E-Learning Classroom Assessment on Students' Computer Literacy

keth Loreen V. Cadutdut*, Leemarc C. Alia**, Bella S. Amarga*** & Sylvia C. Labial****

Mindanao state University At Naawan, Philippines

ABSTRACT

The rapid expansion and growth of technology are observed to have brought unprecedented transformation and opportunities for students and teachers to achieve greater performance and productivity. Given this potential, it is imperative for it to be extended to the classroom to enhance easy access. This quantitative-descriptive research was conducted to assess the students' computer literacy using the e-learning classroom program of the grade 10 students of the TTVHS-Baclay Extension in terms of school facilities, teaching-learning process, and student s' behavior. Purposive sampling was employed in order to avoid biases and data was gathered through a survey questionnaire. Regression analysis, findings revealed that there is a significant relationship between school facilities, the teaching-learning process, and computer literacy. It implies that the satisfaction of the students towards their school facilities does affect their computer literacy and the claim of students towards the Teaching learning process does affect their computer literacy. While the relationship between the student's behavior and the student's computer literacy the remarks is not significant. It implies that the student's behavior does not affect their computer literacy. Continuous improvisation of the school facility is needed. If the school facility has a physical plant of very well advanced in terms of all kinds of provisions in education, the rest will follow such as on the teaching–learning process and the student's behavior.

 KEYWORDS: *e-learning classroom, computer literacy, school facilities, teaching-learning process*

INTRODUCTION

The rapid expansion and growth of technology are observed to have brought unprecedented transformation and opportunities for students and teachers to achieve greater performance and productivity. Given this potential, it is imperative for it to be extended to the classroom to enhance easy access. It is generally believed that education is the bedrock for every technological and economic development of any nation. As a result of that, the Philippine government aimed to improve the educational system by implementing an e-classroom program to raise the computer literacy of Filipinos. Despite the efforts of the government, there is still a persistent lack of progress in the computer literacy of the students. According to the survey of the Asian Institute of Journalism and Communication (AICL) on March 2009 entitled "Survey on Internet Access and Use by Filipino Children", only 74% of Filipino school children nationwide are computer literate.

The Department of Education aimed to equip the learners with relevant and globally competitive skills which foster employability and entrepreneurship or techno-partnership (DepEd Order No. 36, s.2012). This is one of the reasons why providing e-classroom to secondary schools was implemented in order to integrate technology into education since it captures the interest of the learners. Research findings by scholars have shown that information technology (ICT) helps students to learn better and enhance their performance. It is proven that teachers and students benefited from the help of computers and related technology in education.

Moreover, 96,000 educational applications were available for mobile devices, it is composed of learning games and other applications (App Store Metric, 2013). Different subjects such as Mathematics, Sciences, Grammar and Spelling, Arts and Humanities were covered by these applications. Clegg and Bailey (2008) assert that with the utilization of mobile devices such as laptops and computers, the learning process for the learners becomes more fun and conducive due to the user-interactivity and appealing visual presence in the learning tools. In addition, an internet connection plays an important role in helping learners to acquire information related to schooling. The most significant aspect of the web for education at all levels is that it dissolves the artificial wall between the classroom and the real world. The Department of Education declared that as of 2012, 95% of public high schools have computer laboratories and only 57% have internet access.

In the light of generating the baseline data of establishing the effectiveness and efficiency of the e-classroom to computer literacy among Grade 10 students of Tukuran Technical Vocational High School- Baclay Extension this prompted the researchers to conduct the study.

