

# Awareness of Accounting Graduates on Accounting Information System and Other Software: A Basis for Learning Intervention Program

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**Abstract:** *The continuous flow of time translates to unending development of technology, this, of course, includes the advancement of technology in the area of accountancy. Through the years, the accounting processes gradually shifted from manual to automated, this means that the Accounting Information System (AIS) and other software have also emerged. Quantitative approach and descriptive-comparative research designs were used in this study. The statistical treatment and data processes on the other hand were Frequency and Percentage distribution, Likert scale, Weighted mean, Rank method, and Analysis of Variance (ANOVA). The finding indicates that there is a gap regarding the level of awareness of accounting graduates and AIS, Emerging Technologies, Office Application Tools, and Communication and Collaboration Software that were being used in the workplace. Based on the findings, the researchers have been able to formulate an intervention program that can help in filling the gap and can be beneficial to the students, instructors, institutions, and businesses.*

**Keywords:** *Accounting Information System, Emerging Technologies, Office Application Tools, and Communication and Collaboration Software, Intervention Program, Gap*

## 1. INTRODUCTION

The rapid growth of technology opens new ways of learning to students, which has been known globally. Before modern technology emerged, most parts of the education system were manual. It underwent a significant transformation as a result of innovation and the application of this new technology, which is now an essential part of everyone's life and of education. As a result, students are more inclined to be successful in their careers, and the accounting industry will continue to evolve. Since accounting has been experiencing progressive development along with technological advancements, new software has been empowered in every school, so students are now adopting the computerized accounting system that causes the traditional way to gradually disappear. In addition, expanding regulations will lead to more difficulty for traditional accounting systems to sustain. Thus, the demand for modern accounting systems is going to increase (Sobhan, 2019).

As indicated in the context of "Accounting Information System" by Jain (2023), Accounting Information System

(AIS) is one of the methods to gather and store all data regarding events and financial transactions used for decision-making. It provides students with insights and skills required to use in activity control processes and financial reporting cycles. In this course, learners gain knowledge on how to be prepared for being accountants to enhance their study and add substantial benefits to business entities. Furthermore, Gofwan (2022) explained that AIS is an absolute tool in aiding individuals, government institutions, and businesses in achieving and remaining a competitive advantage in spite of emerging technological innovations.

Initially, accountants have taken advantage of new technologies to accomplish their work easily, effectively, or simply. Therefore, the academe needs to include data analytics courses in the existing curriculum in response to the demands from both the business industry and the Association to Advance Collegiate Schools of Business (AACSB). Accounting departments, which are provided with a variety of options to incorporate data analytic instruction into the curriculum, deal with several challenges such as uncertainty about what data analytics is, how it applies to accounting, what courses are allowed to include in data analytics, and

what abilities and instruments should be learned (Dzurinin et al., 2018).

As per the AACSB 2018, there will be an enhancement in the knowledge and skills associated with incorporating information technology into graduate accounting degrees, particularly in the ability of instructors and students to adapt to new technological advancements. Thus, it is evident that developing technologies are important for both students' (future) education and the accounting profession (Kroon et al., 2021).

The purpose of this study was to assess the level of awareness of accounting graduates from Mabalacat City College with the Accounting Information System and other various accounting software utilized in the industry. This study was used as a basis to improve the teaching and learning procedures in order to comply with the software used in the business world. This also held significance in the business and accounting fields, as they would be enforced by future professionals who were equipped with knowledge in regards to the accounting information system.

## **2. REVIEW OF RELATED LITERATURE**

Accounting Information System (AIS) is a system primarily being used to track all aspects of a business's financial activity and help businesses to improve their financial reporting, decision-making, and internal controls (Thottoli, 2020). According to the study, most companies acknowledge the importance of incorporating various accounting software applications, including ERP software, Peachtree, QuickBooks, Tally, generalized accounting software, PowerPoint, Excel, Adobe Acrobat, and other related tools, to facilitate tasks in auditing, taxation, consulting, and corporate management. Consequently, there is a need to acquire proficiency in utilizing specialized accounting software and gain a comprehensive understanding of it.

As stated in the study of Jones et al. (2021), the spread of technology has been of a significant effect on every aspect of the world, including the business area. As a result, businesses now heavily rely on AIS like Xero. The importance of using software in accounting has doubled as a consequence of increasing computer use in daily life, development in accounting, and the introduction of numerous accounting programs that are quickly replacing manual accounting (Ganji, 2021). Additionally, Kroon et al. (2021) mentioned that the work of accountants is going through significant changes as a result of emerging technologies, which are affecting the lives of millions of professionals worldwide. These developments have simplified the global sharing of knowledge and expertise, bringing growth to the concept of open innovation.

Based on the previous research that was conducted by Cadungog-Uy (2020), the disruptive wave of new technologies is affecting the accounting industry, which

encourages higher education to better prepare accounting students for entering the workforce. The study's findings revealed that accounting students lack a basic understanding of Quickbooks, Peachtree, and SunSystem, among other technologies used in the workplace and accounting information systems. The utilization of diverse office software applications such as but not restricted to, Google Docs, Google Presentation, Microsoft Excel, Google Sheets, Microsoft Word, and Microsoft PowerPoint has become an area in which they excel. According to Chan (2019) research (cited by Cadungog-Uy, 2020), saying that in order to give graduate students, the opportunity to gain awareness in actual workplace positions, the study suggested that the school possibly requires part-time work experience with educational credit.

In the study of Hingorani and McNeal (2018), business and engineering schools have included Enterprise Resource Planning (ERP) courses to their programs in order to better prepare students for their future careers. The article promotes QuickBooks for Accounting as a more intuitive and user-friendly alternative, resulting in students having a better knowledge of the fundamental ideas needed in creating a firm on SAP. In research conducted in 2018, Frimpong et al. found that while computerized accounting offers many benefits, some businesses still use manual accounting due to factors such as fear of computers, resistance to change, and the high cost of software. They also noted that small businesses that want to use computerized accounting but are unable to do so because of the high cost of accounting software such as Tally, QuickBooks, and Sage can use Microsoft Excel to do their accounting work.

Software like Microsoft PowerPoint, Microsoft Word, and Microsoft Excel help students to simplify, minimize, and have consistency in the presentation that will be used in discussing important information (Basri et al., 2018). Furthermore, according to the study of Lee et al. (2018), accountants use software and tools to achieve their objectives, which has been critical for accounting educators to adopt various technologies that must be used and taught in accounting programs. The study shows that the most frequently used software/tool that needs to be emphasized in universities is Microsoft Excel because of how important it is to various accounting fields. Students will gain knowledge and skills if the curriculum involves hands-on experience in using software tools.

As indicated by Paras (2019), students are skilled in using Microsoft Office software and performing basic computer operations. Office software expertise, including understanding Microsoft Word, PowerPoint, and Excel, used to be a need for most company activities. The demand for employees who can learn a variety of computer programs with ease and confidence is increasing. Being competent gives us the chance to succeed in a technological environment that is continuously changing. Additionally, Johnson (2023) stated that emerging technology in accounting pertains to the

application of innovative solutions to manage economic data and processes more efficiently. Accountants can use Power BI to find hidden opportunities and better interpret data, allowing them to assist individuals in making more educated decisions.

As mentioned by Pierce (2022), Google Sheets is a powerful tool that can be used for accounting purposes. This is useful for activities like tracking invoices and recognizing pending payments. As per Sen (2022), Microsoft Access is a component of the Microsoft Office Suite and functions as a Database Management System (DBMS). It allows users to construct and integrate databases for more effective business operations.

Accounting education relies heavily on accounting information systems to make judgments based on updated, current, and contemporary data, according to Yoshikuni et al. (2023). It is critical to incorporate AIS into undergraduate accounting curricula in order to adequately prepare accounting students to be industry-ready and informed about the tools they will use in the profession. Based on the study of Al-Hattami (2021), a vital issue that seems to have not been addressed in numerous college curriculums is preparing students for working environments. The ability to find employment and preparation for the job market accounting graduates has been negatively affected by neglecting to deal with developments within the accounting program. Therefore, from that moment they are studying until the actual application of accounting employment, the accountant needs to adapt to this modern technology. Mujiono (2021) stated that the digital skills gap continues to widen between the accountants and the software that is being developed.

