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Research Article

ICT Preparedness and Instructional Ability of Public Elementary School Teachers in San Narciso District

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ABSTRACT

Teaching is one of the most challenging professions, particularly as knowledge continues to expand and technological advancements require teachers to develop competencies in integrating Information and Communication Technology (ICT) into instruction. This study investigated the ICT preparedness and instructional ability of public elementary school teachers in San Narciso District. Specifically, it examined teachers' ICT competence and skills, perceptions of ICT use in teaching, and instructional ability based on the Results-Based Performance Management System Classroom Observation Tool (COT-RPMS). It also determined significant differences in ICT preparedness and instructional ability when teachers were grouped according to selected profile variables and examined the relationship between ICT preparedness and instructional ability. A researcher-made survey questionnaire was used to assess ICT preparedness, while the COT-RPMS was used to evaluate instructional ability. The findings revealed that teachers strongly agreed that they were confident in learning new computer skills and that ICT integration contributed to effective classroom management. Teachers also demonstrated a high level of instructional ability, particularly in applying content knowledge within and across curriculum teaching areas. Significant differences in teachers' perceptions of ICT use were found when grouped according to age and length of service. However, no significant differences in instructional ability were observed across the selected profile variables. Furthermore, competence and skills in Internet applications exhibited a low positive correlation with instructional ability, suggesting a slight positive association between these variables. The study recommends providing adequate and functional ICT resources, strengthening ICT-related training programs, improving Internet connectivity, and sustaining teachers' ICT competencies.

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Further research is recommended to identify other factors that may influence teachers' instructional ability.

Keywords: Classroom Observation, ICT Preparedness, ICT Competence, ICT Integration, Instructional Ability, Public Elementary School Teachers, San Narciso District

Introduction

The demand for Information and Communication Technology (ICT) integration in the curriculum has become a global concern and is significant in achieving the Millennium Development Goals (MDGs) and Education for All (EFA) goals. Kler described ICT as an effective medium that can improve instructional communication between teachers and learners when appropriate educational technologies are integrated into the classroom (Andoh, 2012). ICT has also been recognized as an important tool for building knowledge and supporting educational development (Antonio, 2016). At the school level, ICT can provide opportunities to rethink and redesign educational systems and processes, thereby contributing to quality education. Technology promotes learner-centered education by providing learners with varied and engaging activities that allow them to explore and construct knowledge. It also provides flexibility that assists teachers in accessing and using information to achieve learning goals and address diverse educational needs (Gebhardt et al., 2019). Consequently, governments and educational institutions have initiated investments and programs that promote the integration of ICT into teaching and learning.

The importance of ICT in education has prompted initiatives such as the Preparing the Next Generation of Teachers through ICT project. This initiative focuses on assisting teacher education institutions in preparing teachers to understand how and when technologies can best be used for teaching and learning. It is also considered an important approach to the professional development of teachers and the effective integration of ICT into education (Gebremedhin & Fenta, 2015).

Moreover, the National Competency-Based Teacher Standards (NCBTS), as stipulated in

DepEd Order No. 32, s. 2010, recognized ICT-related competencies as part of teacher professional development. The standards encourage teachers to embrace the effects of ICT on teaching and learning, develop positive attitudes toward technology, and use ICT as an opportunity to strengthen pedagogy and professionalism in line with global trends in education (Kler, 2014). Mateo likewise emphasized the importance of developing teachers' competencies in response to changing educational demands (Klazema, 2011).

With these concerns, the researcher was motivated to undertake the study with the end view of proposing a program to strengthen the ICT preparedness of public elementary school teachers in San Narciso District.

Problem Statement

This study attempted to find out the ICT preparedness and instructional ability of public elementary school teachers at San Narciso District for the School Year 2019-2020. Specifically, it sought answers to the following questions:

1. What is the profile of the public elementary school teachers in terms of:
 - 1.1. sex;
 - 1.2. age;
 - 1.3. highest educational attainment;
 - 1.4. length of service;
 - 1.5. teaching position;
 - 1.6. teaching level assignment;
 - 1.7. ICT training level; and,
 - 1.8. years of using ICT in teaching?
2. What is the level of ICT preparedness among teachers in terms of:
 - 2.1. ICT competence/skills; and,
 - 2.2. perception on the usefulness of ICT in teaching?

