LOOKING THROUGH THE COMPUTER LITERACY SKILLS OF BSAIS STUDENTS AT LAGUNA UNIVERSITY: A GROUNDWORK IN IMPROVING COMPUTER LITERACY

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Keywords:	Abstract.
Computer Literacy Skills	In today's digital age, computer literacy skills are essential, for both academic and professional settings. However, students have different demographic profiles, backgrounds of using a computer, exposure, and interest. Hence, a study focused on the Computer Literacy Skills of Laguna University Bachelor of Science in Accounting Information Systems (BSAIS): A Groundwork for Improving Computer Literacy, is conducted.
Computer attitudes	
Computer self-efficacy	Specifically, this study tackled to determine the profile of the respondents concerning age, gender, year level, frequency of using a computer, and frequent apps/sites being visited. Correspondingly, it assesses the computer literacy of Bachelor of Science in Accounting Information System students at Laguna University, in terms of Microsoft Office Word, Excel, and PowerPoint Presentation in succeeding to provide a groundwork for improving computer literacy.
Computer locus of control	
	A quantitative descriptive research design was utilized in this study to determine the relationship between the respondents' demographic profile and computer literacy skills in terms of, Microsoft Office Word, Excel, and PowerPoint Presentation. The data is gathered in numerical format, and analyzed in a quantitative way using statistical tools. One hundred sixty-one (161) respondents, were chosen randomly to accomplish the questionnaires.

Data showed that the majority of the respondents are female (73%), and are BSAIS Students, ranging from age 21 to 25 years old (59.01%) Figures also depicted that the respondents are Computer Literate in terms of Microsoft Office Word, Excel, and PowerPoint Presentation.

Based on the findings of the study, it is therefore concluded that there is no significant relationship between the demographic profile and computer literacy skills of the respondents. Hence, a Proposed Action Plan for Improving Computer Literacy is devised and presented to the Department of Accounting Information System of Laguna University, Santa Cruz, Laguna.

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1. Introduction

In today's digital age, computer literacy skills are essential, for both academic and professional settings. However, students have different demographic profiles, backgrounds of using a computer, exposure, and interest. Hence, a study focused on the Computer Literacy Skills of Laguna University Bachelor of Science in Accounting Information Systems (BSAIS): A Groundwork for Improving Computer Literacy, is conducted. The insights gained from this research will be used to develop a groundwork for improving the computer literacy of BSAIS students. By developing a groundwork for their computer literacy skills, the researchers hope to empower these students to reach their full potential and thrive in our increasingly digital world and better prepare these students for their future academic and professional pursuits.

Students must keep up with the latest technology and understand how to use it effectively as it grows and evolves. A comprehensive computer literacy program should be implemented in all educational institutions to ensure that students are adequately prepared for their future and chosen careers. All students must be computer literate in this day and age of modernization. This is why schools should require an enhanced program to assist students in developing their computer literacy skills. Such a program should include both theoretical and practical components so that students understand both the fundamentals of computers and how to apply them in real-world situations. It should also provide them with the skills they need to use technology in their daily lives. Schools can ensure that their students are well-equipped with the necessary skills to succeed in this digital world by implementing such a program. In a rapidly changing world, students must possess at least the basic skills and knowledge when it comes to computers.

It is impossible to keep learners from using computers and the internet in the modern world since we rely on them significantly for many different situations. Hence, learners must understand the fundamental manners of utilizing computers and how to utilize these tools appropriately. Students with a computer literacy foundation can progress to more complex abilities like programming. Today, most forms of communication are digital.

2. Theoretical background

This study was anchored on the Multiple Response Theory by (Zulueta, 2004) which advocates a learning that involves the cognition of patterns involving the acquisition of knowledge or skill in response to mastering a task that is in learning a skill and sensory-motor activities. In this study, computer literacy is considered a mastery of operating a computer by learning the patterns by which the machine works. Before a task is completed in computer operation, a series of commands in a program has to be satisfied.

However, to evaluate the computer literacy skills of BSAIS Students at Laguna University, The Cambridge Life Competencies Framework is also utilized. This maps the most important skills learners need to develop to participate effectively in the world and to fulfill their potential throughout their education, careers and lives in general. It is made up of six Competencies – Creative Thinking, Critical Thinking, Learning to Learn, Communication, Collaboration, and Social Responsibilities. Linked to these competencies are the three foundation layers that underpin them all. One of these foundation layers is Digital Literacy. Blue, J. (2022)

3. Research question or Research hypothesis or Problem statement

Specifically, this study tackled to determine the profile of the respondents concerning age, gender, year level, frequency of using a computer, and frequent apps/sites being visited. Correspondingly, it assesses the computer literacy of Bachelor of Science in Accounting Information System students at Laguna University, in terms of Microsoft Office Word, Excel, and PowerPoint Presentation in succeeding to provide a groundwork for improving computer literacy.

4. Data and methods

A quantitative descriptive research design was utilized in this study to determine the relationship between the respondents' demographic profile and computer literacy skills in terms of, Microsoft Office Word, Excel, and PowerPoint Presentation. The data is gathered in numerical format, and analyzed in a quantitative way using statistical tools. One hundred sixty-one (161) respondents, were chosen randomly to accomplish the questionnaires.

5. Results

Table 1. Distribution of Respondents According to Age.

