

ACCOUN-TECH-CY: A Correlational Study of Technological Literacy and Academic Performance Among Accountancy Students in Pamantasan ng Lungsod ng San Pablo

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Abstract

The rapid advancement of digital technologies has significantly transformed accounting education, increasing the demand for strong technological literacy among students. This study examined the relationship between technological literacy and academic performance among accountancy students at Pamantasan ng Lungsod ng San Pablo. A quantitative correlational research design was employed, utilizing a validated researcher-made survey questionnaire administered to randomly selected respondents. Descriptive statistics were used to assess levels of technological literacy and academic performance, while Spearman Rank-Order Correlation determined the relationship between variables. Results revealed that students demonstrated high levels of basic digital skills but comparatively lower proficiency in accounting software. Academic performance was also rated high. Furthermore, findings indicated a significant positive relationship between technological literacy and academic performance. These results imply that increased technological competence contributes to better academic outcomes. The study highlights the importance of integrating technology-based instruction in accounting education and recommends strengthening curriculum interventions focused on specialized digital tools.

Keywords: Technological Literacy, Academic Performance, Basic Digital Skills, Accounting Software Proficiency, Accountancy Students, Digital Tools

1. Introduction

With the digital age advancing rapidly, technological literacy became increasingly vital, particularly in fields heavily reliant on data processing, computation, and analysis. Among these, accountancy experienced a significant transformation from manual to computerized systems as a result of digital innovations. Accounting software, web-based tools, and various digital platforms emerged as essential aspects of the profession, demanding higher levels of competence and knowledge. At Pamantasan ng Lungsod ng San Pablo, many accountancy students struggled to keep pace with these technologies because they had not been sufficiently exposed to such tools in their prior educational backgrounds. This lack of exposure prevented them from staying current with the latest technological advancements.

A significant gap existed between students' theoretical knowledge of digital tools and their ability to apply them in academic contexts. While students were exposed to general technology, they lacked the specific proficiency required to operate accounting-related tools. Factors such as limited resources, the unavailability of specialized digital education, and difficulties adjusting to digital learning environments widened this gap. Although academic institutions needed to update their curricula to prepare students for an evolving digital landscape, variations in digital literacy—stemming from unequal access to resources—complicated the process. Addressing this gap provided insights for developing targeted interventions and curriculum enhancements to equip students with essential digital competencies.

Numerous studies affirmed the importance of digital competency in accounting education. Ahmed et al. (2021) discussed the advanced levels of proficiency students must attain to assess digital information effectively. Al-Hattami (2025) viewed digital accounting as a catalyst for change, particularly when paired with technological self-efficacy. Furthermore, Januszewski et al. (2024) and Adi et al. (2024) emphasized the importance of aligning with global technological trends to improve learning outcomes.

Despite this existing research, much remained to be accomplished. Ahmed et al. (2021) showed that accounting students often fell behind their peers in digital skills, while Shamsudin et al. (2023) highlighted systemic inadequacies in preparing students for future employability. Locally, Lanuza and Escalona (2020) noted that educational policies in the Philippines were slow to adapt to rapid technological changes. Tavares et al. (2023) and Qasim & Kharbat (2020) advocated for significant curriculum revisions and cooperation between institutions and professional bodies.

This study, “ACCOUN-TECH-CY: A Correlational Study of Technological Literacy and Academic Performance Among Accountancy Students in Pamantasan ng Lungsod ng San Pablo,” aimed to evaluate the technological literacy of students and determined whether proficiency in digital tools contributed to their academic success.

2. Material and methods

2.1 Research Design

This study utilized a quantitative correlational research design to examine the relationship between technological literacy and academic performance among Accountancy students at Pamantasan ng Lungsod ng San Pablo. This design was appropriate because it allowed the researchers to measure numerical data, analyze patterns, and determine the degree and direction of the relationship between the identified variables.

The correlational design enabled an investigation into how the independent variable was associated with the dependent variable. Additionally, the study included the frequency of digital tool usage as a supportive variable to further describe the students’ technological engagement. The quantitative approach was chosen to provide evidence-based, empirical data to support data-driven decision-making for curriculum and instructional improvements within the accountancy program.

2.2 Locale of the Study

The study was conducted at Pamantasan ng Lungsod ng San Pablo (PLSP), a local university located in Brgy. San Jose, San Pablo City, Laguna, Philippines. PLSP offered various academic programs, including Accountancy, which provided a structured curriculum designed to prepare students for the evolving demands of the profession. This curriculum emphasized both foundational accounting knowledge and the integration of modern technological tools to ensure student readiness for a digital workplace.

2.3 Respondents of the Study

The respondents of this study consisted of accountancy students enrolled at Pamantasan ng Lungsod ng San Pablo during the Academic Year 2025–2026. These students were selected as participants because they were directly involved in accounting education and were exposed to the use of digital tools and technologies relevant to the study.

