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# Computer Literacy among Secondary School Teachers: Basis for Development Intervention

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***Abstract***
*This study sought to determine the computer literacy of 270 secondary school teachers in the District of Hinoba-an. More so, this investigated the relationship of the computer literacy to the performance of the participants for the school year 2017 - 2018. The whole population was the participants of the study as the researcher wanted to determine the whole phenomenon the district and the teachers specifically are experiencing. This descriptive-correlational study utilized the Pearson Product Moment Correlation for the significant relationship while T-Test for the significant difference on the computer literacy when the participants are grouped according to sex and when before and after of the intervention are compared; Analysis of Variance was employed to variables like Age, School Position, Highest Educational Attainment, and Length of the results showed that participants Service. essentially and generally high in terms of their literacy in computer. There is a significant difference on the computer literacy among the secondary schools in terms of age, school position, and length of service, while it was found out that there is no significant difference when the and highest participants are grouped according to sex educational attainment. The results and findings became bases in the crafting of Development Intervention, "SHARE- was effective as there was IT!" The intervention significant difference before and after the intervention, for which the mean score of self-evaluation on the computer skills increased. The Department of Education is encouraged to continually conduct developmental strategic innovations the skills of teachers in the and programs to enhance and to deliver excellent access, quality computer age relevance to education.*
***Keywords:*** *Computer Literacy, Secondary School Teachers, Development Intervention*

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## I. INTRODUCTION

**Background of the Study**

The rapid uptake of computer usage demands new ways of thinking about what we teach, how we teach it and, increasingly, how we justify his pedagogical choices. For the English language teacher, there is a great urgency to look beyond traditional forms of print media in order to consider how we prepare students for careers that require active participation in the new literacy of the digital age. Although traditionally defined as the ability to read and write, an understanding of what it means to be literate needs to be extended.

Teaching with new technology is a series that provides teachers with practical, research-based approaches to using computer technologies in their language classrooms. It has deliberately chosen to use the term 'computer-based technologies' to highlight the technologies where the computer is an obvious tool. Many other classroom tools and artifacts use digital technology, but do not involve computers as machines in any obvious way. Such tools and artifacts include VCRs, mobile phones, clocks and language lab.

These new computer-based technologies were initially taken up by teachers who had a passion for computer technology. Now that these technologies have been used in language education for almost two decades, many other teachers want to explore their use in their own classrooms. In fact, digital literacies are increasingly becoming an essential tool for social, education and occupational words (Snyder, 2002). One foundation for gaining such control is through the mastery of essential computer skills (Kasper,2000).

The researcher, as a graduate of information technology and as a licensed teacher, observed that there are many high school teachers who complain about paper works as to downloading of forms, submitting reports online, and even in registering or enrolling learners' registered number in the Learner's information System(LIS).Out of these situation, the researcher found it interesting to investigate the computer literacy of teachers and their rating on their performance as reflected against their Individual Performance Commitment and Review Form(IPCRF).

**Statement of the Problem**

This study determined the computer literacy among secondary school teachers and their performance in the District of Hinoba-an, Negros Occidental, during the school year 2017-2018. The results became bases for the crafting out of development intervention.

Specifically, it sought to answer the questions:

1. What is the socio-demographic profile of the respondents in terms of:
a. Age;
b. Sex;
c. Highest educational attainment;
d. School position; and
e. Length of service?
2. What is the computer literacy of secondary school teachers in Microsoft applications such as Microsoft Word, Microsoft Excel and Microsoft Power Point when they are grouped and compared according to their socio-demographic profile and when taken as a whole?
3. What is the computer literacy of secondary school teachers in Microsoft applications such as Microsoft Word, Microsoft Excel and Microsoft Power Point after the development intervention?
4. What is the performance of secondary school teachers in the District of Hinoba-an?
5. Is there a significant difference among the secondary school teachers in the District of Hinoba-an in-computer literacy when they are grouped according to their socio-demographic profile?
6. Is there a significant difference in computer literacy of secondary school teachers before and after the development intervention?
7. Is there a significant relationship between computer literacy of secondary school teachers in the District of Hinoba-an and their performance?

**Hypotheses**

1. There is no significant difference among the secondary school teachers in the District of Hinoba- an in-computer literacy when they are grouped according to their socio-demographic profile.
2. There is no significant difference in computer literacy of secondary school teachers before and after the development intervention.
3. There is no significant relationship between c literacy of secondary school teachers in the District of Hinoba-an and their performance.

**Conceptual Framework**

This study was anchored on the concept of Cope and Kalantzis (2000). Coming to terms with new concepts in literacy helps us to understand, decipher and control the influence and meaning of digital information in our lives (Kasper 2000). One foundation for gaining such control is through the mastery of essential computer skills. Teachers with the fast-paced emergence of who are equipped technology can help their students gain crucial computer literacy skills. However, not all teachers want to become full-time computer trainers but each has a role to play in helping their student gain the skills needed to live and work in the information age.

