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ICT Training Needs Assessment

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***Abstract*— for the individual or an organization as a whole. It is to ensure that the resources invested in training are targeted at areas where it is appropriate and in need considering the limited budgets and the need for cost-effective solutions. Thus, the ICT Training Needs Assessment (ICT TNA) was conducted to channel resources into the areas which will contribute the most to beneficiaries particularly the elementary and secondary teachers of DepEd Tandag City Division to ensure that they will gain knowledge and the right skills that would help them work effectively and competently at the same time determine if a training need exists and if it does, what training is required to fill the gap. It focuses on the implementation of different ICT -related SkillsTraining which would help alleviate the performance of teachers in the classroom and other tasks of which the use of computers will make their work easier, more efficient, and organized.**

The sampling group was drawn from 292 Elementary and Secondary Teachers of Tandag City Division and Gamut National High School using Random Sampling Technique. Data were collected through Survey Questionnaire that includes 40 questions from five (5) components and the questionnaires were approved for content validity by experts. Frequency and Percentage are the statistical methods used to analyze the data. The result of the study revealed that the majority of teachers have basic knowledge of ICT and it became the basis to conclude that teachers do not have enough ICT Competence and that teachers need to be proficient in knowing where and when to use technology for teaching, learning, and other related tasks.

Keywords: ICT, Skills Competency, Productivity Tools, Network Applications, Data Management.

I. PROBLEM STATEMENT

Information and Communication Technology (ICT) transform the way we live, prevalent in the workplace, school and even in personal lives. Learners are growing up in a world characterized by technological change and innovation. In Education, there is a need to equip learners with the necessary skills and experiences that will enable them to become contributing members of the global community. Hence, it is concluded that ICT can empower teachers and learners, an avenue for change and foster the development of skills. However, the use of ICT in the classroom for potential educational benefits is not automatic since it is considered as a multifaceted process that involves not just technology but also curriculum and pedagogy, institutional readiness, teacher competencies, and long-term financing, among others (Tinio, 2003).ICT has the power to increase motivation and learner engagement in life-long learning skills at the same time facilitates the transformation of school education as one of the educational tools**.** Thus, harnessing ICT continues as an important challenge to educators. It is as well evident that the Philippine Government has shown serious commitment to ICT in education by having a series of initiatives to apply ICT in teaching and learning that is vertically aligned into the Millennium Development Goals and the Education for All Movements on universal primary education and MDG 3 on gender equality in education, by 2015(https://en.wikipedia.org/wiki/Education_For_All).

Along this endeavor, the College of Information Technology Education (CITE)of Surigao del Sur State University, Tandag Campus is continually spearheading ICT Trainings for high school and elementary school teachers particularly ICT Coordinators of Department of Education of the Tandag City and Surigao del Sur Division through a community extension program , one of the four-fold functions of a higher education institution. It is committed to provide ICT education and opportunities for public school teachers to equip and provide them the desired knowledge and skills in the integration of ICT in teaching. Some of the technical trainings conducted includes: Diskless System; Website Development using HTML; CSS / JavaScript; Desktop Publishing and Photo Editing. Hence, the need for assessment will be conducted to determine the level of ICT Skills Competencies of the teachers and its implication to their designations as school's ICT Coordinators and at the same time for the college to decide on what other ICT / Skills Trainings to be designed suitable according to their needs.

The Aim of Research

This study aimed to assess the level of Information Communication Technology (ICT) Competencies of Tandag City Division and Gamut National High School Teachers of Tandag City and Municipality of Tago Surigao del Sur respectively S.Y 2018-2019. Specifically, it sought to answer the following:

1. What is the profile of teachers in terms of:
   1.1 Gender
   1.2 Highest Educational Attainment
   1.3 Seminars/ Trainings Attended related to ICT
2. What is the Respondents' Assessment on its Level of Competencies based on the Skills gained from the ICT Literacy Programs as Extension Activities conducted by

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the College of Engineering, Computer Studies and Technology (CECST) in terms of the following?

2.1 Knowledge and Skills in Basic Computer Operation

2.2 Use Appropriate Office and Teaching Productivity Tools

2.3 Use of Internet, Network Applications and Resources

2.4 Knowledge and Skills in Information and Data Management

2.5 ICT Integration in the Teaching-Learning Process

3. What ICT Training Programs can be proposed to enhance the Skills of the respondents?

II. METHOD OF RESEARCH

Research Design

The research used descriptive method, which involved a questionnaire to assess the level of ICT competencies for Tandag City Division and Gamut National High School Teachers of Tandag City and Municipality of Tago Surigao del Sur respectively within SY 2018-2019.

