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## COMPUTER ASSISTED LEARNING IN NEW NORMAL AS TO THE READINESS ENCOUNTERED AMONG FRESHMEN STUDENTS IN TERTIARY LEVEL

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### Abstract

This study aimed to assess the readiness to use computers as communication for learning among the first-year Bachelor of Secondary Education major in Filipino students for their output submission on the given tasks. A descriptive method was used for questionnaires and informal interviews with the respondents in Tertiary School in Cebu and collected data from 50 students through a questionnaire in random sampling. The theories of self efficacy were sought for the study. The main problems were 1) what were the difficulties encountered by the students in computer instruction? 2) What are the students' perceptions as to the status of computer instruction as to competencies, methods and techniques, Instructional materials, and available equipment/facilities?, 3) What were the coping mechanism/adjustments in new normal? The results of some student problems were student-related, such as having no interest in studies, not performing the given tasks, and having no money to complete computer-related projects. Facilities were lack of supplies sought teacher-associated problems such as lack of time to prepare and repetitive learning activities. The results for the students' perception described acquire perception of the students as to methods and techniques were described as never, and the accommodation facilities were insufficient. As enumerated, the problems that the respondents encountered in the computer instruction were varied and should have an immediate plan of action for the welfare of the students to face the technological society and be ready to acquire new sets of skills.

Keywords: computer-assisted, coping mechanism, learning readiness, perceptions, tertiary level

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### Introduction

Today's teaching environment is a competition on how to deal with new trends in the modern world. To teach effectively, instructors must have a full complement of supplemental resources to assist students in every facet of teaching, from preparing the class to conducting a lecture unit and assessing students. In the last ten years, small computers have revolutionized education. Demiray (2011) has emphasized the importance of online and online learning tools for better learning and teaching in higher education. Undergraduate students entering college with computer literacy is an advantage. Most incoming college students have taken an introductory computer literacy course in middle or high school or are self-taught (Johnson, 2002). Learners are considered essential elements of online learning processes (Aydin & Tasci, 2005).

Computers in classrooms, museums libraries are rapidly becoming as necessary to the learning process as books, papers, and pens; computers in school, the student can develop science projects and prepare reports using the new technology, which is a computer. In the library, students can search a computer database for articles about their fields of interest. Learners must be able to integrate their knowledge of technical skills, visual literacy, analytical skills, and critical thinking skills to solve complex problems. The K-12 level reflected technology competencies in the National Educational Technology Standards for Students (International Society for Technology in Education, 2000).

Many studies have found the results of numerous issues on computer instruction that, until nowadays, were not solved. The study of Fletcher and Deeds (1994) revealed that over 40 percent of the 176 secondary agricultural teachers who responded possessed mild to severe levels of computer anxiety. Computer-related activities can be more engaging to students, especially if educators consider the approach introduced to students to gain learning.

The introduction of computers to our society has been a journey of computer-mediated communication that goes a long way. Most youths felt that computers increased efficiency, gave them more control, made informed people and materials more accessible, and were practical in sharing ideas. Through youth's web pages, communication notes, and writing ideas, youth viewed using computers as effective means to communicate with community members.

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Information that helps teach or encourages interaction has been a multi-modal way of communication on computers in text or multimedia formats, including photographs, videos, animation, speech, and music. The guided drill is a computer program that poses questions to students, returns feedback, and selects additional questions based on the student's responses (Arnold, 2000). The computer elevates and refers to the global classroom; basic computer skills start with simple abilities such as holding the mouse correctly, understanding the "enter key," or realizing that has to turn on or off the monitor. As stated by Arnold, 2000 in his Computer-Aided Instruction, computers also can help students visualize objects that are difficult or impossible to view. Many obstacles prevent new users from wanting to increase their computer knowledge, such as how computers should be used to serve a more genuine purpose in community development and how they can affect youth. These issues also have something to do with the development of computer skills and can help non-users become more familiar with the fundamentals of using a computer.. At this point, the researcher is motivated to investigate this issue to enhance the quality of training, and better comprehend students submitting work utilizing computers to convey that students can utilize them effectively.

The problems encountered in using the computer when submitting and completing work with students have advantages and disadvantages. Many students benefit from the immediate responsiveness of computer interactions and appreciate the self-paced and private learning environment, motivation to learn, and increasing independence to personal responsibility for education. Some students' failures are attributed to teachers' insufficient computer-aided system training. Computer technology instruction for students could also be necessary, detracting from the primary educational process (Arnold, 2000).