As indicated in the study by Asmuni et al. (2020), we must gain a deeper understanding of the function of information technology in this accounting challenge through educational methods, one of which has been applied in Indonesia: the project-based learning (PBL) approach. The PBL approach method is used to help students better understand how information technology serves a part in the accounting challenge and to provide them with a deeper knowledge of accounting information systems in real-life situations.

According to Kharbat and Muqattash (2020), designing a curriculum is a joint responsibility between professionals and universities. Because modern accounting students require advanced IT skills, implementing this suggested curriculum will bridge the gap between the AIS curriculum and real-world employment demands. In addition, O'Donnell (2019) stated that, AIS programs in accounting have failed to meet the increasing demand for accountants with IT skills, highlighting the need for deeper integration of data analytics competencies.

Incorporating information and computing technology with the curriculum is one of the biggest challenges, as stated in study of Lai and Chiu (2018), because of the rapid development of computer and information technology (IT).

Based on the study's findings, instructors may find it useful and practical to enhance the learning experience in information systems courses, create relevant curriculum, and understand the most important components of enhancing learning about information systems and related technologies. Furthermore, Moradi et al. (2019) discovered that a strong curriculum can have a beneficial effect on students' learning in AIS courses, as their fifth hypothesis showed. In order to give the undergraduates students, the understanding of system, efforts are also being made to improve the curriculum of the student in accounting program.

Companies use accounting software to track and analyze financial transactions, search engines to conduct research, and email for communication. As a result of this, adding computerized accounting subjects to the curriculum has become crucial in order to align education with the demands of today's accounting professionals. The objective is to improve students' abilities and understanding, equipping them more effectively for their future professions and to understand how this will affect their academic performance (Chandrapala & Thevaruban, 2019).

Accounting graduates should be aware of how technology is transforming the profession because of the distinctive feature of the digital economy (cited by Kotb et al., 2019). Correspondingly, Akanbi and Adewoye (2018) asserted that the primary objective of comprehensive AIS is to automate business processes and provide real-time data. Moreover, according to Gonzales (2021), the accounting field need to constantly enhance their skills and knowledge in accounting systems and tools for the newest digital transformation trends.

Ackerman (2019) explained in his study that weak employment preparation is just one of the negative effects of the out-of-date curriculum in accounting for students. Organizations are also struggling since it takes longer and cost more to keep new workers up to date, and the perspective of the accounting profession as a whole is also affected. This is partly due to the significant skills gap that exists between what businesses need and what institutions are teaching.

According to Sharma (2023), some of the factors why such AIS are important in business is because they increase the execution and decisionmaking speed, improve the accuracy and quality, provide transparency, ease the accounting procedures while saving time and decreasing cost, it also gives freedom to access anywhere while having great data security and privacy, and lastly, it helps in monitoring the progress and generating reports. In addition, according to Senthil (2018), web-based systems are accessed through HTTP and typically run in web browsers. They are used by businesses because they reduce development costs and time since they don't require installation on local devices. The introduction of web-based solutions has impacted company operations in the digital age, enhancing efficiency and collaboration.

As eloquently explicated by Solomon (2023), the growing field of Business Process Outsourcing (BPO) is in high demand and continues to evolve. BPO automation helps your business stay competitive by making it simpler to decrease manual labor costs and errors while speeding up processes. Furthermore, Al-Amin (2023) indicated that accounting procedures can get more complicated and time-consuming as organizations expand. Accounting professionals from BPO companies can assist companies in identifying and managing financial risks. They can offer advice on following tax laws, regulations, and other financial hazards. Expanding organizations can simplify and save time on accounting by outsourcing to BPO firms.

On the other hand, Wann (2023) explained that companies looking forward to reducing their accounting procedures and minimizing expenses frequently turn to BPO financial accounting. BPO for financial accounting is a growing trend where companies hire outside experts to handle their accounting tasks. Babb's research from 2023 indicates that a wide range of processes are possible for outsourcing. This includes data entry jobs, financial processes, marketing initiatives, and operations relating to human resources.

### 3. CONCEPTUAL FRAMEWORK

Accounting Information System (AIS) as defined by Turner et al. (2022), is a system that automates, integrates, and manages all areas accounting-related aspects of an organization.

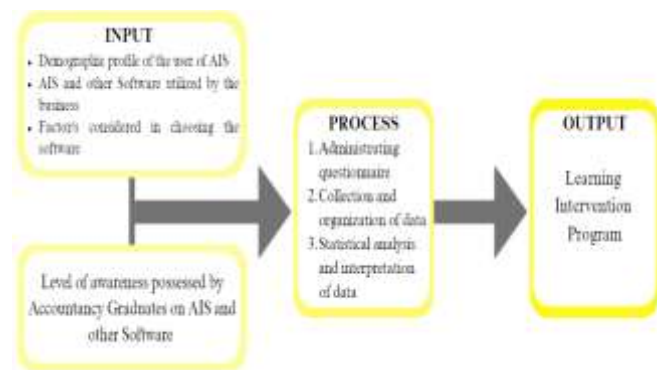


Figure 1. Research Paradigm

The Input Process Output (IPO) model was used by the researchers to analyze the demographic profile of businesses, the Accounting Information System (AIS), and other related software used in the workplace, as well as the factors that were considered when selecting their chosen software. It also involved determining the level of awareness that accounting graduates had of AIS and other software. The questionnaire was used during the process stage to gather data, and the output stage focused on developing an effective AIS-enhanced accounting course.

### 4. RESEARCH PROBLEMS

The objective of the study was to identify the graduates' awareness of the different accounting information system and other software, which are also used in the workplace. The findings were used to identify the possible learning intervention program to be suggested. The specific objectives focused on providing answers to the following questions:

1. What is the demographic profile of the user of Accounting Information System:
  - 1.1. Type of Business
  - 1.2. Nature of Business
  - 1.3. Years of using Accounting Information System and other Software
2. What accounting information system and other software are typically utilized by businesses/organizations?
3. What are the factors considered by the businesses in choosing the specific software?
4. What level of awareness do accounting graduates have of accounting information system?
5. What is the accounting graduates' level of awareness of the other software utilized in the workplace:
  - 5.1. Emerging technologies
  - 5.2. Information-searching software
  - 5.3. Operating systems
  - 5.4. Office software application
  - 5.5. Office productivity software
  - 5.6. Software for collaboration or communication
  - 5.7. Cloud storage
6. Is there a significant difference in the profile of the business and accounting information system and other software used?
7. What learning intervention program should be crafted from the result?

### 5. HYPOTHESIS

The researchers expect the following hypothesis could be constructed:

#### Null Hypothesis

**H<sub>0</sub>:** There is no significant difference between the profile of the business and accounting information system and other software.

#### Alternative Hypothesis

**H<sub>1</sub>:** There is a significant difference between the profile of the business and accounting information system and other software.

### 6. SIGNIFICANCE OF THE STUDY



The findings of the study have a great value in improving the learning process of students by increasing their understanding of accounting information system and other software. The results can also help higher education institutions, instructors, and school administration implementing learning intervention programs that align with industry requirements. Additionally, the study can help businesses save time and money by bridging the knowledge gap between accounting education and the AIS that is really being used in the workplace.

**7. SCOPE AND DELIMITATIONS OF THE STUDY**

The researchers decided to limit the study to significant features such as Accounting Information System and other software. The selected groups of respondents were accounting professionals of Business Process Outsourcing (BPO) companies in Angeles City and Mabalacat City, Pampanga, as well as graduates of the Bachelor of Science in Accountancy program at Mabalacat City College for the academic year 2021-2022. This study aimed to determine the awareness of the graduates regarding Accounting Information System and other software used in the workplace, which would be helpful in educational development.

