 2021; Mao & Hovick, 2022; Morina et al., 2023; Setiawan et al., 2024).

Implications

The findings of this study imply that to enhance the acceptance of online counseling among Muslim university students in Indonesia, higher education institutions must prioritize strengthening digital literacy as a foundational competence. Digital literacy was found to be the only direct predictor of technology acceptance, while critical thinking contributed indirectly through digital literacy, and academic performance influenced technology acceptance both directly and indirectly. Therefore, counseling services should be designed to align with students' cultural and religious values, emphasizing privacy, ethical sensitivity, and spiritual compatibility. Institutions are encouraged to integrate digital literacy training into academic programs while ensuring that online counseling platforms are perceived as both effective and respectful of Islamic principles, thereby increasing their relevance and acceptability.

Limitations And Recommendations For Further Research

Although this study provides valuable insights into the factors influencing technology acceptance in online counseling among Muslim university students, it is not without limitations. The research was conducted at a single institution, Universitas Negeri Padang, which may limit the generalizability of the findings to other university contexts across Indonesia. Furthermore, the cross-sectional design restricts the ability to infer causal relationships or track changes in students' attitudes over time. Future studies are encouraged to involve participants from multiple higher education institutions across diverse regions and cultural settings to enhance external validity. In addition, longitudinal designs are recommended to examine how academic

performance and digital literacy influence technology acceptance over time, and how critical thinking may contribute indirectly through digital literacy to support students' sustained engagement with online mental health services.

CONCLUSION

This study concludes that academic performance and digital literacy are significant direct predictors of technology acceptance in online counseling among Indonesian Muslim university students, while critical thinking contributes indirectly through digital literacy. Digital literacy plays a central role, both as a direct contributor and as a mediating variable that links cognitive and academic strengths with students' willingness to engage in digital mental health services. These findings reinforce the importance of strengthening digital competence as a primary strategy, while also fostering critical thinking and academic readiness as supporting factors, to promote the adoption of culturally appropriate and effective online counseling in higher education settings.

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AUTHOR CONTRIBUTION

ZA contributed to the formulation of the research idea, instrument development, supervision of the entire research process, and preparation of the initial draft of the article. G was responsible for data collection, data analysis using PLS-SEM, and writing the methods and results section. AHP contributed to the validation of research instruments and drafting the discussion section of the article. HH played a role in the field data collection process and helped analyze and interpret the research results. AH contributed to the literature review, drafting the introduction and literature review sections, and final editing of the article manuscript before submission to the journal.

REFERENCES

AbdulKareem, A. K., & Oladimeji, K. A. (2024). Cultivating the digital citizen: trust, digital literacy and e-government adoption. *Transforming Government: People, Process and Policy*, *18*(2), 270–286. https://doi.org/10.1108/TG-11-2023-0196

Afthanorhan, A., Ghazali, P. L., & Rashid, N. (2021). Discriminant Validity: A Comparison of CBSEM and Consistent PLS using Fornell & Larcker and HTMT Approaches. *Journal of Physics: Conference Series*, *1874*(1), 12085. https://doi.org/10.1088/1742-6596/1874/1/012085

Almulla, M. A. (2023). Constructivism learning theory: A paradigm for students' critical thinking, creativity, and problem solving to affect academic performance in higher education. *Cogent Education*, *10*(1), 2172929. https://doi.org/10.1080/2331186X.2023.2172929

Alshurafat, H., Al Shbail, M. O., Masadeh, W. M., Dahmash, F., & Al-Msiedeen, J. M. (2021). Factors affecting online accounting education during the COVID-19 pandemic: an integrated perspective of social capital theory, the theory of reasoned action and the technology acceptance model. *Education and Information Technologies*, *26*(6), 6995–

7013. https://doi.org/10.1007/s10639-021-10550-y

Arbulú Pérez Vargas, C. G., Moreno Muro, J. P., Pérez Delgado, J. W., Espino Carrasco, D. K., Fernández Cueva, A., & Acosta-Enriquez, B. G. (2024). Mediating role of digital skills and mobile self-efficacy in the stress and academic engagement of Peruvian university students in postpandemic virtual environments. *BMC Psychology*, *12*(1), 481. https://doi.org/10.1186/s40359-024-01982-5