Readiness can be achieved through the efforts of students and teachers and can be derived from significant planning of its resources. It would mean that the schools should develop multi-year plans that directly address its thrust to satisfy every individual to be considered "ready." It is easy to say that one is ready to face a particular task. However, along the way, problems arise that would lead to worse scenarios, hence, the miscalculations of readiness (Balajadia, 2015). In the holistic sense, it involves the readiness of the mind, heart, and physical body – the cognitive, affective, and psychomotor domains, respectively (Schaffer, 2004). Integration can be a form of courses as well as learning modules and learning to access the computer with the ability to do it in a particular time. The results of the study by Yilmaz, 2017 "Exploring the role of e-learning readiness on student satisfaction and motivation in a flipped classroom" indicated that students' e-learning readiness was a significant predictor of their satisfaction and motivation in the FC model of instruction.

Asian Pacific Economic Cooperation and McConnell have defined electronic readiness as "The level of community readiness to participate in the networked world" (Darab & Montazer, 2010). Some studies presented "Assessing the readiness of art and non-art students to use virtual training" that a type of training requires skills that depend on the characteristics of e-learning, and not just a particular discipline but a questionnaire used to evaluate the different majors in a university (Rasouli et al., 2016). Several studies on e-learning readiness have been conducted in Iran and outside Iran. Those studies can be parts into three groups; some are looking to provide a helpful model for e-learning readiness assessment (Mosadegh, Kharazi, & Bazargan, 2011). Although many universities across the world have incorporated Internet-based learning systems, the success of their implementation requires an extensive understanding of the end-user acceptance process (Al-Adwan et al., 2013, from Aristovnik et al., 2016).

As a facilitator of learning activities, there is no doubt that a teacher exerts a strong influence over her students. First is the personality, which can manifest in his verbal-communicative behavior. Another factor is that integrative behavior is likely to compensate for better learning on the student's part and the student's achievements. Instructional materials and facilities for the pupils and teachers would surely help make a difference in making teaching and learning meaningful and lively. The result of the study (Rathmell, 2018) is that teacher-student communication and support through ability, and teachers describe the ability to use that information to work with students to address misunderstandings or provide more instruction.

This study therefore set out to examine and analyze the impact of inadequate of expert teachers, equipment and facilities on teaching and learning in using computers in the different subject areas for tertiary level in Cebu City.  
Statement of the Problem

Stated in the modern world on affecting the teaching and learning of literary in education for 21st century learners may come up with the unavailability and unconnected use of equipment, facilities and training for teachers. The objective of this study is to;

- a. gather the problems encountered by the students in computer instruction; and
- b. aimed to the perceptions of the students as to the status of computer instruction like competencies, methods and techniques, instructional materials and available equipment/facilities to measure the participants' learning readiness.

#### Research Questions:

- 1) What were the difficulties encountered by the students in computer instruction?
- 2) What are the students' perceptions as to the status of computer instruction as to competencies, methods and techniques, Instructional materials, and available equipment/facilities?

### Materials and Methods

This study used a descriptive correlation research approach that described the students' problems and perceptions of their actual conditions encountered in readiness using a computer for communication with the use of given survey questionnaires and informal interviews. This study was conducted in public tertiary students in Cebu City, which offers technological program. The researcher works as an instructor who handle classes in the research context, convenient sampling strategy was adopted and 50 students were included as the participants of the study. The survey questionnaires will be given to the respondents; informal interviews will be made to clarify some answers in the questionnaire and actual observations were included purposely. The data were collected through questionnaire consisting of two sections: (a) items to gather the problems encountered by the students in computer instruction and (b) items aimed to the perceptions of the students as to the status of computer instruction like competencies, methods and techniques, instructional materials and available equipment/facilities to measure the participants' learning readiness adopted from Hung et al.'s (2010) Online Learning Readiness Scale (OLRS). Ranking will be used to determine the extent of the problems encountered as perceived by the respondents in connection with computers. The problem with the lowest sum was ranked number one, and the problem with the highest was ranked last.

Some procedures will be followed during the instrument's administration, including administering the survey questionnaires after some initial planning to ask for respondents. In addition to conducting informal discussions with respondents to clarify some written responses, the researcher personally distributed copies of the survey questionnaires to the respondents. Survey questionnaire retrieval came last. The survey respondents provided 50 questionnaires. The respondents were given plenty of time before it was retrieved. The responses were counted, processed, and evaluated when the questionnaire was retrieved. They were informed that participating was entirely voluntary, and special precautions were taken to guarantee that participants' identity was upheld. The responders were not required to provide any identification or personal data.