A total number of respondents was determined through the application of a simple random sampling technique, ensuring that each student had an equal chance of being selected. This method was utilized to minimize bias and to obtain a representative sample of the population. The respondents came from different year levels within the accountancy program, providing a diverse range of perspectives in terms of technological literacy and academic performance.

The participants voluntarily took part in the study and were informed about its purpose prior to data collection. Their responses served as the primary source of data in determining the relationship between technological literacy and academic performance.

2.4 Sample and Sampling Procedure

Simple Random Sampling was utilized in this study to ensure that the sample was representative of the population without dividing it into subgroups or strata. This technique gave every member of the population an equal and independent chance of being selected as a respondent, thereby minimizing selection bias and enhancing the objectivity of the results. By employing this method, the researchers aimed to ensure that the findings could be generalized to the broader student body within the accountancy program.

2.5 Research Instrument

The study employed a researcher-made Likert-scale questionnaire, validated by experts in accounting education and other professionals, as the primary research instrument to collect quantitative data. The instrument was directly anchored on the reviewed literature, including the Technology Acceptance Model (TAM), Technological Pedagogical Content Knowledge (TPACK), and various empirical studies regarding digital literacy and accounting software proficiency. It consisted of four main parts: the first part gathered the demographic and technical profile of the respondents, including age, sex, year level, general weighted average (GWA), type of devices used, and internet access; the second part assessed the respondents’ technological literacy in terms of basic digital skills and accounting software proficiency; the third part identified the digital tools commonly used by the respondents for academic and accounting-related tasks, including the frequency of usage; and the fourth part evaluated the respondents’ academic performance based on their perceived preparedness and ability to apply learned concepts.

2.6 Data Gathering Procedure

Prior to the actual data gathering, the researchers sought approval from the appropriate authorities, including the College Dean and concerned faculty members of Pamantasan ng Lungsod ng San Pablo, to conduct the study among accountancy

students. After securing permission, the researchers coordinated with instructors to identify the target respondents and determine the most appropriate schedule for the administration of the survey questionnaire.

The primary data gathering instrument used in this study was a validated researcher-made questionnaire. Before its distribution, the researchers ensured that the instrument had undergone expert validation to establish its clarity, relevance, and alignment with the objectives of the study.

The researchers personally administered the questionnaires to the selected respondents using simple random sampling. Prior to answering the questionnaire, the respondents were informed about the purpose of the study, and their consent was obtained. They were assured that their responses would be treated with strict confidentiality and would be used solely for academic purposes.

The questionnaire was distributed either in printed form or through an online platform, depending on the availability and convenience of the respondents. Clear instructions were provided to guide the respondents in answering each part of the instrument. The researchers remained available to address any clarifications during the process to ensure accurate and complete responses.

After the completion of the questionnaires, the researchers immediately retrieved the printed copies or collected the responses from the online platform. The gathered data were then checked for completeness and consistency. Responses with missing or invalid entries were excluded from the final dataset to maintain the integrity of the analysis.

Finally, all collected data were organized, encoded, and prepared for statistical treatment. The encoded data served as the basis for the application of descriptive and inferential statistical tools used in the study.

2.7 Data Analysis Techniques

The data gathered from the survey questionnaires were systematically organized, encoded, and analyzed using appropriate statistical tools to address the research objectives. Both descriptive and inferential statistics were employed to ensure a comprehensive interpretation of the results.

Descriptive statistics were utilized to summarize and present the general characteristics of the data. Frequency counts and percentages were used to describe the distribution of respondents in terms of the digital devices and tools they utilized. The weighted mean was applied to determine the level of technological literacy and academic performance based on the Likert-scale responses. Meanwhile, the standard deviation was used to measure the variability of the responses, indicating the consistency of the participants' answers. For the interpretation of the weighted mean, the following scale was used: 4.21 – 5.00 = Very High/Excellent; 3.41 – 4.20 = High/Good; 2.61 – 3.40 = Moderate/Average; 1.81 – 2.60 = Low/Fair; 1.00 – 1.80 = Very Low/Poor

Prior to inferential analysis, normality testing was conducted using the Kolmogorov–Smirnov and Shapiro–Wilk tests to determine whether the data followed a normal distribution. The results revealed that the data were not normally distributed ($p < 0.05$), which justified the use of non-parametric statistical methods.

For inferential statistics, the Spearman Rank-Order Correlation Coefficient (ρ) was employed to determine the strength and direction of the relationship between technological literacy and academic performance. This test was appropriate given the non-normal distribution of the data and the ordinal nature of the variables. The level of significance was set at 0.05 to test the null hypothesis.