3. What is the level of instructional ability of teachers assessed thru Classroom Observation Tool- Results-Based Performance Management System (COT-RPMS)?
4. Is there a significant difference in the ICT preparedness of the teachers grouped according to profile variables?
5. Is there a significant difference in the instructional ability of teachers when grouped according to profile variables?
6. Is there a significant relationship between ICT preparedness and the instructional ability of teachers?

Scopes and Limitations

The study involved the elementary school teachers of San Narciso District, who are teaching for the School Year 2019-2020. San Narciso District is not the biggest district in Zambales. San Narciso District caters 15 Elementary schools; namely Alusiis ES, Beddeng-Mabangcal ES, Consuelo ES, Dallipawen ES, Doce-Martires ES, La Paz ES, Mabato ES, Namatacan ES, Omayá ES, San Jose-Patrocinio ES, San Juan-Candelaria ES, San Narciso CS San Pascual ES, San Rafael-Natividad ES, and Simminublan ES. The coverage of the study is on self-competency assessment of elementary school teachers that could serve as the basis for in-service education and in attaining an effective ICT classroom instruction.

The content of the questionnaire includes items designed to seek personal information (Profile), data on their level of ICT preparedness through their ICT competence, and Perceptions of using ICT in teaching as well as the teacher's instructional ability.

This study was limited only to the competency areas cited by the researcher. The study is also limited to the district where she is currently teaching.

Methodology

Research Design

This study used a descriptive-correlational research design to describe teachers' ICT preparedness and instructional ability and to

determine the relationship between these variables. A correlational research design is appropriate when the researcher seeks to examine the degree and direction of association between two or more variables without manipulating them. It allows researchers to determine whether changes or variations in one variable are associated with changes in another variable (Mateo, 2008).

Correlational research is conducted to investigate and explain observed relationships among variables. Data are collected systematically and analyzed using appropriate statistical procedures to determine the strength and direction of the relationships between the variables under investigation. Unlike experimental research, correlational research does not involve the manipulation or control of variables (Mateo, 2008).

Correlational research goes beyond simply describing existing conditions because it systematically investigates relationships between two or more variables of interest (Nymabene & Nzuki, 2014). However, although it can identify the existence, strength, and direction of relationships, it does not establish causality. Therefore, a significant relationship between teachers' ICT preparedness and instructional ability would indicate an association between the variables but would not necessarily mean that ICT preparedness directly causes changes in instructional ability.

Respondents and Location

The research study was conducted in all Elementary Schools of San Narciso District, Division of Zambales. The target respondents are the public elementary school teachers and master teachers who are directly involved in the subject of the study.

Fifty-Six regular permanent teachers of San Narciso District are the respondents of this study. They handle an advisory class and a departmental schedule for the SY 2019-2020. Table 1 presents the distribution of respondents per Grade Level. San Narciso is not one of the biggest schools in Zambales. Currently, it

employs the target respondents of Fifty-Six regular permanent teachers. San Narciso district is consisting of 15 elementary public schools. There are 13 teachers in the Grade 4,

20 teachers in the Grade 5, 12 teachers in the Grade 6 and 11 academic teachers. For a total of fifty six permanent teachers.

Table 1. Frequency Distribution and Percentage of Respondents

Teachers per Grade Level	f	%
Grade IV Teachers	13	23.21
Grade V Teachers	20	35.71
Grade VI Teachers	12	21.43
Academic Teachers	11	19.64
Total	56	100

The study was conducted in San Narciso District, Division of, Zambales. The location of

the school where the respondents are teaching is shown in Figure 2.

