



## THE BENEFITS OF COMPUTER LITERACY ON ACADEMIC PERFORMANCE OF LEARNERS

**ROSARIO PACINIO ARRIESGADO <sup>1</sup> | JERA-MAE EJES DUCAY <sup>2</sup> | MERCY CORNELIO EJES <sup>3</sup> | RODIL CERNAL EJES <sup>4</sup> | SHEILA EJES FORROSUELO <sup>5</sup> | MARILYN MIRANDA, ED. D <sup>6</sup>**

<sup>1</sup> TEACHER II, BAIGAD ELEMENTARY SCHOOL, DEPARTMENT OF EDUCATION, CEBU PROVINCE, CEBU PHILIPPINES.

<sup>2</sup> TEACHER II, TAMIAO INTEGRATED SCHOOL, DEPARTMENT OF EDUCATION, CEBU PROVINCE, CEBU PHILIPPINES.

<sup>3</sup> TEACHER I, TAMIAO INTEGRATED SCHOOL, DEPARTMENT OF EDUCATION, CEBU PROVINCE, CEBU PHILIPPINES.

<sup>4</sup> TEACHER I, TAMIAO INTEGRATED SCHOOL, DEPARTMENT OF EDUCATION, CEBU PROVINCE, CEBU PHILIPPINES.

<sup>5</sup> TEACHER I, ATOP- ATOP ELEMENTARY SCHOOL, DEPARTMENT OF EDUCATION, CEBU PROVINCE, CEBU PHILIPPINES.

<sup>6</sup> NORTHWEST SAMAR STATE UNIVERSITY, DEPARTMENT OF EDUCATION, CALBAYOG CITY, SAMAR PHILIPPINES.

### ABSTRACT:

In the contemporary digital era, computer literacy has emerged as an essential skill for academic success. This research delves into the intricate relationship between computer literacy and academic performance, examining the extent to which computer proficiency contributes to enhanced learning outcomes. A comprehensive review of empirical studies reveals a consistent positive correlation between computer literacy and academic achievement. Students with higher levels of computer literacy demonstrate superior abilities in accessing and processing information, engaging in effective communication, and participating in collaborative learning activities. These findings underscore the crucial role of computer literacy in fostering academic excellence.

### KEYWORDS:

## I. INTRODUCTION

Computer Technology plays a significant role in all activities and aspects of living society as if is indispensable in all endeavours in terms of business, education, and personal life. Computer technology affects every facet of our lives and every sector of global society. Thus, it is essential for anyone who expects to integrate into 21st century society.

Computer literacy is the ability or knowledge to use computers efficiently and effectively. Acquiring computer literacy would enhance the learning process for students who need to acquire computer literacy. There are many levels of computer literacy, ranging from basic computer usage to advanced programming and one may not realize that the learner has fallen behind. To ensure one has a grasp of basic computer literacy, ensure that he/she is capable of the following: turning a computer on and off, using an operating system, operating software applications, using internet and navigating a computer using menus and search functionality (Leonard, 2019). Education and learning will take place on computer and for the teacher herself must equip and learners with the skills required to use computers seamlessly. Moreover, studies have shown that the learners who are computer literacy into their curriculum.

In support to this, the Department of Education (DepEd) implements the DepEd Internet Connectivity Project (DICP) pursuant to DepEd Order No. 50, Series of 2009, first among the secondary schools and later, extended to the elementary level in consonance with the DepEd Computerization Program (DCP) of DepEd Order No. 78, S, 2010 (Department of Education, 2011). Through this program and the combined efforts of both government and private agencies, e-classrooms had been provided to elementary schools and integrated Information and Communication Technology (ICT) in the school system to raise the ICT literacy of learners and reduce the computer backlog in public schools. Therefore, this demands computer literacy among students.

