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## Impact to information computer technology: computer competency of Tinajero high school teachers in Philippines

*Impacto en la tecnología informática: la competencia informática de los profesores de secundaria de Tinajero en Filipinas*

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### ABSTRACT

This study aims to describe the computer competency of high school teachers at Tinajero High School, in the Philippines, during the calendar year 2019. Specifically, it sought to identify and describe the teachers' computer competency, strengths and weaknesses, and problems in MS Word, Excel, and PowerPoint. Most of the conducted studies focused on the computer competency of the students. Few studies addressed the computer competency level of the teachers. In this digital age, teachers are not exempted on learning the Microsoft application. Sooner or later, the world will be embracing a mode of instruction that uses more of computer than of those traditional ways. This study used descriptive-survey type of study and a validated competency test from Module quizzes from Innovate: A Mentor's Guide to ICT Foundation Competencies by Microsoft Philippines. Findings showed the teachers are highly competent on MS Word, competent on MS Excel, and MS PowerPoint. Insufficiency of the computer equipment was identified as the main problem. It is therefore recommended to further strengthen the ICT capability training being given to the teachers so that technology will be maximized in making the educative system more impactful to the learners.

**Keywords:** Competency; Information Computer Technology; Philippines; High School

### RESUMEN

Este estudio tiene como objetivo describir la competencia informática de los docentes de secundaria Tinajero en Filipinas, durante el año calendario 2019. Específicamente, buscó identificar y describir la competencia informática, las fortalezas, debilidades y los problemas en MS Word, Excel y PowerPoint. La mayoría de los estudios realizados se han centrado en la competencia informática de los estudiantes, pocos estudios abordaron el nivel de competencia informática de los docentes. En esta era digital, los maestros no están exentos de aprender la aplicación de Microsoft. Tarde o temprano, el mundo adoptará un modo de instrucción que usa más computadoras que las formas tradicionales. Este estudio utilizó un tipo de estudio descriptivo de encuesta y una prueba de competencia validada de los cuestionarios del Módulo de Innovate: A Mentor's Guide to ICT de la Fundación ICT de Microsoft Filipinas. Los resultados mostraron que los maestros son altamente competentes en MS Word, competentes en MS Excel y MS PowerPoint. La insuficiencia del equipo informático se identificó como el principal problema. Por lo tanto, se recomienda fortalecer aún más la capacidad de capacitación en TIC que se brinda a los maestros para que la tecnología se maximice y haga que el sistema educativo sea más impactante para los estudiantes.

**Palabras clave:** competencia; tecnología informática; Filipinas; escuela secundaria

## INTRODUCTION

The students of the 21st century is known to be digital natives. They are also labeled as Generation X. These learners are born in the exposure of technology specifically of internet, computers, and other modern gadgets. With such environment, the learners' interests are more focused on their age and on the things they often see. That's why the challenge to education is to be adept with those technology.

Lucido (2007), stated that with the evolving pace of the innovation in today's Information Age is so dynamic that within the first decade of the 21st century, computer technology in education has matured to transform into an educative information and communication technology (ICT) in education. Traditional teaching methods can still be used. However, there are lots of equipment to be used to make the teaching- learning process easier, enjoyable, and meaningful to our students.

With such trend, education uses technology to cater quality learning to the students. Such technology is either communication media and audio-visual media. Communication media involves the internet, electronic mail (either text or video), chatrooms, blog sites, news services (like of print, video clip), music, movie, and television rom. On the other hand, audio visual media are of concerning text, sound, graphics, charts, photos, PowerPoint presentation, CD, VCD, DVD player, CDVCD, DVD player, educational software, educational websites, software's, course wares, school registration/ records and accounting.

Faculty members, staff, and administration should have that skill and use that acquired skill to make their work easier, to gain comfort, to make teaching experiential, and to connect with our students. These technology will be useless if they will just be displayed, stocked, and remain unused. With such, different trainings were conducted and continued to be scheduled to assure that facilitators of learning are ready for the "techy" age.