Research Procedure

To identify the respondents and distribute the needs assessment survey questionnaires, the researcher ask permission from Dr. Gregoria T. Su, Schools Division Superintendent of Tandag City Division through the Information Technology Officer, Cheryl. Q. Deleña and Dr. Joselito G. Quijada, Secondary School Principal II of Gamut National High School , Gamut Tago Surigao del Sur.

Respondents of the Study

The respondents of the study are the School Heads, ICT Coordinators, Elementary and High School Teachers of Tandag City Division and Teachers from Gamut National High School under the Division Office of the Surigao del Sur SY 2018-2019. This includes a total of two hundred ninety-two (292) respondents involved in the study.

Research Population

There are two hundred ninety two (292) out of 560 expected respondents who participated the survey, equivalent to 52% of the entire population.

Table 1.0 Distribution of Respondents

SCHOOL YEAR	MALE	FEMALE	TOTAL
2018-2019	54	238	292

Data Gathering Instruments

The researcher used survey questionnaires as data gathering tool. The instrument consists of two parts; first is the Demographic Profile of the teachers, second focused on the ICT Skills Competency Assessment using adopted-edited questionnaire from the National ICT Competency Standard for Teachers. The respondents were given enough time to answer each indicator in the questionnaire that is distributed in-person.

Statistical Treatment of Data

Responses from the questionnaire were analyzed using Percentage Frequency Distribution that specifies the percentage of observations that exist for each data point or grouping of data points. It is particularly useful method of expressing the relative frequency of survey responses and other data(Lavrakas, 2008).

III. ANALYSIS AND DISCUSSION

Profile of Respondents

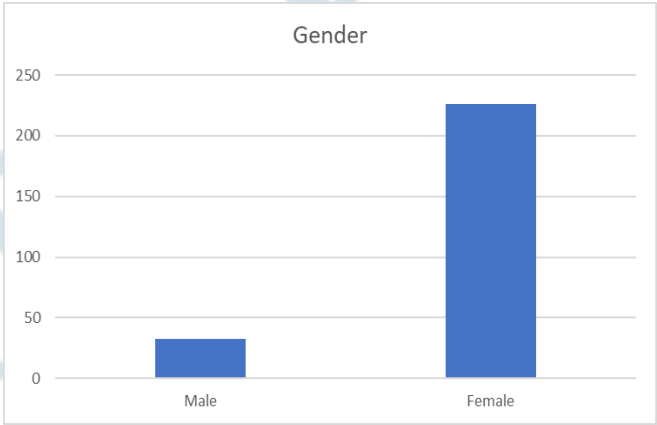

Figure 1.0 Gender of Respondents

Female outnumbered male respondents since there are only few male teachers in the schools where the survey was conducted.

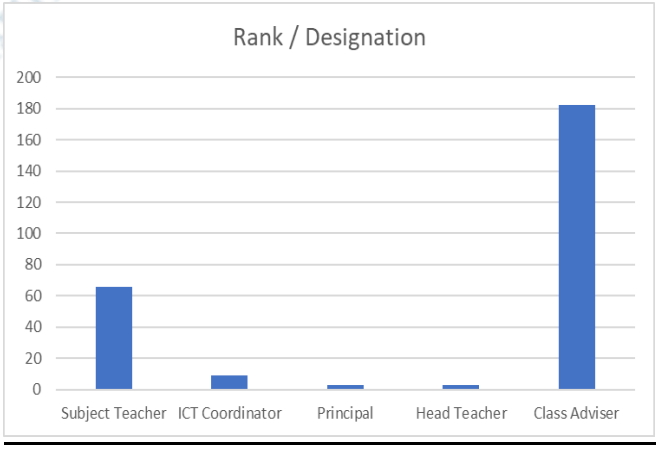

Figure 2.0 Rank / Designation of Respondents

Among the number of respondents, most of them are class advisers followed by subject teachers and only few are ICT Coordinators, Principals and Head Teachers. This is because in Tandag City Division, only one(1) or two (2) ICT Coordinator(s) and one(1) Principal or Head Teacher per school.

