MIKAILALSYS
Journal of Multidisciplinary Sciences

e-ISSN : 2987-2286
p-ISSN : 2987-3924

Index: Harvard, Boston, Sydney, Copernicus, Sinta 4, Scilit, Semantic, Google, etc

https://doi.org/10.58578/mikailalsys.v4i2.10843

Digital Literacy Competencies of Students in Evaluating the Accuracy of Information on the Internet: A Case Study of Library and Information Science Students

Hana Kamilah & Elva Rahmah
Universitas Negeri Padang, Indonesia
elva@fbs.unp.ac.id; hanakamilah1907@gmail.com

Article Info:

Submitted:	Revised:	Accepted:	Published:
May 11, 2026	Jun 8, 2026	Jun 20, 2026	Jun 25, 2026

Abstract

The rapid growth of digital technology has expanded access to information while increasing the risk of misinformation and inaccurate online content. This condition requires students to develop adequate digital literacy competencies to evaluate the credibility and accuracy of information obtained from the internet. This study aims to describe the digital literacy competencies of Library and Information Science students at Universitas Negeri Padang in evaluating information accuracy based on four dimensions: digital skills, digital ethics, digital culture, and digital safety. A descriptive quantitative approach was employed, involving 70 students selected through simple random sampling. Data were collected using a questionnaire and analyzed through descriptive statistics. The findings indicate that students' digital literacy level was categorized as very high, with an overall mean score of 3.29. Among the four dimensions, digital ethics obtained the highest score, whereas digital culture received the lowest score, although it remained within the high category. These findings suggest that students have strong competencies in accessing, evaluating, verifying, and utilizing digital information responsibly. This study concludes that digital literacy

Mikailalsys is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

plays an important role in supporting students' ability to assess information accuracy in complex digital environments. The findings contribute to the development of digital literacy studies in higher education and provide practical implications for strengthening digital culture and critical thinking skills in information evaluation practices.

Keywords: Digital Literacy; Information Accuracy; Information Credibility; Information Evaluation; Library And Information Science Students

INTRODUCTION

The rapid advancement of information and communication technology has fundamentally transformed the way individuals access, produce, distribute, and consume information. The internet has evolved from a supplementary communication tool into a primary source of knowledge that supports educational, professional, social, and cultural activities worldwide. In Indonesia, internet penetration has continued to increase significantly, reaching approximately 221 million users in 2024, which represents a substantial proportion of the national population (Haryanto, 2024). This development has positioned university students among the most active internet users because academic activities increasingly depend on digital resources, online communication platforms, electronic databases, and internet-based learning environments.

The widespread availability of digital information offers substantial opportunities for higher education institutions and students. Through digital technology, students can access scholarly articles, e-books, online repositories, educational videos, and various other information resources without geographical limitations. The accessibility and speed of information retrieval have contributed significantly to educational efficiency and knowledge acquisition. Nevertheless, the abundance of information available on the internet has simultaneously generated new challenges regarding information quality, credibility, and authenticity. The digital environment enables information to circulate rapidly regardless of its accuracy, creating circumstances in which misinformation, disinformation, and hoaxes can spread extensively among internet users (Octa Aroyo et al., 2025).

In contemporary society, information abundance does not automatically guarantee information quality. Instead, the increasing volume of digital content often makes it more difficult for users to distinguish reliable information from misleading or inaccurate content.

Consequently, the ability to evaluate information critically has become an essential competency for individuals operating within digital environments. Educational institutions are therefore expected not only to provide access to information technologies but also to develop students' capacities to assess, interpret, and verify information obtained through digital platforms (OECD, 2025).

The concept of literacy has undergone substantial transformation alongside technological developments. Historically, literacy referred primarily to the ability to read and write printed texts. Since the invention of the printing press and the subsequent expansion of mass communication, literacy has played a central role in educational development and social progress. However, the emergence of digital technologies has expanded the meaning of literacy beyond traditional reading and writing skills. Contemporary literacy encompasses the ability to understand, evaluate, create, and communicate information through various digital formats and technological platforms (Britannica, 2026)

Within this evolving context, digital literacy has emerged as a critical competency for the twenty-first century. Digital literacy is not limited to technical proficiency in using digital devices or software applications. Instead, it encompasses a broader set of cognitive, social, ethical, and technological skills that enable individuals to interact effectively and responsibly within digital environments (Nugraha, 2022). Digital literacy involves the ability to locate information, evaluate source credibility, interpret content critically, communicate responsibly, protect personal data, and participate constructively in digital communities.

The significance of digital literacy has become increasingly apparent in response to the rapid spread of misinformation and false information on the internet. Social media platforms, online news portals, messaging applications, and content-sharing websites have created unprecedented opportunities for information dissemination. Although these technologies facilitate communication and knowledge sharing, they also allow inaccurate information to reach large audiences within a short period. As a result, internet users frequently encounter information that has not undergone adequate verification processes. Without sufficient digital literacy competencies, individuals may accept misleading information as factual and unknowingly contribute to its dissemination (Septia et al., 2025).