According to Webster Encyclopedia dictionary, skill is the ability to do something as product of practice, learning, drills, and mastery. Unlike of talent, it is not something innate to the being of the person. People have to be skillful so that they can go with the rapid transitions of life. This is the main reason why different institutions are giving skill trainings to different schools as well to group of people so that illiteracy and unskillfulness can be solved.

Empowerment is very much needed in any endeavor that a person has or is undergoing. Support from his higher ups can boost the motivation of any individual. There are some teachers who are hesitant to undergo to different trainings. Age factor is one of their reasons. But if support from people around them are very much evident, teachers will take the global challenges.

With such evidences, the researchers were so enthusiastic to investigate on the impact of the different ICT trainings being conducted to our educators. Assessment of the trainings were done through the computer competency of the participants and their strengths and weaknesses so that proper enhancement of the program can be done. Also, this study aims to distinguish whether the goals of the trainers are being achieved in helping our educators to produce globally competitive students by training the teachers with gadgets that can help their work easier, comfortable, and more adept to their clientele.

### Statement of the Problem

This study was designed to describe the computer competency of high school teachers at Tinajer High School during the calendar year 2019. More specifically, it sought to answer the following questions:

What is computer competency of Tinajero High School Teachers who had ICT trainings

during 2019 in:

- a.1 MS Word,
- a.2 MS Excel, and
- a.3 MS PowerPoint

What are the strengths and weaknesses of the respondents on the basic computer skills and as such as in:

- b.1 MS Word,
- b.2 MS Excel, and
- b.3 MS PowerPoint

What are the common problems faced by the respondents that affect their computer competency level?

### **METHODS AND MATERIALS**

This study used the descriptive-survey research. Corresponding letter of request to seek permission from the school administrator was submitted and approved prior to the actual data gathering the research team. Previous researches were done on computer competency but mostly focusing on the students. It is believed that teachers should be also assessed since they are facilitators of learning. Further failure to be competent on computer in this digital world will have a negative impact on the delivery of learning. It is in that reason that various trainings were being conducted to the public teachers. Only the high school teachers at Tinajero High School who undergone ICT trainings for the calendar year were taken as respondents. A validated competency test from Module quizzes from Innovate: A Mentor's Guide to ICT Foundation Competencies by Microsoft Philippines was utilized to determine the level of computer competency of the selected respondents in the ICT trainings during 2019.

The test was administered for a period of one day by the data gathering group of the research team on July 19, 2019. Scores in the competency test were determined for each area of application, i.e. word, excel and power point. The mean scores per area were determined and reported in percentage. These mean scores in percentage served as the basis in determining the competency level of the participants in the ICT trainings. The strengths and weaknesses of the respondent on the basic computer skills were identified also per area of application. The answers of the respondents in each question per area of application were identified as correct or wrong answer and frequency were tallied.

The item per each area of application wherein frequency of wrong answer is significantly high was identified as the weakness of the respondents. On the other hand, item/s wherein frequency of correct answer is high is/are identified as the strength of the respondents.

Results from the frequency tally were rank and served as the basis in identifying the strengths and weaknesses of the respondents. A one-on-one interview with the respondents was also employed to ensure that the findings and results of the study conducted are not based only on their acuity. Answers were tallied based on the frequency of the answers of the respondents and reported in ranks. All data were collected and presented in frequency, percentage, and rank distributions.

### **FINDINGS**

The overall computer competency of the high school teachers at Tinajero High School is competent. This is shown on the scores of the teachers on the given competency test wherein

50.33 percent are competent. With such findings, we can therefore say that the ICT trainings have given impact to their trainees.

The computer competency of the high school teachers in MS Word is highly competent. This reflected on the computed frequency percentage which is 41.67. This further describes that they are more than the average level on the knowledge and application of skills in connection to MS Word.