Békés, V., Aafjes-van Doorn, K., Luo, X., Prout, T. A., & Hoffman, L. (2021). Psychotherapists' Challenges With Online Therapy During COVID-19: Concerns About Connectedness Predict Therapists' Negative View of Online Therapy and Its Perceived Efficacy Over Time. *Frontiers in Psychology*, *12*, 705699. https://doi.org/10.3389/fpsyg.2021.705699

Caratozzolo, P., Alvarez-Delgado, A., & Sirkis, G. (2021). Fostering Digital Literacy through Active Learning in Engineering Education. *Proceedings - Frontiers in Education Conference, FIE*, *2021-Octob*, 1–6. https://doi.org/10.1109/FIE49875.2021.9637304

Chocarro, R., Cortiñas, M., & Marcos-Matás, G. (2023). Teachers' attitudes towards chatbots in education: a technology acceptance model approach considering the effect of social language, bot proactiveness, and users' characteristics. *Educational Studies*, *49*(2), 295–313. https://doi.org/10.1080/03055698.2020.1850426

Collins, C., Broglia, E., & Barkham, M. (2025). Evaluating the evidence base for university counseling services and their effectiveness using CORE measures: A systematic review and meta-analysis. *Journal of Affective Disorders*, *372*, 451–462. https://doi.org/10.1016/j.jad.2024.12.022

Creswell, J. W. (2009). *Research Design Qualitative Quantitative and Mixed Methods Approaches*. Sage publications.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). Technology acceptance model. *J Manag Sci*, *35*(8), 982–1003.

Duong, C. D., Vu, T. N., & Ngo, T. V. N. (2023). Applying a modified technology acceptance model to explain higher education students' usage of ChatGPT: A serial multiple mediation model with knowledge sharing as a moderator. *International Journal of Management Education*, *21*(3), 100883. https://doi.org/10.1016/j.ijme.2023.100883

Emmelkamp, P. M. G., & Meyerbröker, K. (2021). Virtual Reality Therapy in Mental Health. *Annual Review of Clinical Psychology*, *17*(1), 495–519. https://doi.org/10.1146/annurev-clinpsy-081219-115923

Faturohman, T., Kengsiswoyo, G. A. N., Harapan, H., Zailani, S., Rahadi, R. A., & Arief, N. N. (2021). Factors influencing COVID-19 vaccine acceptance in Indonesia: An adoption of Technology Acceptance Model. *F1000Research*, *10*, 476. https://doi.org/10.12688/f1000research.53506.2

Garavand, A., Aslani, N., Nadri, H., Abedini, S., & Dehghan, S. (2022). Acceptance of telemedicine technology among physicians: A systematic review. *Informatics in Medicine Unlocked*, *30*, 100943. https://doi.org/10.1016/j.imu.2022.100943

Hair, J., & Alamer, A. (2022). Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics*, *1*(3), 100027. https://doi.org/10.1016/j.rmal.2022.100027

Hair, J. F., Astrachan, C. B., Moisescu, O. I., Radomir, L., Sarstedt, M., Vaithilingam, S., & Ringle, C. M. (2021). Executing and interpreting applications of PLS-SEM: Updates for family business researchers. *Journal of Family Business Strategy*, *12*(3), 100392. https://doi.org/10.1016/j.jfbs.2020.100392

Halpern, D. F., & Dunn, D. S. (2021). Critical Thinking: A Model of Intelligence for Solving Real-World Problems. *Journal of Intelligence*, *9*(2), 22.

https://doi.org/10.3390/jintelligence9020022

Han, Y., Yang, S., Han, S., He, W., Bao, S., & Kong, J. (2025). Exploring the relationship among technology acceptance, learner engagement and critical thinking in the Chinese college-level EFL context. *Education and Information Technologies*, 1–24. https://doi.org/10.1007/s10639-025-13375-1