**8. METHODOLOGY**

**8.1 Research Design**

This paper used Descriptive- Comparative Research Design in order to process the data gathered. According to McCombes (2023), Descriptive Research Design is used to observe and measure variables in order to produce a precise and well organized description of population, situation, or object. On the other hand, the Comparative Research Design according to Richardson (2018), is the comparison of two groups in order to derive a conclusion about them.

**8.2 Research Locale**

The study was conducted at Angeles City and Mabalacat City, Pampanga, Philippines. Business Process Outsourcing (BPO) companies around Angeles City and Mabalacat City, Pampanga are the first respondents of this study. The second respondents are accounting graduates from Mabalacat City College.

**8.3 Respondents**

Sampling is very useful while performing research. It is one of the most crucial aspects of assessing the accuracy of the study's results (Singh, 2018). The researchers employed Purposive Sampling Technique in identifying their chosen respondents- this technique is a non-random approach wherein the respondents are selected based on researchers' criteria (Crossman, 2020). The selected respondents are two groups. The first group are the 20 accounting professionals from 5 of the top 15 BPO firms inside the Clark Pampanga. These are TOA Global, Outsourced HR Solution, Origo, Clark Outsourcing, and MICROTEL Global Solutions Inc

(Pajuleras, 2022). The second group are the 20 accounting graduates from MCC from the batch 2021-2022 who have accounting related job/experience.

Group	No. of Respondents	Selection Criteria
First Respondents	20	Four (4) accounting professionals each of the aforementioned BPO Companies.
Second Respondents	20	Accounting graduates who have accounting-related job/experience

**8.4 Instrument**

Two questionnaires were adapted by the researchers to gather relevant information: one for accounting graduates and one for business organizations. The questionnaire instrument was adopted from Cadungog-Uy's (2020) research questionnaire, from her thesis entitled: Accountancy Students' Familiarity with Accounting Information Systems and Other Technologies Used in the Workplace. This questionnaire is a closed-ended questionnaire, specifically, a checkbox questionnaire was used. According to Gupta (2020), closed-ended questions consist of providing a predefined set of responses to the respondent, who then selects from the options provided.

**Table 1: Reliability Test Results**

Indicators	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items		
		N of Items	Interpretation	
Level of Awareness	0.883	8	Good	

*Cronbach's Alpha:  $a \geq 0.9$  (Excellent),  $0.9 > a \geq 0.8$  (Good),  $0.8 > a \geq 0.7$  (Acceptable),  $0.7 > a \geq 0.6$  (Questionable),  $0.6 > a \geq 0.5$  (Poor),  $0.5 > a$  (Unacceptable) (Source: National Research Council Committee on Scientific Principles for Educational Research, 2002)*

The researchers used Cronbach's alpha after pre-testing a research instrument through the help of a skilled statistician. In this study, table 1 above shows the reliability test results of the instruments. Based on the findings, it was found that the level of awareness scale got a result of 0.883, interpreted as good. This indicates that the research instrument has passed the reliability test and was accepted for data gathering.

**8.5 Data Collection**

The researchers conducted a survey using questionnaires, obtaining consent from participants via email and in person. They focused on two key areas: the choice of accounting software and the factors influencing these choices in BPO companies in Angeles City and Mabalacat City, Pampanga, and the awareness level of accounting graduates regarding

software used in the workplace. They employed Google Forms for graduates of Mabalacat City College (MCC) and on site distribution of questionnaires for accounting professionals, they allowed participants sufficient time to provide thoughtful responses. The gathered data formed the foundation for processed information.

**8.6 Data Processing and Statistical Treatment**

For the data analysis, the following statistical technique was used:

8.6.1 *Frequency and Percentage Distribution:* According to Turney (2022), frequency distribution shows how many records are present for every possible outcome of the variable in question. Additionally, a percentage distribution is commonly used to express data such as the relative frequency of survey replies (Dean, 2022). For the computation of percentage, the formula below was used:

$$P = \frac{F}{N} \times 100\%$$

P= Percentage  
F= Frequency  
N= Number of Respondents

**F = MSB/MSW**      The four-point Likert Scale (100= constant 022), is commonly used in collecting and measuring the attitudes, opinions, and responses of the respondents. The neutral response option in the Likert scale is the biggest source of dispute in this statistical tool (Edwards & Smith, 2023), the reason which why the researchers opt to use 4 Point Likert Scale. The following formula was used to calculate the range:

$$\text{Range} = \frac{n-1}{n}$$

- a. The weighted mean scores provided below were used to assess the level of accounting graduates' awareness about various accounting information system and other software.

Rate	Verbal Description	Verbal Interpretation	Range
4	Fully Aware	With advanced knowledge and skill	3.25 - 4.0
3	Aware	With basic knowledge and skill	2.50 - 3.24
2	Not Aware but have heard of it	No skill at all	1.75 - 2.49
1	Fully Not Aware	No skill at all	1.00 - 1.74

8.6.3 *Weighted Mean:* A weighted average is a calculation that accounts for the different weights that each integer in a data collection has. When calculating a weighted average, each value in the data set is multiplied by a predetermined weight before the final calculation is done (Ganti, 2023). The formula given below:

8.6.4 *Rank Method:* it involves determining the ordinal position or the degree of agreement of the participants. This ranking process reorganizes the data from smallest to largest or largest to smallest (Jackson and Klein, 2022).

8.6.5 *One Way ANOVA:* also known as an "analysis of variance," examines the means of independent groups to determine whether there is a statistically significant difference between their population averages (Simkus, 2023).

- F = coefficient of ANOVA
- MSB = Mean sum of squares between the groups
- MSW = Mean sum of squares within groups

**8.7 Ethical Consideration**

This ensured respondents' safety throughout the research. Respondents were fully informed, data kept confidential per Republic Act No. 10173 (Data Privacy Act of 2012), and researchers took precautions against harm. Proper citation and objectivity were maintained. Where: n= highest score on degree of agreement

**9. PRESENTATION, ANALYSIS, AND INTERPRETATION OF DATA**

This section revealed the data gathered, the outcome of the statistical analysis done and interpretation of findings.

1. What is the demographic profile of the user of Accounting Information System?

- 1.1. Type of Business
- 1.2. Nature of Business
- 1.3. Years of using Accounting Information System and other Software

*Table 2.1. Business Profile of the User of AIS in terms of Type of Business*

Type of Business	Frequency	Percentage
Sole Proprietorship	0	0
NGO	0	0
Government	0	0
Partnership	0	0

Where:

$$\bar{x} = \frac{\sum_{i=1}^n (x_i * w_i)}{\sum_{i=1}^n w_i}$$

$\sum$  = sum of  
 w = weights  
 x = value  
 n = number of data  
 $w_i$  = allocated weighted value  
 $x_i$  = observed values

Limited Company (PLC)/ Corporation	20	100
Total	20	100

The business profile of the users of AIS in terms of *type of business* is displayed in Table 2.1. As observed, all (100%) of the participants are considered as a “Limited Company (PLC)/Corporation”.

**Table 2.2. Business Profile of the User of AIS in terms of Nature of Business**

Nature of Business	Frequency	Percentage
Service	20	100
Merchandise	0	0
Manufacturing	0	0
Total	20	100

The business profile of the AIS users in terms of *nature of business* is displayed in Table 1.2. As observed, all (100%) of them provide “Services”. These findings signify that the primary nature of business of the participating AIS users delves with providing services.

**Table 2.3. Business Profile of the User of AIS in terms of Years of Using AIS**

Years of Using AIS	Frequency	Percentage
4 years	5	25
5 years	11	55
> 5 years	4	20
Total	20	100

The business profile of the companies in relation to the *Years of Using AIS* is displayed in Table 2.2. As observed, 55% of the companies have been using AIS for 5 years, whereas 25% have been using AIS for 4 years. On the other hand, 20% have been using AIS for more than 5 years. These findings signify that among the companies participated, the majority of them have been using AIS for 5 years.