ISSN (Online) 2394-2320

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Vol 10, Issue 1, January 2023

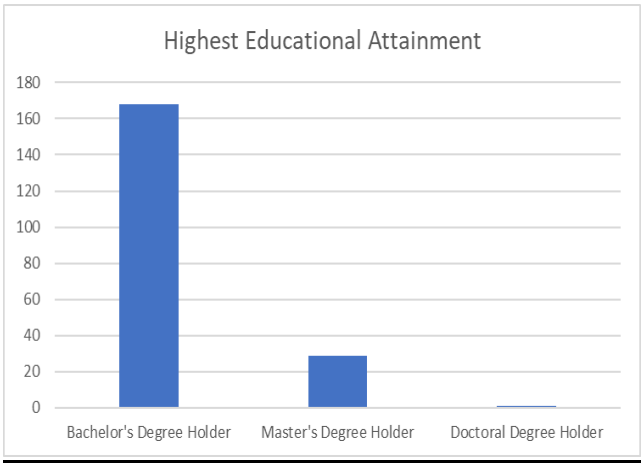

Figure 3.0 Respondents' Highest Educational Attainment

Result shows that only one (1) respondent have finished his/her doctoral degree and the rest of the respondentswith the highest number are baccalaureate degree holders with units in masteral.

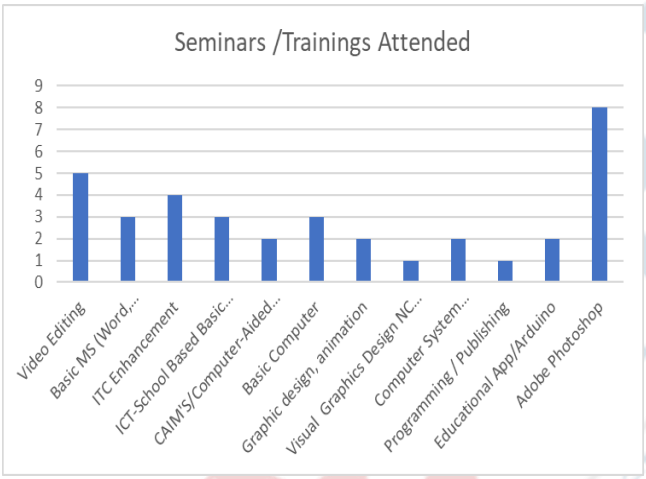

Figure 4.0 ICT Seminars / Trainings Attended by Respondents

The SDSSU-Main Campus College of Information Technology Education (SDSSU-CITE) has been an extension activity partner of Tandag City Division and Gamut National High School in the conduct of ICT Literacy Programs thus, respondents have varied trainings in ICT . As shown above there are many respondents who were trained in Adobe Photoshop where they learn how to enhance the pictures and how to draw objects and images, at the same time some of those who learned adobe photoshop was able to attend the training in video editing which they can both use such in graphics presentations in the conduct of classes, delivery of instruction and even in their required reports and accomplishments.

The following figures presents the Skills' Competencies related to technical operations , concept and productivity of various ICT tools like computers and communication devices both online and offline applications.

Knowledge and Skills in Basic Computer Operation

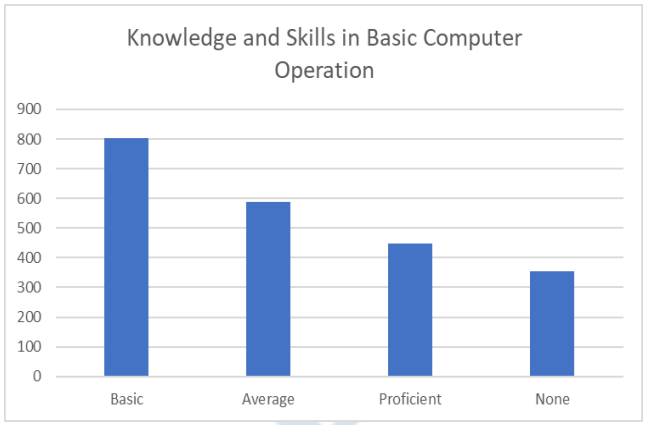

Figure 5.0 Respondents' Knowledge and Skills in Basic Computer Operation

In terms of the knowledge on Basic Computer Operation, not everybody is well versed, majority have gained only the basic knowledge. It means that they are not proficient enough on computer as to its operation.