Age	Frequency	Percentage	Rank
16-20	62	38.51%	2
21-25	95	21.00%	1
26-30	3	1.86%	3
31 and above	1	0.62%	4
Total	**161**	**100%**	

Source: Authors

Table 1 illustrates the profile of the respondents in terms of age. It will be noted that 59% or 95 out of 161 respondents belonged to the age bracket 21-25 years old, while 38.51% or 62 out of 161 respondents belonged to the age bracket of 16-20 years old.

On the other hand, 1.86% or 3 out of 161 respondents belonged to the age bracket of 26-30 years old, and only 1 out of 161 respondents belonged to ages between 31 and above years old.

The results of the data shows that age 21-25 got the highest number of frequency and percentage it shows that young adults age 21-25 are so engaged and skilled in using computers also because its includes that 21st century people are more often being modern. In addition, the evolution of Computer system also affected the teaching and learning in schools and education systems in developing the student's capacity.

This means that the profile of the respondents with regards to age were majority young adults during the time of the study.

According to the study by Mbaeze, I. C., Ukwandu, E., & Anudu, C. (2018), modern children are often considered to be "digital natives," certain familial norms and socioeconomic factors can affect a child's ability to learn age-appropriate computer literacy. Laptops and tablets are increasingly used in schools, and computer skills are becoming more and more of an educational necessity among K to 12 students, reflecting their necessity in the world beyond school.

Table 2. Distribution of Respondents According to Gender.

Gender	Frequency	Percentage	Rank
Female	119	73.91%	1
Male	42	26.09%	2
Total	**161**	**100%**	

Source: Authors

Table 2 illustrates the demographics of the respondents in terms of gender. It showed that the female gender had the highest frequency of 119 and a percentage of 73, greater than the male gender with a frequency of 42 and a percentage of 26.09%. This might have been because women spent more time using computer systems and other online platforms. Male respondents represented forty-two (42), or 26.00%, of the 161 total respondents. Females, on the other hand, receive 119, or 74.00%.

According to S. Sobieraj & N.C. Krämer (2020) by their studies on technology usage and acceptance, it has shown that there are differences in how men and women use technology and perceive their own technological abilities. In a scientific experiment, it was shown that although men and women perceive their technological aptitude differently, their capacity to do tasks is identical. There were also slight differences between men and women in terms of positive emotions, but not negative emotions, depending on the complexity of the technology being utilized.

Table 3 illustrates the profile of the respondents in terms of year level. Additionally indicates frequency and percentage.

Table 3. Distribution of Respondents According to Year Level.

Year Level	Frequency	Percentage	Rank
First-year	23	14.00%	4
Second-year	34	21.00%	2
Third-year	25	16.00%	3
Fourth-year	79	49.00%	1
Total	**161**	**100%**	

Source: Authors

Table 3 illustrates the demographics of the respondents in terms of the year level. It will be noted that 49%, or 79 out of 161 respondents, belong to the fourth-year level. While 21%, or 34 out of 161 respondents, fall to the first-year level, on the other hand, 16%, or 25 respondents, belong to the third-year level, and only 23 out of 161 respondents are from the first-year level.

The data showcases a larger representation of senior students (4th-year) among the respondents compared to other year levels. For instance, fourth-year students, who formed the largest group in the data, might likely possess a higher level of computer literacy as they have been exposed to academic challenges requiring these skills for a longer period. Meanwhile, first-year students, constituting the smallest group, might have less exposure or proficiency in these tools.

A study by Dionola, et al. (2022) showed that Technology is increasingly influencing classrooms, with colleges aiming to enhance student retention and educational options. Computer literacy, including basic to advanced understanding of word processing, presentation, and spreadsheet tools, can boost students' enthusiasm and participation in online learning. This skill teaches digital literacy, creative thinking, reasoning, communication, and productivity.

Table 4 illustrates the profile of the respondents in terms of Frequency of using Computer. Additionally indicates frequency and percentage.

Table 4. Distribution According to the Frequency of using a computer.

Indicator	Frequency	Percentage	Rank
Daily	76	47.00%	1
Weekly	51	32.00%	2
Monthly	7	4.00%	4
Rarely	27	17.00%	3
Total	**161**	**100%**	

Source: Authors

Table 4 illustrates the demographics of the respondents in terms of frequency of using computers, with Daily frequency representing the highest number, or seventy-six (76), or 47.00% out of 161 respondents. A rare post came next, with fifty-one (51), or 32.00% of the total. Followed by rarely, with twenty-seven (27) or 17% of the total responses. On the other hand, the lowest percentage received was weekly use, with seven (7) or 4.00% of the respondents.

The results emphasizes that nearly half of the respondents, specifically 47% of the total participants reported using computers on a daily basis. This finding signifies that among the surveyed group, the most prevalent behavior regarding computer usage was the daily utilization of computers. This frequency suggests a substantial inclination or habit among these individuals to engage with computers on a regular basis indicating a significant integration of technology into their daily routines or educational activities.

According to Letao, (2018), students who use computers almost every day at school performed better than the students from the group who used computers between once a week and once a month, after controlling for students' SES backgrounds. Consistent computer usage can also aid students in improving their computer literacy abilities and knowledge.

Table 5 illustrates the profile of the respondents in terms of Length of Frequency apps/sites being visited. Additionally indicates frequency and percentage.

Table 5. Distribution According to Frequent apps/sites being visited.