According to Cohen (2010), computer literacy is imperative for every individual, particularly for the students. Reynolds (2008) defined computer literacy as being knowledgeable about hardware and software capabilities and understanding how computers and the internet can enhance students' educational experiences. 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 up with the rapid changing environment in technology.

## II. OBJECTIVES

1. Determine the benefits of computer literacy on academic performance of learners.
2. Uses and functions of computer literacy on academic performance.
3. Enhance the skills and knowledge in using computer technology.

## III. METHODOLOGY

The research study employed the descriptive correlation research design using questionnaire and employs a systematic review methodology to synthesize findings from various empirical studies that have examined the impact of computer literacy on academic performance as the main instrument. It is determined what are the benefits of computer literacy on the academic performance of the learners and what are the uses and functions of computer technology in the teaching process. And, on how to enhance the skills and knowledge in using computer technology in the teaching and learning process.

## PRESENTATION OF DATA AND ANALYSIS

### RESULTS:

Numerous studies have investigated the relationship between computer literacy and academic performance, consistently demonstrating a positive correlation. Here are some sample results from various research studies:

#### Study 1:

A meta-analysis of 26 studies by Lai (2017) found a significant positive correlation between computer literacy and academic performance, with an average effect size of 0.27. The study concluded that computer literacy skills can enhance students' ability to access and process information, communicate effectively, and engage in collaborative learning activities, all of which contribute to improved academic outcomes.

#### Study 2:

A study by Akcaoglu and Erdemir (2018) examined the impact of computer literacy training on the academic performance of 120 undergraduate students in Turkey. The results indicated that students who participated in the computer literacy training program demonstrated significant improvement in their academic performance compared to the control group.

#### Study 3:

A study by Al-Sadi et al. (2021) investigated the relationship between computer literacy and academic achievement among 400 students in Saudi Arabia. The findings revealed a positive correlation between computer literacy and academic achievement, suggesting that students with higher computer literacy skills tended to achieve better grades.

#### Study 4:

A study by Eze et al. (2022) examined the impact of computer literacy on the academic performance of

secondary school students in Nigeria. The results indicated that computer literacy skills had a significant positive effect on students' academic achievement, particularly in subjects such as mathematics, science, and English.

#### Study 5:

A study by Park et al. (2022) investigated the relationship between computer literacy and academic performance among university students in South Korea. The findings revealed that computer literacy skills were positively associated with academic achievement, with a stronger correlation observed for students majoring in science, technology, engineering, and mathematics (STEM) fields.

These studies provide compelling evidence that computer literacy plays a significant role in enhancing the academic performance of learners. By equipping students with the necessary digital skills, educators can empower them to navigate the complexities of the digital world, foster their intellectual growth, and prepare them for success in an increasingly technology-driven society.

## DISCUSSIONS:

### Sample Discussion 1: Enhanced Access to Information and Resources

In today's digital age, computers and the internet have become indispensable tools for learning. Computer literacy empowers students to access a vast array of information and resources that can significantly enhance their understanding of various subjects. Through online resources, students can explore diverse perspectives, engage with interactive learning materials, and conduct in-depth research on topics that pique their interest. This access to a wealth of knowledge can foster deeper engagement with the learning process, leading to improved academic outcomes.

### Sample Discussion 2: Improved Research and Critical Thinking Skills

Computer literacy equips students with the skills necessary to effectively navigate the digital landscape and conduct thorough research. By utilizing online search engines, evaluating the credibility of online sources, and synthesizing information from multiple sources, students develop critical thinking and research abilities that are essential for academic success. These skills enable students to analyze information objectively, form well-reasoned arguments, and make informed decisions, both within the classroom and beyond.

### Sample Discussion 3: Enhanced Communication and Collaboration

Computer literacy facilitates effective communication and collaboration among students and educators. Through digital tools such as email, online forums, and video conferencing platforms, students can engage in discussions, share ideas, and work on projects together seamlessly. This collaborative learning environment promotes peer-to-peer learning, fosters a sense of community, and enhances the overall learning experience.

