

# DIFFERENCES OF LOCAL GOVERNMENT EMPLOYEES (LGUs) COMPUTER LITERACY SKILLS BASED ON PERSONAL ATTRIBUTES

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**ABSTRACT:** Computer and internet proficiency are a requirement for all employees in public and private organizations. However, age and educational attainment can be a factor in digital literacy. This study determined the extent of age and educational qualification in computer and internet skills. It utilized a descriptive and causal-comparative research design. Respondents in this study were LGU Opol, Misamis Oriental, Philippines participants in the computer literacy training held by the USTP IT Department in December 2017. After the training, data was collected and analyzed using inferential statistics. Results revealed that training participants' computer and internet skills improved significantly. However, when compared according to their age and educational qualification, it was concluded that it does not matter in the context of this study, which might be due to the fact that the majority of the participants are in their 50s and are college graduates. Overall, their computer and internet skills were comparable before and after the training. The researchers then recommend that further computer literacy training be conducted as well as in other regions. Further studies may also be conducted to determine the employers' satisfaction with the work performance of the participants after they are trained, as well as intensive monitoring and evaluation of the training conducted.

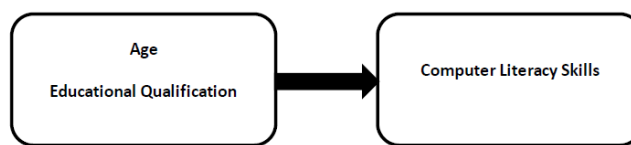
**Keywords:** computer and internet skills, age, educational attainment, local government employees

## 1. INTRODUCTION

Computer literacy is fundamental for each individual in today's global technological world. As a matter of fact, computer literacy is as basic to all students as the coursework in the core curriculum for today's computer-centric information age [1] in preparation for future work. According to Cohen, computer literacy is imperative for every individual, particularly for students [2]. Information, Communication, and Technology (ICT) proficiency have been considered one of the fundamental skills beyond other skills such as reading, writing, and numeracy [3]. Reynolds defined computer literacy as being knowledgeable about hardware and software capabilities and understanding how computers and the internet can enhance students' educational experiences [4]. It is the basic understanding of operating computers and similar technology, such as tablets and smartphones. Hence, being computer literate gives a learner an opportunity to cope with the rapidly changing environment of technology.

In government sectors, computers are used in data processing, maintaining a database of citizens, and supporting a paperless environment. Many employers are now recruiting candidates who have knowledge and experience in information technology or those who are computer literate. Therefore, potential candidates should master at least some level of computer literacy [5]. In the Philippines, specifically, those employed in local government units; need to possess the necessary computer literacy skills as the government adopts computerization programs for all government offices nationwide. The Department of Information and Communication Technology (DICT) of the Philippines established the e-government, which is envisioned to create "a digitally empowered and integrated government that provides responsive and transparent online citizen-centered services for a globally competitive Filipino nation. Hence, it is imperative for every government employee to be computer literate to perform their functions effectively and efficiently. Digital literacy has been very important, especially for older adults. As a matter of fact, older adults are capable of learning

and acquiring digital literacy skills as long as they are strongly motivated or they know the functional benefits related to ICT [6]. However, there are also studies that argue that age does not matter in technology integration. In a study conducted by Tweed, teacher age did not play a significant role in classroom technology use by teachers [7]. This study was conducted for teachers, but in the context of the LGU employees in Northern Mindanao, this has yet to be explored. Furthermore, in terms of the differences in computer literacy skills with respect to the educational qualification of employees, there is no available literature yet, especially in the Philippines, and hence this study was conducted. This study was conducted to determine if the government employees' age and educational attainment matter on their levels of computer literacy skills. The interplay of the variables was shown in the following figure:



**Figure 1: Conceptual Paradigm of the Study**

The figure above shows the extent of LGU employees' age and educational qualification on their level of computer literacy skills. These LGU employees of Opol, Misamis Oriental, Philippines, are those who were able to attend the computer literacy training conducted by the USTP IT Department in coordination with the Extension and Community Relations Department last December 2017.

## 2. METHODS

This study utilized a descriptive and causal-comparative research design. Respondents in this study were LGU Opol, Misamis Oriental, Philippines participants in the computer literacy training held by the USTP IT Department in December 2017, in collaboration with the university's

Extension and Community Relations Department. The data was collected after the training was conducted and analyzed using descriptive statistics such as frequency, percentage, mean and standard deviation, and inferential statistics to compare the computer and internet skills of the participants specifically the non-parametric Wilcoxon Signed Rank Test considering the number of participants. The participants are also given informed consent to the data collection and their anonymity was given utmost consideration in compliance with the Republic Act 10173 or the Data Privacy Act of 2012 of the Philippines.

