

Digital Trust and Information Verification Behavior among Generation Z in the Era of Artificial Intelligence

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ARTICLE INFO	ABSTRACT
<p>Article history: Submitted: June 02, 2026 Final Revised: June 27, 2026 Accepted: June 29, 2026 Published: June 30, 2026</p> <p>Keywords: digital trust; information verification behavior; artificial intelligence; generation Z; SEM-PLS.</p>	<p>Purpose This study examines the influence of digital trust on information verification behavior among Generation Z university students in the era of artificial intelligence. The increasing use of AI-generated information has raised concerns regarding information credibility and the ability of users to verify digital content effectively.</p> <p>Methods A quantitative cross-sectional survey design was employed. Data were collected through an online questionnaire distributed to 412 Generation Z university students in Indonesia using purposive sampling. Digital Trust was specified as the exogenous variable and Information Verification Behavior as the endogenous variable. The data were analyzed using Structural Equation Modeling–Partial Least Squares (SEM-PLS) with SmartPLS 4.</p> <p>Findings The results indicate that respondents demonstrated relatively high levels of digital trust ($M = 4.02$) and information verification behavior ($M = 4.15$). The structural model revealed that digital trust positively and significantly influences information verification behavior ($\beta = 0.562$, $t = 12.874$, $p < 0.001$). The model explained 31.6% of the variance in information verification behavior ($R^2 = 0.316$), while the effect size analysis indicated a substantial practical effect ($f^2 = 0.462$). The predictive relevance assessment further confirmed the model's predictive capability ($Q^2 = 0.214$).</p> <p>Research Implications The findings highlight the importance of strengthening digital trust, AI literacy, and information verification competencies within higher education. Educational institutions and policymakers should promote responsible AI use by encouraging critical evaluation of digital information and fostering trustworthy AI environments.</p> <p>Originality This study contributes to the emerging literature on artificial intelligence and information behavior by demonstrating that digital trust encourages stronger information verification practices rather than passive acceptance of AI-generated information among Generation Z students.</p>



INTRODUCTION

The rapid expansion of artificial intelligence (AI) technologies has transformed the way information is produced, distributed, and consumed in digital environments. AI-powered systems, including generative AI platforms, recommendation algorithms, intelligent search engines, and automated content generation tools, have become integral components of daily digital interactions. These developments have created new opportunities for information access while simultaneously increasing concerns regarding misinformation, fabricated content, and information credibility. The growing presence of AI-generated information has shifted public attention toward issues of digital trust,

particularly among younger generations who are highly exposed to digital technologies in educational, social, and professional activities (Wong et al., 2024; Mogaji et al., 2024; Ajish, 2024).

Generation Z represents the first cohort to grow up entirely within a digitally connected environment. Their daily activities are closely associated with social media platforms, online information ecosystems, and AI-assisted applications. Previous studies indicate that Generation Z demonstrates high levels of interaction with AI technologies across multiple domains, including online shopping, banking services, education, tourism, investment decision-making, and consumer behavior (Bunea et al., 2024; Bhatnagr & Rajesh, 2025; Pradhanawati & Pinem, 2025; Maheshwari & Samantaray, 2026; Pricope Vancia et al., 2023). This intensive engagement has accelerated the formation of perceptions regarding the reliability, usefulness, and trustworthiness of AI-driven systems. Research also suggests that trust functions as a critical factor influencing users' willingness to adopt and continuously utilize AI technologies (Chin et al., 2024; Rosli et al., 2026; Wong et al., 2024).

The concept of digital trust has gained increasing scholarly attention as digital interactions become more dependent on algorithmic decision-making and AI-generated outputs. Digital trust refers to users' confidence in the integrity, reliability, transparency, and competence of digital technologies and information systems. Studies have shown that trust significantly influences behavioral outcomes across various AI contexts, including purchasing decisions, public services, financial applications, and smart technologies (Guerra-Tamez et al., 2024; Maulana et al., 2022; Bhatnagr & Rajesh, 2025; Chin et al., 2024). Wong et al. (2024) further argued that trust in AI is shaped by both institutional factors and individual perceptions, suggesting that trust formation is a multidimensional process involving technological, social, and psychological dimensions.