2. What accounting information system and other software are typically utilized by businesses/organizations?

**Table 3.1. Accounting Information System Used in Their Business**

Accounting Information System Used (Multiple responses)	Frequency	Percentage to N (20)	Rank
Quickbooks	16	80	1
SAP F1	3	15	6
Oracle/ Flexcube	2	10	7
Peachtree	0	0	

SunSystems	0	0	
Xero	15	75	2
Company Built Software	8	40	3
Others: Mind Your Own Business (MYOB)	5	25	4
Others: What You See Is What You Get (WYSIWYG)	4	20	5

Table 3.1 presents the Accounting Information System and other software used in their business. As observed, the majority (80%) of the companies have been using “QuickBooks”. This is followed by “Xero” (75%), “Company Built Software” (40%), “MYOB” (25%), “WYS” (20%) and “SAP F1” (15%). On the other hand, only 10% have been using “Oracle/Flexcube”. These findings signify that QuickBooks is the main software being used by the companies. Similar to the findings presented in Table 2.1, Itang, A.E., (2020), also found out that Quickbooks is the most used Accounting Information System (AIS) in Nigeria. On the other hand, contrary to the table above, Peachtree/Sage50 was the 2nd most used AIS in their locality, while in the data presented, it was not utilized.

In addition, Marushchak et al. (2021) stressed that Quickbooks was utilized the most because of its features like satisfying complex accounting problems with ease, reconciliation of taxes, reporting financial statements, and inventory management.

**Table 3.2. Emerging Technologies Used in Their Business**

Emerging Technologies Used (Multiple responses)	Frequency	Percentage to N (20)	Rank
Cloud Computing	8	40	2.5
Automation and artificial intelligence	7	35	4
Big data	4	20	5.5
Data analytics	10	50	1
Blockchain technology and distributed ledgers	1	5	7
Cyber security	8	40	2.5
Others: Cyber Physical System (CPS)	4	20	5.5

Table 3.2 demonstrates the technologies used in their business. As observed, half (50%) of the companies have been using “Data analytics”. This is followed by “Cyber security” (40%), “Cloud Computing” (40%), “Automation and artificial intelligence” (35%), “Big data” (20%) and “CPS” (20%). On the other hand, the least used is “Blockchain technology and distributed ledgers” with only 5% of them utilizing this

technology. These findings signify that data analytics is the main technology being utilized by the companies, because data analytics could support Certified Public Accountants (CPAs) in mathematical computations and analysis in order to identify patterns and trends to make effective decisions (Campbell, 2019).

**Table 3.3. Information-searching Software Used in Their Business**

Information-searching Software (Multiple responses)	Frequency	Percentage to N (20)	Rank
Google (for Information)	19	95	1
YouTube (for Video Tutorial)	9	45	2.5
Amazon (for Products)	2	10	6
Bing (for Information)	5	25	4
Udemy (for Learning Materials)	0	0	
Coursera (for Learning Materials)	1	5	9.5
Facebook (for Current Events)	9	45	2.5
Others: Cyber Physical System (CPS)	4	20	5
Others: LinkedIn	1	5	9.5
Others: MS Power Automate	1	5	9.5
Others: Compono-ATS	1	5	9.5
Others: Sprout-HRIS	1	5	9.5
Others: ChatGPT	1	5	9.5

Table 3.3 shows the software applications used in their business. As observed, an overwhelming majority (95%) of the companies have been using “Google (for Information)”. This is followed by “YouTube (for Video tutorial)” (45%), “Facebook (for Current Events)” (45%), “Bing (for Information)” (25%), “CPS” (20%) and “Amazon (for Products)” (10%). Additionally, other software applications used by the companies include “Coursera (for Learning Materials)” (5%), “LinkedIn” (5%), “ChatGPT” (5%), “MS Power automate” (5%), “Compono – ATS” (5%), and “Sprout – HRIS” (5%). These findings signify that Google (for Information) is the main software application being used by the companies.

These application software are essential for individuals in this present times, including to the accounting professionals. Google, in specific, is a tool created to organize the world's

information and make it useful and accessible. According to Ajah and Nweke (2019), Google, a big data giant, was used to search for information. In the year 2009 alone, this search engine processed 24 Petabytes of data searches per day. Since then, Google continued to grow, and maintain its reign as the biggest search engine in the present.

**Table 3.4. Operating Systems Used in Their Business**

Operating Systems Used (Multiple responses)	Frequency	Percentage to N (20)	Rank
Microsoft Windows	20	100	1
Linux/Ubuntu/Redhat	0	0	
ChromiumOS (Cloud)	5	25	4
MacOSX	1	5	5
Android	10	50	2
IOS (iPhone Operating System)	7	35	3

Table 3.4 reveals the operating systems used in their business. As observed, all (100%) of the companies have been using “Microsoft Windows”. This is followed by “Android” (50%), “iPhone Operating System” (35%), and “ChromiumOS (Cloud)” (25%). On the other hand, the least used operating system is “MacOSX” (5%). These findings signify that Microsoft Windows is the main operating system being utilized by the companies.

Business operations are usually being processed through a computer, and a computer's most important software is its operating system. This system is the one responsible for everything in relation to running a computer as it is the one who runs your programs, and controls your hardware, making sure everything works together smoothly, and keeping your computer secure. According to Yeung, N.A. (2022), Android, and Iphone Operating System (IOS), is close competitors to the most used operating system, the Microsoft Windows. Microsoft Windows separates itself from its competition by being the most complete OS as it addresses the shortcomings of the other OS. Microsoft Windows is designed and marketed at budget conscious and specs meticulous individuals, making it perfect for businesses.

**Table 3.5. Office Applications Used in Their Business**

Office Applications Used (Multiple responses)	Frequency	Percentage to N (20)	Rank
Microsoft Word	16	80	4.5
Google Docs	17	85	3
Microsoft 365 Word	16	80	4.5
Microsoft Excel	20	100	1
Google Sheets	18	90	2
Microsoft 365 Excel	14	70	6.5
Microsoft PowerPoint	14	70	6.5



Google Presentation	7	35	9
Microsoft 365 PowerPoint	9	45	8
Open Office	2	10	11
Libre Office	1	5	13
WPS (Writer, Presentation, Spreadsheets)	4	20	10
Others: MS Visio	1	5	13
Others: Power BI	1	5	13

Table 3.5 indicates the office applications used in their business. As observed, all (100%) of the companies have been using “Microsoft Excel”. Moreover, majority of them also utilize “Google Sheets” (90%), “Google Docs” (85%), “Microsoft Word” (80%), “Microsoft 365 Word” (80%), “Microsoft 365 Excel” (70%), and “Microsoft PowerPoint” (70%). Additionally, most of them are making use of “Microsoft 365 PowerPoint” (45%) and “Google Presentation” (35%). Meanwhile, other office applications used by the companies include “WPS (Writer, Presentation, Spreadsheets)” (20%), “Open Office” (10%), “Libre Office” (5%), “MS Visio” (5%), and “Power BI” (5%). These findings signify that Microsoft Excel is the most utilized office application by the companies.

According to Alobaidani et al. (2023), Microsoft Excel was a widely used accounting software application in professional as well as educational environments. It is generally used for creating and managing spreadsheets, doing financial computations, and producing reports and visualizations. Excel could also be used to analyze large datasets.

As stated by Roseberg (2022), businesses mostly used Microsoft Excel as their office application because it was a powerful and versatile tool that is substantially helpful for a wide range of tasks, including financial services and accounting.

**Table 3.6. Office Productivity Software Used in Their Business**

Office Productivity Software Used (Multiple responses)	Frequency	Percentage to N (20)	Rank
Microsoft Access	11	55	4
Libre Office Base	1	5	8
Google Forms	16	80	1
Microsoft 365 Forms	8	40	5
Microsoft Outlook	13	65	2.5
Mozilla Thunderbird	0	0	
Gmail	13	65	2.5
Windows Live	1	5	8
Microsoft One Note	6	30	6
Evernote	0	0	

Google Keep	0	0	
Clickup	1	5	8

Table 3.6 exhibits the office productivity software used in their business. As observed, 80% of the companies have been using “Google Forms”. Furthermore, the majority of them are making use of “Microsoft Outlook” (65%), “Gmail” (65%), and “Microsoft Access” (55%). Also, most of them are making use of “Microsoft 365 Forms” (40%) and “Microsoft OneNote” (30%). On the other hand, other office productivity software used by the companies includes “LibreOffice Base (5%), “Windows Live” (5%), and “Clickup” (5%). These findings signify that Google Forms is the most utilized office productivity software by the companies.