University students represent a particularly important population in this context because they frequently rely on internet-based information for academic purposes. Assignments, research projects, presentations, and independent learning activities often

require students to access and utilize information from various online sources. Consequently, students must possess the ability to determine whether the information they encounter is credible, accurate, and relevant. Failure to evaluate information appropriately may result in the use of unreliable sources, poor academic performance, and weakened critical thinking abilities (Salsabila & Abidin, 2024).

The challenge of information verification has become more complex due to the increasing sophistication of digital content production. Advances in technology enable individuals and organizations to create highly persuasive information that may appear credible despite lacking factual accuracy. This phenomenon has intensified concerns regarding information integrity and public trust. In academic settings, the consequences of inaccurate information can be particularly significant because they may influence learning outcomes, research quality, and scholarly integrity (Junaidi et al., 2025).

Several studies have emphasized the growing importance of digital literacy in addressing these challenges. Ratri & Aviyanti (2025) describe digital literacy as the ability to locate, evaluate, use, share, and create digital content responsibly within digital environments. Their findings suggest that effective participation in digital society requires more than technological skills; it also demands critical evaluation competencies and ethical awareness. Similarly, Pratama et al. (2025) argue that digital literacy plays a crucial role in supporting educational transformation by enhancing students' access to information and preparing them for increasingly digitalized professional environments.

The educational relevance of digital literacy is further highlighted by studies demonstrating its contribution to critical thinking and problem-solving abilities. Fiqtianisa (2025) found that digital literacy significantly supports students' capacities to analyze information critically and solve complex problems in digital contexts. These findings indicate that digital literacy serves not only as a technological competency but also as a cognitive framework that facilitates informed decision-making and analytical reasoning. Several studies have highlighted the role of digital literacy in improving students' ability to evaluate information in digital environments. Silvhiany et al. (2021) found that critical digital literacy significantly enhances students' ability to assess the credibility and reliability of online sources, indicating that information evaluation is an essential component of digital literacy. In addition, Haliq et al. (2025) reported that students with higher levels of digital literacy demonstrated better abilities to analyze and identify hoax news circulating on digital

platforms. These findings suggest that digital literacy not only supports access to information but also strengthens students' critical capacity to distinguish accurate information from misinformation and false content.

Research concerning digital literacy has also examined its relationship with misinformation resistance. Abdul Haliq et al. (2025) reported that students with higher levels of digital literacy exhibit stronger abilities to analyze and identify hoax news. Likewise, Putri & Ardoni (2025) demonstrated that the implementation of digital literacy practices contributes to preventing the spread of misinformation on social media among university students. These studies suggest that digital literacy functions as an important protective mechanism against information manipulation and deceptive online content.

Additional research has focused on the relationship between digital literacy and critical thinking in online information consumption. Nurviana et al. (2024) identified a positive relationship between digital literacy and students' critical thinking abilities when reading online news. This finding reinforces the argument that digital literacy facilitates analytical engagement with digital information and promotes more reflective information consumption behaviors.

Despite the growing body of literature on digital literacy, several limitations remain evident. Existing studies have predominantly examined digital literacy in relation to social media usage, critical thinking skills, educational technology adoption, or misinformation prevention. For example, Syahfira et al. (2023) investigated the relationship between digital literacy and social media use among university students, while Putri & Ardoni (2025) focused on digital literacy as a strategy for reducing hoax dissemination. Although these studies provide valuable insights into the broader implications of digital literacy, they do not specifically address students' abilities to evaluate the truthfulness of information encountered on the internet.

Furthermore, previous research has often treated digital literacy as a single construct without examining how its various dimensions contribute to information evaluation processes. As a result, there remains limited empirical understanding of how specific components of digital literacy influence students' capacities to verify information accuracy and determine source credibility. This limitation is particularly important given the multidimensional nature of digital literacy and the increasingly complex digital information environment.

Another limitation concerns the research context. Most existing studies have focused on general student populations across various academic disciplines. Relatively few studies have investigated students enrolled in Library and Information Science programs, despite their specialized educational background in information management, information retrieval, information organization, and information evaluation. Students within this field are expected to develop advanced competencies related to information assessment and validation, making them a particularly relevant population for investigating issues related to digital literacy and information verification.

Based on these considerations, a clear research gap can be identified. Previous studies have provided substantial evidence regarding the importance of digital literacy in educational contexts, critical thinking development, and misinformation prevention. However, limited research has specifically examined the ability of Library and Information Science students to evaluate the truthfulness of internet-based information through the lens of digital literacy. Moreover, empirical investigations focusing on information evaluation as the primary outcome of digital literacy remain relatively scarce (Wiladi & Afrianti, 2024).

