



## **The Digital Literacy Level of the BSAIS Students at Laguna University: An Empirical Investigation**

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### **ABSTRACT**

A quantitative study examined the digital literacy of Laguna University's Bachelor of Science in Accounting Information Systems (BSAIS) students. The research assessed students' proficiency in using accounting software, data analysis tools, and online resources relevant to the field. Results showed high digital literacy among BSAIS students, suggesting readiness for industry demands. While demographic factors influenced digital engagement, most students (young adults, predominantly female) positively viewed technology's role in learning. The study recommends curriculum enhancements, including mandatory computer literacy courses and workshops on online safety, to further improve students' digital skills and prepare them for the evolving accounting landscape.

Keywords: Computer Literacy, Digital Era, Digital Literacy, Digital Proficiency, Technology

### **1. Introduction**

Digital literacy is increasingly crucial, especially for students in fields like accounting information systems (AIS). This is because rapid technological advancements demand proficiency in navigating digital tools and resources for academic success and future careers. Digital literacy encompasses a wide array of skills, from critical online information evaluation to effective digital communication. While digital literacy is essential for success in the 21st-century economy, a skills gap often exists between what individuals possess and what's needed. The COVID-19 pandemic highlighted this gap, forcing a rapid shift to online learning and accelerating the demand for improved digital literacy training. This gap disproportionately affects certain demographic groups.

Higher education, particularly programs like the Bachelor of Science in Accounting Information Systems (BSAIS) at Laguna University, emphasizes digital literacy's importance. BSAIS students require strong digital skills for academic work, online research, collaboration, and professional development. Recognizing this need, Laguna University seeks to assess the current digital literacy levels of its BSAIS students. This assessment will inform the development of a targeted digital literacy program designed to meet the specific needs of these students, enhancing their skills and preparing them for success in the digital age. The results of this assessment will directly inform the creation of a tailored digital literacy program for BSAIS students at Laguna University, ensuring they are equipped with the necessary skills for their academic and professional futures.

### **2. Theoretical Background**

The Self-Determination Theory by Ryan, R. and Deci, E. (2020), Self-Determination Theory (SDT) offers a valuable framework for understanding how technology can influence student motivation. SDT posits that intrinsic motivation, driven by inherent interest and enjoyment, and autonomous extrinsic motivation, where individuals internalize and value external goals, are key predictors of positive learning outcomes. These forms of motivation are fostered when students' basic psychological needs for autonomy, competence, and relatedness are met. Technology, when thoughtfully integrated, can play a significant role in fulfilling these needs. By providing opportunities for personalized learning, flexible learning environments, and choice in tools and resources, technology can enhance students' sense of autonomy and control over their learning. Interactive learning experiences, adaptive learning platforms, and collaborative tools can foster a sense of competence and mastery.

Furthermore, technology can facilitate the creation of online communities, communication tools, and shared learning experiences that build a sense of relatedness and belonging. When technology is used to support autonomy, competence, and relatedness, students are more likely to experience increased intrinsic motivation and engagement, leading to increased effort, persistence, improved learning outcomes, and positive attitudes towards learning. Therefore, educators should consider how technology can be used to support these psychological needs, creating a more motivating and engaging learning environment for students.

### 3. Research Objectives

This study's main goal is to evaluate the digital literacy of Laguna University's Bachelor of Science in Accounting Information Systems (BSAIS) students. The research will comprehensively analyze several key areas. First, it will characterize the student population by examining demographic factors such as age, gender, academic year, access to digital devices (computers, etc.), and internet availability. Second, it will measure the students' digital literacy itself, assessing their skills, understanding, and attitudes towards technology. This includes evaluating their proficiency in relevant software, their awareness of cybersecurity threats, their research capabilities using digital tools, and their effectiveness in online communication. Third, the study will investigate how effectively students are adapting to and utilizing digital tools in their studies, focusing on efficiency, skill development, and overall productivity gains. Finally, the study will analyze the correlation between the students' demographic characteristics and their digital literacy levels to identify factors that may significantly influence their digital proficiency. The findings will provide valuable insights into the digital literacy landscape of the BSAIS student body.

### 4. Data and Methods

This research used a quantitative approach to measure the digital literacy of 142 randomly selected second- through fourth-year Bachelor of Science in Accounting Information Systems (BSAIS) students at Laguna University. Data collection involved a 50-item survey questionnaire, adapted for this study and employing a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) to assess digital competence, usage, and transformation. The survey's results were analyzed using descriptive statistics (frequency distribution, mean, and standard deviation) and inferential statistics (chi-square tests) to provide a thorough understanding of the BSAIS students' digital literacy levels. This rigorous quantitative methodology ensured a robust and statistically sound analysis of the collected data.

### 5. Results

Table 1 shows the average digital competence scores of the survey participants.