Hanham, J., Lee, C. B., & Teo, T. (2021). The influence of technology acceptance, academic self-efficacy, and gender on academic achievement through online tutoring. *Computers and Education*, *172*, 104252. https://doi.org/10.1016/j.compedu.2021.104252

Hanley, T., & Wyatt, C. (2021). A systematic review of higher education students' experiences of engaging with online therapy. *Counselling and Psychotherapy Research*, *21*(3), 522–534. https://doi.org/10.1002/capr.12371

Hannan, E., & Liu, S. (2023). AI: new source of competitiveness in higher education. *Competitiveness Review*, *33*(2), 265–279. https://doi.org/10.1108/CR-03-2021-0045

Hwang, Y., & Oh, J. (2021). The relationship between self-directed learning and problem-solving ability: The mediating role of academic self-efficacy and self-regulated learning among nursing students. *International Journal of Environmental Research and Public Health*, *18*(4), 1–9. https://doi.org/10.3390/ijerph18041738

Kabakus, A. K., Bahcekapili, E., & Ayaz, A. (2023). The effect of digital literacy on technology acceptance: An evaluation on administrative staff in higher education. *Journal of Information Science*, 01655515231160028. https://doi.org/10.1177/01655515231160028

Kara, M. (2022). Revisiting online learner engagement: exploring the role of learner characteristics in an emergency period. *Journal of Research on Technology in Education*, *54*(S1), S236–S252. https://doi.org/10.1080/15391523.2021.1891997

Kolbe, L., Jaywant, A., Gupta, A., Vanderlind, W. M., & Jabbour, G. (2021). Use of virtual reality in the inpatient rehabilitation of COVID-19 patients. *General Hospital Psychiatry*, *71*, 76–81. https://doi.org/10.1016/j.genhosppsych.2021.04.008

Law, K. M. Y., & Geng, S. (2019). How innovativeness and handedness affect learning performance of engineering students? *International Journal of Technology and Design Education*, *29*(4), 897–914. https://doi.org/10.1007/s10798-018-9462-3

Lee, Y. F., Hwang, G. J., & Chen, P. Y. (2022). Impacts of an AI-based chabot on college students' after-class review, academic performance, self-efficacy, learning attitude, and motivation. *Educational Technology Research and Development*, *70*(5), 1843–1865. https://doi.org/10.1007/s11423-022-10142-8

Levin, I., & Mamlok, D. (2021). Culture and society in the digital age. *Information (Switzerland)*, *12*(2), 1–13. https://doi.org/10.3390/info12020068

Lin, Y., & Yu, Z. (2023). Extending Technology Acceptance Model to higher-education students' use of digital academic reading tools on computers. *International Journal of Educational Technology in Higher Education*, *20*(1), 34. https://doi.org/10.1186/s41239-023-00403-8

Mao, C. M., & Hovick, S. R. (2022). Adding Affordances and Communication Efficacy to the Technology Acceptance Model to Study the Messaging Features of Online Patient Portals among Young Adults. *Health Communication*, *37*(3), 307–315. https://doi.org/10.1080/10410236.2020.1838106

Martín-Raugh, M., Kell, H., Ling, G., Fishtein, D., & Yang, Z. (2023). Noncognitive skills and critical thinking predict undergraduate academic performance. *Assessment and Evaluation in Higher Education*, *48*(3), 350–361. https://doi.org/10.1080/02602938.2022.2073964

Mater, N. R., Haj Hussein, M. J., Salha, S. H., Draidi, F. R., Shaqour, A. Z., Qatanani, N., & Affouneh, S. (2022). The effect of the integration of STEM on critical thinking and technology acceptance model. *Educational Studies*, *48*(5), 642–658. https://doi.org/10.1080/03055698.2020.1793736

Mitchell, S. L. (2023). The Work of College Counseling Centers in the Early 21st Century. *American Psychologist*, *78*(9), 1125–1136. https://doi.org/10.1037/amp0001249

Morina, N., Kampmann, I., Emmelkamp, P., Barbui, C., & Hoppen, T. H. (2023). Meta-analysis of virtual reality exposure therapy for social anxiety disorder. *Psychological Medicine*, *53*(5), 2176–2178. https://doi.org/10.1017/S0033291721001690