Google Forms was a widespread corporate productivity tool since it was free, simple to use, and could be used to create a number of forms and surveys for various objectives, such as gathering client feedback or generating leads. As stated by the Google Workspace Team (2023), Google Forms was the most utilized office productivity software for businesses because it could be used to collect data, create surveys, manage projects, and generate reports. This makes it a valuable asset for businesses of all sizes and industries.

**Table 3.7. Communication or Collaboration Software Used in Their Business**

Communication or Collaboration Software Used (Multiple responses)	Frequency	Percentage to N (20)	Rank
Microsoft Teams	16	80	1
Slack	6	30	4
Google Meet	12	60	2
Whereby	0	0	
Others: Zoom Meeting	8	40	3

Table 3.7 reveals the communication or collaboration software used in their business. As observed, the majority (80%) of the companies have been using “Microsoft Teams”. This is followed by “Google Meet” (60%), “Zoom” (40%), and “Slack” (30%). These findings signify that Microsoft Teams is the main communication or collaboration software being utilized by the companies

Microsoft Teams is a well-known company communication tool since it combines several functions in one place, such as chat, phone call, video, file sharing, and task management. It was also easy to use and works with other Microsoft products. Companies used Teams to communicate with each other, customers, and other teams. Rouse (2023) states that Microsoft Teams was the leading communication and collaboration platform for businesses because it was user-friendly, compatible with other Microsoft 365 applications, and secure and dependable. Teams was also affordable and scalable, making it a good choice for businesses of all sizes.

**Table 3.8. Cloud Storage Used in Their Business**

Cloud Storage Used (Multiple responses)	Frequency	Percentage to N (20)	Rank
Microsoft One Drive	12	60	2
Dropbox	11	55	3
Google Drive	17	85	1
Apple iCloud	2	10	4.5
Others: MS Sharepoint	2	10	4.5

Table 3.8 exhibits the cloud storage used in their business. As observed, the majority (85%) of the companies have been using “Google Drive”. This is followed by “Microsoft OneDrive” (60%), “Dropbox” (55%), “Apple Cloud” (10%), and “Sharepoint” (10%). These findings signify that Google Drive is the most utilized cloud storage by the companies.

Companies generally preferred Google Drive because it seamlessly integrates with Google's suite of apps, enabling employees to collaborate and access data from anywhere. It is affordable, secure, and allows for real-time communication. As stated by Johnson (2021), Google Drive was the most utilized cloud storage by companies because it was easy to use, accessible, scalable, secured, and collaborative. It also integrates seamlessly with other Google Workspace apps and offers a number of compliance features.

3. What are the factors considered by the businesses in choosing the specific software?

**Table 4. Factors Considered by the Businesses in choosing the Specific Software**

Factors Considered (Multiple responses)	Frequency	Percentage to N (20)	Rank
Ease of Use	19	95	2
Cost	20	100	1
Saves time	18	90	3
Data security and privacy	17	85	5
Accuracy and Quality	16	80	7
Alignment of function and needs	17	85	5
Helps in monitoring progress	15	75	8
Easy installation and maintenance	13	65	9
Increase decision-making speed	11	55	10
Easy data sharing and collaboration	17	85	5

Others: Application Programming Interface (API)	1	5	11.5
Others: Integration	1	5	11.5

Table 4 shows the factors considered by the businesses in choosing the specific software. As observed, the factor “Cost” elicited the highest percentage (100%). This signifies that cost is the primary factor considered by the businesses in choosing a specific software.

According to Knops (2021), they take into account a system's cost as well. The license fees, which change based on the number of users, the price of the software or module, the amount of the hardware, the rate of hosting, the fee of installation and maintenance, the price of training, and the price of support make up the actual cost. Calculating ROI estimation is a good idea prior to signing any type of contract.

Moreover, choosing the right accounting information system (AIS) to be implemented in a business entity was crucial as it will be one of the major factors in how an organization worked, retained its operation, and succeeded. Every (2020) stated that, in choosing accounting software, one of the factors that should always be kept in mind was the cost. Normally, software that provides greater service has a greater cost of acquisition, a business must first identify the software's cost-benefit ratio before applying it to the operation.

Furthermore, “Ease of Use” registered the second highest percentage (95%), followed by “Saves time” (90%), “Easy data sharing and collaboration” (85%), “Alignment of function and needs” (85%), “Data security and privacy” (85%), “Accuracy and quality” (80%), “Helps in monitoring progress” (75%), “Easy installation and maintenance” (65%), “Increase decision-making speed” (55%). Additionally, other factors considered by the businesses in choosing the specific software include “API” (5%) and “Integration” (5%).

4. What level of awareness do accounting graduates have of accounting information system?

**Table 5. Level of Awareness of the Accounting Graduates on Accounting Information System**

Accounting Information System	Weighted Mean	Verbal Interpretation	Rank
Quickbooks	3.00	Aware	2
SAP FI	2.00	Not aware but have heard of it	5
Oracle/Flexcube	2.10	Not aware but have heard of it	4
Peachtree	1.75	Not aware but have heard of it	6
SunSystems	1.45	Fully Not Aware	7
Xero	3.70	Fully Aware	1

Company Built Software	2.75	Aware	3
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3.25-4.00 Fully Aware; 2.50-3.24 Aware; 1.75-2.49 Not aware but have heard of it; 1.00-1.74 Fully Not Aware

Table 5 presents the level of awareness of the accounting graduates on Accounting Information System. Results showed that “Xero” was assessed with the highest weighted mean of 3.70 (Fully Aware), indicating a very high level of awareness. Accountancy students have a significant level of awareness about Xero accounting software, because of its integration into academic programs, practical training opportunities, and the availability of online resources. This awareness equipped them with valuable skills and knowledge that could be applied in their future careers as accountants. Jones et al. (2021), indicates that employing Xero Accounting software as a core unit in accounting can benefit students as it can help in enhancing their professional skills as well as their employability.

Moreover, the respondents have a high level of awareness with regards to “QuickBooks” (3.00) and “Company Built Software” (2.75).

Conversely, the respondents answered “Not aware but have heard of it” to “Oracle/Flexcube” (2.10); “SAP F1” (2.00); and “Peachtree” (1.75). On the other hand, “SunSystems” was assessed with the lowest weighted mean of 1.45 (Fully Not Aware), indicating very low level of awareness regarding this software.

5. What is the accounting students’ level of awareness of the other software utilized in the workplace?

**Table 6.1. Level of Awareness of the Accounting Graduates on Emerging Technologies**

Emerging Technologies	Weighted Mean	Verbal Interpretation	Rank
Cloud Computing	3.15	Aware	1
Automation and artificial intelligence	2.90	Aware	4
Big data	2.05	Not aware but have heard of it	6
Data analytics	3.10	Aware	2
Blockchain technology and distributed ledgers	2.35	Not aware but have heard of it	5
Cyber security	3.05	Aware	3

3.25-4.00 Fully Aware; 2.50-3.24 Aware; 1.75-2.49 Not aware but have heard of it; 1.00-1.74 Fully Not Aware

Table 6.1 presents the level of awareness of the accounting graduates regarding emerging technologies.

Results showed that the technology “Cloud Computing” was determined with the highest weighted mean of 3.15 (Aware), showing a high level of awareness. Based on the findings of the study of Shaikh (2021), the majority of professionals in the field are familiar with cloud computing in accounting, and the remaining respondents are not adopting cloud computing in accounting due to a lack of awareness. Furthermore, those that use cloud computing find it advantageous in a variety of ways, including ease of installation, always up to date, saves money, easy to access (from anywhere at any time), scalability, and so on. This awareness will enable accounting students to adapt to the changing technology landscape and leverage these technologies to improve efficiency and effectiveness in their future accounting careers.