The present study seeks to address this gap by examining digital literacy as a framework for understanding students' abilities to assess information validity and credibility in digital environments. Rather than focusing solely on technological proficiency or social media behavior, this research emphasizes the practical application of digital literacy competencies in evaluating the truthfulness of information encountered online. Such an approach contributes to a more nuanced understanding of how digital literacy functions in academic information practices.

The theoretical foundation of this study is based on the Four Pillars of Digital Literacy framework proposed by Setu (2021), consisting of digital skills, digital ethics, digital culture, and digital safety. This framework provides a comprehensive perspective for understanding digital literacy because it integrates technical competencies with ethical awareness, cultural participation, and security consciousness.

Digital skills refer to individuals' abilities to access, search for, organize, and utilize digital information effectively. These competencies enable students to navigate digital environments, formulate appropriate search strategies, and identify relevant information sources (Rahmawati et al., 2025). Effective digital skills are essential for locating information efficiently and supporting evidence-based learning activities.

Digital ethics emphasize responsible behavior in digital environments. Ethical awareness includes respecting intellectual property rights, acknowledging information sources appropriately, avoiding the dissemination of misinformation, and engaging in responsible online communication. Ethical considerations are particularly important in academic settings because they contribute to scholarly integrity and responsible knowledge production.

Digital culture reflects individuals' attitudes, values, and participation patterns within digital communities. It encompasses critical engagement with digital content, constructive interaction in online spaces, and the development of responsible information consumption habits. Digital culture influences how individuals interpret information and respond to diverse perspectives encountered online.

Digital safety refers to awareness and practices related to protecting personal information, recognizing digital threats, and maintaining secure online behaviors. Students who possess strong digital safety competencies are more likely to recognize suspicious information, identify fraudulent content, and verify information before accepting it as factual (Anderson & Martinez, 2026).

The integration of these four dimensions offers a comprehensive conceptual framework for understanding how students evaluate online information. Information verification is not solely a technical process; it also involves ethical judgment, cultural awareness, critical reflection, and security considerations. Consequently, the Four Pillars framework provides an appropriate theoretical foundation for investigating students' abilities to assess information truthfulness in digital environments.

The novelty of this research lies in its application of the Four Pillars of Digital Literacy framework to examine students' abilities to evaluate the truthfulness of internet-based information within the context of Library and Information Science education. Unlike previous studies that focused primarily on digital literacy as a general competency or explored its relationship with social media behavior, this study specifically investigates information evaluation as a core outcome of digital literacy. Furthermore, the research concentrates on students who possess academic training related to information management and information literacy, thereby providing insights into a population expected to demonstrate advanced information evaluation competencies.

From a theoretical perspective, this study also contributes to the integration of information literacy and digital literacy concepts. Information literacy emphasizes the ability to identify information needs, locate relevant information, evaluate source credibility, and use information effectively (Head et al., 2020). Gusriani & Masruri (2023) emphasize that information literacy skills in digital environments involve the ability to identify information needs, locate relevant sources, evaluate information critically, and use information effectively. These competencies are essential for supporting students' ability to assess the credibility and accuracy of online information. Digital literacy extends these competencies into digital environments characterized by technological complexity, algorithmic mediation, and rapidly changing information ecosystems (Madani et al., 2025). Combining these perspectives enables a more comprehensive understanding of students' information evaluation practices in contemporary digital contexts.

Accordingly, this research focuses on students of the Library and Information Science Program at Universitas Negeri Padang. As future information professionals, these students are expected to possess strong competencies in evaluating information quality and promoting responsible information use. Understanding their digital literacy capabilities is therefore important not only for academic purposes but also for informing educational strategies aimed at strengthening information evaluation competencies in higher education.

The objective of this study is to describe empirically the digital literacy abilities of Library and Information Science students in evaluating the truthfulness of information on the internet based on the dimensions of digital skills, digital ethics, digital culture, and digital safety. The findings are expected to contribute to the development of digital literacy scholarship, enrich discussions concerning information evaluation in higher education, and provide practical recommendations for strengthening students' critical engagement with digital information in an increasingly complex information landscape.

METHODS

This study employed a quantitative approach with a descriptive research design to examine the digital literacy abilities of students in evaluating the truthfulness of information on the internet. A quantitative approach was selected because the research aimed to obtain objective and measurable data regarding students' digital literacy competencies through

numerical measurements and statistical analysis. According to Creswell & Creswell (2024), quantitative research is appropriate for investigating phenomena through structured instruments and empirical data analysis, allowing researchers to generate systematic and objective descriptions of observed conditions. The descriptive design was adopted because the study focused on describing the level of students' digital literacy without testing causal relationships or examining the influence between variables. Instead, the research sought to provide an empirical overview of students' abilities in assessing information credibility within digital environments.