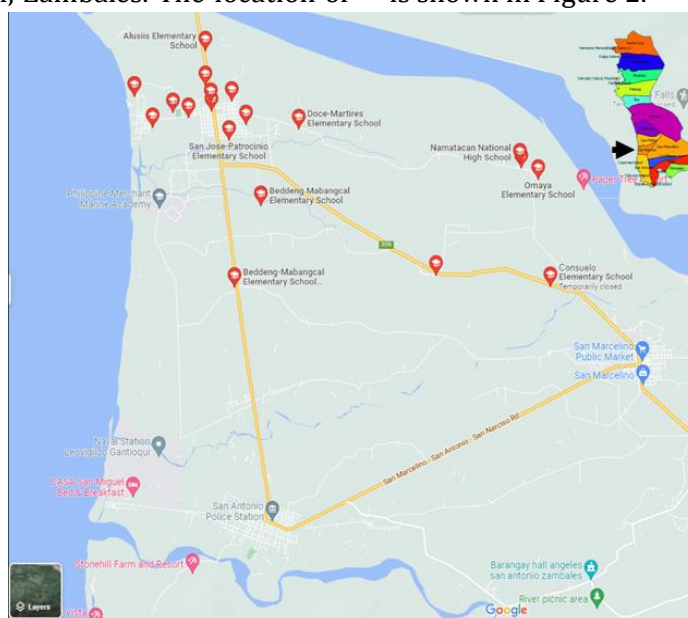


Figure 2. The Research Locale (San Narsico, Zambales)

The researcher used Google Earth program in presenting the research locale.

San Narciso district is located in between San Antonio, Zambales and San Felipe, Zambales with the division number 050, station number 13. With the one hundred forty three (143) regular permanent teachers, the schools rendered its service guided by the vision: We envision in San Narciso District as one of the best performing district not only in the Division of Zambales but in the Region as well by 2025 helping each child reach his/her full potential and self-fulfillment.

San Narciso District's missions is to provide relevant quality education such as early

childhood and elementary education, as well as alternative learning systems for out-of-school youth and adults and includes education for those with special needs to all learners and transform them into productive and upright members of the society who are MAKADIYOS, MAKABANSA, MAKATAO at MAKAKALIKASAN.

Instruments

Data needed for this study were obtained mainly through the COT –RPMS form (Appendix B) and questionnaires (Appendix A). Observations and informal interviews were likewise conducted to support or verify the

respondents' responses in the questionnaire. The results gathered from the auxiliary methods substantiated data obtained from the questionnaire.

Questionnaire was used in the study designed primarily for teachers in evaluating the ICT Preparedness and instructional ability of the Elementary Teachers at San Narciso District. The instruments were subjected to the scrutiny of the adviser, statistician, and the thesis committee. Results of their assessment led to the revisions of the instruments. To determine the validity and reliability of the instrument to be used; it will undergo the following processes:

The questionnaire was given to 15 teachers of Mapanao Elementary School, Subic District, Zambales. They were asked to fill up the copies then they were interviewed by the researcher to find out their assessment of the questionnaire. They were asked; if all the items are adequate enough to collect data about all aspects of the use of educational mediated technology; if the questions are objective and not biased; if all the items are relevant to the research problem; and if the questionnaire is not too long. Cronbach's Alpha was used in computing the reliability of the testing. Then, the necessary revisions were made.

Upon approval of the revised instrument, the copies of the questionnaire were distributed personally by the researcher to the respondents of San Narciso District with the permission of the District Supervisor. After few days, all the copies distributed were retrieved by the researcher for interpretation.

Data Collection

The researcher sought permission from the Division Superintendent, (Appendix C) the

District Supervisor of San Narciso (Appendix D) District and to the Principals of each schools (Appendix E) to conduct the study. The COT-RPMS was acquired from the Master teachers or School Heads of each school with the permission of the teachers being observed. The distribution of questionnaires was done on February 5, 2020 and collected by February 6 to February 7, 2020. The questionnaires were personally distributed and retrieved by the researcher to Intermediate elementary school teachers in San Narciso District to ensure that hundred percent retrieval of the questionnaires. After the retrieval of the questionnaires, the data were analyzed and interpreted utilizing the statistical measures suitable to the study.