Apps/Sites	Frequency	Percentage	Rank
Canva	82	51.00%	1
Adobe (InDesign, Photoshop, Acrobat, etc.)	14	9.00%	3
Microsoft Office apps (Word, spreadsheet, presentation, etc.)	52	32.00%	2
Google Service (Google Docs, Google spreadsheet, Google presentation, etc.)	9	6.00%	4
Others (please specify):	4	2.00%	5
Total	**161**	**100%**	

Source: Authors

Table 5 illustrates the demographics of the respondents in terms of Frequency apps/sites being visited, with Canva representing the highest number, or eighty-two (82), or 51.00% out of 161 respondents. A Microsoft Office apps came next, with fifty-two (52), or 32.00% of the total. Followed by Adobe, with four-teen (14) or 9% out of 161 respondents, and Google Service with nine (9) or 6% of the total responses. On the other hand, the lowest percentage received was others, with four (4) or 2.00% of the respondents.

The results show that the Canva and Microsoft Office are particularly popular among the surveyed demographics, possibly for tasks related to design and office productivity, respectively. Adobe and Google

Services also have users, though at a lower percentage. The data provides insights into the respondents' preferences or habits with regard to these specific apps/sites.

As stated by Paraskevaa, Boutaa and Papagiannib, (2017), a person's prior experience with computers, which includes the time spent using them and working with different applications, can impact their computer literacy skills. In essence, students need to develop skills that involve understanding how to use computers for tasks such as creating, modifying, and utilizing documents, spreadsheets, and presentations. This underscores the importance of practical experience in shaping individuals' proficiency with computer applications and technology.

Table 6 shows the level of Computer Literacy Skills of the respondents in terms of Microsoft word processing.

Table 6. Level of Computer Literacy Skills in terms of Microsoft Word Processing

Statements	Weighted Mean	SD	Remarks
Can open and close a word processing software.	4.65	0.69	Strongly Agree
Can create a new document and save it with an appropriate file name.	4.63	0.68	Strongly Agree
Can format text by changing font styles, sizes, and colors.	4.58	0.75	Strongly Agree
Can align text and paragraphs (left, right, center, justified).	4.62	0.69	Strongly Agree
Can apply different types of formatting (bold, italic, underline) to text.	4.62	0.69	Strongly Agree
Can copy and paste objects in a Word document.	4.63	0.71	Strongly Agree
Can insert a picture in a Microsoft Office Word document	4.60	0.74	Strongly Agree
Can change page layout such as margins and page orientation in a Word document.	4.51	0.77	Strongly Agree
Can create and insert tables in Word	4.63	0.69	Strongly Agree
Can set print options and print Word documents.	4.42	0.82	Strongly Agree

Weighted Mean	4.69
SD	0.73
Verbal Interpretation	Extremely Literate

Legend: 4.21 – 5.00: Strongly Agree/ Extremely Literate
3.41 – 4.20: Agree/ Highly Literate
2.61 – 3.40: Neutral/ Moderately Literate
1.81 – 2.60: Disagree/ Slightly Literate
1.00 – 1.80: Strongly Disagree/Not Literate

Source: Authors

Based on the table, the student-respondents "Strongly Agreed" all the identified statements depicting their level of computer literacy in terms of Microsoft Word, with means ranging from 4.42 to 4.65 and standard deviation ranging from 0.71 to 0.82.

The data showed that "Can open and close a word processing software." obtained the highest mean score with 4.65 and standard deviation of 0.69, hence, remarked as strongly agree. This is followed by "Can create a new document and save it with an appropriate file name.", "Can copy and paste objects in a Word document." and "Can create and insert tables in Word" with a mean score of 4.63 and standard deviation of 0.68 and 0.69, it was also remarked as strongly agree. On the other hand, "Can set print options and print Word documents." received the lowest mean score of responses with mean of 4.42 and standard deviation of 0.82, yet was remarked strongly agree. The level of computer literacy skills in terms of

Microsoft Word Processing attained a weighted mean score of 4.69 and a standard deviation of 0.73 and was verbally interpreted as extremely literate among the respondents.

As shown in Table 6, the respondents have a very high level of computer literacy skills in terms of Microsoft Word Processing. Most of the students responded positively as the questions above assessed their level of computer literacy skills in terms of Microsoft Word. This indicates that the respondents are highly certain that they possess the necessary skills to perform the aforementioned tasks with ease.

Microsoft Word is essential to students' development of computer literacy. Word processing skills are becoming increasingly important in today's educational environment for both future career aspirations and academic success. Recent studies have shown that the use of Microsoft Office Word can a have positive effect on student learning outcomes. A study by Lee and Song (2021) showed that collaborative Word-Processing activities improved students' teamwork skills and promoted a more positive learning experience. It became a common tool in education due to its potential to enhance students' digital skills and learning outcomes.