Similarly, the respondents answered “Aware” with regards to “Data analytics” (3.10); “Cyber security” (3.05) and “Automation and artificial intelligence (AI)” (2.90), indicating high level of awareness.

On the other hand, “Big data” was assessed with the lowest weighted mean of 2.05 (Not aware but have heard of it), indicating low level of awareness regarding this software. Also, the accounting graduates have a low level of awareness on “Blockchain technology and distributed ledgers” (2.35).

**Table 6.2. Level of Awareness of the Accounting Graduates on Information-searching Software**

Information-searching Software	Weighted Mean	Verbal Interpretation	Rank
Google (for Information)	3.95	Fully Aware	2
YouTube (for Video Tutorial)	3.95	Fully Aware	2
Amazon (for Products)	3.25	Fully Aware	4
Bing (for Information)	3.00	Aware	5
Udemy (for Learning Materials)	2.15	Not aware but have heard of it	7
Coursera (for Learning Materials)	2.35	Not aware but have heard of it	6
Facebook (for Current Events)	3.95	Fully Aware	2

3.25-4.00 Fully Aware; 2.50-3.24 Aware; 1.75-2.49 Not aware but have heard of it; 1.00-1.74 Fully Not Aware

Table 6.2 reveals the level of awareness of the accounting graduates regarding software application to search for information. Results showed that the “Google (for Information)”, “YouTube (for Video tutorial)”, and

“Facebook (for Current Events)” were assessed with the highest weighted mean of 3.95 (Fully Aware), indicating a very high level of awareness. The high weighted mean of 3.95 (Fully Aware) indicated that accounting students are well aware of the usefulness and relevance of these applications for searching information. The convenience, accessibility, and vast resources available on Google, Youtube, and Facebook make them valuable tools for accounting students to enhance their knowledge and stay informed in their field of study.

In the study of Basu (2018), Google, Youtube, and Facebook are among the things that affect our daily lives. When we are curious about something, we can just Google it and get a pile of answers with it. Whenever we need to have a visual representation to understand something better, we just search it on Youtube. In addition, we can also communicate and be connected with the help of the internet, a great example is Facebook.

Likewise, the respondents have a very high level of awareness on “Amazon (for Products)” (3.25), whereas they have a high level of awareness on “Bing (for Information)” (3.00).

On the other hand, “Udemy (for Learning Materials)” was assessed with the lowest weighted mean of 2.15 (Not aware but have heard of it), indicating low level of awareness regarding this software. Also, the accounting graduates have a low level of awareness on “Coursera (for Learning Materials)” (2.35).

**Table 6.3. Level of Awareness of the Accounting Graduates on Operating Systems**

Operating Systems	Weighted Mean	Verbal Interpretation	Rank
Microsoft Windows	3.95	Fully Aware	1
Linux/Ubuntu/Redhat	2.05	Not aware but have heard of it	6
ChromiumOS (Cloud)	2.55	Aware	4
MacOSX	2.50	Aware	5
Android	3.55	Fully Aware	2
IOS (iPhone Operating System)	3.25	Fully Aware	3

*3.25-4.00 Fully Aware; 2.50-3.24 Aware; 1.75-2.49 Not aware but have heard of it; 1.00-1.74 Fully Not Aware*

Table 6.3 displays the level of awareness of the accounting graduates regarding operating systems used in the workplace. Results showed that the “Microsoft Windows” was assessed with the highest weighted mean of 3.95 (Fully Aware), indicating a very high level of awareness. The high level of awareness among accounting graduates regarding Microsoft Windows was beneficial as it aligned with the operating system commonly utilized in the workplace. This familiarity could contribute to their efficiency and

productivity when working with accounting software, financial tools, and other applications that are compatible with Microsoft Windows (Basri et al., 2018).

In the same way, the respondents have very high level of awareness on “Android” (3.55) and “iPhone Operating Sytem” (3.25). Additionally, they have high level of awareness on “ChromiumOS (Cloud)” (2.55) and “MacOSX” (2.50).

On the other hand, “Linux/Ubuntu/Redhat” was assessed with the lowest weighted mean of 2.55 (Not aware but have heard of it), indicating low level of awareness regarding this operating system.

**Table 6.4. Level of Awareness of the Accounting Graduates on Office Applications**

Office Applications	Weighted Mean	Verbal Interpretation	Rank
Microsoft Word	3.75	Fully Aware	4.5
Google Docs	3.75	Fully Aware	4.5
Microsoft 365 Word	3.70	Fully Aware	7
Microsoft Excel	3.90	Fully Aware	1
Google Sheets	3.60	Fully Aware	10
Microsoft 365 Excel	3.85	Fully Aware	2
Microsoft PowerPoint	3.80	Fully Aware	3
Google Presentation	3.70	Fully Aware	7
Microsoft 365 PowerPoint	3.65	Fully Aware	9
Open Office	2.20	Not aware but have heard of it	11
Libre Office	1.95	Not aware but have heard of it	12
WPS (Writer, Presentation, Spreadsheets)	3.70	Fully Aware	7

*3.25-4.00 Fully Aware; 2.50-3.24 Aware; 1.75-2.49 Not aware but have heard of it; 1.00-1.74 Fully Not Aware*

Table 6.4 demonstrates the level of awareness of the accounting students regarding office applications used in the workplace. Results showed that the “Microsoft Excel” was assessed with the highest weighted mean of 3.90 (Fully Aware), indicating a very high level of awareness. According to Alobaidani et al. (2023), AIS was widely used in accounting education and industry. It's very useful for analyzing accounting data, improving academic performance, and developing professional jobs. Managing financial data and corporate operations requires the use of Microsoft Excel, which was a key accounting program. A weighted mean of 3.90 indicates that there was a significant confidence among the accounting graduates that they are fully aware of using



Microsoft Excel in the workplace. Because when it comes to functions like financial modeling, assessment of data, and reporting, Excel was a powerful and commonly utilized application in several industries. That's why to help students meet the demands of the workplace, educational organizations frequently set a high priority on teaching Excel skills.

On the other hand, according to Abd Hadi et al. (2021), because students are unfamiliar with the program, using Excel spreadsheets could be tough for them. Students find it challenging to become familiar with Excel spreadsheets, according to studies in the information technology industry conducted in developing nations. Students, on the other hand, agree that spreadsheets are easier to use than accounting programmes. By demonstrating to learners how to utilize spreadsheets and giving them the chance to improve their skills, students could more effectively prepare for future careers in accounting.

In the same manner, the respondents have very high level of awareness on "Microsoft 365 Excel" (3.85); "Microsoft PowerPoint" (3.80); "Microsoft Word" (3.75); "Google Docs" (3.75); "Microsoft 365 Word" (3.70); "Google Presentation" (3.70); "WPS (Writer, Presentation, Spreadsheets)" (3.70); "Microsoft 365 PowerPoint" (3.65); and "Google Sheets" (3.60).

On the other hand, "Libre Office" was assessed with the lowest weighted mean of 1.95 (Not aware but have heard of it), indicating low level of awareness regarding this office application. Also, the accounting graduates have a low level of awareness on "Open Office" (2.20).