The study, on the same manner, investigated the computer literacy and the performance of secondary school teachers in the District of Hinoba-an, school year 2017 - 2018. This study served as an avenue for the concerned to conduct a more in-depth trainings and workshops to maximize the educational system's mission to provide quality education to its constituents. The participants were categorized according to their socio-demographic profile such as: sex, age, school position, highest educational attainment and length of service. Their performance as reflected in their Individual Performance Commitment and Review Form (IPCRF) was also utilized in the study.

A proposed development intervention was crafted as a gauge to the administrators and to the Department of Education as a whole to enhance existing programs and perhaps conduct more innovations related to computer-based instructions accordingly align in the Department of Education's mission and vision - one is to provide access, quality, and relevance to education.

The schematic diagram presented below explains the relationship of independent and dependent variables of the study.

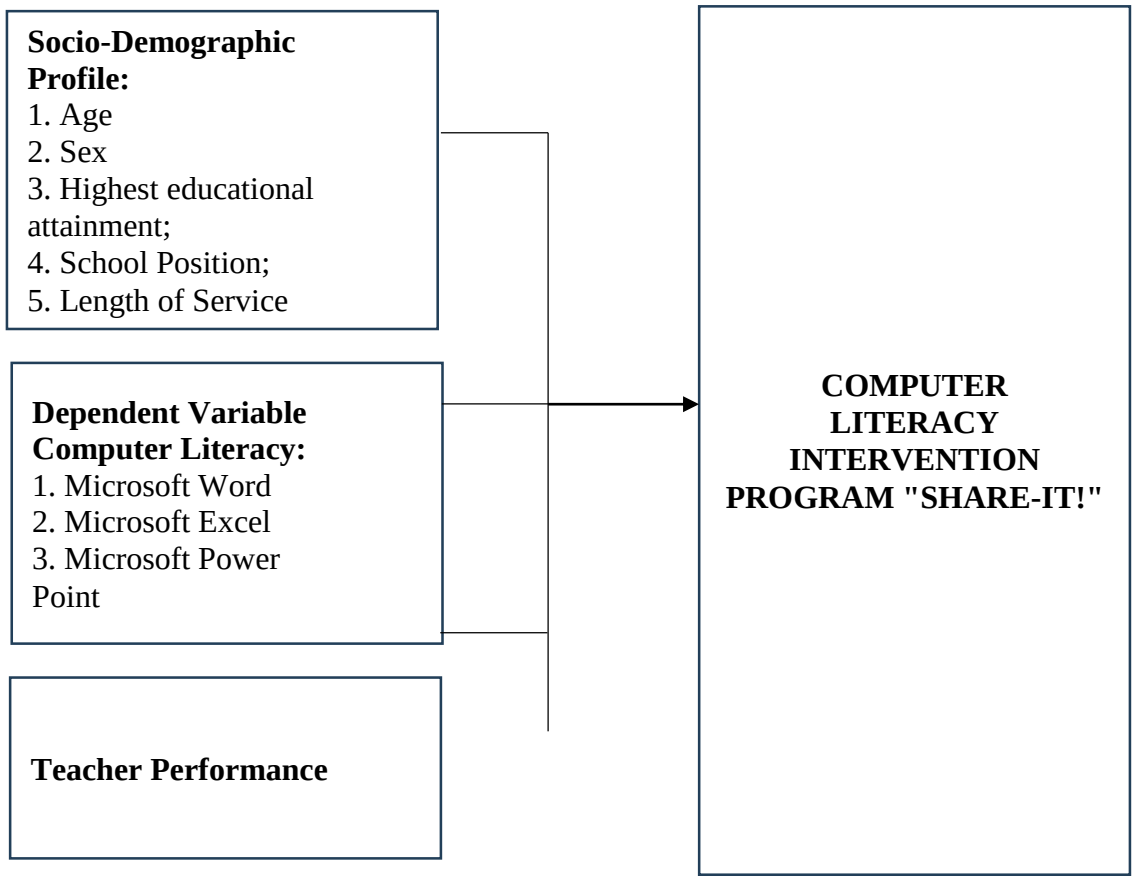


*Figure1*. Schematic Diagram of the Study. Computer Literacy among Secondary Schools: Basis for Development Intervention.

## II. RESEARCH DESIGN AND METHODOLOGY

This research design, respondents of the study, sampling techniques, data gathering instrument, validity and reliability of the instrument, data gathering procedure and the data treatment.

**Research Environment**

This research study was conducted in the District of Hnioba-an of the Division of Negros Occidental to determine the computer literacy among secondary school teachers and their performance for the School Year 2017-2018.