Table 7 shows the level of Computer Literacy Skills of the respondents in terms of Microsoft Spreadsheet

Table 7. Level of Computer Literacy Skills in terms of Microsoft Office Spreadsheet

Statements	Weighted Mean	SD	Remarks
Can group/ungroup columns and rows in Excel.	3.95	1.00	Agree
Can be able to use different formulas in Excel.	3.52	1.05	Agree
Can create and insert tables in Excel.	4.00	1.03	Agree
Can copy and paste objects in Excel	4.07	1.03	Agree
Can create and insert different graphs in Excel.	3.84	1.09	Agree
Can be able to resize columns and rows	4.14	0.96	Agree
Can identify shortcuts in writing formulas	3.52	1.09	Agree
Can adjust data display by changing cell formats	3.64	1.06	Agree
Can sort results	3.65	1.06	Agree
Can import a data file published on the Web into your spreadsheet	4.42	1.12	Agree
Weighted Mean	3.79		
SD	1.05		
Verbal Interpretation	Highly Literate		

Legend: 4.21 – 5.00: Strongly Agree/ Extremely Literate
3.41 – 4.20: Agree/ Highly Literate
2.61 – 3.40: Neutral/ Moderately Literate
1.81 – 2.60: Disagree/ Slightly Literate
1.00 – 1.80: Strongly Disagree/Not Literate

Source: Authors

Based on the table, the student-respondents "Agreed" with all of the identified statements showing their level of computer literacy in terms of Microsoft Spreadsheet, with means ranging from 3.52 to 4.14 and standard deviations ranging from 0.96 to 1.12.

The data showed that "Can be able to resize columns and rows" obtained the highest mean score with 4.14 and standard deviation of 0.96, remarked as agree. This is followed by "Can copy and paste objects in Excel.", and "Can create and insert tables in Excel." with a mean score of 4.07 and 4.00 and standard deviation of 1.03, it was also remarked as agree. On the other hand, "Can be able to use different formulas in Excel." and "Can identify shortcuts in writing formulas." received the lowest mean score of responses with mean of 3.52 and standard deviation of 1.05 and 1.09, yet was remarked agree. The level of computer

literacy skills in terms of Microsoft Spreadsheet achieved a weighted mean score of 3.79 and a standard deviation of 1.05 and was verbally interpreted as highly literate among the respondents.

As shown in table 7 the respondents have a high level of computer literacy in various spreadsheet tasks. While they exhibit strength in fundamental and intermediate tasks. However, skills related to using different formulas and identifying shortcuts in writing formulas received lower mean scores, this suggests a need for potential improvement or further training in these more advanced Excel functionalities among the respondents.

In the research of Chaamwe, N. , Shumba, L, (2016) agreed that the use of technology enhances the understanding of mathematics and other similar subjects by pupils and students primary and Secondary schools. There are a number of software tools that can be used for this purpose on the market. One such tool which is usually overlooked by most educators is Microsoft Excel. MS Excel has an advantage over other tools in that it is widely available and relatively easy to use. Researchers concur that the utilization of the use of technologies like Excel to teach students about topics like statistics improves their grasp of those topics. In comparison to other programs, Ms. Excel has the advantage of being widely accessible and rather simple to use.

Table 8 shows the level of Computer Literacy Skills of the respondents in terms of Microsoft Office PowerPoint.

Table 8. Level of Computer Literacy Skills in terms of Use of Microsoft Office PowerPoint

Statements	Weighted Mean	SD	Remarks
Can create custom animations for each element on a slide.	4.08	0.98	Agree
Can apply transitions between slides and customizing their properties.	4.15	0.98	Agree
Can insert a new slide into a PowerPoint presentation.	4.33	0.89	Strongly Agree
Can rehearse timings for a slideshow in PowerPoint.	4.07	0.96	Agree
Can align and distribute objects on a slide to ensure consistent spacing and layout.	4.09	0.95	Agree
Can save a presentation as a PDF file.	4.42	0.86	Strongly Agree
Can insert hyperlinks into a PowerPoint presentation.	3.97	1.05	Agree
Can add shapes and text boxes to a slide.	4.32	0.89	Strongly Agree
Can use the "Format Painter" tool in PowerPoint.	3.71	1.06	Agree
Can import data into a PowerPoint slide from an Excel spreadsheet.	3.79	1.16	Agree
Weighted Mean	4.09		
SD	0.98		
Verbal Interpretation	Highly Literate		

Legend: 4.21 – 5.00: Strongly Agree/ Extremely Literate
3.41 – 4.20: Agree/ Highly Literate
2.61 – 3.40: Neutral/ Moderately Literate
1.81 – 2.60: Disagree/ Slightly Literate
1.00 – 1.80: Strongly Disagree/Not Literate
Source: Authors

From the table, the student-respondents "Strongly Agreed" three depicted statements; "Can insert a new slide into a PowerPoint presentation.", "Can insert hyperlinks into a PowerPoint presentation.", and "Can

add shapes and text boxes to a slide." With mean score ranging from 4.32 to 4.42 and standard deviation ranging from 0.86 and 0.89.

The student-respondents remarked the remaining seven statements "Agree", which corresponded to the indicators stating "Can create custom animations for each element on a slide.", "Can apply transitions between slides and customizing their properties.", "Can rehearse timings for a slideshow in PowerPoint.", "Can align and distribute objects on a slide to ensure consistent spacing and layout.", "Can insert hyperlinks into a PowerPoint presentation.", "Can use the "Format Painter" tool in PowerPoint.", and "Can import data into a PowerPoint slide from an Excel spreadsheet." With mean ranging from 3.71 to 4.15 and standard deviation ranging from 0.95 to 1.16.

The data showed that "Can save a presentation as a PDF file." received the highest mean score with 4.42 and standard deviation of 0.86, hence, remarked as strongly agree. This is followed by "Can insert a new slide into a PowerPoint presentation" with a mean score of 4.33 and standard deviation of 0.89, it was also remarked as strongly agree. On the other hand, "Can use the "Format Painter" tool in PowerPoint." received the lowest mean score of responses with mean score of 3.71 and standard deviation of 1.06, and remarked as agree. The level of computer literacy skills in terms of use of Microsoft Office PowerPoint attained a weighted mean score of 4.09 and a standard deviation of 0.98 and was verbally interpreted as Highly Literate among the respondents.