The level of competency of the teachers in MS Excel is Competent. This is based on the computed frequency percentage of 39.58. Meaning, the respondents have met the basic requirements needed on using the MS Excel.

The level of competency of the respondents on MS PowerPoint is Competent. This is based on the computer frequency percentage of 47.92. The teachers are average in terms of the concepts and basic skills connected to doing presentations down to delivering it.

The respondents are strong in the use and concept of MS Word. This is substantiated by the 81.25 percent who passed the 10-item part of the test. On the other hand, MS Excel and MS PowerPoint are the weaknesses of the respondents. This is the result of the percentage of failures which are 64.58 percent and 66.67 percent respectively.

The high school teachers were described based on their strengths and weaknesses in connection to the skills included in MS Word. Rank one on their strengths is working with document. The other specific skills that ranked two to six are working with texts, word basics, working with tables, working with paragraphs, and managing files. With such rank order, it was also found out that the specific skill which the high school teachers have to improve is in managing files.

The respondents were described based on their strengths and weaknesses in connection to the skills included in MS Excel. The number one strength of the high school teachers in MS Excel is learning the fundamentals. The number two to number six on the strengths of the teachers in MS Excel are functions and formulae, creating and working charts, formatting worksheets, setting up worksheets for printing, working with cells and cell data, and modifying workbooks. With such order, the weakness of the teachers in MS Excel is modifying workbooks. This was the result for it ranked last among the strengths of the teachers.

The respondents were described based on their strengths and weaknesses in connection to the skills included in MS PowerPoint. The strength of the teachers in MS PowerPoint is working with multimedia. Other skills connected to MS PowerPoint from rank two to seven are working with other programs, formatting presentations, learning the fundamental, drawing and working objects, editing a presentation, and delivering a presentation. The weakness of the high school teachers in MS PowerPoint is delivering a presentation since it ranked last on the strengths.

Majority of the high school teachers indicated that absence or lack of computer units is the common problem that affects their computer competency. This was found out for this reason rank one. Other reasons that rank two to six are computerization is not a priority, insufficient knowledge and skills, no administrative skills, prefer to use manual than computer method, and hectic schedule for the whole day.

## CONCLUSIONS

The respondents are competent on the basic computer skills as manifested on the highly competent description for the MS Word and competent description for the MS Excel and MS PowerPoint. Indeed, level of the competency is varied based on the respondents.

Strengths and weaknesses are identified as a whole and per application. As a whole, the respondents are at best in the use of MS Word, while they still need to improve in MS Excel and MS

Powerpoints. Moreover, there are still weaknesses that have to remedy per application to improve the competency level of the teachers.

Problems on the computer equipment needed to apply ICT is the main factor that affect the level of the respondents. Insufficiency of the the computer equipment is a pivotal concern why the respondents are averagely in the “techi” world.

The impact of the trainings to the respondents are magnified as seen on the level of computer competency.

There is still a room for the enhancement of the program and trainings such as:

- Continuous ICT trainings during Semestral Break.
- Provide computer in every classroom so that trained teachers can apply their knowledge and skills in ICT trainings.
- Provide higher level of training to those who are knowledgeable with the basic skills in ICT like movie maker and others.
- More training programs.
- School should provide computers for teachers.
- Formulate a program that will address this problem on a quarterly basis.
- Have an internet connection for the school.

#### RECOMMENDATIONS

In the light of the findings and conclusions drawn, the following are offered for recommendations:

- The suggestions of the respondents on how to enhance the ICT programs and trainings being offered to the teachers should be considered and implemented by the concerned authorities in the department.
- ICT trainings should be given to all. Since, it cannot be avoided to use the technology at this times, trainings as such should be available and highly motivated to everyone.
- Funding on the ICT aspect of education should be reviewed and improved. Even though we have skillful people in ICT if they do not have equipment that they can use, their learning is useless.
- A replication of this study is suggested to be conducted by the researchers in other places or in a broader scope.

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