**Table 1 - Summary of Mean Results**

	Weighted Mean	Verbal Interpretation
Skills	4.33	Extremely Literate
Concepts	4.24	Extremely Literate
Attitudes	4.29	Extremely Literate

*Legend: 5.00 – 4.21 Extremely Literate, 4.20 – 3.41 Highly Literate, 3.40 – 2.61 Moderately Literate, 2.60 – 1.81 Limited Knowledge, 1.80 – 1.00 No Knowledge*

The data in Table 1 shows respondents possessing strong digital skills, demonstrating proficiency in essential tasks like online file sharing and data evaluation, and exhibiting awareness of online interaction consequences. This high level of competence aligns with Reddy et al.'s (2020) findings on student digital literacy. While respondents displayed a solid grasp of fundamental computer operations (digital concepts), their confidence in independent troubleshooting was less pronounced, suggesting a need for targeted support in problem-solving and self-efficacy, echoing Omotoy's (2023) research on self-efficacy in online learning. Furthermore, a positive attitude towards technology in education was prevalent, recognizing its learning potential. However, the study acknowledges potential underlying anxieties about the effectiveness of digital learning, as highlighted by Akcil and Bastas (2020), emphasizing the need for a holistic approach addressing both positive attitudes and potential concerns to ensure successful digital learning integration.

Table 2 presents the average scores for participants' digital literacy, specifically focusing on their use of digital tools and resources.

**Table 2 – Summary of Mean Results**

Customer Satisfaction Factors	Weighted Mean	Verbal Interpretation
Proficiency in Software	4.31	Extremely Literate
Security Awareness	4.18	Highly Literate
Research Skills	4.25	Extremely Literate
Online Communication	4.53	Extremely Literate

*Legend: 5.00 – 4.21 Extremely Literate, 4.20 – 3.41 Highly Literate, 3.40 – 2.61 Moderately Literate, 2.60 – 1.81 Limited Knowledge, 1.80 – 1.00 No Knowledge*

Table 2 shows respondents exhibiting high levels of digital literacy across several key areas. Their proficiency in software usage reflects confidence in utilizing various tools effectively, supporting Takenaka et al.'s (2021) argument for understanding computer operation principles. A strong security

awareness was also demonstrated, aligning with Frydenberg et al.'s (2020) emphasis on integrating cybersecurity skills into digital literacy education. Furthermore, respondents displayed high competency in research skills, utilizing digital tools effectively for research purposes, consistent with Albrecht et al.'s (2021) focus on integrating digital tools into academic research. Finally, proficiency in online communication skills for both academic and social contexts was evident, reinforcing Khalil and Ebner's (2017) emphasis on electronic communication tools for enhancing collaboration and teamwork. In summary, the data highlights the importance of comprehensive digital literacy programs encompassing practical skills and theoretical knowledge.

Table 3 shows the significant relationship between self-service kiosk user experience factors and customer satisfaction in selected quick-service restaurants.

**Table 3 - Summary of Mean Results**

Customer Satisfaction Factors	Weighted Mean	Verbal Interpretation
Efficiency	4.29	Extremely Literate
Growth	4.24	Highly Literate
Productivity	4.11	Highly Literate

*Legend: 5.00 – 4.21 Extremely Literate, 4.20 – 3.41 Highly Literate, 3.40 – 2.61 Moderately Literate, 2.60 – 1.81 Limited Knowledge, 1.80 – 1.00 No Knowledge*

Table 3 reveals that the study participants exhibited high levels of digital transformation, demonstrating significant efficiency, growth, and productivity in their academic use of digital tools. This finding supports the importance of digital literacy as a key factor in enhancing efficiency and progress, a point emphasized by Bell (2021). The respondents' ability to adapt and effectively utilize digital tools aligns with Oliviera and Souza's (2021) comprehensive view of digital literacy, which stresses the development of a wide range of skills necessary for success in the Fourth Industrial Revolution. Moreover, the strong relationship observed between digital literacy and productivity corroborates the findings of Yazon et al. (2019) on the link between faculty digital literacy and research output. These results highlight the critical need for comprehensive digital literacy programs in academic settings to cultivate efficiency, adaptability, and productivity among students, directly addressing concerns raised by the College Innovation Network (2021) regarding student confidence in using new educational technologies. The strong performance shown in Table 3 provides compelling evidence for the positive impact of robust digital literacy training on student success.

## 6. Conclusions

Based on the findings presented in the results, the researchers conclude the following:

1. The mean levels of the respondents' digital literacy in Table 1 indicate that they are "Extremely Literate" across all assessed areas of digital competence, with the following weighted means: Skills at 4.33, Concepts at 4.24, and Attitudes at 4.29. This reflects a strong foundation in essential digital skills and a positive attitude toward technology in education.
2. In Table 2, the mean levels for respondents' digital usage demonstrate high proficiency, with the following weighted means: Proficiency in Software at 4.31 (Extremely Literate), Security Awareness at 4.18 (Highly Literate), Research Skills at 4.25 (Extremely Literate), and Online Communication at 4.53 (Extremely Literate). These scores highlight respondents' effective use of digital tools and awareness of security practices.
3. Table 3 illustrates the mean levels of digital transformation among respondents, revealing high scores with Efficiency at 4.29 (Extremely Literate), Growth at 4.24 (Highly Literate), and Productivity at 4.11 (Highly Literate). This indicates that respondents are effectively leveraging digital tools to enhance their academic endeavors and overall productivity. The study's results show that participants have strong digital literacy skills in various areas, highlighting the ongoing importance of incorporating digital literacy training into education.

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