As shown in Table 8, the respondents are well-versed in utilizing Microsoft PowerPoint for a variety of tasks. The findings suggest that they have strong foundational skills in creating, customizing, and organizing presentations, but there is still room for improvement in more advanced features such as the "Format Painter" tool, "Can import data into a PowerPoint slide from an Excel spreadsheet", and "Can insert hyperlinks into a PowerPoint presentation." Overall, the respondents can be considered highly literate in terms of computer skills related to Microsoft Office Presentation.

Microsoft PowerPoint not only enhances students' computer literacy skills but also prepares them for future endeavors in various professional settings. Furthermore, the ability to effectively use Microsoft PowerPoint allows students to communicate their ideas and information in a visually appealing and dynamic manner.
As stated by Blue, J. In 2022, there are many resources for improving computer literacy skills, such as online tutorials, classes at community centers or colleges, and books/e-books. Furthermore, it's crucial for teachers to recognize the students' enthusiasm for computers and provide intervention activities that will enhance their computer literacy in word processing, spreadsheets, presentations, and general computing.

Table 9 illustrates the significant relationship between the demographic profile and computer literacy skills in terms of Microsoft Office Word Processing. The table also shows the r-value, degree of correlation, p-value, and analysis.

Table 9. Significant Relationship between the Demographic Profile and Computer Literacy Skills in terms of Microsoft Office Word Processing

Demographic Profile s	Computer Literacy Skills	r-value	Degree of Correlation	p-value	Analysis
Age		-0.03	Very Weak Negative Correlation	0.743	*Not Significant*
Gender	*Microsoft Office Word Processing*	0.09	Very Weak Positive Correlation	0.224	*Not Significant*
Year Level		-0.03	Very Weak Negative Correlation	0.672	*Not Significant*
Frequency of using a Computer		0.07	Very Weak Positive Correlation	0.377	*Not Significant*
Frequent apps/sites being visited.		0.03	Very Weak Positive Correlation	0.644	*Not Significant*

Based on the table, the computed p-values between the demographic profile in terms of age, gender, year level, Frequency of using a Computer, and Frequent apps/sites being visited, and the Computer Literacy Skills in terms of Microsoft Office Word Processing are all greater than the level of significance ($\alpha = 0.05$). The data showed that age computed p-value is 0.743, gender with 0.224, year level with 0.672, Frequency of using a Computer with a 0.377, and Frequent apps/sites being visited with a computed p-value of 0.644. It signifies that there is no significant relationship between the respondents' demographic profile and computer literacy skills of the respondents in terms of Microsoft Office Word Processing.

Furthermore, the computed r-values with regards to age and year level show a very weak negative correlation, with a scale of -0.03. Similarly, gender, Frequency of using a Computer, and Frequent apps/sites being visited show a very weak positive correlation, with a scale ranging from 0.03 to 0.09. The data showed age and year level had a computed r-value of -0.03. On the other hand, gender with a 0.09, Frequency of using a computer had 0.07, Frequent apps/sites being visited had a computed r-value of 0.03.

The findings indicate that there is no significant relationship between demographic profile and the level of computer literacy skills in Microsoft Office Word Processing of the respondents. These findings indicate that factors like age, gender, year level, frequency of using a computer, and frequent apps/sites being visited do not strongly influence proficiency in Word Processing skills among the surveyed population.

According to the study of Lung-Yu Li and Long-Yuan Lee (2016). there findings show that gender factors have no impact on attitude toward Computer Literacy skills. The results of their study were supported with similar studies finding no significant difference in attitude toward computer Internet between males and females (Huang, 2000; Huang, 2002). In a study carried out by Gebhardt et. al. in 2019, they examined the disparities in computer literacy between genders.

Furthermore, the report published by Global Giving in 2019 highlights that not everyone has equal access to the Internet, and some individuals lack a solid understanding of computer usage. Additionally, Tanenaka (2021) argues that many people face challenges in comprehending the complex systems involved in computer literacy, particularly those who have not been exposed to technologically advanced environments during their upbringing. It is clear from these various sources that there are gender differences and barriers, along with variations in access and understanding, that contribute to the digital divide within our society.

Table 10 illustrates the significant relationship between the demographic profile and computer literacy skills in terms of Microsoft Office Excel. The table also shows the r-value, degree of correlation, p-value, and analysis.

Table 10. Significant Relationship between the Demographic Profile and Computer Literacy

Skills in terms of Microsoft Office Spreadsheet

Demographic Profile s	Computer Literacy Skills	r-value	Degree of Correlation	p-value	Analysis
Age		0.05	Very Weak Negative Correlation	0.501	*Not Significant*
Gender	*Microsoft Office Spreadsheet*	0.18	Very Weak Positive Correlation	0.021	*Not Significant*
Year Level		0.02	Weak Negative Correlation	0.740	*Not Significant*
Frequency of using a Computer		0.07	Very Weak Positive Correlation	0.376	*Not Significant*
Frequent apps/sites being visited.		0.09	Very Weak Positive Correlation	0.238	*Not Significant*

Legend:

Based on the table, the computed p-values between the demographic profile in terms of age, gender, year level, Frequency of using a Computer, and Frequent apps/sites being visited, and the Computer Literacy Skills in terms of Microsoft Office Excel are all greater than the level of significance ($\alpha = 0.05$). The data showed that age computed p-value is 0.501, gender with 0.021, year level with 0.740, Frequency of using a Computer with a 0.376, and Frequent apps/sites being visited with a computed p-value of 0.238. It signifies that there is no significant relationship between the respondents' demographic profile and computer literacy skills of the respondents in terms of Microsoft Excel.