METHODOLOGY

This study employed a quantitative-descriptive design was used in this study. This method was used for the purpose of gathering information about the existing condition of computer literacy among the selected students of TTVHS-Baclay Extension in relation to the e-classroom program of the government. The subject of this study was the Grade 10 students in Tukuran Technical Vocational High School - Baclay Extension who used most of their time in the e-classroom. The researcher uses a survey questionnaire as a tool for collecting data from the respondents. A questionnaire is a data-gathering instrument used when factual information is desired (Best and Khan, 2003). This study uses a self-administered questionnaire as the main research instrument used in conducting the study. The questionnaire consists of two sections, section I part pertains to the school facilities, teaching-learning process, and students' behavior inside the e-learning classroom, and section II it was designed to know the level of computer literacy of the students.
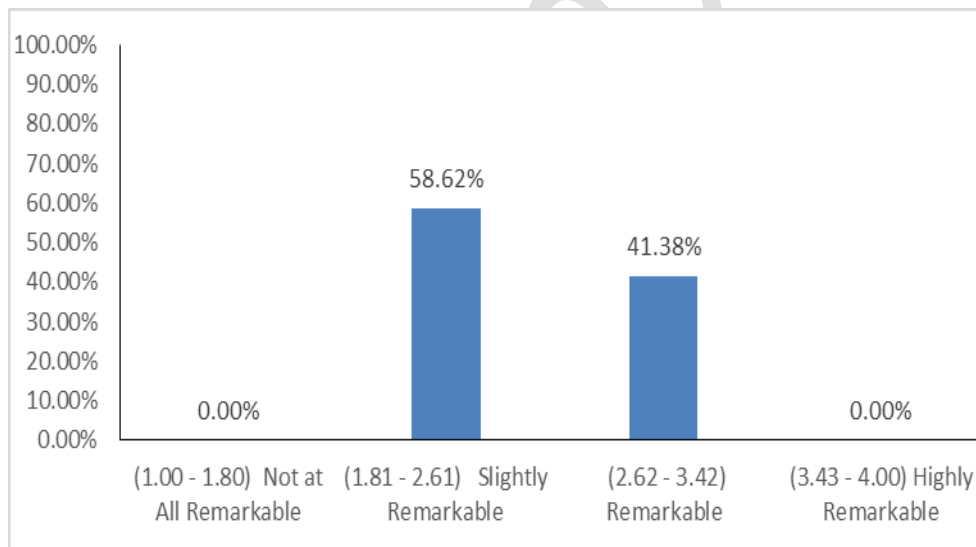
RESULTS AND DISCUSSION
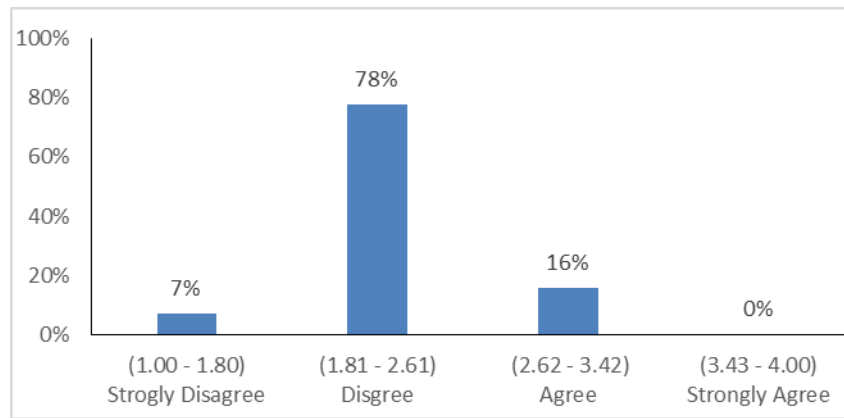
Figure 1. Percentage distribution of the e-learning classroom assessment of the students in terms of School Facilities

