



Training Needs Assessment of Teachers: Basis for Information and Communication Technology Literacy Program

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Abstract

The study determined the training needs in Information and Communication Technology (ICT) of elementary teachers in the District of Tangalan, Aklan. It employed a descriptive research design utilizing seventy (70) regular teachers from nine (9) elementary schools in the District of Tangalan, Aklan. The study used a researcher-modified questionnaire that covers the demographic profile of respondents, ICT teachers' abilities, and the extent of ICT training needs. Several competencies were used in the questionnaire guided by the National ICT Competency Standard (NICS) for teachers developed by the Commission on Information and Communications Technology (CICT). It was found that the ICT abilities of the teachers declined with age or pedagogical experience; however, gender and teaching position did not affect the teachers' technical ability. Both male and female teachers are ICT-savvy. Age and teaching experience reduce ICT abilities and influence classroom integration training and ICT training needs. The study further revealed that teachers' age, gender, teaching position, and years in teaching do not have a significant impact on their ICT abilities or training needs. The two categories of ICT, including use in the classroom and use of ICT software and programs, fall under the level of enhancement. Indeed, training is needed to upgrade the prior knowledge of the teachers; thus, designing and implementing courses and programs that meet those requirements is essential to further honing their ICT knowledge.

Keywords: *Assessment, ICT Literacy, Information Communication and Technology (ICT), National ICT Competency Standard (NICS),*

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Introduction

Technology has stimulated individuals to modify how they carry out an activity. It has become necessary for individuals to adapt their methods to technological progress. Globalization and the advancement of information and communications technology (ICT) have driven the economy because of the increase level of competition in the workplace. Consequently, numerous governments have begun investing in ICT to meet the current digital information age requirements. The continual development of web-based technology, in union with the meteoric rise in Internet accessibility, has made it possible for web-based applications to be used extensively across various fields of study. The use of information and communications technology (ICT) in the management of classrooms has increased rapidly due to its effectiveness and efficiency.

This study aimed to determine the training needs in Information and Communication Technology (ICT) of elementary teachers of the Schools District of Tangalan and formulated an ICT literacy program that cater their ICT competency needs. This study has been propelled by the need to integrate ICT in the classroom. Everyone is aware how technology has compelled individuals to alter how they accomplish an activity. It has become necessary for individuals to adapt their methods to technological progress. Globalization and the advancement of information and communications technology (ICT) have driven the economy because of the heightened level of competition in the workplace. The use of information and communications technology (ICT) in the management of classrooms has increased rapidly due to its effectiveness and efficiency. Buabeng-Andoh (2012) has mentioned that the key factor of teacher's successful integration of ICT in the classroom teaching is professional development. Tolentino (2013) confirmed that Information and Communications Technology (ICT) can impact student learning when teachers are digitally literate and know how to integrate it into the curriculum. Schools use ICT tools to communicate, create, disseminate, store, and manage information. In some contexts, ICT has also become integral to the teaching-learning interaction through approaches such as replacing chalkboards with interactive digital whiteboards and using students' smartphones. When teachers are digitally literate and trained in ICT, these methods can help students develop higher-order thinking skills, give them creative and personalized ways to show what they know, and make them better prepared to deal with the constant changes in technology in society and the workplace. ICT is essential in the classroom teaching and learning process since it enables instructors and students to operate, save, control, and retrieve data, fostering self-regulated and active learning. Moreover,

the same study claims that for teachers to maintain relevance in the fast digitizing academic environment, they need a technology intervention program to improve their computer competency. Educators are able and willing to adopt cutting-edge tools. To help kids learn new knowledge, we need to close the gap between the tools we use to teach them and how we teach them.

In the Philippines, a recent study reveals that most teachers have basic knowledge on ICT and needs improvement (Las Johansen et al., 2017). The researcher believes that there is a need to identify the teachers' essential abilities or competencies in ICT and be given appropriate training and assistance from the experts. Training needs of teachers in Information and Communication Technologies (ICT) are among the most critical considerations for integrating ICT into everyday educational practice, along with teachers' ICT competencies and use of these technical resources. With competency in ICT and skills to support the growth of the ICT sector, human capital will be established. Thus, it will turn to support the progress of the other segments of the economy. This information presented encouraged the researcher to investigate on the training needs of teachers as basis for the ICT Literacy Program among Elementary School Teachers in the Schools District of Tangalan.

Methodology

The study is anchored to David P. Ausubel's Schema Theory in which referred to a "data structure" by which general concepts that an individual absorb from everyday life is stored in the memory. According to Driscoll (2005), "schemata are packets of knowledge and schema theory is a theory of how these packets are represented and how the representation facilitates the use of the knowledge in particular way" (p. 129). A person would go through life receiving different pieces of information. While some pieces get stored in the memory, others do not. The schema theory reflected a cognitivist approach wherein, learning involves the associations that were created through contiguity and reproduction or repetitive measures (Mergel, 1998).

Also, this study anchored to the Subsumption Learning Theory of David Ausubel in 1963. The theory focuses on how individuals acquire and learn large chunks of information through visual means or text materials. According to him, a learner absorbs new information by tying it to existing concepts and ideas that they have already acquired. The acquisition of knowledge is based on the actual processes that occur during learning. The key process that takes place in the learner's brain is subsumption, wherein new content is related to relative ideas that are already present in

the existing cognitive structure on a non-verbatim basis. Cognitive structures are what's left in the human brain from all the learning experiences, after forgetting inevitably occurs. So, when some details, facts or situations lose their individual nature, they are then integrated into a general notion. Likewise, fostering healthy home interactions and engaging children at early age love for reading can boost children's ability to read is neglected. Through this, they need an intervention to give ample time in reading to enhance their reading skills and to increase their reading readiness in school especially those who are in primary years.