Furthermore, the computed r-values with regards to age, gender, year level, Frequency of using a Computer, and Frequent apps/sites being visited indicate a very weak positive correlation, with a scale ranging from 0.02 to 0.18. The data showed that age computed r-value is 0.05, gender with 0.18, year level with a 0.02, Frequency of using a Computer that had 0.07, and Frequent apps/sites being visited with a computed r-value of 0.09. This showed that there is almost no linear association between the respondents' demographic profile and the Microsoft Excel skills.

The result of the findings showed that there is no significant relationship between the respondent's demographic profile and computer literacy skills in terms to Microsoft office excel. It indicates that the BSAIS student in Laguna University already have a solid understanding of Excel's basic and intermediate functions. The respondents age, gender, year level and how frequent they use computers and apps doesn't affect them in attaining a computer literacy skill in Microsoft office excel.

 In the study of Smith, James H., et al. it showed that there are no significant factors between demographic characteristics and computer experiences with self-perceived level of computer skills and computer knowledge. Computer and information literacy is becoming more equal among students of different genders. Male students tend to use computers more often and have more skills in programming and troubleshooting. Female students, however, have higher scores in computer and information literacy assessments. The main difference is the level of interest in computer technologies between males and females. K. Ying-Sheng (2020).

However, they also need to be proficient in using the most common software applications. However, not everyone may have access to the necessary systems and resources to develop computer literacy, especially if they come from a less technologically advanced background. This is consistent with the findings of Cabejan & Takenaka (2021)

Table 11 illustrate the significant relationship between the demographic profile and computer literacy skills in terms of Microsoft Office PowerPoint. The table also shows the r-value, degree of correlation, p-value, and analysis.

Table 11.   Significant Relationship between the Demographic Profile and Computer Literacy

Skills in terms of Microsoft Office Presentations

Demographic Profile s	Computer Literacy Skills	r-value	Degree of Correlation	p-value	Analysis
Age		0.09	Very Weak Negative Correlation	0.206	*Not Significant*
Gender	*Microsoft Office Presentations*	0.25	Weak Positive Correlation	0.001	*Significant*
Year Level		0.02	Weak Negative Correlation	0.754	*Not Significant*
Frequency of using a Computer		0.12	Very Weak Positive Correlation	0.103	*Not Significant*
Frequent apps/sites being visited.		0.15	Very Weak Positive Correlation	0.056	*Not Significant*

From the table. It is showed that in terms of gender with a p-value of 0.001 and the Computer Literacy Skills in terms of Microsoft Office Presentation the computed p-values are less than the level of significance ($\alpha = 0.05$). The analyses showed that the relationships were significant. Furthermore, the computed r-values with regards to gender with a 0.25 showed a weak positive correlation.

On the other hand, the computed p-values between the demographic profile in terms of age that had 0.206 p-value, year level with 0.754, Frequency of using a Computer with a 0.103, and Frequent apps/sites being visited with a computed p-value of 0.056, and the Computer Literacy Skills in terms of Microsoft Office PowerPoint are all greater than the level of significance ($\alpha = 0.05$). The analyses show that the relationships are not significant.

Furthermore, the computed r-values with regards to age, year level, Frequency of using a Computer, and Frequent apps/sites being visited show a very weak positive correlation, with a scale ranging from 0.02 to 0.25. The data showed that age had a computed r-value of 0.09, year level with a 0,02, Frequency of using a Computer that has 0.12, and Frequent apps/sites being visited with a computed r-value of 0.15.

It appeared that Table 11 showed that there is no significant relationship between Computer Literacy Skills in terms of Microsoft Office PowerPoint including the demographic profile followed; age, gender and year level. On the other hand, Frequency of using a computer and Frequency apps/sites being visited have their significant relationship with Computer Literacy Skills in terms of Microsoft Office PowerPoint.

This indicates that the BSAIS student at Laguna University has already shown mastery in creating, customizing, and arranging presentations, along with outstanding performance in a variety of functions suggests that they already possess a firm grasp of PowerPoint fundamentals.

In the Study to S. Sobieraj & N.C Krämer 2020, explained how the women and men differentiate on using technologies and perceive their own technologically abilities that most of people beliefs are increase feelings of uncertainty. In addition, Lulu C. (2019) stated that computer literacy is the ability of an individual in using computers and technologies efficiently. It considered that having a knowledge on using and utilizing computer have the ability to perform school basic computer. Since Computers are now using in any various process specially in schools and works.