Data Analysis

The data gathered from the COT- RPMS and questionnaire were collated and presented in tables. Appropriate statistical treatment used in the study includes the following.

Percentage and Frequency Distribution

This was used to organize and describe the personal profile of the respondents. As to age, gender, highest educational attainment/ specialization, length of teaching experience, teaching position, and seminars.

Descriptive of Ratings in COT-RPMS

This was used to measure the classroom performance of teachers. The rubric for each classroom observable indicator is designed to assess the classroom performance of teachers across learning areas and grade levels. The researcher requires 1 COT only among the respondents. The Descriptive ratings used were listed below.

Level	Level Name	Range	Remarks
7	Intergrating	6.21 – 7.00	Outstanding
6	Consolidating	5.41 – 6.20	Very Satisfactory
5	Applying	4.61 – 5.40	Satisfactory
4	Developing	3.81 – 4.60	Unsatisfactory
3	Organizing	3.00 – 3.80	Poor

Integrating (Level 7) which requires a range of 6.21-7.00 to get a remark of Outstanding, Consolidating (Level 6) with 5.41 -6.20 to get a remark of Very Satisfactory, Applying (Level 5) with 4.61-5.40 to acquire a remark of Satisfactory, Developing (Level 4) 3.81-4.60 range with Unsatisfactory remarks, and the last is organizing (Level 3) 3.00-3.80 range with poor remarks.

Rate	Interval	Level of ICT Skills	Perception on Usefulness of ICT
4	3.50 – 4.00	Outstanding	Strongly Agree
3	2.50 – 3.49	Very Satisfactory	Agree
2	1.50 – 2.49	Satisfactory	Disagree
1	1.00 – 1.49	Needs Improvement	Strongly Agree

Analysis of Variance (ANOVA)

This was utilized in testing if there is a significant difference between ICT preparedness when the respondents are grouped according to their age, gender, position, length of service, highest educational attainment, seminars attended, and level of ICT competence. The rejection or acceptances of the null hypotheses was based on p value less than the 5% level of significance.

Pearson r

This was used to analyze the relationship between ICT preparedness of teachers and their instructional ability. Verbal Interpretation is shown below. Verbal Interpretation of the Computed Pearsn Correlation Coefficient r. *Source: Basic Statistics by Parreño and Jimenez (2014)*

Result and Discussion

Data gathered in this study were analyzed and interpreted according to appropriate statistical tool that best apply to respective tables. It includes frequency and percentage, mean analysis, analysis of variance and correlation analysis on ICT preparedness and instructional ability of public elementary school teachers from San Narciso District.

Weighted Mean and Descriptive Rating

This was used since different groups of respondents involved contributing to an overall average. The weighted mean measured the teachers' level of ICT competency/skills and their perception on the usefulness of ICT in teaching. The following scale was used to describe the weighted means qualitatively.

Presentation, Analysis, and Interpretation of Data

Data gathered in this study were analyzed and interpreted according to appropriate statistical tool that best apply to respective tables. It includes frequency and percentage, mean analysis, analysis of variance and correlation analysis on ICT preparedness and instructional ability of public elementary school teachers from San Narciso District

Profile of Public Elementary School Teachers in San Narciso District

The teacher respondents from the public elementary schools of San Narciso District were described in terms of profile variables considered relevant to the analysis of the study. Table 3 presents the frequency and percentage distribution of the public school teachers according to sex, age, highest educational attainment, length of service, teaching position, teaching level assignment, ICT training level, and number of years using ICT in teaching.

Sex. The majority of the respondents, comprising 71.43% or 40 out of 56, were female, while 28.57% or 16 out of 56 were male. This indicates that female teachers constituted a larger proportion of the public elementary school teachers included in the study. Gebhardt, Thomson, Ainley, and Hillman reported that female teachers who effectively use technology can serve as role models for young

women in school, although differences have been observed between male and female teachers in the use of computers and technology (Porter & Carter, 2000).