**Table 6.5. Level of Awareness of the Accounting Graduates on Office Productivity Software**

Office Productivity Software	Weighted Mean	Verbal Interpretation	Rank
Microsoft Access	3.85	Fully Aware	3
Libre Office Base	1.95	Not aware but have heard of it	11
Google Forms	3.75	Fully Aware	5
Microsoft 365 Forms	3.80	Fully Aware	4
Microsoft Outlook	3.90	Fully Aware	2
Mozilla Thunderbird	2.10	Not aware but have heard of it	10
Gmail	3.95	Fully Aware	1
Windows Live	2.70	Aware	7
Microsoft One Note	3.65	Fully Aware	6
Evernote	2.20	Not aware but have heard of it	9
Google Keep	2.55	Aware	8

Clickup	2.05	Not aware but have heard of it	12
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3.25-4.00 Fully Aware; 2.50-3.24 Aware; 1.75-2.49 Not aware but have heard of it; 1.00-1.74 Fully Not Aware

Table 6.5 exhibits the level of awareness of the accounting students regarding office productivity software used in the workplace. Results showed that the "Gmail" was assessed with the highest weighted mean of 3.95 (Fully Aware), indicating a very high level of awareness. This implied that the accounting graduates demonstrated a very high level of awareness regarding Gmail, an accessible email service that provides accuracy and regular updates to enhance user efficiency and interaction. It was determined that students have a high level familiarity of several office productivity software, including the utilization of Gmail that has significant awareness of the students, according to the comprehensive study conducted by Cadungog-Uy, J. (2020). The study also highlighted the significance of knowing students' knowledge with not only traditional office productivity software but also certain components that make an impact to their total digital literacy.

Likewise, the respondents have a very high level of awareness of "Microsoft Outlook" (3.90); "Microsoft Access" (3.85); "Microsoft 365 Forms" (3.80); "Google Forms" (3.75); and "Microsoft OneNote" (3.65).

In addition, the respondents have a high level of awareness regarding "Windows Live" (2.70) and "Google Keep" (2.55).

On the other hand, "LibreOffice Base" was assessed with the lowest weighted mean of 1.95 (Not aware but have heard of it), indicating low level of awareness regarding this ty software. Also, the accounting graduates have low level of awareness on "Evernote" (2.20); "Mozilla Thunderbird" (2.10); and "Clickup" (2.05).

**Table 6.6. Level of Awareness of the Accounting Graduates on Communication or Collaboration Software**

Communication or Collaboration Software	Weighted Mean	Verbal Interpretation	Rank
Microsoft Teams	3.95	Fully Aware	1
Slack	2.60	Aware	3
Google Meet	3.70	Fully Aware	2
Whereby	1.65	Fully Not Aware	4

3.25-4.00 Fully Aware; 2.50-3.24 Aware; 1.75-2.49 Not aware but have heard of it; 1.00-1.74 Fully Not Aware

Table 6.6 indicates the level of awareness of the accounting students on communication or collaboration software used in the workplace. Results showed that the "Microsoft Teams" was assessed with the highest weighted

mean of 3.95 (Fully Aware), indicating a very high level of awareness. The high level of familiarity with Microsoft Teams among accounting graduates may be due to its relevance and alignment with broader developments in educational technology and business platforms for communication. Because of its quality, ease of use and features, Microsoft Teams was a successful virtual learning system (Almodaires et al., 2021).

Similarly, the respondents have a very high level of awareness on “Google Meet” (3.70), whereas they have a high level of awareness regarding “Slack” (2.60).

On the other hand, “Whereby” was assessed with the lowest weighted mean of 1.65 (Fully Not Aware), indicating a very low level of awareness regarding this software.

**Table 6.7. Level of Awareness of the Accounting Graduates on Cloud Storage**

Cloud Storage	Weighted Mean	Verbal Interpretation	Rank
Microsoft One Drive	3.95	Fully Aware	1
Dropbox	3.25	Fully Aware	4
Google Drive	3.85	Fully Aware	2
Apple iCloud	3.30	Fully Aware	3

3.25-4.00 Fully Aware; 2.50-3.24 Aware; 1.75-2.49 Not aware but have heard of it; 1.00-1.74 Fully Not Aware

Table 6.7 shows the level of awareness of the accounting students on cloud storage used in the workplace. Results showed that the “Microsoft OneDrive” was assessed with the highest weighted mean of 3.95 (Fully Aware), indicating a very high level of awareness. The results indicated that accounting students have a very high level of awareness regarding "Microsoft OneDrive," with the highest weighted mean of 3.95, categorizing the awareness level as "Fully Aware." The users may access all of the information with OneDrive, a Microsoft online service. They may use all of the devices to access, share, and save your information while also securing it. A useful and effective data storage solution, cloud storage offers safe, on-demand access to files for both users and companies, stores long-term data like financial records, and has become more utilized for collaborative communication, according to Frankenfield (2022).

Correspondingly, the respondents have a very high level of awareness on “Google Drive” (3.90); “Apple Cloud” (3.30); and “Dropbox” (3.25).

6. Is there a significant difference in the profile of the business and accounting information system and other software used?

**Table 7. Significant Difference in the Accounting Information System and Other Software Used when grouped according to Years of Using AIS**

Variables	F-value	P-value	Decision on H <sub>0</sub>	Interpretation
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Accounting Information System	1.41	.269	Accept	Not Significant
Emerging Technologies	3.78	.044 *	Reject	Significant
Information-searching Software	3.64	.048 *	Reject	Significant
Operating Systems	11.0	.001 *	Reject	Significant
Office Applications	6.48	.008 *	Reject	Significant
Office Productivity Software	6.61	.010 *	Reject	Significant
Communication or Collaboration Software	3.09	.072	Accept	Not Significant
Cloud Storage	8.53	.003 *	Reject	Significant

\*Significant at .05 level (p<.05)

F-value= Computed F-value (ANOVA test result)

P-value= level of significance (if p<.05, significant; if p>.05, not significant)

H<sub>0</sub>= Null Hypothesis

Table 7 reveals the significant difference in the accounting information system and other software used by the companies when grouped according to years of using AIS.

In terms of **Emerging Technologies**, there is a computed F-value of 3.787 with a p-value of .044 (.044<.05). Since the p-value of .044 is below the alpha at .05 level, the null hypothesis is rejected. This means that there is a significant difference in the accounting information system and other software used by the companies when grouped according to years of using AIS.

In the same manner, significant differences existed in terms of **Software Applications** (F=3.645; p=.048<.05); **Operating Systems** (F=11.039; p=.001<.05); **Office Applications** (F=6.483; p=.008<.05); **Office Productivity Software** (F=6.614; p=.010<.05); and **Cloud Storage** (F=8.531; p=.003<.05). As shown, the p-values are lesser than the alpha at .05 level. This means that the number of years of using AIS makes a significant difference on the aforementioned applications and software used by the companies.

On the other hand, significant differences were not found in terms of **Accounting Information System** (F=1.419; p=.269>.05); and **Communication/Collaboration Software** (F=3.091; p=.072>.05). As shown, the p-values are greater than the alpha at .05 level. This means that the companies, regardless of the number of years of using AIS, have similar usage of **Accounting Information System** and **Communication/Collaboration Software**. According to Bhatt

(2020), performance comes from individual skills and experience not from the number of years. In addition, in line with the theory/study of Babb (2023), many businesses incorporate BPO with enterprise software to increase business process efficiency. It is essential to look for process management software that scales easily, automates repetitive operations, and smoothly interfaces with a wide range of software and applications.

7. What learning intervention program should be crafted from the result?

Technology has transformed accounting, providing professionals with improved accuracy and efficiency through software and tools. However, accounting education may not adequately prepare students for the industry's software, which may be challenging for fresh graduates. An intervention plan is a systematic technique that aids in determining the issue, strategy implementation, and intervention effectiveness assessment. The researchers suggested intervention strategy, which can help address this issue by encouraging hands on the teaching and learning processes, is displayed in the table below:

**Table 8. Action/Intervention Plan**

Intervention Plan/Program	Objective	Time Frame	Person Involved	Expected Outcome	Means of Evaluation
Confered Approach (Self-paced learning and peer learning)	To provide the advantages of interactive learning while allowing students to study the accounting software at their own pace.	One week per month	• Students	• Improved engagement and retention • Enhanced understanding	• Documentation • Formative and Summative Assessment
Technology-driven Curriculum Enhancement	To prepare students for the technology-driven business world by equipping them with practical software skills and knowledge of career trends.	Every subject/sem	• Students • Instructors • School Administration	• Improved student engagement, learning outcomes, and career preparation	• Post-test assessment
Experiential Learning Program (Includes training courses, workshops, internships, feedback, and mentorship)	To meet the demand for more practical, industry-focused accounting education. To give students hands-on experience in order to better equip them for successful careers in accounting.	Three months per subject/sem	• Students • Instructors • Institutions • Businesses	• Enhanced professional skills • Proficiency in industry tool/software • Practical work experience	• Certificate of Completion • Assessment-based Certificate • Observations • Documentation • Summative Assessment
Educational Outreach Program (Includes seminars and workshops)	To address the need for accounting education and industry demands to be more closely connected. To enhance accounting education standards and provide graduates with the skills they need for successful careers.	Once every quarter of a year	• Students • Instructors • Businesses	• Reduced skills gap • Enhanced student employability • Improved teaching quality • Increased industry collaboration	• Certificate of Attendance/Participation • Feedback Form • Questionnaire • Documentation

majority of companies had been using AIS for five years.