**Research Design**

The nature of the specific problem of this study calls descriptive correlational type of there search methodology as it investigated the computer literacy and the performance of secondary school teachers in the District of Hinoba-an for the school year 2017 - of research indicates whether the

2018. This type relationship was perfect, very high, high, marked or moderate, slight, negligible (Calmorin&Calmorin, 2010). It also allows the prediction of future events from present knowledge (Stangor, 2011).

Furthermore, this study utilized this type of research method as it allows a better description and understanding of the study that assists the researcher in interpreting the data. It involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection (Glass & Hopkins, 1984).

Studies of this type might describe the current state of multimedia usage in schools or patterns of activity resulting from group work at the computer.

**Locale of the study**

The study was conducted to eight secondary schools in the District of Hinoba-an, namely (from the farthest south): Culipapa National High School- Sangke Extension, Culipapa National High School, Bulwangan National High School, Bilbao-Uybico National High School, Bilbao-Uybico National High School - Damutan Extension, St. Michael's Academy Inc., Extension, Bulwangan National High School Our and Lady of Sorrows

Talacagay Academy. The Municipality of Hinoba-anis 191-kilometer away from the heart of the province and 6-hour drive when riding a public utility bus.

**Participants of the Study**

The respondents of the study were the secondary schools school teachers from private and public schools in the District of Hinoba-an.

Hereunder is the list of schools with their corresponding number of participants.

| **Name of Schools** | **Number of Participants** |
|---|---|
| Culipapa National High School – Sangke Extension | 27 |
| Culipapa National High School | 41 |
| Bulwangan National High School | 68 |
| Bilbao-Uybico National High School | 45 |
| Bulwangan National High School – *Talacagay Extension* | 28 |
| Bilbao-Uybico National High School – *Damutan Extension* | 10 |
| St. Michael's Academy | 26 |
| Our Lady of Sorrows Academy | 25 |
| **Total** | **270** |

## III. RESULT

**Section 1. Socio- Demographic Profile of the participants**

To determine the level of Secondary school Teachers in their Computer Literacy and performance, the study polled 270 secondary school teachers. The participants in the study identify female participants fell 171, with the youngest of 102 and in the middle age of 111 and the oldest of 57 years. In terms on secondary school teachers position teacher I got the highest number followed by the teacher II and has a lowest number is the teacher III. The highest educational attainment which the bachelor's degree with units in master's degree has a highest number of 170. 5 - 8 years got the highest number in terms on length of service of the teachers.

**Section 1. Level of Computer Literacy of The Participants Before the Development Intervention**

**Mean of Computer Literacy of Secondary School Teachers when grouped according to profile.**

- 3.72 to 3.71 mean of female and male respondents said that they are literate in computer which interpreted as High.
- 4.18 and 3.63 mean of younger and meddle aged said the they are literate in terms on computer and interpreted as high.
- Older has a 3.08 mean which interpreted as average which means that half of the respondents are belong to the average level.
- Teacher I and teacher II got the mean of 3.73 which identify as high in term on operating the computer.
- Teacher III identify as average with the mean of 3.08.
- All of the teachers got the high mean in terms on the highest educational attainment.
- 1 – 12 years in service got the high mean which means they are able to operate the computer literacy.
- 13 – 16 years identify the mean of 3.03 which interpreted as average.
- 17 - above in service identify as low in terms on the computer operation which need a intervention program.

**Section 2. Level of Computer literacy of Secondary School Teacher in Microsoft Application when taken as a whole.**

**Mean of Computer literacy of Secondary School Teacher in Microsoft Application when taken as a whole.**

- 3.91 and 3.77 mean identify from Microsoft Word, Microsoft power Point which interpreted as high.
- 3.48 mean is belonged to Microsoft Excel which interpreted as average.
- Overall has a mean of 3.72 which interpreted as high and still identify that almost of the secondary teachers are good on the computer operation.

**Section 3. Level of Computer Literacy of Second Teacher after the Development Intervention**
**Mean Computer Literacy of Second Teacher after the Development Intervention**

- Microsoft Word got the 4.51 mean which interpreted as very high which represent that the given intervention is effective.
- Microsoft Excel and Microsoft power Point has a mean of 4.08 and 4.31 interpreted as high which identify that there is an improvement on the computer operation of the secondary teachers after the intervention.
- 4.0 mean which identify as the as the teacher's performance which interpreted as average.

**Section 4. On the Significant Difference on Computer Literacy when the Participants are grouped according profile.**

- .659,.938 and .543 identify as p-value in terms on significant difference in sex which concluded as not significant and the decision is failed to reject the null hypothesis.
- 0.000 p-value identify in three areas of age with the conclusion of significant and the decision is rejecting the null hypothesis.
- .029, .023 and .034 the p-value in terms on significant difference on position it concluded significant and the decision is rejecting the null hypothesis.
- On educational attainment the p-value are 0.631, 0.538 and 0.418 concluded as not significant and the decision is failed to reject the null hypothesis.
- The significant difference on the length of service and Microsoft application identifies the .000 p-value which concluded as significant and has a decision of reject the null hypothesis.