Despite the increasing acceptance of AI technologies, concerns regarding information accuracy remain substantial. Generative AI systems are capable of producing convincing yet inaccurate information, creating challenges for users attempting to distinguish between factual and fabricated content. Evidence from recent studies demonstrates that exposure to AI-generated misinformation can influence users' judgments and perceptions of information credibility (Amaro et al., 2023). University students, particularly those belonging to Generation Z, frequently utilize AI-based tools for learning, information retrieval, and academic tasks, raising questions regarding their ability to evaluate and verify digital information critically. Research examining Generation Z university students has identified varying levels of knowledge, ethical awareness, and attitudes toward AI technologies, indicating that trust in AI may not always correspond with critical evaluation practices (Acosta-Enriquez et al., 2024; Dewalska-Opitek et al., 2024).

Information verification behavior has consequently become an increasingly important construct in digital communication research. Information verification behavior refers to the actions undertaken by individuals to evaluate the accuracy, credibility, and authenticity of information before accepting, sharing, or utilizing it. The proliferation of AI-generated content has intensified the need for verification practices because conventional indicators of information credibility are becoming less visible within automated digital environments. Educational researchers have emphasized the importance of developing metacognitive and critical evaluation skills among Generation Z to address emerging challenges associated with AI-generated information and digital literacy (Chardonens, 2025). Such developments suggest that information verification behavior is no longer solely a matter of media literacy but also a response to growing uncertainty within AI-mediated information ecosystems.

Existing studies have predominantly examined trust in AI from the perspectives of technology adoption, consumer behavior, service utilization, and purchasing intentions (Guerra-Tamez et al., 2024; Pradhanawati & Pinem, 2025; Rosli et al., 2026; Bunea et al., 2024). Other investigations have focused on attitudes toward AI, ethical perceptions, and acceptance factors among Generation Z users (Dewalska-Opitek et al., 2024; Acosta-Enriquez et al., 2024). Although these studies provide valuable insights into trust formation and AI adoption, empirical evidence regarding the relationship between digital trust and information verification behavior remains limited. The increasing dependence on AI-generated information creates a need to understand whether stronger trust encourages responsible verification practices or instead reduces users' motivation to critically evaluate information.

This research addresses that gap by examining the relationship between digital trust and information verification behavior among Generation Z university students in the era of artificial intelligence. University students constitute a relevant population because they represent intensive users of digital information and AI-based technologies for academic and non-academic purposes. Understanding how digital trust influences verification behavior is important for the development of digital literacy strategies, responsible AI utilization, and information integrity frameworks within higher education environments.

This study employs a quantitative approach using Structural Equation Modeling–Partial Least Squares (SEM-PLS) to analyze the relationship between digital trust and information verification behavior among Generation Z university students. Data are collected through an online questionnaire distributed via Google Forms. The findings are expected to contribute to the growing literature on AI trust, digital literacy, and information behavior by providing empirical evidence regarding how trust in digital environments shapes verification practices among young digital natives in contemporary AI-driven information ecosystems.

METHOD

Research Design

This study employed a quantitative research approach using a cross-sectional survey design to investigate the relationship between digital trust and information verification behavior among Generation Z university students in the era of artificial intelligence. The quantitative approach was selected because it enables the measurement of latent constructs through observable indicators and facilitates empirical testing of theoretical relationships. Structural Equation Modeling–Partial Least Squares (SEM-PLS) was utilized as the primary analytical technique due to its suitability for predictive models involving latent variables and its flexibility in handling non-normal data distributions.

Population and Sample

The population of this study consisted of Generation Z university students enrolled in higher education institutions in Indonesia. Generation Z refers to individuals born between 1997 and 2012 who have grown up in highly digitalized environments and regularly interact with artificial intelligence technologies in educational and social contexts.

A purposive sampling technique was employed to ensure that respondents possessed relevant experience with AI-based systems and digital information environments. Eligible participants were active university students belonging to the Generation Z cohort and had prior experience using artificial intelligence applications such as ChatGPT, Gemini, Copilot, Perplexity, or similar platforms. The study targeted between 300 and 500 respondents, exceeding the minimum sample size generally recommended for SEM-PLS analysis and ensuring adequate statistical power.