6. Conclusions

In the light of the findings of this study entitled: Looking Through the Computer Literacy Skills of BSAIS Students at Laguna University: A Groundwork in Improving Computer Literacy, the following conclusions are drawn:

1. The findings of the respondents' demographic profile show that in terms of age, the majority of the BSAIS respondents were between 21 and 25 years of age, which is mainly young adult college students enrolled at university. Meanwhile, in terms of gender, it shows that the majority of the respondents are female. And in terms of year level, it indicates that most of the respondents are in 4th year students.
2. In terms of the Frequency of using computers the respondents result show that they are using them daily. Students are using computers quite frequently today as a result of the expansion of online learning. Students use computers for three to eight hours a day or longer, depending on the level of their studies and whether they attend classes in person or virtually. Furthermore, in the Frequency of apps/sites being visited, the findings show that the respondents frequently visited the app/site is Canva, where the students find it more accessible for creating presentations and other projects.
3. 3.The students exhibit a high level of computer literacy in Microsoft Word Processing. They are proficient in basic tasks like opening and closing Word documents, creating, and saving documents, and setting print options.

4. In Microsoft Office Spreadsheet, students are highly literate in basic and intermediate functions, but there is room for improvement in more advanced skills such as using different formulas and identifying shortcuts.

5. In Microsoft Office Presentation, the students were also "highly literate." They demonstrated proficiency in creating, customizing, and organizing presentations, with strong performance in various functions.

6. The overall result of these findings shows that, there is no significant relationship between the demographic profile and computer literacy skills of the respondents. The researchers concluded that the students at Laguna University, despite their age, gender, and year level, are already highly literate in basic computer knowledge/skills in MS Word, MS Spreadsheet, and MS presentation. Overall, the students at Laguna University's computer literacy skills are commendable and set them up for success in various academic and professional pursuits.

References

Louise Gaille. (2020). *20 Advantages and Disadvantages of Survey Research*. Retrieved from vittana.org: https://vittana.org/20-advantages-and-disadvantages-of-survey-research

A. Owen, Ph.D. (2022). *The Ongoing Need for Academic Digital Skills.* Retrieved from excelined.org/: https://excelined.org/2022/09/20/the-ongoing-need-for-academic-digital-skills/

Albert, Jose Ramon G. (2021). *Why Literacy Measurement Deserves Rethinking*. Retrieved from www.pids.gov.ph: https://www.pids.gov.ph/publication/policy-notes/why-literacy-measurement-deserves-rethinking

Alliance for Affordable Internet. (2021). *The Costs of Exclusion: Economic Consequences of the Digital.* Retrieved from Web Foundation: https://webfoundation.org/docs/2021/10/CoE-Report-English.pdf

Arsenijević, J. &. (2019). New Media Literacy within the Context of Socio-Demographic Characteristics. *Procedia Technology*, 22, 1142-1151.

Bahian, E. V., & Sari, A. M. (2017). *On the spread of computer literacy among education students.* . Retrieved from evsu.edu.ph: https://www.evsu.edu.ph/university-research-and-created-works/on-the-spread-of-computer-literacy-among-education-students/

Blue, J. (2022). *More than just using computers: understanding and developing Digital Literacy with our new guide*. Retrieved from www.cambridge.org/: https://www.cambridge.org/elt/blog/2022/04/07/understanding-developing-digital-literacy/

Blue, J. (2022). *World of better learning*. Retrieved from cambrige.org: https://www.cambridge.org/elt/blog/2022/04/07/understanding-developing-digital-literacy/

Boulianne, E. (2014). Impact of accounting software utilization on students' knowledge acquisition: An important change in accounting education. *Journal of Accounting & Organizational Change, Vol. 10 No. 1, pp. 22-48. https://doi.org/10.1108/JAOC-12-2011-0064*.

Bruwelheide, Janis H. (n.d). Computer Literacy: A Current Review of the Literature. *Rural Educator, v5 n3 p6-10 Spr 1984*.

Cabejan & Takenaka. (2021, June). Cadiz-Cabejan, A., & Takenaka, M. (2021, June). Students' computer literacy and academic performance - researchgate. Retrieved April 2, 2023, from https://www.researchgate.net/publication/352978898_Students'_Computer_Literacy_and_Academic_Performance.

Cadiz-Gabejan & Takenaka, A. M. (2021).). Students' Computer Literacy and Academic Performance. Journal of World Englishes and Educational Practices. Retrieved from https://www.researchgate.net/publication/352978898_Students'_Computer_Literacy_and_Academic_Performance/citation/download

Cadiz-Gabejan, A. M., &; Takenaka, M. J. C. (2021). *Students' computer literacy and academic performance.* Retrieved from Journal of World Englishes and Educational Practices. : https://www.al-kindipublisher.com/index.php/jweep/article/view/1883

Calina, R. et al. (2019). *Effectiveness of computer literacy among grade 12 accountancy, Business and Management Students of Bestlink College of the Philippines Academic year 2018-2019.* Retrieved from https://ojs.aaresearchindex.com/index.php/aasgbcpjmra/

Calina, R. et al. (2019). *Effectiveness of computer literacy among grade 12 accountancy, Business and Management Students of Bestlink College of the Philippines Academic year 2018-2019.* Retrieved from ojs.aaresearchindex.com: https://ojs.aaresearchindex.com/index.php/aasgbcpjmra/

Children's Joy Inc. (2018). *Survey on Internet Access and Used by Filipino Schoolchildren, Summary of Nation Findings.*

Gebhardt et al. (2019). Introduction to Gender Differences in Computer and Information Literacy. Retrieved from https://www.researchgate.net/publication/335860190_Introduction_to_Gender_Differences_in_Computer_and_Information_Literacy

Global Giving. (2019). *Help 500 Filipino children be literate in computer.* Retrieved from Global Giving: https://www.globalgiving.org/projects/help-500-filipino-children-literate-in-computer/reports/

Hindi et al. (2004). Computer Literacy: Implications for Teaching a College-Level Course.