Moussa, N. M., & Asender, S. A. (2022). A Comparative Study Of College Counseling Preferences: Face-To-Face Vs. Online Counseling. *Journal of Positive School Psychology*, *2022*(11), 133–146. http://journalppw.comhttps//orcid.org/0000-0003-1342-8201

Muhammad, R. (2024). The Effectiveness of Technology to Improve Educational Counseling Services: A Systematic Literature Review. *Journal of Teaching and Learning*, *18*(2), 111–127. https://doi.org/10.22329/jtl.v18i2.8709

Naidoo, P., & Cartwright, D. (2022). Where to from Here? Contemplating the Impact of COVID-19 on South African Students and Student Counseling Services in Higher Education. *Journal of College Student Psychotherapy*, *36*(4), 355–369. https://doi.org/10.1080/87568225.2020.1842279

Nikou, S., De Reuver, M., & Mahboob Kanafi, M. (2022). Workplace literacy skills—how information and digital literacy affect adoption of digital technology. *Journal of Documentation*, *78*(7), 371–391. https://doi.org/10.1108/JD-12-2021-0241

Novella, J. K., Ng, K. M., & Samuolis, J. (2022). A comparison of online and in-person counseling outcomes using solution-focused brief therapy for college students with anxiety. *Journal of American College Health*, *70*(4), 1161–1168. https://doi.org/10.1080/07448481.2020.1786101

Oh, S. S., Kim, K. A., Kim, M., Oh, J., Chu, S. H., & Choi, J. Y. (2021). Measurement of digital literacy among older adults: Systematic review. *Journal of Medical Internet Research*, *23*(2), e26145. https://doi.org/10.2196/26145

Peng, D., & Yu, Z. (2022). A Literature Review of Digital Literacy over Two Decades. *Education Research International*, *2022*(1), 2533413. https://doi.org/10.1155/2022/2533413

Pilav-Velić, A., Černe, M., Trkman, P., Wong, S. I., & Kadić-Abaz, A. (2021). Digital or innovative: Understanding "Digital Literacy–practice–innovative work behavior" chain. *The South East European Journal of Economics and Business*, *16*(1), 107–119.

Potyrała, K., & Tomczyk, Ł. (2021). Teachers in the lifelong learning process: examples of digital literacy. *Journal of Education for Teaching*, *47*(2), 255–273. https://doi.org/10.1080/02607476.2021.1876499

Profetto-McGrath, J. (2003). The relationship of critical thinking skills and critical thinking dispositions of baccalaureate nursing students. *Journal of Advanced Nursing*, *43*(6), 569–577. https://doi.org/10.1046/j.1365-2648.2003.02755.x

Ramachandran, H. J., Jiang, Y., Teo, J. Y. C., Yeo, T. J., & Wang, W. (2022). Technology Acceptance of Home-Based Cardiac Telerehabilitation Programs in Patients With Coronary Heart Disease: Systematic Scoping Review. *Journal of Medical Internet Research*, *24*(1), e34657. https://doi.org/10.2196/34657

Rivas, S. F., Saiz, C., & Almeida, L. S. (2023). The Role of Critical Thinking in Predicting and Improving Academic Performance. *Sustainability (Switzerland)* , *15*(2), 1527. https://doi.org/10.3390/su15021527

Sabrina, R., Akrim, A., Hartanto, D., & Dalle, J. (2023). Role of Perceived Religious Values to Facilitate Predictors of Public Trust in Government: The Case of a Muslim-Majority Culture. *Journal of Ethnic and Cultural Studies*, *10*(3), 169–189. https://doi.org/10.29333/ejecs/1776

Saif, N., Khan, S. U., Shaheen, I., Alotaibi, A., Alnfiai, M. M., & Arif, M. (2024). Chat-GPT; validating Technology Acceptance Model (TAM) in education sector via ubiquitous

learning mechanism. *Computers in Human Behavior*, *154*, 108097. https://doi.org/10.1016/j.chb.2023.108097