The predominance of female teachers in the present study does not necessarily indicate inadequate ICT integration in the teaching-learning process. Rather, the finding provides important contextual information about the

composition of the respondents and may serve as a basis for examining whether sex is associated with teachers' ICT preparedness and instructional ability. The actual level of ICT preparedness should therefore be determined through the teachers' reported competencies, skills, perceptions, and observed instructional performance rather than inferred solely from the sex distribution of the respondents.

Table 2. Frequency and Percentage Distribution of Teacher Profile

Variable	Categories	Frequency	%
Sex	Male	16	28.57
	Female	40	71.43
Age (Mean=40.82 y.o.)	23 – 27	6	10.71
	28 – 32	4	7.14
	33 – 37	6	10.71
	38 – 42	16	28.57
	43 – 47	12	21.43
	48 – 52	6	10.71
	53 – 58	6	10.71
	BEED	13	23.21
Highest Educational Attainment	MA Units	36	64.29
	MA Graduate	6	10.71
	Ed. D. Units	1	1.79
	5 years and below	8	14.29
Length of Service (Mean= 15.48 years)	6 – 10	8	14.29
	11 – 15	13	23.21
	16 – 20	12	21.43
	21 – 25	9	16.07
	26 – 30	3	5.36
	More than 30 years	3	5.36
Teaching Position	Teacher I	18	32.14
	Teacher II	18	32.14
	Teacher III	9	16.07
	Master Teacher I	5	8.93
	Master Teacher II	6	10.71
Grade Level Assignment	Academic Teacher	7	12.50
	Grade 4	14	25.00
	Grade 5	18	32.14
	Grade 6	17	30.36
ICT Training Level	School Level	18	32.14
	District Level	4	7.14
	Division Level	32	57.14
	Regional Level	2	3.57
	5 years and below	32	57.14

Variable	Categories	Frequency	%
Years of using ICT in Teaching (Mean=5.98 years)	6 – 10	17	30.36
	11 – 15	4	7.14
	More than 15	3	5.36

Age

Greater proportion (28.57%) or 16 of the 56 respondents were aged 38-52 years old and least (7.14%) of the distribution fall under age range 28-32. The mean age 40.82 indicates that the respondents are young adults. This agrees with Pascual (2018) that public elementary teacher are mostly young adults.

This implies that, it would not be unusual for the public elementary teachers to be using computers and other ICT tools during their lessons. Younger teachers were educated in an educational system where computers were the norm. It would not, therefore, be surprising for them to be familiar with the use of computers for teaching and learning.

Highest Educational Attainment

The majority (64.29%) of the teacher respondents have earned their master units and there was one (1.79%) out of 56 teachers who have Doctor of Education units. This indicates the hat majority of the public-school teachers are pursuing their graduate studies for professional advancement. This finding agrees with the finding of Zhang (2008) that teachers possessing advanced degrees or education significantly and positively influence student science achievement. The DepEd had long been advocating that graduate education may improve teacher effectiveness. It implies that prevalence of graduate degrees among the public-school teachers may lead to relationship between teacher educational attainment and learner achievement.

Length of Service

Greater proportion (23.21%) or 13 out of 56 respondents have been in the teacher service for 11 – 15 years while there are equal percentage (5.36%) in the number of years ranging 26 – 30 and more than 30 years. The mean 15.48 years indicates that the public-

school teachers have been serving the department for more than a decade of teaching. This data contradicts the finding of Villaver (2005) that the greatest concentration of number of teachers in the elementary schools was found to have 10 years or less length of teaching experience.

Teaching Position

Greater proportions (32.14%) or 18 of the 56 respondents were equally distributed as Teacher I and Teacher II while there are 5 (8.93%) Master Teacher I. This indicates that public elementary schools were greatly populated with teachers who were in the lower rank teaching positions.

Grade Level Assignment

Highest percentage (32.14%) of the respondents are teaching in the Grade 5 level while there were seven (12.50%) out of 56 respondents who are categorized as academic teachers.