Hoyle, J. (2018). Computer Literacy: Implications for Teaching a College-Level Course. Retrieved from https://jise.org/volume13/n2/JISEv13n2p143.pdf

Indeed.com. (2023). *What is computer literacy and how to improve in 6 steps.* Retrieved from Indeed: https://uk.indeed.com/career-advice/career-development/computer-literacy

J. Ainley. (2018). *Students and Their Computer Literacy: Evidence and Curriculum Implications.* Retrieved from link.springer.com: https://link.springer.com/referenceworkentry/10.1007/978-3-319-71054-9_4

J. Dy. (2022). *Improving digital skills in the Philippines.* Retrieved from Manila Bulletin: https://mb.com.ph/2022/08/25/improving-digital-skills-in-the-philippines/?fbclid=IwAR121LfDXvzCnZWhQZ4i1XSYqmo4oz0BJfnfxA59300DxVMDnl1QsD45oVU

J. S. Barrot, et al. (2021). Students' online learning challenges during the pandemic.

Journal of Computer Education. (2022). *sciencedirect.com.* Retrieved from Journal of Computer Education: https://www.sciencedirect.com/journal/computers-and-education

K. Ying-Sheng. (2020). Gender Differences in Computer Literacy among Students in the Computer Introduction Course of the Department of Technology. Retrieved from http://www.itspoa.com/UploadFiles/2020-05/369/2020052618383496910.pdf

L. Bernstein. (2019). *New Global Survey Offers Snapshot of Technology in the Classroom.* Retrieved from edtechmagazine.com: https://edtechmagazine.com/k12/article/2019/02/new-global-survey-offers-snapshot-technology-classroom-2019

Lulu, C. (2019). *Computer Literacy Awareness Among Primary School Teachers in IkwerreLGA of Rivers State. .* Retrieved from academia.edu: https://www.academia.edu.com

Manila Bulletin. (2019). *Manila Bulletin.* Retrieved from https://mb.com.ph/category/news

Mbaeze, I. C., Ukwandu, E., & Anudu, C. (n.d.). The influence of information and communication technologies on students' academic performance. *Journal of Information Technology Impact, 10(3),129136.*

P. Bhandari. (2022). *Correlational Research | When & How to Use.* Retrieved from www.scribbr.com: https://www.scribbr.com/methodology/correlational-research/

Philippine Institute for Development Studies. (2021). *Philippine Institute for Development Studies.* Retrieved from Digital Literacy Skills of Filipinos: from https://www.pids.gov.ph/details/fact-friday-on-digital-literacy-skills-of-filipinos#:~:text=A%20PIDS%20paper%20underscored%20the,for%20

S. Sobieraj & N.C. Krämer. (2020). *Similarities and differences between genders in the usage of computer with different levels of technological complexity, Volume 04.* Retrieved from www.sciencedirect.com: (https://www.sciencedirect.com/science/article/pii/S0747563219303498)

Santos et al. (2019). PDF] ICT literacy and school performance.: Semantic scholar. Turkish Online Journal of Educational Technology. Retrieved April 3, 2023, from https://www.semanticscholar.org/paper/ICT-Literacy-and-School-Performance.-Santos-Ramos/098183ce048a73421afa457742.

Scottish Government. (2015). *Literature Review on the Impact of Digital Technology on Learning and Teaching*. Retrieved from gov.scot: https://www.gov.scot/publications/literature-review-impact-digital-technology-learning-teaching/documents/

Statista Research and Development. (2023). Mobile internet & apps in the Philippines - statistics & facts.

Unicef.org. (2020). *Two thirds of the world's school-age children have no internet access at home, new UNICEF-ITU report says*. Retrieved from Unicef.org: https://www.unicef.org/press-releases/two-thirds-worlds-school-age-children-have-no-internet-access-home-new-unicef-itu

Wang, et al. (2022). Social networking sites use and college students' academic performance: testing for an inverted U-shaped relationship using automated mobile app usage data: This is a research article by Wang et al. that examines the relationship between social networki.

Weinberger. (2017). Retrieved from Computer Literacy among Employees of Government and Non-Government Agencies: Basis for the Formulation of Computer Training Program : https://ijisrt.com/assets/upload/files/IJISRT22AUG214_(1).pdf

Weli. (2015). Accounting Students Attitude towards Computer, the Acceptance of the Accounting Information System's Course and Teaching Method. *Social and Behavioral Sciences*, 18-25.

Writer, S. (2018). The Danger of Computer Illiteracy in an Increasingly Digital World.

Zawawi, et al. (2019). An Empirical Study On Computer Literacy Among Graduating Students In The Bachelor Of Accountancy Programs Of Malysian Public Higher Institutions.

Zhang, Li, & Zhang. (2019). *21st Century Literacy Skill of Information Technology and Computer Education Students* . Retrieved from researchgate.net: https://www.researchgate.net/publication/352073614_21st_Century_Literacy_Skill_of_Information_Technology_and_Computer_Education_Students

Zulueta. (2004). *Multiple Response.* Retrieved from Computer Literacy among Employees of Government and Non- Government Agencies: Basis for the Formulation of Computer Training Program: https://ijisrt.com/assets/upload/files/IJISRT22AUG214_(1).pdf