Table 1. Sample Characteristics

Aspect	Description
Population	Generation Z university students
Sampling Technique	Purposive Sampling
Unit of Analysis	Individual student
Target Sample Size	300–500 respondents
Research Location	Universities in Indonesia
Data Collection Method	Online Questionnaire (Google Forms)

Research Variables and Operational Definitions

The study examined two primary constructs: digital trust and information verification behavior. Digital trust was treated as the exogenous variable, while information verification behavior served as the endogenous variable. Digital trust refers to an individual's confidence in the reliability, credibility, transparency, and accuracy of information generated or mediated by digital technologies and artificial intelligence systems. Information verification behavior refers to actions performed to assess, validate, and confirm the credibility and accuracy of information before acceptance, utilization, or dissemination.

Table 2. Operational Definitions of Variables

Variable	Dimension	Indicator
Digital Trust	Reliability	Trust in the consistency of AI-generated information
Digital Trust	Accuracy	Perceived accuracy of AI-generated information
Digital Trust	Credibility	Confidence in the credibility of AI systems
Digital Trust	Transparency	Perceived clarity of AI information processes
Digital Trust	Security	Confidence in the security and integrity of information
Information Verification Behavior	Source Checking	Examining the source of information before use
Information Verification Behavior	Cross-Verification	Comparing information with multiple sources

Information Verification Behavior	Fact Validation	Verifying factual claims and evidence
Information Verification Behavior	Critical Evaluation	Assessing information quality and credibility
Information Verification Behavior	Information Confirmation	Seeking additional evidence before sharing information

Research Instrument

Data were collected using a structured questionnaire distributed through Google Forms. The instrument was developed based on previous literature concerning trust in artificial intelligence, digital trust, and information verification behavior. All measurement items were adapted to the context of AI-mediated information usage among university students. The questionnaire consisted of demographic questions and measurement items representing the research constructs. Responses were measured using a five-point Likert scale ranging from strongly disagree to strongly agree.

Table 3. Likert Scale Measurement

Scale	Interpretation
1	Strongly Disagree
2	Disagree
3	Neutral
4	Agree
5	Strongly Agree

Table 4. Measurement Items

Variable	Code	Measurement Item
Digital Trust	DT1	I believe that AI-generated information is reliable.
Digital Trust	DT2	I trust information produced by AI systems.
Digital Trust	DT3	AI provides credible information for academic purposes.
Digital Trust	DT4	AI-generated information is sufficiently accurate.
Digital Trust	DT5	AI systems present information transparently.
Information Verification Behavior	IVB1	I verify AI-generated information before using it.
Information Verification Behavior	IVB2	I compare AI-generated information with other sources.
Information Verification Behavior	IVB3	I check the credibility of references provided by AI systems.
Information Verification Behavior	IVB4	I critically evaluate AI-generated information.
Information Verification Behavior	IVB5	I seek supporting evidence before sharing AI-generated information.

Data Collection Procedure

Data collection was conducted through an online survey platform using Google Forms. The questionnaire link was disseminated through university communication channels, student organizations, academic networks, and social media platforms. Participation was voluntary, and respondents were informed about the purpose of the study before completing the questionnaire. Anonymity and confidentiality were maintained throughout the research process. Prior to statistical analysis, the collected responses were screened to identify incomplete questionnaires, duplicate entries, and invalid responses. Only complete and eligible responses were included in the final dataset.

Data Analysis

The collected data were analyzed using SmartPLS version 4. The analysis comprised measurement model assessment and structural model assessment. The measurement model evaluation focused on the assessment of reliability and validity. Convergent validity was evaluated using outer loading values and Average Variance Extracted (AVE). Reliability was assessed through Cronbach's Alpha and Composite Reliability. Discriminant validity was examined using the Fornell–Larcker criterion and Heterotrait–Monotrait Ratio (HTMT).

Table 5. Measurement Model Evaluation Criteria

Assessment	Threshold
Outer Loading	> 0.70
Average Variance Extracted (AVE)	> 0.50
Cronbach's Alpha	> 0.70
Composite Reliability	> 0.70
HTMT Ratio	< 0.90
Variance Inflation Factor (VIF)	< 5.00

The structural model evaluation assessed the predictive and explanatory capability of the proposed model. The analysis included coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), and path coefficient estimation. Statistical significance was examined through bootstrapping procedures using 5,000 subsamples.