The study focused on a single variable, namely students' digital literacy ability in evaluating the truthfulness of information on the internet. The conceptual framework was based on the Four Pillars of Digital Literacy proposed by Setu (2021), which consist of digital skills, digital ethics, digital culture, and digital safety. Digital skills refer to students' ability to access information, search for relevant information, and manage and understand digital content effectively. Digital ethics encompass responsible information use, the ability to avoid disseminating misinformation, and awareness of ethical principles in digital communication. Digital culture includes selective information consumption habits, critical attitudes toward online information, and constructive participation in digital environments. Meanwhile, digital safety involves the ability to identify false information, protect personal data, and verify information obtained through online platforms. These dimensions were operationalized into measurable indicators and served as the basis for constructing the research instrument.

The population of this study consisted of all active students enrolled in the 2022 cohort of the Library and Information Science Program at Universitas Negeri Padang. This population was selected because of its direct relevance to information literacy and digital information management, making it suitable for investigating competencies related to information evaluation and verification. The sample comprised 70 students selected from the population using the Slovin formula with a 5% margin of error. The study employed probability sampling through a simple random sampling technique, ensuring that every member of the population had an equal opportunity to be selected as a respondent. This sampling method was considered appropriate because the population shared relatively homogeneous characteristics, particularly in terms of academic background and educational experience. Furthermore, simple random sampling minimizes selection bias and enhances the representativeness of the sample, thereby improving the generalizability of the findings.

The study utilized both primary and secondary data sources. Primary data were collected directly from respondents through a structured questionnaire, whereas secondary data were obtained from books, scientific journals, and other relevant scholarly sources supporting the research topic. The questionnaire served as the primary research instrument and was developed based on the indicators derived from the Four Pillars of Digital Literacy framework. The instrument consisted of 36 statement items designed to measure students' digital literacy abilities in evaluating information on the internet. Responses were measured using a four-point Likert scale comprising Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). The use of a four-point scale was intended to encourage respondents to express clear positions regarding each statement and to facilitate quantitative analysis.

Before being administered to the main sample, the instrument underwent validity and reliability testing to ensure its quality and appropriateness. Construct validity was assessed using the Pearson Product-Moment correlation technique by correlating each item score with the total score. An item was considered valid if the calculated correlation coefficient exceeded the critical value of the correlation table. The results indicated that all 36 questionnaire items met the validity requirements, demonstrating their suitability for measuring the intended construct. Reliability testing was subsequently conducted using Cronbach's Alpha coefficient with the assistance of Statistical Package for the Social Sciences (SPSS) version 27. The analysis produced a Cronbach's Alpha value of 0.904, which exceeded the minimum acceptable threshold of 0.70. This result indicates a high level of internal consistency and confirms that the instrument was reliable for data collection purposes.

Data collection was conducted through the distribution of questionnaires to the selected respondents. The questionnaire was administered online to facilitate efficient dissemination and completion by participants. In addition to the questionnaire, documentation techniques were employed to support the research process. Documentation included records and evidence related to questionnaire distribution and completion activities. These documents served as supporting materials to verify the implementation of the data collection process and to strengthen the credibility of the study.

The collected data were analyzed using descriptive statistical techniques. The analysis began with data editing to ensure the completeness, consistency, and accuracy of respondents' answers. This stage was essential to identify incomplete or inconsistent responses before further processing. Subsequently, data tabulation was performed by

assigning scores to each response according to the Likert scale and organizing the data into statistical tables. The next stage involved descriptive statistical analysis, which included calculating frequencies, percentages, mean scores, and grand mean values to describe the overall level of students' digital literacy abilities. The findings were then presented in the form of tables and descriptive interpretations to facilitate understanding and discussion of the results. Finally, conclusions were drawn based on the statistical findings, providing an empirical description of students' digital literacy competencies in evaluating the truthfulness of information on the internet. Through these procedures, the study generated a comprehensive overview of students' digital literacy levels across the dimensions of digital skills, digital ethics, digital culture, and digital safety.

RESULTS

Descriptive Statistical Analysis

Table 44 Summary of Average per Digital Literacy Ability Indicator

No	Indicator	Average Indicator	Category
1	Digital Skills	3.29	Very high
2	Digital Ethics	3.32	Very high
3	Digital Culture	3.24	High
4	Digital Security	3.31	Very High
Grand Mean		3.29	Very high
Calculation		(3.29 + 3.32 + 3.24 + 3.31) / 4 = 12.56 / 4 = 3.29	

source: Compiled by the researcher (2026)

Based on the calculation of the overall average value (*grand mean*) obtained by adding the average of the four indicators, then divided by the number of indicators (4). The calculation results show *a grand mean* of 3.29. This figure is in the interval scale range of 3.25 - 4.00 which is included in the very high category. Thus, in general, the digital literacy skills of students of the Library and Information Science Study Program, Padang State University in assessing the accuracy of information on the internet are classified as very high. This achievement indicates that students have adequate provisions to access, evaluate, and use digital information critically and responsibly, although there are still several aspects that need to be improved. This result is in line with the digital literacy survey conducted by Aulia & Tasrif (2025) which found that Indonesian students are generally at a level approaching very high, especially in universities that have an information and technology-based curriculum.