10.2 The results of the study have shown that QuickBooks is the most used Accounting Information System (AIS) among the surveyed businesses. On the other hand, the study revealed that Xero is the AIS with the highest level of awareness among accounting graduates. The findings of the study have shown a gap between the level of awareness of accounting graduates and the AIS utilized in the workplace.

10.3 The findings revealed that accounting professionals have increasingly adopted data analytics as their preferred tool due to its effectiveness in uncovering patterns and trends,

which are essential for making informed decisions. Moreover, cloud computing, and cyber security follows data analytics in the ranks of most used technologies among the professionals in the field. Accounting graduates, on the other hand, have shown a commendable level of awareness regarding cloud computing, followed by data analytics. Even though the graduates are aware of the emerging technologies that are utilized in the workplace, the findings still underscore the need for enhanced education and exposure to these emerging technologies.

10.4 The findings showed that Google emerged as the main information resource, with an overwhelming majority of accounting professionals utilizing it for information gathering and access. Accounting graduates demonstrated a similar level of familiarity with the utilization of Google, with the majority of respondents indicating full awareness of the platform. This suggests that accounting graduates are well equipped to leverage Google's vast resources to support their learning and professional development. Similarly, most of the graduates also attain full awareness on YouTube and Facebook. It signifies therefore that accounting professionals and graduates do share the same insights in the qualities that this specific software can provide.

10.5 According to the findings, Microsoft Windows is the most often used operating system among businesses. Windows, as the software that organizes a computer's whole system, provides a familiar and dependable foundation for handling daily activities. Furthermore, accounting graduates appear to be well-equipped to manage this Windows-dominated industry as they have full awareness of that platform.

10.6 The result shows that Microsoft Excel and Google Sheets were the most commonly used office applications for the surveyed businesses. Similarly, among the graduates of accounting, MS Excel was the leading office application tool in terms of their awareness. This implied that Excel is an essential tool for accounting professionals and graduates. The findings of the study have shown that the graduates' awareness and the tools being utilized at the workplace are aligned.

10.7 The most commonly used office productivity software among the surveyed BPO companies was Google Forms. Yet, Gmail has the highest level of awareness among the accounting graduates of Mabalacat City College. This implies that accounting graduates are more familiar with email applications than with forms-based productivity tools. Moreover, Microsoft Outlook, Microsoft Access, and Microsoft 365 Forms were also widely used by the BPO companies and it has a high level of awareness among the graduates. These show that these Microsoft productivity tools are significant for accounting professionals. The findings of the study have shown that the level of awareness of accounting graduates and the office application tools utilized in the workplace are aligned.

- 10.8 The most utilized communication or collaboration software in BPO companies was Microsoft Teams and Google Meet and graduate students have a high level of awareness among this software. This indicates that cloud-based communication tools were becoming significant for accounting professionals. However, Zoom was utilized by a moderate number of businesses. This implies that zoom can be an option for companies that need to communicate with clients or staff. In addition, Slack was used by a smaller number of BPO companies and graduates have a low awareness of this software. This means that Slack is not as popular as other communication or collaboration tools in the accounting industry. The findings of the study have shown that the level of awareness of accounting graduates and the communication or collaboration software utilized in the workplace are aligned.
- 10.9 Google Drive is the most commonly used cloud storage by BPO companies. However, Microsoft One Drive had the highest level of awareness among accounting graduates. This implies that the graduated students are a little bit more familiar with Microsoft products than with Google Drive. This was followed by Dropbox and Apple Cloud that were also utilized by the majority of companies and graduated students have moderate to high awareness of it among the software. It therefore indicates that the cloud storages that were being utilized in the industry are well known among the graduates.
- 10.10 The results revealed that cost is the leading factor on how BPO chooses their accounting software. The firms carefully consider the total cost of ownership, which includes license payments, hardware needs, hosting, maintenance, training, and support. Next to this is the ease of use, highlighting their desire for intuitive and user-friendly interfaces. Lastly are the features that enhance efficiency and productivity that gives time savings, easy data sharing and collaboration, and alignment with specific functional needs. This indicates that these three aspects are the priorities of BPO in choosing their accounting software.
- 10.11 There was a significant difference in terms of Accounting Information System and other software that they are already utilizing in the workplace. This implies that organizations that have been using technology for a long time were able to utilize modern and highly advanced technologies. However, AIS and communication/collaboration software don't have significant differences regarding when the businesses started to employ them. This shows that AIS and communication/collaboration software have the ability to stay up to date. On the other hand, there was a significant difference in other software besides AIS and communication/collaboration software. These findings indicate that there were software used by the businesses which are capable of meeting their changing needs, and there are other software that needs to be explored as they continue to progress with the help of technology.

## 11. RECOMMENDATIONS

The following suggestions aim to offer beneficial guidance for enhancing the use of accounting software in accounting education to ensure that students are updated with the current demands of the accounting industry. In light of the survey data analysis, the authors suggest the following recommendations concerning the significance of this study:

11.1 Self-paced learning and peer learning are suggested for students. Improved student engagement and retention can be achieved through self-paced learning, where students have greater control over their studies, as each student has unique strengths and limitations. With the help of this, students can search the accounting software currently used by businesses and determine the most effective method for them to understand its various tools. After studying it on their own, learners can participate in peer learning to share their knowledge and comprehension of that particular piece of software. Working in a group enhances students' accuracy as it provides better results than individual performance alone. This approach fosters a collaborative environment where students can instruct and support one another in their learning process.

11.2 It is recommended that school administration enhance or modify the course syllabus to enhance academic success. School administration should incorporate computerized accounting topics into course guides to keep up with technological advancements in the business industry. They should design effective curricula by integrating commonly used accounting software. This approach will help students excel in the business world by providing them with the tools they are going to utilize in the workplace.

11.3 Training courses, workshops, fieldwork, and/or internships are advised for higher education institutions in order to strengthen learning. In order to give graduates the opportunity to gain practical work experience, connect with other professionals, practice office etiquette, and enhance their professional skills, these programs should provide academic credit. To determine the workshop's effectiveness, they should also be assessed or monitored both before and after. With these systems, educational institutions can determine which accounting software is actually utilized in the workplace and how well students are learning it, allowing them to come up with ways to make it better. In the end, educational institutions will be able to produce graduates who are proficient in using accounting software in the industry.

11.4 It is recommended to businesses that seminars and meetings be held with various colleges to enlighten students, instructors, and the institutions themselves about the accounting software used in the accounting profession. This will give the attendees of the seminar or meeting an insight into the demands of today, which they may also incorporate into their teaching and learning processes.



11.5 To further enhance the practical skills and technological proficiency of accounting students, it is recommended that educational institutions collaborate with tech companies to develop custom plugins and modules for popular accounting software. These customizations should be tailored to meet the specific educational needs and simulate advanced, real-world accounting scenarios. In addition, the educational institutions should invite people from the tech companies who are equipped with knowledge and skills when it comes to using accounting software so they can instruct students in this area.

In summary, the use of accounting software encourages active participation and enhances the students' understanding and application of subject matter by having a ton of practice, relevant experience and sufficient preparation for the real world of work. By implementing the recommendations outlined in this section, students will have a higher chance to increase their knowledge and develop the necessary accounting skills.

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