Years of Using ICT in Teaching

Majority (57.14%) of the 56 respondents have attended ICT training in the Division level while there were two (3.57%) in the distribution who had attained training in the Regional level. This indicates that the teachers in the public elementary schools have sufficient trainings related to ICT. It is a modern fact that using ICT in teaching because of teachers' training could influence the improvement in students' academic performances. This finding adheres with the findings of Hussain, Suleman, Din, and Shafique, (2017) that based on statistical analysis, it came to light that information and communication technology positively affects students' academic performance.

Level of Information Communication and Technology (ICT) Preparedness among Public School Teachers

ICT refers to all technological tools, which are used to process, store, and disseminate information that support teaching- learning such as computers and laptops. ICT Preparedness of the public elementary school teachers was measured through their level of

competence/skills and perception toward the use of ICT in teaching.

ICT Competence/Skills of Public Elementary Teachers

This refers to the degree of ICT capability of the teachers. Table 3 presents the teachers' level of ICT competence/skills.

Table 3. Teachers' Level of ICT Competence/Skills

ICT Area	Wt. Mean	Qualitative Interpretation
Basic Computer Operation	3.88	Outstanding
Software Application	3.52	Outstanding
Internet Application	3.45	Very Satisfactory
Computer ICT-based Task in DepEd	3.70	Outstanding
Composite	3.64	Outstanding

Q.I.: 1.00-1.49(Needs Improvement); 1.50-2.49(Satisfactory); 2.50-3.49(Very Satisfactory); 3.50-4.00(Outstanding)

The public elementary school teachers obtained an Outstanding level of ICT competence and skills in Basic Computer Applications, with a composite mean of 3.88. As presented in Appendix F, the respondents obtained their highest rating in their knowledge of the different parts of a computer. This indicates that they demonstrated an outstanding level of competence and skills in using desktop computers and laptops, including their basic functions and commands.

In contrast, the respondents obtained their lowest rating in Internet Applications, with a mean of 3.45, interpreted as Very Satisfactory. This indicates that although the teachers demonstrated a satisfactory level of competence in using appropriate Internet platforms for teaching, there is still room for improvement in utilizing online applications and resources to support the teaching-learning process. The overall composite mean of 3.64 indicates that the public elementary school

teachers demonstrated an Outstanding level of ICT competence and skills.

This finding is consistent with Antonio (Pear Technology, (n.d.)), who reported that public elementary school teachers possess skills in using ICT in teaching and learning processes. The finding implies that the teachers in San Narciso District have developed adequate competencies in using basic ICT tools for instructional purposes. However, their relatively lower rating in Internet Applications suggests the need for continuous training and professional development focused on the effective use of online platforms, digital resources, and Internet-based instructional tools.

Teachers Perception of Usefulness of ICT in Teaching

This covers the teachers' attitude towards use of ICT when teaching. Table 4 shows the teachers' perception in usefulness of ICT in teaching.

Table 4. Teachers Perception of Usefulness of ICT in Teaching

Teachers Perception of Usefulness of ICT in Teaching (Mean=3.71)		Wt. Mean	Qualitative Interpretation
1	I feel confident learning new computer skills.	3.86	Strongly Agree

Teachers Perception of Usefulness of ICT in Teaching (Mean=3.71)		Wt. Mean	Qualitative Interpretation
2	I find it easier to teach by using ICT	3.77	Strongly Agree
3	I am aware of the great opportunities that ICT offers for effective teaching	3.77	Strongly Agree
4	I think that ICT- supported teaching makes learning more effective.	3.80	Strongly Agree
5	The use of ICT helps teachers to improve teaching with more updated materials.	3.84	Strongly Agree
6	I think the use of ICT improves the quality of teaching.	3.75	Strongly Agree
7	I think the use of ICT helps to prepare teaching resources and materials.	3.82	Strongly Agree
8	The use of ICT enables the students to be more active and engaging in the lesson.	3.82	Strongly Agree
9	I have more time to cater to students need if ICT is used in teaching.	3.66	Strongly Agree
10	I have an effective teaching with the use of ICT.	3.61	Strongly Agree
11	I think the use of ICT in teaching can make the lesson time bounded.	3.59	Strongly Agree
12	I am confident that my students learn best with the help of ICT.	3.57	Strongly Agree
13	The classroom management is in control if ICT is used in teaching.	3.52	Strongly Agree
14	Students pay more attention when ICT is used in teaching.	3.70	Strongly Agree
15	Students exert more effort for their lesson if ICT is used in teaching.	3.54	Strongly Agree