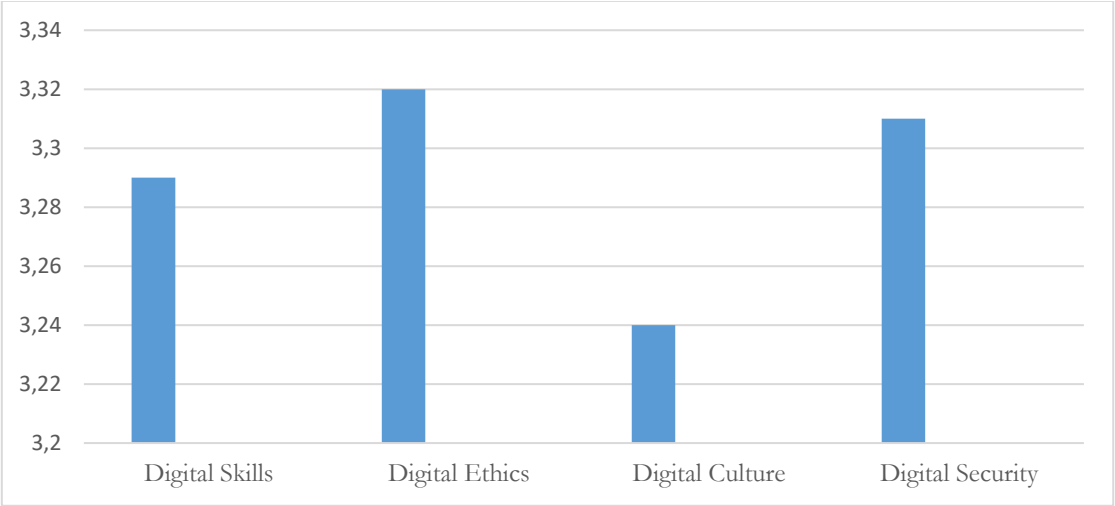


Figure 1. Graph of Average Values of Digital Literacy Ability Indicators

Figure 1 Graph of Average Values of Digital Literacy Ability Indicators illustrates that all digital literacy indicators achieved high to very high scores, ranging from 3.24 to 3.32. Although students demonstrated strong technical, ethical, and security-related competencies, Digital Culture remained the lowest-rated dimension. This finding implies the need to strengthen students' critical attitudes, information verification practices, and responsible engagement in digital spaces to enhance their ability to evaluate information credibility effectively.

DISCUSSION

This study aimed to examine the digital literacy abilities of students in the Library and Information Science Program at Universitas Negeri Padang in evaluating the truthfulness of information on the internet. The findings revealed that the overall digital literacy level of students was categorized as very high, as indicated by a grand mean score of 3.29. This result suggests that students generally possess strong competencies in accessing, evaluating, managing, and utilizing digital information responsibly. The findings also indicate that students have developed a relatively comprehensive understanding of digital literacy, encompassing not only technical skills but also ethical awareness, critical attitudes, and information security practices. These competencies are particularly important in the current digital environment, where the rapid circulation of information increases the risk of misinformation, disinformation, and information overload.

The high level of digital literacy identified in this study supports the conceptual framework proposed by Setu (2021), which emphasizes that digital literacy is a multidimensional competence consisting of digital skills, digital ethics, digital culture, and digital safety. The findings demonstrate that these dimensions collectively contribute to students' ability to assess information credibility and determine the truthfulness of online content. The results also reinforce the argument that digital literacy should not be understood solely as technological proficiency but rather as a combination of cognitive, social, ethical, and security-related competencies required for effective participation in digital environments.

Among the four dimensions examined, digital ethics achieved the highest mean score (3.32), followed by digital safety (3.31), digital skills (3.29), and digital culture (3.24). Although all dimensions were categorized as high or very high, the variation among the indicators provides important insights into the strengths and weaknesses of students' digital literacy competencies.

The high score for digital skills indicates that students possess adequate technical competencies in accessing and managing information through digital platforms. Most respondents reported that they regularly use the internet to search for information and understand how to obtain information relevant to their needs. These findings suggest that students have successfully developed the foundational competencies required for information retrieval and digital information management. This result is consistent with the findings of Haliq et al. (2025), who reported that university students generally demonstrate good levels of digital literacy in terms of accessing and utilizing information resources.