Table 6. Structural Model Evaluation Criteria

Indicator	Recommended Value
R^2	0.25 (Weak), 0.50 (Moderate), 0.75 (Substantial)
f^2	0.02 (Small), 0.15 (Medium), 0.35 (Large)
Q^2	> 0
Path Coefficient	Positive or Negative Relationship
t-statistic	> 1.96
p-value	< 0.05

RESULTS

Respondent Characteristics

A total of 412 valid responses were obtained and included in the analysis. All respondents met the predefined sampling criteria as Generation Z university students who had prior experience using artificial intelligence applications. The demographic profile of the respondents provides an overview of the sample composition and confirms the suitability of the participants for examining digital trust and information verification behavior.

Table 1. Respondent Characteristics

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	178	43.2
	Female	234	56.8
Age	18–20 Years	124	30.1
	21–23 Years	221	53.6
	24–26 Years	67	16.3
AI Usage Frequency	Daily	263	63.8
	Several Times per Week	108	26.2
	Several Times per Month	41	10.0
Most Used AI Platform	ChatGPT	271	65.8
	Gemini	74	18.0
	Copilot	39	9.5
	Others	28	6.7

The findings indicate that female respondents represented the majority of the sample. Most participants were aged between 21 and 23 years, accounting for more than half of the respondents. Daily use of AI applications was reported by 63.8% of respondents, demonstrating a high level of interaction with AI technologies. ChatGPT emerged

as the most frequently used platform, suggesting that respondents were highly familiar with AI-generated information environments.

Descriptive Statistics

Descriptive statistics were calculated to examine the distribution of responses across the study variables. Mean values above the midpoint of the scale indicate generally positive perceptions regarding digital trust and information verification behavior.

Table 2. Descriptive Statistics

Variable	Mean	Standard Deviation
Digital Trust	4.02	0.67
Information Verification Behavior	4.15	0.61

The results reveal relatively high mean scores for both constructs. Information verification behavior exhibited a slightly higher mean score than digital trust, indicating that respondents generally engaged in verification activities when interacting with digital information. The standard deviation values suggest acceptable variability in responses.

Measurement Model Assessment

The measurement model was evaluated to determine whether the indicators adequately measured their respective latent constructs. Convergent validity was assessed using outer loading values and Average Variance Extracted (AVE), while reliability was evaluated using Cronbach's Alpha and Composite Reliability.

Table 3. Outer Loading Results

Variable	Indicator	Outer Loading
Digital Trust	DT1	0.834
Digital Trust	DT2	0.867
Digital Trust	DT3	0.882
Digital Trust	DT4	0.851
Digital Trust	DT5	0.819
Information Verification Behavior	IVB1	0.844
Information Verification Behavior	IVB2	0.879
Information Verification Behavior	IVB3	0.858
Information Verification Behavior	IVB4	0.887
Information Verification Behavior	IVB5	0.842

All indicators exceeded the recommended threshold of 0.70. The highest loading value was observed for indicator IVB4 (0.887), indicating a strong contribution to the Information Verification Behavior construct. These findings confirm satisfactory indicator reliability.

Table 4. Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
Digital Trust	0.894	0.922	0.704
Information Verification Behavior	0.901	0.927	0.718

The reliability analysis demonstrates that all constructs exceeded the recommended threshold of 0.70 for both Cronbach's Alpha and Composite Reliability. Furthermore, AVE values were greater than 0.50, indicating adequate convergent validity. These results confirm that the measurement model possesses strong internal consistency and construct validity.

Discriminant Validity Assessment

Discriminant validity was evaluated to ensure that each construct was empirically distinct from other constructs included in the model. The assessment employed both the Fornell–Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT).

Table 5. Fornell–Larcker Criterion

Construct	Digital Trust	Information Verification Behavior
Digital Trust	0.839	
Information Verification Behavior	0.562	0.847

The results indicate that the square root of the AVE for Digital Trust (0.839) and Information Verification Behavior (0.847) exceeded the correlation between the two constructs (0.562). These findings satisfy the Fornell–Larcker criterion, confirming that each construct shares greater variance with its own indicators than with other constructs. Therefore, the measurement model demonstrates satisfactory discriminant validity, indicating that the two latent constructs are empirically distinct.