The e-learning classroom assessment of the students in TTVHS-Baclay Extension in terms of School Facilities and that 78% of students disagree, and 16% of students agree. This means that 45 students are not satisfied to use of their school facilities, while 9 students are satisfied working on their school facilities. The respondents show that they are in unison of disagreeing on the nature of school facilities in the preparations and utilizations of the e–learning classroom as per the respondents' assessments. It all means that there is a need for continuous improvisations on the school's physical plant and its design must suit the preparations for the e–learning classroom setup since we are in a new normal scheme. According to Oviawe and Oshio (2011) and Mike (2003), the findings of their studies revealed that ICT facilities serve as a major contributor to effective teaching and learning. Adeogun, (2001) posited that the learning experience is richest when the environment (physical resources) around them meets their needs through its adequacy and effective utilization. And he asserted that children learn well when they can actively explore an environment rich in adequate materials.
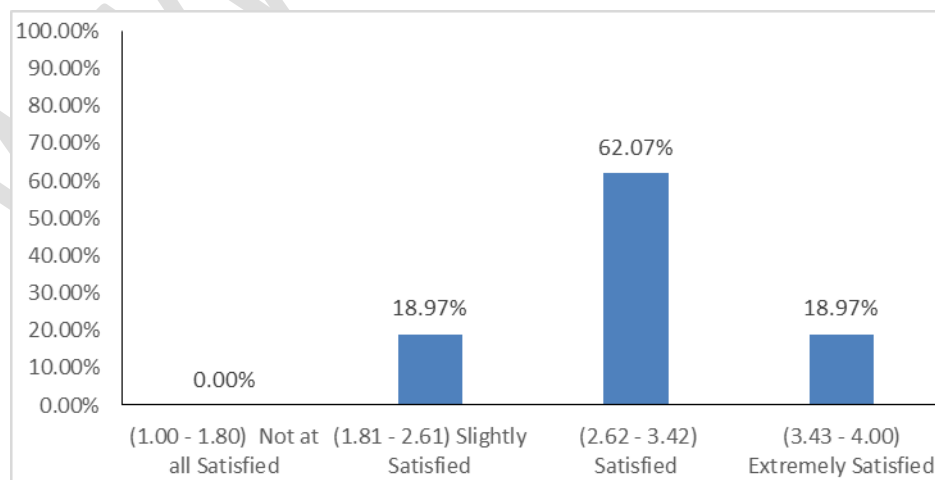
Figure 2. Percentage distribution of the e-learning classroom assessment of the students in terms of Teaching Learning Process

Figure 2 in this study, shows the percentage distribution of the e-learning classroom assessment of the students in TTVHS-Baclay Extension in terms of the teaching-learning process, and that is 18.97% or 11 out of 58 students are slightly satisfied,62.07% or 36 out of 58 students are agreed and 18.97% or 11 out of 58 students strongly agree. This means that 47 students are satisfied with the teaching-learning process that happened inside the e-classroom while 11 are not satisfied with the teaching-learning process that happened inside the e-classroom. The overall reaction level of respondents to the implementation of e-classroom is interpreted as agree which indicates that the teaching-learning process is more effective. Moreover, with the help of teachers, the students can perform well in their assigned tasks. This manifests that students attempt to perform well in their assigned tasks. This supports the theory of Vygotsky called Scaffolding which means using a variety of instructional techniques to move students progressively towards stronger and greater independence in the learning process. The teacher factor and his abilities towards better learning have a big impact on students has a big impact to become computer literate. The respondents agreed that the teaching–learning process had been established well. It all means that whatever the school's physical plant and its design had been established, whether in good rapport or not, the teachers are well–prepared in their processing schemes, and they have been flexible and well–trained in the outcome of the new normal scheme.

Figure 3. Percentage distribution of the e-learning classroom assessment of the students in terms of students' Behavior.

As seen in figure 3, the percentage distribution of the e-learning classroom assessment of the students in TTVHS-Baclay Extension in terms of students' behavior, and that is 58.62% or 33 out of 58 students answer slightly remarkable, and 41.38% or 24 out of 58 students answer remarkable. This means that 33 students disagreed with to belief that they display remarkable behavior of the students during the implementation on e–learning classrooms while 24 students agree to believe that they display remarkable behavior of the students during the implementation of e-learning classrooms. Conversely, the data shows that most of the students are very interested when it comes to technology. This parallel to the theory of