However, several findings indicate that certain aspects of digital skills still require improvement. The ability to formulate effective search keywords obtained a relatively lower score compared with other indicators within the same dimension. This result suggests that while students are capable of accessing information, they may not always employ optimal search strategies to retrieve highly relevant or credible information. Therefore, strengthening students' search strategy competencies may further improve their ability to identify trustworthy information sources.

The findings regarding digital ethics are particularly noteworthy because this dimension achieved the highest overall score among the four pillars of digital literacy. Students demonstrated strong ethical awareness in using information responsibly, respecting information sources, and avoiding the dissemination of unverified information. The high

score on the indicator related to avoiding information from unclear sources reflects a strong commitment to ethical information practices. This finding supports the argument of Putri & Ardoni (2025), who found that digital literacy contributes significantly to preventing the spread of misinformation on social media platforms.

Despite these positive results, the study also revealed that not all students consistently verify information before sharing it with others. Although the overall score remained within the high category, a small proportion of respondents admitted that they do not always conduct verification procedures before disseminating information. Consequently, digital ethics education should continue emphasizing the importance of systematic verification practices rather than relying solely on ethical awareness.

Digital culture emerged as the dimension with the lowest mean score, although it remained within the high category. This finding is particularly significant because digital culture encompasses critical attitudes, selective information consumption, and constructive participation in digital environments. Several indicators within this dimension received lower scores compared with other dimensions, particularly those related to recognizing unreliable information and maintaining skepticism toward online content.

The relatively lower performance in digital culture suggests that students may still encounter difficulties when distinguishing credible information from misleading content. Approximately one-fifth of respondents demonstrated uncertainty regarding their ability to identify unreliable information sources.

The findings further indicate that students are generally willing to question information and compare multiple sources before accepting information as true. These behaviors reflect the development of critical thinking habits that are essential for navigating complex information environments. According to Septia et al. (2025), digital literacy contributes significantly to strengthening critical thinking skills when individuals encounter potentially misleading information. Therefore, the relatively high scores obtained in this dimension suggest that students have begun to internalize critical information evaluation practices, although further improvement remains necessary.

The digital safety dimension achieved the second-highest score among all indicators. Students demonstrated strong awareness regarding personal data protection, information verification, and the use of security measures while navigating digital environments. These

findings indicate that respondents recognize the importance of protecting themselves from digital risks while simultaneously ensuring the reliability of the information they consume.

Particularly noteworthy is the high score obtained for verifying information before using it. This result suggests that students understand the importance of information validation as a prerequisite for responsible information use. Such behavior is consistent with the findings of Bottyán (2023) who reported that awareness of digital security is positively associated with information verification practices among university students.

From a theoretical perspective, this study contributes to the growing body of literature concerning digital literacy by demonstrating the applicability of the Four Pillars of Digital Literacy framework in explaining students' information evaluation competencies. The findings confirm that digital literacy extends beyond technical skills and encompasses ethical awareness, cultural attitudes, and security practices that collectively influence how individuals assess information credibility. The study therefore supports multidimensional approaches to digital literacy that integrate technological, cognitive, social, and ethical perspectives.

From a practical perspective, the findings provide important implications for higher education institutions, particularly Library and Information Science programs. Universities should continue strengthening digital literacy education by emphasizing critical information evaluation, fact-checking skills, source verification strategies, and misinformation detection. Academic libraries may also play a strategic role in developing information literacy programs that complement classroom instruction and support students' ability to evaluate online information effectively.

Methodologically, this study demonstrates the usefulness of descriptive quantitative approaches in assessing digital literacy competencies across multiple dimensions. The use of the Four Pillars framework provides a comprehensive structure for evaluating students' abilities and may serve as a reference for future studies investigating digital literacy in different educational contexts.

Nevertheless, several limitations should be acknowledged. First, the study was conducted within a single study program, limiting the generalizability of the findings to broader student populations. Second, the data relied on self-reported questionnaire responses, which may be influenced by social desirability bias and respondents' subjective perceptions of their own abilities. Third, the study focused exclusively on descriptive analysis and did not examine causal relationships among variables. Future research may incorporate

comparative, correlational, or experimental designs involving larger and more diverse populations to provide a deeper understanding of factors influencing digital literacy and information evaluation competencies.

Overall, the findings indicate that students of the Library and Information Science Program at Universitas Negeri Padang possess a very high level of digital literacy in evaluating the truthfulness of information on the internet. However, the comparatively lower performance in digital culture highlights the continuing need to strengthen critical information evaluation habits and skepticism toward online content. These competencies are essential for preparing students to become responsible information users and future information professionals in an increasingly complex digital information ecosystem.