Table 6. HTMT Ratio

Construct Relationship	HTMT Value
Digital Trust – Information Verification Behavior	0.641

The HTMT value between Digital Trust and Information Verification Behavior was 0.641, which is well below the recommended threshold of 0.90. This result indicates that the two constructs are conceptually distinct and exhibit adequate discriminant validity. Consequently, the measurement model satisfies the HTMT criterion, providing further evidence that discriminant validity has been successfully established.

Collinearity Assessment

Before evaluating the structural model, collinearity diagnostics were conducted using the Variance Inflation Factor (VIF). This analysis was performed to ensure that multicollinearity did not affect the estimation of the structural relationships.

Table 7. Collinearity Statistics

Relationship	VIF
Digital Trust → Information Verification Behavior	1.000

The results indicate that the VIF value for the relationship between Digital Trust and Information Verification Behavior is 1.000, which is well below the recommended threshold of 5.00. This finding confirms the absence of multicollinearity among the predictor constructs, indicating that collinearity does not pose a concern in the structural model. Therefore, the predictor variable can be retained in the model, and the subsequent structural model assessment can be interpreted with confidence.

Structural Model Assessment

The structural model was evaluated to examine the explanatory power of the proposed research framework. The coefficient of determination (R^2) was used to assess the proportion of variance in the endogenous construct explained by the exogenous construct.

Table 8. Coefficient of Determination (R^2)

Endogenous Variable	R^2	Interpretation
Information Verification Behavior	0.316	Moderate

The results indicate that Digital Trust explains 31.6% of the variance in Information Verification Behavior ($R^2 = 0.316$). According to commonly accepted guidelines, this value represents a moderate level of explanatory power, suggesting that digital trust contributes meaningfully to explaining information verification behavior among

Generation Z students. Nevertheless, approximately 68.4% of the variance remains unexplained, indicating that additional factors not included in the present model may also influence information verification behavior. These findings demonstrate that the proposed structural model possesses satisfactory explanatory capability while leaving room for future studies to incorporate other relevant determinants.

Table 9. Effect Size (f^2)

Relationship	f^2	Interpretation
Digital Trust → Information Verification Behavior	0.462	Large Effect

The effect size analysis indicates that digital trust exerts a substantial influence on information verification behavior. The obtained value exceeds the threshold for a large effect, suggesting practical significance in addition to statistical significance.

Table 10. Predictive Relevance (Q^2)

Endogenous Variable	Q^2
Information Verification Behavior	0.214

The Q^2 value is greater than zero, indicating that the model possesses predictive relevance. Consequently, the proposed model demonstrates an adequate ability to predict information verification behavior.

Hypothesis Testing

Hypothesis testing was conducted through bootstrapping procedures with 5,000 subsamples. The analysis examined the significance and direction of the relationship between digital trust and information verification behavior.

Table 11. Path Coefficient Results

Relationship	Path Coefficient (β)	t-value	p-value	Decision
Digital Trust → Information Verification Behavior	0.562	12.874	0.000	Supported

The results reveal a positive and statistically significant relationship between digital trust and information verification behavior. The path coefficient value of 0.562 indicates that increases in digital trust are associated with stronger verification behavior. The t-value exceeded the critical threshold of 1.96, while the p-value remained below 0.05, confirming support for the proposed hypothesis.

Predictive Assessment

To further evaluate the predictive performance of the model, PLSpredict analysis was conducted. The results indicate satisfactory predictive accuracy.

Table 12. PLSpredict Results

Indicator	RMSE
IVB1	0.573
IVB2	0.548
IVB3	0.562
IVB4	0.537
IVB5	0.556

The PLSpredict analysis demonstrates acceptable predictive performance across all indicators. The relatively low RMSE values indicate that the model is capable of generating reliable predictions for information verification behavior among Generation Z students.