**3. RESULTS AND DISCUSSION**

Table 1: Profile of the Respondents

Profile	Frequency	Percentage
Gender		
Male	2	14.29
Female	12	85.71
Age		
50-59 years old	8	57.14
40-49 years old	2	14.29
30-39 years old	4	28.57
Highest Educational Attainment		
College Graduate	10	71.43
College Level	2	14.29
High School Graduate	2	14.29

Table 1 shows the profile of the respondents who answered the survey questionnaires. It can be gleaned from the table that the majority of the respondents are female who is 50-59 years old and graduated from college.

**Table 2: Comparison of the Respondents' Computer and Basic Internet Skills Before and After the Conduct of Computer Literacy Training Using Wilcoxon Signed Rank Test**

Skills	Z-value	p-value	Conclusion
Computer Skills <i>Before:</i> Mean= 13.36; SD=6.913 <i>After :</i> Mean= 22.21; SD=2.694	-3.065	0.002**	Significant
Basic Internet Skills <i>Before:</i> Mean = 2.43; SD=1.603 <i>After:</i> Mean = 3.36; SD= 1.008	-2.401	0.016**	Significant

\*\*significant (2-tailed) at p<0.05

Using the Wilcoxon Signed Rank Test, results show that there was a significant improvement in the respondents' computer and basic internet skills, as indicated by the probability values of 0.002 and 0.016, respectively, which led to the rejection of the null hypothesis. This implies that the computer literacy training was instrumental in the improvement of their computer and basic internet skills.

Hence, it is vital for the local government of Opol to continue this program with the help of the USTP IT Department as it was proven to be effective in its first implementation. Computer skills training is deemed vital for government employees to have better job performance. As supported by the study by Lagon, the level of basic computer literacy among government employees and officials was not adequate [8]. Therefore, computer operation skills were the most common educational need among the employees and officials. Computer literacy skills may be improved and the job performance of the respondents through interventions such as skills training, seminars, and workshops.

**Table 3: Comparison of the Respondents' Computer and Basic Internet Skills Before and After the Conduct of Computer Literacy Training When Grouped According to Age and Highest Educational Attainment**

Skills	Factor	F-value	p-value	Conclusion
Computer Skills (Before Training)	Age	0.835	0.658	Not Significant
	Highest Educational Attainment	0.063	0.806	Not Significant
Computer Skills (After Training)	Age	6.383	0.143	Not Significant
	Highest Educational Attainment	1.474	0.250	Not Significant
Basic Internet Skills (Before Training)	Age	1.343	0.501	Not Significant
	Highest Educational Attainment	0.764	0.401	Not Significant
Basic Internet Skills (After Training)	Age	4.370	0.200	Not Significant
	Highest Educational Attainment	1.432	0.257	Not Significant

\*\*significant (2-tailed) at p<0.05

It can be gleaned from the table above that the respondents' computer and basic internet skills before and after the conduct of computer literacy training when grouped according to age and highest educational attainment were not significantly different as indicated by the probability values greater than 0.05, which led to the non-rejection of the null hypothesis. This implies that the age and highest educational attainment of the respondents do not affect their level of computer and basic internet skills before and after the conduct of the computer literacy training by the USTP Extension Office and IT department. This further means that they do have the same level of skills before and after, and the computer training really helps in gaining those competencies which they can apply in their day-to-day work.

**4. CONCLUSIONS AND RECOMMENDATIONS**

The computer literacy training conducted by the USTP IT Department was indeed successful. Based on the findings of the study, it can be inferred that the participants' computer and internet skills improved significantly after the training. However, when the computer and internet skills were

compared according to age and educational qualification, it was concluded that it does not matter in the context of this study, which might be due to the fact that the majority of the participants are in their 50s and are college graduates. There might be a different scenario if the age distribution were even.

Overall, their computer and internet skills were comparable before and after the training. The researchers then recommend that further computer literacy training be conducted for the LGU Opol as well as other LGUs in Northern Mindanao. Further studies may also be conducted to determine the employers' satisfaction with the work performance of the participants after they are trained as well as intensive monitoring and evaluation of the training conducted.

### Acknowledgments

The researchers are grateful to the USTP Administration through the Research Office headed by Dr. Ismael Talili and the Extension and Community Relations Department headed by Dr. Maria Teresa M. Fajardo for their approval and support to conduct this impact study. Moreover, the researchers would also like to thank Dr. Laila S. Lomibao, Dean of the College of Science and Technology Education, and Dr. Jocelyn Barbosa, Dean of the College of Information Technology and Computing, for their constant support in conducting this impact assessment.

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