CONCLUSION

This study aimed to examine the digital literacy abilities of students in the Library and Information Science Program at Universitas Negeri Padang in evaluating the truthfulness of information on the internet based on the four pillars of digital literacy: digital skills, digital ethics, digital culture, and digital safety. The findings indicate that the overall level of students' digital literacy falls within the very high category. This result demonstrates that students possess strong competencies in accessing, understanding, evaluating, verifying, and utilizing digital information responsibly. High performance across all dimensions suggests that students have developed the essential competencies required to navigate contemporary digital information environments effectively, particularly in relation to ethical information use and information security practices.

The findings successfully address the research objective by confirming that students possess adequate capabilities to assess the credibility and truthfulness of online information. Nevertheless, the study also reveals that digital culture represents the weakest dimension compared to the other pillars of digital literacy. Although still categorized as high, this dimension indicates that some students continue to face challenges in identifying unreliable information, maintaining a healthy level of skepticism toward online content, and consistently comparing information across multiple sources before accepting it as valid. These findings highlight the importance of strengthening critical information evaluation habits within digital environments.

This study contributes theoretically by supporting the applicability of the Four Pillars of Digital Literacy framework in explaining students' competencies in evaluating online information. Practically, the findings provide valuable insights for higher education institutions, academic libraries, and educational policymakers in designing digital literacy programs that emphasize information verification, fact-checking skills, misinformation detection, and critical digital engagement. The significance of this study lies in its specific focus on evaluating information truthfulness as a core component of digital literacy among Library and Information Science students.

Based on these findings, higher education institutions are encouraged to strengthen digital literacy initiatives that focus on critical information assessment and responsible digital participation. Future studies are recommended to involve broader and more diverse populations, employ comparative or explanatory research designs, and investigate additional factors influencing students' digital literacy competencies within increasingly complex digital information ecosystems.

REFERENCES

Agustin, H. (2018). Sistem Informasi Manajemen Menurut Prespektif Islam. *Jurnal Tabarru': Islamic Banking and Finance, 1*(1), 63–70. https://doi.org/10.25299/jtb.2018.vol1(1).2045

Agustine, M., & Prasetyawati, Y. R. (2020). Pengaruh Kualitas Informasi Instagram dan Electronic Word of Mouth terhadap Citra Dapurfit. *PRofesi Humas, 5*(1), 82–97. https://doi.org/10.24198/prh.v5i1.23966

DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems, 19*(4), 9–30. https://doi.org/10.1080/07421222.2003.11045748

Dwivedi, Y. K., Ismagilova, E., Hughes, D. L., Carlson, J., Filieri, R., Jacobson, J., Jain, V., Karjaluoto, H., Kefi, H., Krishen, A. S., Kumar, V., Rahman, M. M., Raman, R., Rauschnabel, P. A., Rowley, J., Salo, J., Tran, G. A., & Wang, Y. (2021). Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management, 59*, Article 102168. https://doi.org/10.1016/j.ijinfomgt.2020.102168

Dwiyanti, A., Syahputra, M. R., & Widhiandono, D. (2024). Persepsi Mahasiswa Terkait Pemanfaatan Media Sosial Instagram sebagai Saluran Penyebaran Berita Politik di Harian Disway. *Relasi: Jurnal Penelitian Komunikasi, 4*(2), 21–30. https://doi.org/10.69957/relasi.v4i02.1583

Dzakirah, A., Burhanuddin, B., & Burhani, A.-M. A. I. (2025). Strategi Pembuatan Konten Edukatif di Instagram @rekamnusantara dalam Peningkatan Kesadaran Lingkungan. *Jurnal Informatika dan Teknologi Pendidikan, 5*(2), 113–123. https://doi.org/10.59395/jitp.v5i2.133

Fadly, M., & Desriyeni. (2025). Persepsi Mahasiswa terhadap Akun Instagram @INFOUNP sebagai Media Informasi Akademik. *Pendas: Jurnal Ilmiah Pendidikan Dasar, 10*(3), 283–290. https://doi.org/10.23969/jp.v10i03.31521

Faisal, D., Surahman, S., & Mardiana, S. (2021). Pengaruh Akun Instagram @Beritacilegon terhadap Kebutuhan Informasi Pengikut (Followers). *PODCAST: Jurnal Ilmu Komunikasi, 1*(2), 1–9. https://jurnal.hasbie.or.id/index.php/jpc/article/view/27

Hakim, H. I., Polin, I., & Irwansyah, I. (2024). Peran Media Sosial Instagram sebagai Media Informasi dalam Masyarakat 5.0. *Jurnal Ilmiah Wahana Pendidikan, 10*(23), 287–300. https://doi.org/10.5281/zenodo.14564263

Hayatulnupus, S. M. (2025). Transformasi Komunikasi Masyarakat Modern Melalui TikTok: Analisis Partisipatif Generasi Z. *Bashirah: Jurnal Komunikasi dan Penyiaran Islam, 6*(1), 94–106. https://doi.org/10.51590/bashirah.v6i1.1060