### Results and Discussions

This study's findings are presented in two parts, first on the problems encountered by the students in computer instruction, and second on the students' perceptions as to the status of competencies, methods and techniques, instructional materials and availability of equipment/facilities in the classroom.

Learning encountered by the students

Based on the findings, Table 1 displays the students' issues ran into while studying and the needs that need to be evaluated.

The following showed administration-related problems, teacher-related problems, equipment and facilities, student-related problems, and parent-related problems with each sub-problem. Five (5) main problems with sub-problems were met by the students in their readiness for computer-aided use in the class.

**Table 1**  
**Encountered by the Students**

<b>Problems encountered</b>	<b>Sum of Rank</b>	<b>Final Rank</b>
1. <i>equipment and facilities</i> not functioning keyboards, mouse, units, and printer, less electric fan/ air conditioning units, and lack of supplies	45	2
2. <i>administration problems</i> oversized classes, lack of time in supervision, poor ventilation, and lighting, insufficient number of hours for computer instruction, and lack of instructional aid	39	4
3. <i>teacher-related problems</i> not master on his/her lesson, lack of time to prepare, and repetitive learning activities	40	3
4. <i>student-related problems</i> lack of interest in studies, does not perform the task, lack of money for computer projects and no access/time or available computers at home	47	1
5. <i>parent-related problems</i> lack of money to support computer projects, complaints about computer fees, and follow-up to their children's progress	49	5

The first ranking problem was the "students-related" sum of ranks for every item, such as "lack of interest in studies, does not perform the task, and lack of money for computer projects" and accessibility /availability of computers at home were included. The second-ranking problem shows "equipment and facilities." Under this problem were "not functioning keyboards, mouse, units and printer, less electric fan/ air conditioning units, lack of supplies." In the third ranking were "teacher-related problems," such as not master on his/her lesson, lack of time to prepare, and repetitive learning activities. Next, the fourth-ranking problem was "administration problems". Finally, the students ranked "parent-related problems" as the fifth, citing issues like a lack of funding for computer projects, complaints about computer fees, and a lack of follow-up regarding their children's progress as problems met. Under this problem were "oversized classes, lack of time in supervision, poor ventilation and lighting, short hours for computer instruction, and lack of instructional aide. This study supports (Fitchten et al., 2019) recommendations for enhancing access, creating new learning opportunities, and eliminating obstacles.

Competencies acquired by the students.

Competency is an ability to do efficiently, demonstrate in a specific area and respond in a society. It is difficult for students if they also lack knowledge since most students are first years. It is necessary to assist the students in learning inside-outside the classroom. Table 1.1 shows the competencies acquired by the students. The respondent's competencies acquired were access to a computer was rated as less acquired with a weighted

**Table 2**  
**Competencies acquired by the students**

<b>Competencies</b>	<b>WM</b>	<b>Indicators</b>
1. switching on the computer	2.0	Acquired
2. starting navigation/using the mouse	1.93	Acquired
3. accessing the computer	1.13	Less Acquired
4. selecting/Encoding simple text	1.77	Acquired
5. submitting output using emails	1.64	Less Acquired
6. holding down and dragging	1.67	Less Acquired
7. finding the suit Icons	1.75	Acquired
9. quitting the application	1.79	Acquired
10. using the Microsoft Office	1.36	Less Acquired
<b>AVERAGE</b>	<b>1.67</b>	<b>Acquired</b>

Legend: 2.34 – 3.0 - Fully Delivered / Acquired, 1.67 – 2.33 -Partially Delivered / Acquired; 1.0 – 1.66 -Less Delivered / Acquired

submitting outputs via email was rated as less acquired with a weighted mean of 1.64; holding down and dragging was rated as acquired with a weighted mean of 1.67; finding the suit icon was rated as acquired with a weighted mean of 1.75; selecting simple text was rated as acquired with a weighted mean of 1.77; and quitting the application was rated as acquired with a weighted mean of 1.13. The average weighted mean of the competencies acquired by the students as to the challenges encountered in computer instruction was 1.67, described as acquired. This study supported (Bowe et al., 2014) stated that university students encounter wide levels of computer competency and must address these concerns to the management. The study's findings showed that acquired competencies are less, demonstrating that the student's learning must be ready in extensive classroom assignments during the semester. To synthesize, some students had very minimal technical skills and were not ready for technological activities because of the perceived lack of preparation for learning. With technology, students will be less reliant on the instructor and more capable of supporting one another in their academic endeavors. The researcher believes that the study presented above contributes some results to learning development in line with the readiness of computer instructions.