Apperson et al., (2006) that the use of technology in the classroom causes students to have a more favorable attitude toward their education.
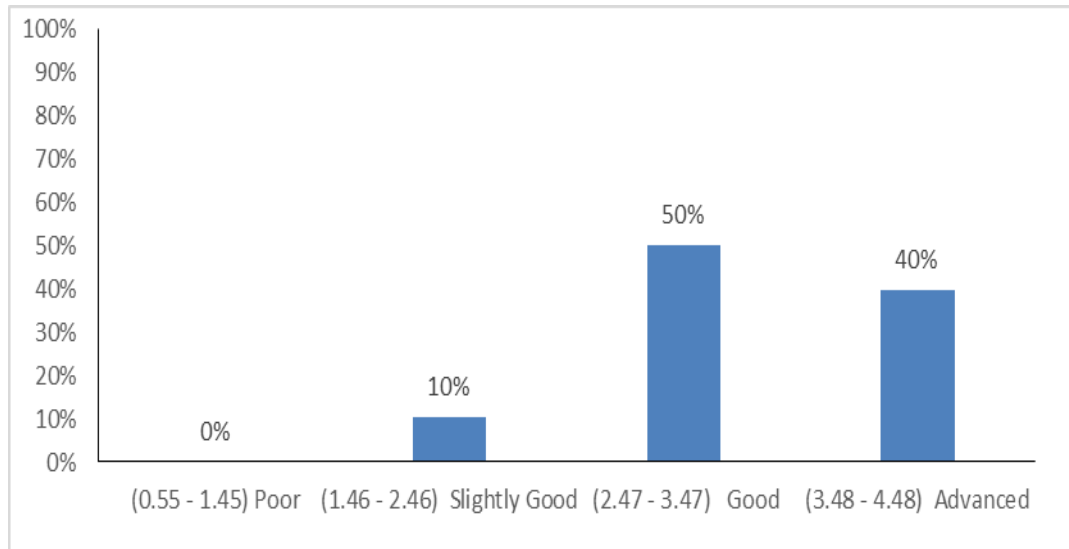
Figure 4. Percentage distribution of the student's level of computer literacy

As reflected in figure 4, that is 50% of students are good, 40% of students are advanced, and 10% of students are slightly good at using computers and their various applications While the great majority of students possess sufficient computer skills and acknowledge the advantages of interactive and multimedia-enhanced learning material, a small percentage lacks basic computer skills and/or is very skeptical about e-learning. The results revealed that students' familiarity and skills with the Internet and WEB are fair. This result is consistent with Samuel et al. (2004) findings. They found that the highest performance of students was with Email and Internet. In another study in Japan, 43% of students had moderate literacy about the Internet and 28% of respondents had good literacy (Murray & Andrew, 2011). Skill and familiarity of students with Microsoft Office such as Excel were less while they have good familiarity and skill with PowerPoint and Word. The reason may be that they used this software for doing their homework and projects. These findings are consistent with Zarei et al. (2012) and Karami, Khajeh (2007).

Table 1. Regression Analysis Test for Two Samples result for the relationship between the school facilities and the student's computer literacy

Computer Literacy	r-value	p-value	Remarks
School Facilities	0.477	0.0002	**Significant
± .336 critical value .01 (two-tail)		p-value < 0.01 level of significant	

Table 2 shows the relationship between the Teaching learning process and the student's computer literacy that is the r-value 0.496 is outside the critical value ± .336 and the p-value 0.0001 is less than to 0.01 level of significance. Thus, the null hypothesis is rejected. The

remarks is highly significant. It implies that the claim of students towards the Teaching learning process does affect to their computer literacy.

Computer Literacy	r-value	p-value	Remarks
Teaching Learning Process	0.496	0.0001	**Significant
± .336 critical value .01 (two-tail)		p-value < 0.01 level of significant	

Table 2. Regression Analysis Test for Two Samples result for the relationship between the Teaching Learning Process and the student's computer literacy in TTVHS-Baclay Extension

Table shows the relationship between the student's behavior and the student's computer literacy that is the r-value 0.236 is inside the critical value ± .336 and the p-value 0.0744 is greater than to 0.05. Thus, the null hypothesis is not rejected. The remarks is not significant. It implies that the students behavior have does not affect their computer literacy.

Computer Literacy	r-value	p-value	Remarks
Students Behavior	0.236	0.0744	Not Significant
± .259 critical value .05 (two-tail)		p-value > 0.05 level of significant	

Table 3. Regression Analysis Test for Two Samples result for the relationship between the Students' Behavior and their computer literacy