DISCUSSION

Digital Trust Among Generation Z University Students in the Era of Artificial Intelligence

The descriptive analysis revealed that Digital Trust achieved a mean score of 4.02, indicating that Generation Z university students generally demonstrate favorable perceptions toward artificial intelligence technologies and AI-mediated information environments. This finding suggests that respondents tend to perceive AI systems as reliable, credible, and useful sources of information for academic and non-academic purposes. The relatively high trust level observed in this study reflects the increasing normalization of AI technologies within higher education environments where students frequently utilize AI tools for information retrieval, content generation, and learning support. The result further indicates that trust has become a fundamental component of digital interactions among younger generations who are continuously exposed to algorithm-driven systems.

The finding is consistent with previous studies indicating that Generation Z exhibits stronger acceptance of emerging technologies than earlier generations because digital technologies have been integrated into their daily experiences since childhood. Chan and Lee (2023) reported that Generation Z students show significantly higher interest in adopting generative artificial intelligence within educational settings compared with older cohorts, while Biloš and Budimir (2024) found that technological familiarity significantly contributes to positive attitudes toward AI adoption. Similar conclusions were reported by Wang and Zhang (2023), who demonstrated that Generation Z users tend to perceive AI systems as beneficial tools that enhance efficiency and performance across various activities. These studies collectively support the argument that technological exposure and familiarity contribute significantly to the development of trust toward AI technologies.

The result may also be interpreted through the broader transformation of digital society in which artificial intelligence increasingly mediates communication, information access, and decision-making processes. Ameen, Hosany, and Taheri (2023) argued that the psychology of Generation Z is strongly influenced by continuous interactions with advanced technologies that shape perceptions, expectations, and behavioral responses toward digital systems. Similarly, Seyfi et al. (2024) emphasized that Generation Z increasingly expects intelligent, personalized, and technology-enhanced experiences across multiple domains of life, including education and information consumption. Consequently, the relatively high level of digital trust identified in this study reflects a broader societal shift in which artificial intelligence has become an accepted and expected component of contemporary digital ecosystems.

Information Verification Behavior in AI-Mediated Information Environments

The descriptive findings indicated that Information Verification Behavior achieved a mean score of 4.15, which exceeded the mean score observed for Digital Trust. This result demonstrates that respondents actively verify information obtained from digital sources despite expressing confidence in artificial intelligence technologies. The finding suggests that trust and verification are not mutually exclusive constructs but may coexist within contemporary information environments characterized by increasing complexity and uncertainty. The high verification behavior observed among respondents indicates that students remain attentive to information quality even when utilizing advanced AI systems.

The emergence of strong verification behavior may be explained by increasing awareness regarding the limitations of generative artificial intelligence. Williamson and Prybutok (2024) emphasized that the rise of generative AI has introduced new forms of misinformation, fabricated content, and digital deception capable of influencing public perceptions and decision-making processes. Because AI-generated outputs often appear highly convincing regardless of factual accuracy, users may perceive a greater need to validate information before accepting or disseminating it. The findings therefore suggest that respondents recognize both the opportunities and risks associated with artificial intelligence, encouraging them to engage in verification activities as a protective mechanism.

The result is also consistent with contemporary perspectives on digital literacy and AI literacy within higher education. Muawanah et al. (2024) argued that effective engagement with artificial intelligence requires not only technological competence but also the ability to critically evaluate digital information and assess source credibility. Likewise, Lesinskis et al. (2023) suggested that digital transformation within educational environments encourages the development of more sophisticated information-processing skills among Generation Z users. The relatively high verification behavior observed in this study may therefore reflect growing levels of digital maturity among university students who increasingly understand the importance of validating information within AI-mediated environments.

The Influence of Digital Trust on Information Verification Behavior

The structural model analysis demonstrated that Digital Trust significantly influences Information Verification Behavior among Generation Z university students, as indicated by a path coefficient of 0.562, a t-value of 12.874, and a p-value below 0.001. The magnitude of the coefficient indicates a moderately strong positive relationship, suggesting that students with higher confidence in digital technologies tend to exhibit stronger verification practices when interacting with AI-generated information. This finding indicates that trust in digital systems does not necessarily encourage passive information consumption but instead may facilitate more responsible engagement with digital content. The result further suggests that trust and critical evaluation can coexist within contemporary AI-mediated information environments where users are increasingly aware of the benefits and limitations of algorithmic systems.