#### Perceptions by the students

Involved with the use of computers as perceived by the students were come to understand what is to deliver in the teaching and learning process, along with the new sets of student generation and the emergence of a new virtual versus traditional classroom lectures.

As reflected in the analyzed data of the student's perception of learning-assisted instruction, table 2 shows that the assisted areas like accommodation are not sufficient for students' learning, which were rated as insufficient, as shown in its weighted mean of 1.46. These accommodation facilities were the following: computer area and teachers' table rated insufficient by the teachers, lecture area, ventilation, and lightning. On the other hand, students perceived the instructional material as sufficient by its weighted mean of 1.97: computer units, keyboards, printers, inks, and hand-outs available. Moreover, the said method and techniques were sufficient for the students, with a weighted mean of 1.55. During the lecture discussion, the teachers provided demonstrations, projects, observation, and hands-on activities for the individual student's learning. The findings showed that learning inside the classroom is not only by itself but with the help of the teachers, prepared content, and administration goals. This study supported (McCoy, 2010) claimed that the use of a computer at home is related to enhanced computer skills and respondents with a computer at home had increased self-efficacy.

**Table 3**  
Perceptions by the Students learning computer-assisted instructions Learning assisted areas

Learning Assisted Areas	Mean	Indicators
1. Accommodation Facilities Computer Area, Lecture Area, Ventilation and Lighting, Chairs/Tables	1.46	Not Sufficient
2. Instructional Materials Computer Unites, Keyboards, Printers, Books, Hand-outs, Links	1.97	Sufficient
3. Methods and Techniques Lecture Discussion, demonstration, Project Observation, Hands-on Activity	1.55	Sufficient
Average	1.66	Not Sufficient

*Legend: 2.34 – 3.0 VS-Very Sufficient, 1.67 – 2.33 S-Sufficient, 1.0 – 1.66 N-Not Sufficient*

Easier for students who have access to computers at home when exposed to higher levels of technological proficiency. These findings are discussed (Ballou & Huguenaud, 2008) in the context of prior research on the variables influencing how well students perform in introductory information systems courses. Previous research on the influences of prior computer experience on learning revealed that higher levels of perceived computer experience positively impacted lecture and lab homework and exam performance. In addition, higher levels of positive class behaviors (attendance and extra-credit participation) positively affected both lecture and lab exam performance. Mallari et al. 2012 stated in the study's findings that the level of students' IT self-efficacy is relatively high, while computer competence indicates a rather low level of perceived ability in using computers. Students were competent in using email, Facebook, and the internet for personal purposes (Mallari et al., 2012).

Perceptions of the students were in favor of computer-assisted instruction. From the results of the present study, it may be inferred that students perceive the use of the computer room, computer in general, as a necessary instrument in facilitating the study, but as a supplement; the interface provided by computer software influences the students learning process and satisfaction (Rehman, F., Khan S.N. & Yunus; S.M., 2012).

**Table 4**  
Coping Mechanism/ adjustment as to new normal

<b>Coping Strategies/adjustments</b>	<b>f</b>	<b>Rank</b>
Competence is too personal and acceptance to others	45	<b>2</b>
Exposure to technological overload	40	<b>3</b>
Self – resiliency Self – confidence	46	<b>1</b>
Peer pressure avoidance and focus	30	<b>5</b>
Problem solving	35	<b>4</b>

This study can be used as evidence to conclude that students learning real-world scenarios in the classroom requires extensive preparation in all areas. The teacher on this matter should address the situation and communicate with their respective administration about the necessity of computer rooms, equipment, and facilities so that they expect a good output of instructions can be achievable. Future qualitative studies are recommended to see a deeper understanding of this result.

### Conclusion

After careful analysis, the student's encounters and perceptions of readiness in computer-assisted instructions were attributed that can help improve their classroom tasks as a behavior to perform technologically proficiently. The student's literacy in using the technology is their way of continuing the course, providing them with enough facilities to use the equipment individually.

Learning in terms of readiness could be attributed to their lack of self-confidence, interest, and experience in using the computer. Prepared academically and equipped students means have the skills to excel in the field. This study only described the concepts of the readiness on computer related that need to review the unforeseen scenarios to students in tertiary level. The use of visual learning (pictures, written text, animations, and videos) and verbal learning (spoken narration) as discrete channels for delivering content is different from the traditional classroom practice of lecturing to students or having students read silently (Bulman, G.& Fairlie, 2016).

Moreover, feedback and inputs from the students' problems encountered, and perceptions towards the learning in computer-assisted instructions could be ways to make plans for reforms and more relevant outcomes. Revisit also multimedia learning platforms that uses for delivery of learning and lecturing to students.

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