**Section 5. Significant Difference on Computer Literacy Before and After the Development Intervention**

- .000 p-value identify into the significant difference between before and after the development intervention with the conclusion of significant and has a decision of reject the null hypothesis.

**Section 6. Significant Relationship Between Computer Literacy and Teacher`s Performance**

- SM Word, MS Excel and MS PowerPoint are identifying no significant relationship to teacher's performance and the decision is Failed to accept the null hypothesis.
- Overall the computer literacy has no significant relationship to teacher's performance.

## IV. DISCUSSION

This research study sought to determine the computer literacy of secondary school teacher in the district of Hinoba-An, Division of Negros Occidental. More so, it investigated on the relation of computer literacy and the teacher's performance for the school 2017-2018.

When categorized according to the identified variables, female participants are more in number than the male ones; middle-aged Teachers I position dominated the education enterprise in the District of Hinoba-an as the school position is concerned; teacher who were not able to enroll yet in post- graduate program are the ones with the highest number in the population as when the highest education system is taken into discussion; and as for the length of service, teacher who have rendered services in more than 1 year but less than 8 years comprise almost 50% of the whole participants.

When take as a whole, the computer literacy of teacher is high. Specifically, in Microsoft Word and Microsoft Power Point, the said literacy is at high level while in Microsoft Excel, average is the verbal interpretation.

Bot sexes are at high level. However, younger and middle- aged teacher are literate at high level than older ones as the latter assessed themselves at an average level. Teacher I, II, and III evaluated their computer literacy as "high" while Master Teacher are at average. Teacher according to highest education attainment, to whatever categories they belong, are at high level of computer literacy. On the other hand, the results showed that teacher when categorized according to the length of service are at decreasing trend in the computer literacy as the length of services increases. Vividly, teacher who are rendering service of not more than 12 years are at high level, with a varying decrease in the mean. Teachers who are 13-16 years in the service are at an average level while those with more than 17 years are at low level.

The teacher's performance for the midyear evaluation of the school year 2017-2018 as reflected in their IPCRF is at a Very Satisfactory Level.

There is no significant difference among the secondary school teacher in their computer literacy and when they are grouped according to sex and highest education attainment, while displayed a significant difference in term of age, school position and length of service.

There is a significant difference before and after the development intervention. The mean score was increased.

There is no significant relationship between computer literacy and teacher's performance. The computer literacy on the 3 Microsoft application such as word, excel and power point has no correlation to the teacher's performance.

## V. CONCLUSION

The research anchored the following conclusion based on the summery of finding.

It is important to note that only few teachers are pursuing the continuing profession as development through enrolling in post-graduate program as they comprise a big number in the population. It is directly proportional to the teaching position of Teacher I as the latter also comprises the largest number of population. It is notable to say that school position is somehow correlated with the highest education attainment. Also noted in the distribution of the population are the teachers belonging to more than 1 year but less than 8 years. The number, perhaps, was affected due to the massive job hiring in the teaching position as a necessity of the department in the implementation of k-12 Program.

When take as a whole, computer literacy of teachers is at high level. This is sound compliance on the Department order No.37, s. 1997 on Computer Literacy as Basic Requirement for New Teachers. Teachers are to complement quality education through computer and information technology skills.

Master Teachers fell below in computer literacy than teachers of lower in position. Most master teachers are at an old age, and as age creates a gap in the computer literacy, they might be far below than the younger ones with lower position. The decrease in the computer literacy when the participants are categorized according to the length of service can be in the result of the investigations. This might mean that the length of service is also correlated with the age. The higher the age. The higher the age, the lower the computer literacy.

On the performance as evaluated in the IPCRF, teachers are at a Very Satisfactory level. This confirms in the massive campaign of enhancing teacher competence through access in technology and innovation. The IPCRF is committed to evaluate the teacher's performance enveloped with knowledge, skills and attitude toward excellence in providing quality service to the students and in aligning competence with the mission, vision, and goals of the department. There is no significant difference among the secondary school teacher in their computer literacy and when they are grouped according to sex and highest educational attainment.

On the contrary, teachers are found to be significant different on the computer literacy in terms of age, school position and lengthen of service. Some older teachers, as for the length of service, considered themselves too old to be learning new tricks and some stuck doggedly too old methods. On the school position, master teachers in the District of Hinoba-an are mostly of aged and that there is a significant difference in computer literacy when the participants are grouped according to the said variable. there is no significant relationship between computer literacy and teacher's performance.

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