The finding is consistent with the perspective proposed by Wong et al. (2024), who argued that trust in artificial intelligence emerges through interactions between institutional mechanisms and individual cognitive evaluations rather than through blind acceptance of technological outputs. Similar conclusions were reported by Ho and Chow (2023), who found that trust serves as an important driver of engagement with AI-based services because users who perceive technological systems as reliable are more willing to interact with them in meaningful ways. Research conducted by Al-Qudah et al. (2024) further demonstrated that trust significantly affects the adoption of digital technologies among Generation Z, indicating that confidence in technological systems frequently precedes active and sustained usage behaviors. Within the present study, higher levels of trust may encourage students to engage more deeply with digital information, thereby increasing awareness regarding information quality and the necessity of verification processes.

The findings also support the argument that Generation Z users exhibit a more pragmatic relationship with technology than previous generations. Puiu et al. (2022) reported that Generation Z tends to evaluate digital technologies according to perceived usefulness, functionality, and performance outcomes rather than relying solely on emotional attachment. Similarly, Acosta-Enriquez et al. (2024) argued that artificial intelligence acceptance within university settings is influenced by cognitive evaluations regarding technological effectiveness and utility. Consequently, students who trust AI systems may simultaneously recognize the importance of ensuring information accuracy, leading to stronger verification behavior rather than unquestioning acceptance of digital content.

Explanatory Power of the Research Model

The coefficient of determination analysis revealed an R^2 value of 0.316, indicating that Digital Trust explains 31.6% of the variance in Information Verification Behavior. According to established SEM-PLS guidelines, this value represents a moderate level of explanatory power. The result demonstrates that digital trust constitutes a meaningful predictor of verification behavior while simultaneously indicating that additional variables contribute to the formation of information verification practices. The findings therefore suggest that information verification behavior is a multidimensional phenomenon shaped by various psychological, technological, and educational factors.

The moderate explanatory power observed in this study aligns with previous research emphasizing the complexity of technology-related behavioral outcomes. Ameen et al. (2022) argued that Generation Z behavioral responses toward digital technologies are influenced by a combination of cognitive, social, emotional, and technological factors that interact simultaneously. Similar observations were presented by Ameen, Hosany, and Taheri (2023), who highlighted the multifaceted nature of Generation Z's engagement with emerging technologies and digital platforms. The current findings therefore indicate that digital trust represents an important but incomplete explanation for information verification behavior within AI-mediated environments.

Several factors not included in the present model may account for the unexplained variance in verification behavior. Digital literacy, critical thinking ability, AI literacy, perceived risk, educational background, and information quality awareness have all been identified as important determinants of technology-related decision-making processes in previous studies (Muawanah et al., 2024; Acosta-Enriquez et al., 2024). Furthermore, social influences and peer interactions may also affect how Generation Z evaluates and verifies digital information. Consequently, future research may benefit from incorporating additional constructs to develop a more comprehensive understanding of information verification behavior in the era of artificial intelligence.

Practical Significance of Digital Trust

The effect size analysis produced an f^2 value of 0.462, indicating a large effect according to accepted SEM-PLS evaluation criteria. This finding demonstrates that Digital Trust exerts not only statistical significance but also substantial practical influence on Information Verification Behavior. The magnitude of the effect suggests that efforts to strengthen digital trust may generate meaningful improvements in how students evaluate and validate information obtained through AI systems. The result therefore highlights the practical importance of trust as a strategic factor within contemporary digital education environments.

The finding supports the broader argument that trust serves as a critical foundation for successful human-technology interaction. Magni et al. (2024) emphasized that the development of Society 5.0 requires balancing

technological advancement with human-centered values, including responsibility, critical thinking, and informed decision-making. Similarly, Nalbant and Aydın (2023) argued that emerging digital ecosystems increasingly depend on users' ability to navigate complex interactions involving artificial intelligence, digital technologies, and information networks. Within such environments, trust functions as an enabling mechanism that facilitates meaningful engagement with technological systems.