The correlation analysis specifically examined the relationships between: (1) basic digital skills and academic performance, (2) accounting software proficiency and academic performance, and (3) overall technological literacy and academic performance. The results of these analyses served as the basis for accepting or rejecting the null hypothesis and for drawing conclusions in the study.

2.8 Ethical Considerations

The study was conducted according to the highest ethical standards to protect the rights, dignity, and confidentiality of all participants. Prior to the initiation of data collection, participants were informed of the study's purpose, procedures, and expected outcomes. Participation was strictly voluntary, and written informed consent was obtained from every respondent.

Confidentiality and anonymity were strictly maintained throughout the research process. No identifiable personal information was recorded or disclosed; all data were anonymized and utilized solely for academic purposes. Furthermore, participants were notified that they were free to withdraw from the study at any moment without penalty or negative consequences.

Every precaution was taken to ensure that the study inflicted no physical, emotional, or psychological harm on the participants. The questionnaire was designed to exclude sensitive or intrusive topics, and all information was collected, stored, and analyzed with honesty and ethical integrity.

The results of the study were reported truthfully, without misrepresentation or distortion. The research followed the ethical guidelines of Pamantasan ng Lungsod ng San Pablo and underwent the required review and clearance by the institution's research ethics committee.

3. Results and Discussion

3.1 Digital Devices and Digital Tools Used by Accounting Students

The results showed that mobile phones and laptops, at 98% and 39% respectively, were the most commonly used digital devices among accountancy students. This indicated a strong reliance on portable and accessible technology for academic purposes. Other devices, such as tablets (14%) and desktops (6%), were less frequently used, which implied a limited dependence on fixed or supplementary hardware.

In terms of digital tools, Learning Management Systems (LMS) and Word Processors/Office Suites (both at 94%) were the most frequently used. Presentation tools (91%), Communication tools (91%), and Video Conferencing platforms (88%) were also widely utilized. However, the use of accounting software (58%) and study applications (54%) was moderate, while statistical or data analysis tools (1%) were rarely used.

These findings were consistent with the DepEd Digital Rise Program (2022), which highlighted the role of LMS and digital productivity tools in sustaining academic engagement in technology-driven environments. Similarly, the results echoed the study of Chasubuta, Ndibalema, and Loislue (2024), who examined the predictive potential of technological literacy and facilitative conditions in relation to LMS usage and revealed that technological literacy was significantly impacted by these factors.

Furthermore, the results aligned with the study by Cadiz-Gabejan and Takenaka (2021), which revealed that while students were highly literate in word processing, they remained moderately literate in other domains.

3.2 Level of Technological Literacy

3.2.1. Level of Technological Literacy in Terms of Basic Digital Skills

The findings revealed that the accountancy students possessed a high level of basic digital skills, with an overall mean of 4.19, which was interpreted as "High." Most indicators were rated between "High Basic Digital Skills" and "Very High Basic Digital Skills," indicating that students were confident in performing fundamental digital tasks. The relatively low standard deviation across indicators suggested consistency in students' responses, implying that basic digital competency was generally shared among the respondents. These results indicated that students were well-equipped to navigate technology-mediated learning environments, which supported their readiness for digital academics.

3.2.2 Level of Technological Literacy in Terms of Accounting Software Proficiency

The level of accounting software proficiency was also rated "High," with an overall mean of 3.82, which was comparatively lower than the mean for basic digital skills. All indicators were verbally interpreted as "High Proficiency," suggesting that students possessed functional knowledge of accounting-related software but might have lacked advanced or in-depth proficiency.

The higher variability in responses, as reflected by the standard deviation, indicated differences in students' exposure to and confidence in using accounting software. This finding suggested that while students were capable of using accounting applications, there remained a need for more structured and hands-on training to strengthen specialized technological competencies.

3.2.3 Level of Technological Literacy in Terms of Basic Digital Skills and Accounting Software Proficiency

The technological literacy of the accountancy students was rated "High," with a composite mean of 4.00. This result indicated that students were generally technologically competent, with stronger skills in basic digital operations than in specialized accounting software. The findings implied that while technological literacy was present, it could be further enhanced by focusing on discipline-specific applications.

These findings supported the study of Cadiz-Gabejan and Takenaka (2021), which identified strong competencies in general computer literacy but weaker skills in spreadsheet and accounting-related applications. Similarly, they aligned with

the study by Dacaymat et al. (2024), which reported that BSAIS students demonstrated above-average digital literacy but only low-average proficiency in accounting software.

Moreover, Nickell and Chambers (2022) emphasized that accounting education had to move beyond basic technological familiarity and focus on application-based learning to meet the evolving demands of the profession. From a theoretical standpoint, the disparity between general digital skills and specialized accounting software proficiency highlighted the relevance of the TPACK framework, which stressed the need to integrate technological knowledge with domain-specific content for meaningful learning outcomes.