Use of Appropriate Office and Teaching Productivity Tools

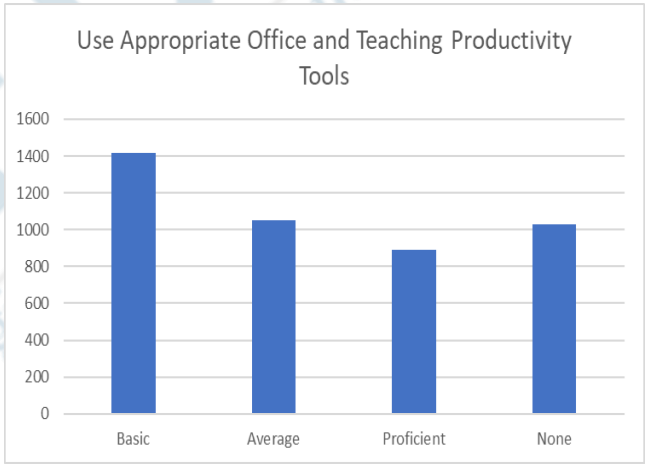

Figure 6.0 Respondents' Use of Appropriate Office and Teaching Productivity Tools

Also, in the case of utilizing the office and teaching productivity tools, it is evident in figure 6.0 that respondents only knows the basic use of office and productivity tools in teaching. In the article posted online (https://www.ed.gov/oii-news/use-technology-teaching-and-learning) it says, technology ushers in fundamental structural changes that can be integral to achieving significant improvements in productivity, used to support both teaching and learning, technology infuses classrooms with digital learning tools, such as computers and hand held devices; expands course offerings, experiences, and learning materials.This model links teachers to their students and to professional content, resources, and systems to help them improve their own instruction and personalize learning.

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Vol 10, Issue 1, January 2023

Hence, teachers still need to learn more about it for them to maximize the features of various productivity tools.

Use of Internet, Network Applications and Resources

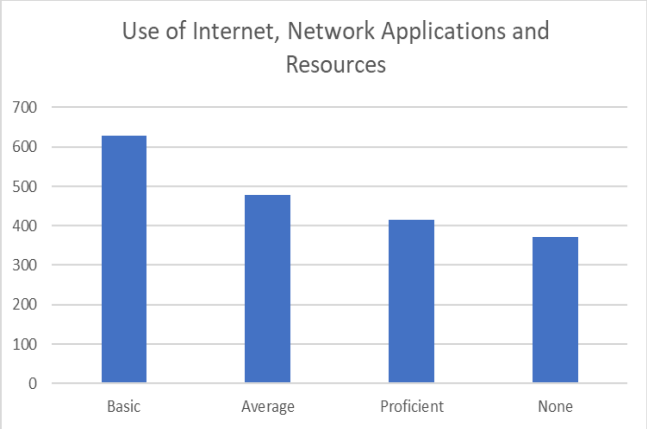

Figure 7.0 Respondents' Use of Internet, Network Applications and Resources

Although internet, network applications and resources are already prevalent networks at present, yet the assessment reveals that many of the respondents have basic knowledge about it. Many of them are not making use of it for teaching purposes like information retrieval, gathering of relevant resources and downloading of educational materials.

Knowledge and Skills in Information and Data Management

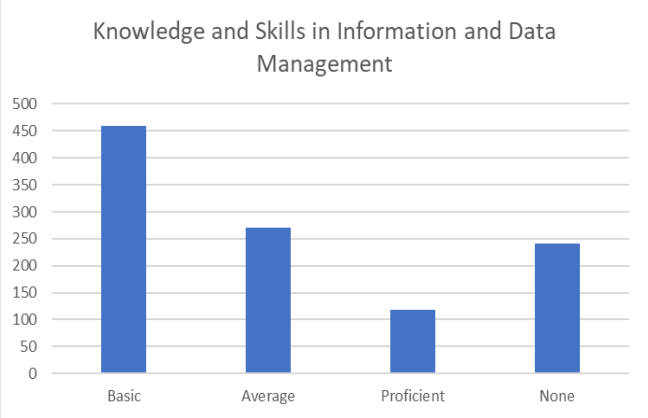

Figure 8.0 Respondents' Knowledge and Skills in Information and Data Management

There are five(5) important Data Management Skills to successfully manage and use information namely: *1)Looking at and Analyzing Data*- the ability to use data effectively including familiarity with the data available ;*2)Navigating Database Software*- it refers to the use of database software to find records, sort, review, edit, print, and other functions; *3)Data Integrity*- to be aware of potential weaknesses in the data when analyzing and using it; *4)Managing Accounts and Files*- keeping track of online account its usernames and passwords and knowing how to organize files and folders on your computer or network. and; *5) Database Design and Planning* – it refers to understanding the benefits and limits of various types of databases, including PC and online databases. These skills are supposed to be present to educators of the present era. Unfortunately, results from the respondents simply shows that they only have basic knowledge on the said skills. Thus, skills training may be offered to respondents to improve their skills in information and data management.