Q.I.: 1.00-1.49(Strongly Disagree); 1.50-2.49(Disagree); 2.50-3.49(Agree); 3.50-4.00(Strongly Agree)

The respondents obtained the highest mean of 3.86 (Strongly Agree) for their confidence in learning new computer skills. This indicates that the teachers are confident and willing to develop their ICT competencies as technology continues to evolve. The lowest mean of 3.52 (Strongly Agree) was obtained for the statement that classroom management is maintained when ICT is used in teaching. Although this received the lowest rating, the result still indicates a strong agreement among the respondents that ICT can support effective classroom management. Instructional technology options such as Internet-based activities, digital media, and online communication tools can provide opportunities for teachers to enhance classroom interaction and facilitate learning.

The finding supports the study of Gebremedhin and Fenta, which reported that teachers generally have positive perceptions toward the use of ICT in the teaching-learning process (Centre for Digital Education, 2010). Technology provides learners with opportunities to access information, explore ideas, seek answers, and communicate with others beyond the traditional classroom setting. It can also increase learner participation by providing more engaging and interactive learning experiences (Department of Education, 2010).

These findings further imply that teacher education and professional development programs should continuously strengthen teachers' ICT competencies. Training may focus on developing and presenting digital information,

preparing ICT-supported learning environments, designing effective technology-based learning experiences, and creating rich learning environments through appropriate ICT integration. Strengthening teachers' understanding and practical application of computer technology may contribute to more engaging learning experiences and improved student learning outcomes.

Instructional Ability of Public Elementary School Teachers in San Narciso District

Instructional ability refers to the ability of the teacher to incorporate the use of ICT in his/her instruction as measured through the Classroom Observation Tool- Results-Based Performance Management System (COT-

RPMS). Table 5 presents the rating on the instructional ability of public elementary school teachers.

The respondents were rated highest (6.89, Integrating) which indicates that they have an outstanding application of their knowledge of content within and across curriculum teaching areas. They rated lowest (6.64, Integrating) in terms of using differentiated, developmentally appropriate learning experiences to address learners' gender, needs, strengths, interests and experiences. The composite value 6.76 (Integrating) indicates that the elementary teachers have an outstanding instructional ability. This implies effectiveness of the teachers in establishing interactions with the learners in classrooms.

Table 5. Teachers' Instructional Ability Rating

	Competencies Observed	Wt. Mean	Qualitative Interpretation
1	Applies knowledge of content within and across curriculum teaching areas	6.89	Integrating
2	Uses a range of teaching strategies that enhance learner achievement in literacy and numeracy skills	6.79	Integrating
3	Applies a range of teaching strategies to develop critical and creative thinking, as well as other higher order thinking skills	6.77	Integrating
4	Manages classroom structure to engage learners, individually or in groups, in meaningful exploration, discovery and hands-on activities within a range of physical learning environments	6.79	Integrating
5	Manages learner behavior constructively by applying positive and non-violent discipline to ensure learning-focused environments	6.80	Integrating
6	Uses differentiated, developmentally appropriate learning experiences to address learners' gender, needs, strengths, interests, and experiences	6.64	Integrating
7	Plans, manages, and implements developmentally sequenced teaching and learning processes to meet curriculum requirements and varied teaching contexts	6.66	Integrating
8	Selects, develops, organizes, and uses appropriate teaching and learning resources, including ICT, to address learning goals	6.66	Integrating
9	Designs, selects, organizes, and uses diagnostic, formative, and summative assessment strategies consistent with curriculum requirements	6.86	Integrating
	Composite	6.76	Integrating

Q.I.: 3.00-3.80 (Organizing); 3.81-4.60 (Developing); 4.61-5.40 (Satisfactory); 5.41-6.20 (Consolidating); 6.21-7.00 (Integrating)