Hilman, A. (2014, November 1). *Ganto.co | Ilmu Amaliah, Amal Ilmiah*. Ganto.co. https://www.ganto.co/profil/1/tentang-kami.html

Kurnia, N., & Astuti, S. I. (2017). Peta Gerakan Literasi Digital di Indonesia: Studi tentang Pelaku, Ragam Kegiatan, Kelompok Sasaran, dan Mitra yang Dilakukan oleh JAPELIDI. *Informasi, 47*(2), 149–166. https://doi.org/10.21831/informasi.v47i2.16079

Kusuma, F. C. (2025). Visual Engagement Instagram dan Trust Pelanggan: Studi pada Akun CLS Basketball Academy. *Jurnal Vicidi, 15*(2), 284–297. https://doi.org/10.37715/vicidi.v15i2.6226

Maradutua, R., Manalu, T., & Dharma, T. (2024). Ketergantungan Mahasiswa dalam Penggunaan Instagram guna Mencari Informasi. *TUTURAN: Jurnal Ilmu Komunikasi, Sosial dan Humaniora, 2*(2), 194–208. https://doi.org/10.47861/tuturan.v2i2.947

Martha, Z. (2021). Penggunaan Fitur Media Sosial Instagram Stories sebagai Media Komunikasi. *Jurnal Komunikasi Nusantara, 3*(1), 26–32. https://doi.org/10.33366/jkn.v3i1.67

Muhajir, A. (2024). Tafsiran Hakikat Informasi dalam Era Teknologi Informasi: Tinjauan Konseptual dan Implikasinya. *Jurnal Kridatama Sains dan Teknologi, 6*(1), 280–289. https://doi.org/10.53863/kst.v6i01.1116

Nafisah, Y. F., & Jannah, M. (2024). Penggunaan Media Sosial pada Generasi Z. *Character: Jurnal Penelitian Psikologi, 11*(2), 705–713. https://ejournal.unesa.ac.id/index.php/character/article/view/60915

Nugraha, W., & Hardiyanto, N. (2022). Pengaruh Kualitas Informasi pada Instagram terhadap Pembentukan Citra Destinasi Wisatawan: Akun Official Instagram Pantai Sayang Heulang. *Prosiding Industrial Research Workshop and National Seminar, 13*(1), 1148–1155. https://doi.org/10.35313/irwns.v13i01.4207

Nurfadila, A. P. (2024). Uses and gratification social media X @Statsrawon to fulfilment information needs of followers. *Jurnal Audiens, 5*(2), 204–214. https://doi.org/10.18196/jas.v5i2.353

Pratama, M. T. R., Pamungkas, I. N. A., & Pramesthi, J. A. (2024). Pemanfaatan Media Sosial Instagram @Sahabat_umkm: Studi Uses and Gratification sebagai Upaya Edukasi Pelaku Usaha Mikro. *Jurnal Indonesia: Manajemen Informatika dan Komunikasi, 5*(2), 1299–1308. https://doi.org/10.35870/jimik.v5i2.652

Prisgunanto, I. (2018). Pemaknaan Arti Informasi di Era Digital. *Wacana: Jurnal Ilmiah Ilmu Komunikasi, 17*(2), 143–151. https://doi.org/10.32509/wacana.v17i2.619

Ramadhein, N. N., & Krismayani, I. (2025). Information experience of Diponegoro University students in utilizing the @folkative account Instagram as a source of political information. *Palimpsest: Jurnal Ilmu Informasi dan Perpustakaan, 16*(2), 137–149. https://doi.org/10.20473/pjil.v16i2.77911

Setiyani, L., Wahidin, M., & Kriswanto, F. P. P. (2023). Analisis Kepuasan Mahasiswa STMIK Rosma dalam Pemanfaatan Akun Instagram @Stmikrosmaofficial Menggunakan Teori Uses and Gratifications. *Jurnal Interkom: Jurnal Publikasi Ilmiah Bidang Teknologi Informasi dan Komunikasi, 17*(4), 167–174. https://doi.org/10.35969/interkom.v17i4.276

Umaroh, F. A. K., Fajrin, R., Kusumawati, M. A., Muhadzib, M. A., Haryudha, & Elisabet, B. M. (2023). Pemanfaatan Instagram sebagai Sumber Informasi Kesehatan Reproduksi Remaja. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI), 6*(1), 122–129. https://doi.org/10.56338/mppki.v6i1.2944

Wiryany, D., Natasha, S., & Kurniawan, R. (2022). Perkembangan Teknologi Informasi dan Komunikasi terhadap Perubahan Sistem Komunikasi Indonesia. *Jurnal Nomosleca, 8*(2), 242–252. https://doi.org/10.26905/nomosleca.v8i2.8821