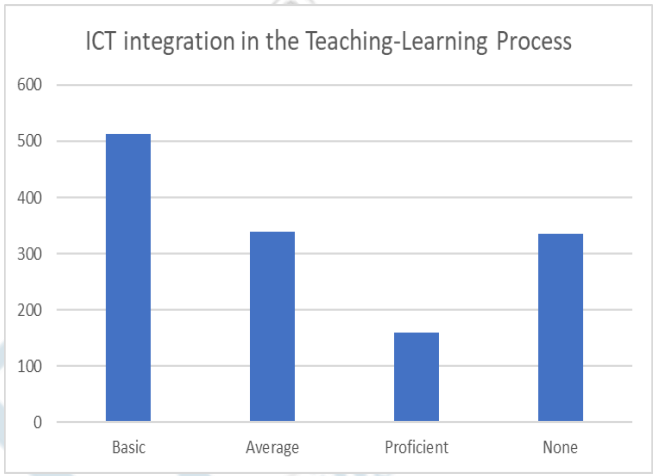

Figure 9.0 Respondents' ICT integration in the Teaching-Learning Process

Globally, educational systems are adopting new technologies to integrate ICT in the teaching and learning process, to prepare students with the knowledge and skills they need in their subject matter. In this way the teaching profession is evolving from teacher-centered to student-centered learning environments. "ICT integration is understood as the usage of technology seamlessly for educational processes like transacting curricular content and students working on technology to do authentic tasks" (Kainth and Kaur, 2011).

Proposed ICT Trainings

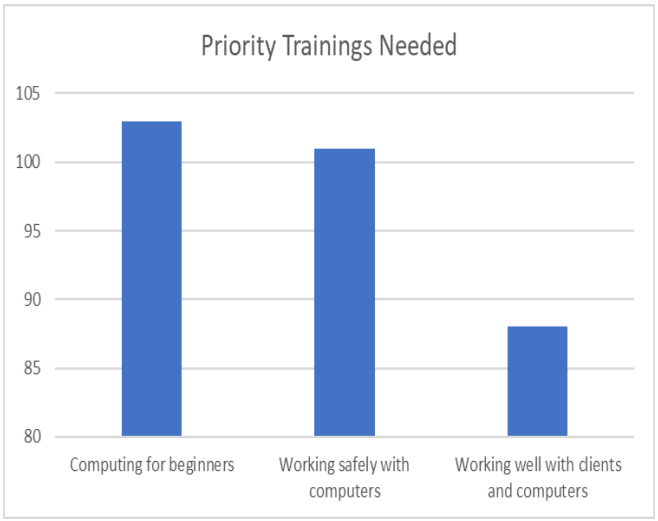

Figure 10.0 Priority Trainings Needed by Respondents

ISSN (Online) 2394-2320

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Vol 10, Issue 1, January 2023

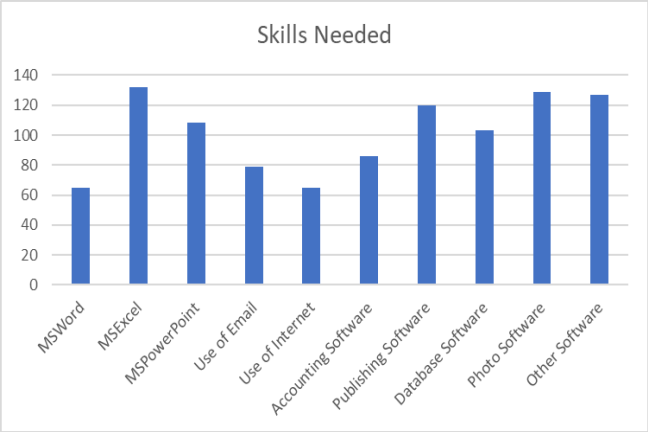

Figure 11.0 ICT Skills Needed by Respondents

In addition, it is shown in the above figure for Skills Needed that respondents are interested and they need to learn MS Excel, Photo Editing Software, Other related Software and Publishing Software.

IV. CONCLUSIONS AND RECOMMENDATIONS

It is clearly revealed in the results of the study that majority of teachers have basic knowledge in ICT. Nevertheless, this is not enough to conclude that teachers are already ICT Competent because it is also reflected in the results that teachers need to be proficient in knowing where and when to use technology for teaching and other related tasks. Thus, it is highly recommended that teachers shall undergo training that will help further enhance their computer skills and knowledge to better improve their delivery of instruction. These includes Skills Trainings in the use of MS Excel, MS Powerpoint, Database, Publishing , Photo Editing Softwares and the like.

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