The study used a descriptive-correlation method of research using the descriptive method to describe the profile of the primary learners, the level of reading comprehension skills, the level of reading comprehension difficulties, and the relationship of the reading comprehension skills and reading comprehension difficulties of the primary learners.

The study was conducted in a far-flung area, second farthest barangay in the Municipality of Ibaday. This study included 32 out of 34 primary learners, from Grades 1 to Grade 3, School Year 2022-2023. The subject of the study was composed of thirty-two (32) primary learners whom eighteen (18) were boys and fourteen (14) were girls, wherein eight (8) from Grade 1, fourteen (14) from Grade 2, and ten (10) from Grade 3.

Data were collected through individual interviews using researcher-made guide questions and the Comprehensive Rapid Literacy Assessment (CRLA) administered to primary learners. To ensure the validity of the instrument used in the study, a panel of experts was selected to conduct content validation. The suggestions, recommendations, and comments provided by the experts were taken into account in the revision of the instrument.

In the conduct of this study, the researcher made sure that necessary letters of consent were secured and proper coordination with people who have direct involvement in this study was properly conducted. The researcher ensured the anonymity of all the information disclosed by the participants was treated with utmost confidentiality by strictly adhering to the provisions of National Ethical Data for Health Guidelines for the significance of the study shall be clearly described in a separate section of the protocol with an accurate and updated description of the status of the social or health problem, and how the study will help arrive at a solution.

The quantitative data were analyzed based on the answers of the respondents in the survey questionnaire and the CRLA. The researcher will utilize the descriptive evaluative statistics which included weighted mean and average. These data may also be generated into tables or graphs as

desired and mean and percentages of the data will also be readily available. This study made use of descriptive correlational research design in order to achieve the primary aim of the study which is to develop a needs-based district wide ICT Literacy Program for Elementary School Teachers. Creswell (2012) stipulated that descriptive correlational research designs are used by researchers to describe and measure the degree of relationship between two or more variables. It is for this reason that such design was adopted in this study. A descriptive survey was made and employed using stratified sampling technique to seventy respondents in the nine elementary schools (Panayakan Elementary School, Tagas Elementary School, Tangalan Elementary School, Dumatad Elementary School, Juan B. Molo – Afga Elementary School, Baybay Elementary School, Dapdap Elementary School, Tondog Elementary School, and Sergio L. Taligatos Elementary School) in the District of Tangalan, Division of Aklan. A researcher modified instrument which was subjected to try-out with a Cronbach alpha coefficient of 0.82 was used in the study. Percentage, frequency count, mean, and weighted mean were utilized by the researcher for facilitating analysis and interpretation of the data. To test the relationship between variables, Pearson r, Cramer's V and paired t-test were used. Ethical standards were observed by securing permission from all authorities concerned as well as the consent of those who participated in the survey.

Respondents of the study

Of the eighty-four (84) regular permanent teachers in the District of Tangalan, seventy (70) were served as the respondents of the study which is chosen through Slovin's Sampling Technique. These are the teachers who currently teaching in elementary level having various subject areas in the following identified schools: Panayakan Elementary School, Tagas Elementary School, Tangalan Elementary School, Dumatad Elementary School, Juan B. Molo – Afga Elementary School, Baybay Elementary School, Dapdap Elementary School, Tondog Elementary School, and Sergio L. Taligatos Elementary School.

Sample Size and Sampling Technique

The participants were identified in this study through Slovin's Sampling Technique to identify how many teachers will going to participate in the study. According to Ellen (2020), Slovin's formula enables researchers to sample a population with the necessary level of accuracy.

Slovin's formula provides the researcher with an estimate of the required sample size to assure satisfactory accuracy of findings.

Findings

The study's primary findings indicate that most of the respondents in this study had the idea of how to use ICT skill with little assumption on how to do it properly in their respective teaching and learning process. Although the teachers in this study reported to have some ICT knowledge/skill, however enhancement training is needed to upgrade prior knowledge. On the other hand, with an increase in age or number of years in teaching, the level of ICT competencies in terms of pedagogy decreased or vice-versa. A statistically significant relationship was found to exist between the teachers' age and number of years of teaching experience and ICT competency in terms of technological tool while there is no statistically significant relationship found to exist between teachers' sex and teaching position and their ICT competency in terms of technological tool. There is no difference between male and females' teachers in terms of ICT competency. Similarly, teachers' teaching position also does not affect their ICT competency in terms of technological tool. An increase in age and number of years in teaching were found to have a negative impact on or negative relationship with then the level of ICT competencies. This means that as the teachers' age and number of years in teaching increases, their level of ICT competencies gets low. There is a weak positive relationship between teachers' age and years in teaching and teachers' training needs in terms of integration in the classroom. Thus, teachers' training needs in terms of integration in the classroom do to increase with an increase in their age and years in teaching. There was no impact of teachers' increase in age and years in teaching on their training needs in ICT in terms of use of ICT software and programs.

Conclusion

Teachers' age, sex, teaching position, and years in teaching do not have a significant impact on their ICT competencies and need for ICT training. In other words, teachers' ICT competencies and need for ICT training do not increase; rather these undergo a decrease as they grow older and their teaching experience increases.

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