From an educational perspective, the findings suggest that universities should focus not only on promoting AI adoption but also on developing trustworthy digital environments characterized by transparency, accountability, and information reliability. Students who perceive AI systems as trustworthy may become more engaged in evaluating digital information because trust encourages sustained interaction and deeper information processing. This interpretation is consistent with studies demonstrating that trust strengthens user engagement across various technology contexts, including banking, commerce, and digital services (Ho & Chow, 2023; Al-Qudah et al., 2024). Therefore, initiatives designed to enhance digital trust may simultaneously contribute to the development of more responsible information verification practices.

Predictive Relevance of the Model

The predictive relevance analysis generated a Q^2 value of 0.214, indicating that the model possesses satisfactory predictive capability. This finding suggests that Digital Trust provides meaningful predictive information regarding future variations in Information Verification Behavior among Generation Z university students. The positive Q^2 value further confirms that the proposed model performs better than a baseline prediction and contributes useful explanatory insights regarding student behavior within AI-mediated environments. Consequently, the model demonstrates both theoretical relevance and practical utility.

The predictive capability identified in this study is particularly important given the increasing integration of artificial intelligence into educational and professional activities. Acosta-Enriquez et al. (2024) emphasized that AI acceptance within higher education continues to expand rapidly, while Chan and Lee (2023) observed growing student interest in incorporating generative AI into learning processes. As AI-generated information becomes increasingly prevalent, understanding the factors that predict responsible information behavior becomes essential for educators and policymakers. The present findings indicate that digital trust can serve as one such predictive factor.

The predictive evidence also supports broader discussions regarding the future role of artificial intelligence in society. Williamson and Prybutok (2024) argued that the growing sophistication of AI-generated content requires stronger mechanisms for ensuring information credibility and reducing misinformation risks. Likewise, Seyfi et al. (2024) suggested that future generations will increasingly operate within environments characterized by intelligent systems and automated decision support technologies. The findings of the present study therefore indicate that fostering informed digital trust may represent an effective strategy for promoting sustainable information verification behavior among Generation Z as artificial intelligence becomes more deeply embedded within everyday life.

CONCLUSION

This study contributes to the growing body of literature on artificial intelligence by examining the relationship between digital trust and information verification behavior among Generation Z university students. The findings indicate that trust in AI-mediated digital environments functions as an important behavioral mechanism that shapes how young individuals engage with information in increasingly automated ecosystems. Rather than encouraging passive acceptance of digital content, trust appears to support more responsible interactions with information by fostering awareness of information quality and credibility within AI-assisted environments. These findings reinforce the view that digital trust should be understood as a multidimensional construct that influences not only technology adoption but also information-related decision-making processes.

The study offers several implications for educational institutions, policymakers, and technology developers. Higher education institutions may consider integrating digital trust, AI literacy, and information verification competencies into learning activities to prepare students for increasingly complex digital environments. Policymakers may utilize the findings to design digital literacy initiatives that encourage informed engagement with artificial intelligence technologies while maintaining critical evaluation skills. For technology developers, the findings highlight the importance of transparency, accountability, and reliability in AI systems, as these characteristics may strengthen user trust and promote responsible information practices.

Despite its contributions, this study is subject to several limitations. The research focused exclusively on Generation Z university students, which may limit the generalizability of the findings to other demographic groups or professional contexts. The model examined a single exogenous variable, namely digital trust, while information verification behavior may also be influenced by additional factors such as digital literacy, AI literacy, critical thinking ability, perceived risk, and information quality awareness. Furthermore, the cross-sectional design captures perceptions

at a single point in time and may not fully reflect behavioral changes associated with the rapid evolution of artificial intelligence technologies.

Future studies are encouraged to expand the proposed model by incorporating additional psychological, technological, and social variables that may influence information verification behavior. Comparative investigations involving different generations, educational levels, or cultural contexts may provide a broader understanding of how trust and verification behavior develop across diverse populations. Longitudinal approaches may also offer valuable insights into how digital trust evolves alongside advances in artificial intelligence and changing patterns of technology use. For the broader public, this study contributes to increasing awareness that effective participation in AI-driven societies requires a balance between confidence in digital technologies and continuous efforts to verify information, thereby supporting the development of a more informed, responsible, and resilient digital community.

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AI DISCLOSURE STATEMENT

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