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial Least Squares Structural Equation Modeling. In *Handbook of Market Research*. Springer Nature. https://doi.org/10.1007/978-3-319-57413-4_15

Sawrikar, V., & Mote, K. (2022). Technology acceptance and trust: Overlooked considerations in young people's use of digital mental health interventions. *Health Policy and Technology*, *11*(4), 100686. https://doi.org/10.1016/j.hlpt.2022.100686

Setiawan, D., Junaidi, Marzal, J., Zulfanetti, & Fitri, L. E. (2024). Integrating Religiosity with Technology Acceptance Model (TAM) and Technology Organization Environment (TOE) Frameworks: A Study on ICT Adoption in Micro and Small Enterprises. *Pakistan Journal of Commerce and Social Sciences*, *18*(3), 651–675. https://doi.org/10.2139/ssrn.4987568

Srijundaree, P., Yurayat, P., & Nipanan, P. (2024). Factors Influencing Acceptance and Use of Online Counseling Technology among Thai Psychologists and Mental Health Counsellors. *Islamic Guidance and Counseling Journal*, *7*(1). https://doi.org/10.25217/0020247451200

Stoumpos, A. I., Kitsios, F., & Talias, M. A. (2023). Digital Transformation in Healthcare: Technology Acceptance and Its Applications. *International Journal of Environmental Research and Public Health*, *20*(4), 3407. https://doi.org/10.3390/ijerph20043407

Sutiani, A., Situmorang, M., & Silalahi, A. (2021). Implementation of an Inquiry Learning Model with Science Literacy to Improve Student Critical Thinking Skills. *International Journal of Instruction*, *14*(2), 117–138. https://doi.org/10.29333/iji.2021.1428a

Tinmaz, H., Lee, Y. T., Fanea-Ivanovici, M., & Baber, H. (2022). A systematic review on digital literacy. *Smart Learning Environments*, *9*(1), 21. https://doi.org/10.1186/s40561-022-00204-y

Tomczyk, Ł., & Potyrała, K. (2021). Parents' knowledge and skills about the risks of the digital world. *South African Journal of Education*, *41*(1). https://doi.org/10.15700/saje.v41n1a1833

Usman, H., Mulia, D., Chairy, C., & Widowati, N. (2022). Integrating trust, religiosity and image into technology acceptance model: the case of the Islamic philanthropy in Indonesia. *Journal of Islamic Marketing*, *13*(2), 381–409. https://doi.org/10.1108/JIMA-01-2020-0020

Velez-Cruz, R. J., & Holstun, V. P. (2022). Pandemic impact on higher education faculty self-care, burnout, and compassion satisfaction. *Journal of Humanistic Counseling*, *61*(2), 118–127. https://doi.org/10.1002/johc.12174

Wang, J., Yuan, G. F., Shi, X., Tang, A., & Shi, W. (2022). Factors influencing attitudes toward cyber-counseling among China's Generation Z: A structural equation model. *Archives of Psychiatric Nursing*, *40*, 124–131. https://doi.org/10.1016/j.apnu.2022.07.011

Wu, R., & Yu, Z. (2024). Investigating Users' Acceptance of the Metaverse with an Extended Technology Acceptance Model. *International Journal of Human-Computer Interaction*, *40*(19), 5810–5826. https://doi.org/10.1080/10447318.2023.2241295

Xin, Y., Weina, H., & Yan, D. (2025). Digital literacy impacts quality of life among older adults through hierarchical mediating mechanisms. *Scientific Reports*, *15*(1), 19288. https://doi.org/10.1038/s41598-025-04472-9

Yulia, D., Permata, M., & Anwar, M. (2024). Analysis of Critical Thinking Skills on the Use of Augmented Reality with the TAM Approach. *Journal of Engineering and Collaborative Learning (IJECL)*, *1*(1), 18–24.

Zaid, B., Fedtke, J., Shin, D. D., El Kadoussi, A., & Ibahrine, M. (2022). Digital Islam and Muslim Millennials: How Social Media Influencers Reimagine Religious Authority and Islamic Practices. *Religions*, *13*(4), 335. https://doi.org/10.3390/rel13040335