The third objective of this study was to determine the significant relationship between e-learning classroom assessment and the computer literacy of the students. Based on the statistical measures using regression analysis as the tool for the correlation measures, there is a significant relationship between the school facilities, teaching-learning process, and computer literacy. In Table 1 the remarks is highly significant. It implies that the satisfaction of the students with their school facilities does affect to their computer literacy. Since the r-value 0.447 is outside the critical value ± .336 and the p-value 0.0002 is less than to 0.01 level of significance. Thus, the null hypothesis is rejected. If the school facility has a physical plant of very well advanced in terms of all kinds of provisions in education, the rest will follow such as on the teaching–learning process and the student's behavior. Studies by Selamat et al. (2004) shows that, on average, respondents agreed that a conducive learning environment would increase their motivation. The finding is in line with Newby and Fisher (1998) which states that the environment of the computer lab has a significant influence on students' attitudes towards computers and courses of study. In table 2 the remarks is highly significant. It implies that the claim of students towards the Teaching learning process does affect to their computer literacy. Since the r-value 0.496 is outside the critical value ± .336 and the p-value 0.0001 is less than to 0.01 level of significance. Thus, the null hypothesis is rejected. Among the external factors that affect the learning performance of the students are the mode and method of instruction given by the teacher, the qualification of the teacher, peer influence on the students, and the teacher-student ratio in a learning session (Singh, Malik, & Singh, 2016; Petty, 2009). Furthermore, between the e-learning classroom assessment and

students' computer literacy, the relationship is not significant. Table 3 shows the relationship between the student's behavior and the student's computer literacy that is the r-value 0.236 is inside the critical value ± .336 and the p-value 0.0744 is greater than to 0.05. Thus, the null hypothesis is not rejected. The remarks is not significant. It implies that the student's behavior does not affect their computer literacy. Taylor et al. (2000) argued that, people can, however, often come up with a new attitude on the spur of the moment toward people or objects that they never encountered before. With relation to computers, this means that although a person has never had any encounter with a computer or related technology before, he/she might have a positive or negative attitude toward computers. Also, the fact that a person might have a positive or negative attitude towards a computer does not necessarily predict how they will behave and perform when working with a computer.

CONCLUSION AND RECOMMENDATION

This study was to find out the significant relationship between e-learning classroom assessment and computer literacy of the students. Table 1 the relationship between school facilities and computer literacy among grade 10 students using regression analysis. Analysis reveals that the r-value 0.447 is outside the critical value ± .336 and the p-value 0.0002 is less than 0.01 level of significance Thus, the null hypothesis is rejected. The remarks are highly significant. It implies that the satisfaction of the students towards their school facilities has something to do with their computer literacy and has a negative relationship as shown in the table. Table 2 shows the relationship between the Teaching learning process and the student's computer literacy that is the r-value of 0.496 is outside the critical value ± .336 and the p-value of 0.0001 is less than 0.01 level of significance. Thus, the null hypothesis is rejected. The remarks are highly significant. It implies that the claim of students towards the Teaching learning process does affect their computer literacy. It implies that the student's behavior does not affect their computer literacy. For future researchers, it is very important to conduct this study for related papers in order to give valuations on the culture of research making for the betterment and continuous improvisations in the education sector now that it is in the new normal set up, especially that the modern way of technology such as e-learning has finally arrived

REFERENCES

i. Adeogun, A. A. (2001): The Principal and the Financial Management of Public Secondary Schools in Osun State:Journal of Educational System and Development. 5 (1) pp. 1-1

ii. Murray A, Blyth A. Survey of Japanese university students' computer literacy levels. *Jalt call journal.* 2011;7(3):307–318.

iii. Oviawe, R. Oshio, E. (2011). The impact of information and communication technologies on teaching and learning ability of education students.Journal of Library and Information Studies

iv. Selamat, R., Ungku Ahamd, N., Abd Razak, N.Z., Ali, L., Sheikh Ahmad, F. & Ahmad Khalid, A. (2004). An investigation into the teachinglearning environment of

the Faculty of Management and Human Resource Development: Towards the establishment of an optimal environment for the pursuit of excellence in teaching and learning. (Research Vote No. 75012). Skudai: Universiti Teknologi Malaysia

v.   Zarei J, Rokhafruz D, Diainat M. The study of computer literacy in students of general medicine. *Health Management.* 2012;15(47):66–75.

vi.   https://www.deped.gov.ph/2012/05/09/do-36-s-2012-guidelines-on-the-2012-implementation-   of-the-senior-high-school-shs-modelling-in-selected-technical-and-vocational-education-and-general-secondary-schools-under-the-k-to-12-basic-ed