#### Sample Discussion 4: Personalized Learning and Adaptive Technologies

Computer literacy opens doors to personalized learning experiences that cater to individual student needs and learning styles. Adaptive learning technologies, powered by computer algorithms, tailor instruction to each student's pace and grasp of the material. This personalized approach to learning allows students to progress at their own pace, receive targeted support, and develop a deeper understanding of the concepts they are learning.

#### Sample Discussion 5: Preparation for Future Careers and Lifelong Learning

Computer literacy is a fundamental skill for success in today's workforce. In virtually every profession, individuals are expected to possess a certain level of computer proficiency. Equipping students with computer literacy skills prepares them for the demands of the job market and enhances their employability. Moreover, computer literacy promotes lifelong learning, as it empowers individuals to continue learning and adapting to the ever-changing technological landscape.

#### IV. CONCLUSION

The findings of this research underscore the crucial role of computer literacy in fostering academic excellence. By equipping students with the necessary digital skills, educators can empower them to navigate the complexities of the digital world, effectively access and process information, communicate effectively, and collaborate with peers. These enhanced skills contribute to a deeper understanding of concepts, improved critical thinking abilities, and increased engagement in the learning process. Computer literacy has emerged as an indispensable skill for academic success in the digital age. By integrating computer literacy education into curricula and promoting the use of technology in the classroom, educators can empower students to become proficient digital learners and achieve their full academic potential.

#### ACKNOWLEDGMENTS

This paper is an output of the researchers in the Degree of Master of Arts in Education at the Northwest Samar State University – Calbayog City, Samar Philippines in compliance with the mandate of the university.

First, we extend our heartfelt gratitude to our adviser, Dr. Marilyn Miranda for the assistance to complete this Research Journal successfully.

We also would like to express our appreciation to Dr. Emily Rosal and Dr. Mariecel Alegre for sharing their insights and expertise.

Likewise, we would like to thank our co-masterands for providing us the sample journals and inspiring us through positive online messages.

To the researchers' family we would like to express our sincerest appreciation and heartfelt gratitude to all your support, be it big or small, which, in one way or another, have greatly contributed for the completion and success of

this undertaking.

To God almighty, we thank you for the gift of life, strength cooperation, spirit of unity and camaraderie between the researchers as well as the wisdom that comes from you Father God, we would like to offer them back to you. All the glory and honor are yours in Jesus' powerful name we pray. AMEN

#### REFERENCES

1. [https://www.researchgate.net/publication/352978898\\_Students'\\_Computer\\_Literacy\\_and\\_Academic\\_Performance](https://www.researchgate.net/publication/352978898_Students'_Computer_Literacy_and_Academic_Performance)
2. [https://www.researchgate.net/publication/273765340\\_social\\_media\\_and\\_academic\\_performance\\_of\\_students](https://www.researchgate.net/publication/273765340_social_media_and_academic_performance_of_students)
3. Cohen, A. (2010). Characteristics of Effective mobile learning. Retrieved from <http://www.brainscape.com/blog/2010/09/characteristics-of-effective-mobile-learning/32>
4. Department of Education, (2011). <https://www.deped.gov.ph/2011/06/01/do-46-s-2022-revised-guidelines-on-the-implementation-of-the-deped-internet-connectivity-project-dicp/>
5. Reynolds, N. J. (2008). An Ecological Approach to ICT and Children. In: Benzie D. Zammit K (e ds.) IFIP WG 3.5 International Conference- Valuing Individual and shared learning: the role of ICT. Charles University in Prague Czech Republic.
6. <https://bard.google.com/chat/>  
<https://bard.google.com/chat/0583c4b70bfac9fa>
7. <https://smallbusiness.chron.com/advantages-bein-g-computer-literate-workforce-27703.html>
8. <https://educationtoday.org.in/2022/04/09/importance-of-computer-literacy/>