3.3 Level of Academic Performance

3.3.1 Preparedness

The level of academic performance among the accountancy students, particularly in terms of preparedness and practical application, was found to be "High," with an overall mean of 4.16. Several indicators were rated as "Excellent," indicating that students perceived themselves as well-prepared, organized, and capable of applying learned concepts to academic tasks.

The consistent mean scores and relatively low standard deviation suggested that students generally shared similar perceptions regarding their academic readiness. This finding implied that students were able to meet academic expectations and perform effectively in their coursework.

These findings supported the studies by Taib et al. (2023) and Alcantara et al. (2025), which reported that students with higher digital competencies tended to demonstrate better academic preparedness and task performance. Furthermore, the results reflected the principles of Outcome-Based Education (OBE) mandated by CHED, which emphasized competence, preparedness, and performance-based outcomes in higher education.

3.4 Correlation Analysis Between Technological Literacy and Academic Performance

The correlation analysis using the Spearman Rank Correlation revealed a significant positive relationship between technological literacy and academic performance. Basic digital skills showed a positive correlation with academic performance ($p = 0.579$, $p = 0.000$), indicating that students with stronger basic digital competencies tended to achieve better academic outcomes.

Similarly, accounting software proficiency was also significantly correlated with academic performance ($p = 0.510$, $p = 0.000$), suggesting that students who were more proficient in accounting-related technologies performed better academically. Furthermore, overall technological literacy demonstrated a moderate to strong positive relationship with academic performance ($p = 0.589$, $p = 0.000$).

These results led to the rejection of the null hypothesis, confirming that technological literacy significantly influenced academic performance. Related literature also affirmed these findings; Cadiz-Gabejan and Takenaka (2021) found that students with high computer literacy achieved better academic results, while Taib et al. (2023) reported moderate to strong associations between digital competencies and learning outcomes among accountancy students.

The findings supported the assumptions of the Technology Acceptance Model (TAM) and the TPACK framework, emphasizing that both the acceptance and effective application of technology contributed to improved learning outcomes.

4. Conclusion & Recommendations

The findings of the study revealed that accountancy students demonstrated a high level of technological literacy, particularly in basic digital skills, while their proficiency in accounting software, although also high, was comparatively lower. Students were found to have a high level of academic performance, indicating that they were generally well-prepared and capable of applying their knowledge in academic tasks. Furthermore, the results confirmed a significant positive relationship between technological literacy and academic performance, showing that students with higher technological competence tend to achieve better academic outcomes. Overall, the study established that technological literacy plays a crucial role in enhancing the academic success of accountancy students.

Based on these findings, it is recommended that educators and faculty members integrate more technology-driven and hands-on activities into the curriculum, particularly those involving accounting software and advanced digital tools. Curriculum developers and academic administrators are encouraged to strengthen course offerings by incorporating specialized training and laboratory-based instruction that reflect current industry practices. Students should also take initiative in developing their technical skills through self-directed learning, online resources, and participation in relevant workshops. Additionally, future researchers are encouraged to explore other variables such as technological self-efficacy, access to digital resources, and learning motivation, as well as to conduct similar studies across different academic

programs or institutions.

Despite the significant findings, this study has several limitations. The research was limited to accountancy students from a single institution, which may affect the generalizability of the results to other populations. The study also relied on self-reported data gathered through questionnaires, which may be subject to response bias and personal interpretation. Furthermore, external factors such as socioeconomic status, internet accessibility, and prior exposure to technology were not included in the analysis, although these variables may influence both technological literacy and academic performance. These limitations suggest the need for broader and more comprehensive future studies to validate and expand upon the findings.

Compliance with ethical standards

This study was conducted in full compliance with the ethical standards and guidelines prescribed by Pamantasan ng Lungsod ng San Pablo and its research ethics committee, ensuring that all procedures involving human participants adhered to principles of integrity, respect, and accountability. Participation in the study was entirely voluntary, and informed consent was obtained from all respondents prior to data collection, with clear explanations provided regarding the purpose, procedures, and intended use of the research. The researchers ensured strict confidentiality and anonymity of all information by refraining from collecting personally identifiable data and by securely handling all responses for academic purposes only. Participants were informed of their right to withdraw from the study at any point without penalty. Ethical approval was secured from the appropriate institutional authorities before the conduct of the study. The researchers declare that there were no conflicts of interest that could have influenced the results or interpretation of the findings. Proper acknowledgement was given to all sources, references, and individuals who contributed to the completion of the study, ensuring that no form of plagiarism or academic misconduct was committed. The authors collectively take full responsibility for the accuracy, originality, and integrity of the work, and affirm that the manuscript is their own intellectual property, with copyright ownership retained by the researchers in accordance with institutional policies. All ethical considerations were carefully observed throughout the research process to uphold the credibility and validity of the study.

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