They provide emotional, organizational, and instructional supports that contribute to children's social, developmental, and academic achievement. This supports that finding of Bird (2017) which prove several instances of students performing better when assigned to teachers with higher evaluation scores and a higher level of performance for students

Difference in the ICT Preparedness when Grouped According to Profile Variables

At 5% level of significance, the differences in the ICT preparedness of the teacher respondents were measured in terms of ICT level

of competence/skill and their differences in perception when they are grouped according to profile variables; sex, age, highest educational attainment, length of service, teaching position, grade level assignment, ICT training level and the number of years of using ICT in teaching.

Difference in the Level of ICT Competence/Skills

Table 6 presents the summarized ANOVA table on teachers' preparedness in terms of level of ICT competence/skills when grouped according to profile variables.

Table 6. ANOVA on Teachers' Preparedness in Terms of ICT Competence/Skills when Grouped According to Profile Variables

Profile Variable	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Interpretation
Sex	Between Groups	.030	1	.030	.241	.625	Not Significant
	Within Groups	6.722	54	.124			
	Total	6.752	55				
Age	Between Groups	1.980	6	.330	3.388	.007	Significant
	Within Groups	4.773	49	.097			
	Total	6.752	55				
Highest Educational Attainment	Between Groups	.647	3	.216	1.837	.152	Not Significant
	Within Groups	6.106	52	.117			
	Total	6.752	55				
Length of Service	Between Groups	2.119	6	.353	3.736	.004	Significant
	Within Groups	4.633	49	.095			
	Total	6.752	55				
Teaching Position	Between Groups	.157	4	.039	.303	.872	Not Significant
	Within Groups	6.595	51	.129			
	Total	6.752	55				
Grade Level Assignment	Between Groups	.290	3	.097	.777	.512	Not Significant
	Within Groups	6.463	52	.124			
	Total	6.752	55				
ICT Training Level	Between Groups	1.232	3	.411	3.868	.014	Significant
	Within Groups	5.521	52	.106			
	Total	6.752	55				
Years of using ICT in Teaching	Between Groups	.709	3	.236	2.035	.120	Not Significant
	Within Groups	6.043	52	.116			
	Total	6.752	55				

It can be seen on the table that age (F=3.388, p=.007), length of service (F=3.736, p=.004), and ICT training level (F=3.868,

p=.014) had significance values less than the set alpha level ($\alpha=.05$). This signifies rejection of the null hypothesis. Hence, there is

significant difference on the level of ICT competence/skills when teachers are grouped according to these profile variables. This indicates that age, length of service and ICT training level had influence on the teachers' level of ICT competence/skills.

Age as a factor of ICT competencies is evident upon comparison on the difference between older generations and those who belong to what is termed digital generations. Nowadays, younger teacher are more comfortable in applying their ICT skills in teaching their students. This may also be a fact which is connected to teachers with longer length of service because they were the teachers who are not so comfortable using ICT equipment in teaching, as compared to those who have shorter length of service, hence younger teachers. Furthermore, younger teachers are more aggressive in attending trainings where they acquire greater ICT competencies and/or skills which they can apply during classes and even in other tasks as government teachers.

The finding implies that younger teachers in San Narciso District tend to demonstrate

greater effectiveness in applying their ICT competencies as tools for enhancing the teaching-learning process. This may be attributed to their greater exposure to digital technologies and familiarity with emerging ICT tools and applications. The finding is consistent with Nymabene and Nzuki, who emphasized that teachers need appropriate training and opportunities to develop positive attitudes toward ICT integration and to recognize technology as an important tool for supporting both teaching and learning (Johnson, 2011). Thus, continuous ICT training and professional development may help teachers, regardless of age, strengthen their confidence, competencies, and ability to integrate technology effectively into classroom instruction.

Difference in Teachers' Perception on the Usefulness of ICT in Teaching

Table 7 presents the summarized ANOVA table on teachers' preparedness in terms of their perception on the usefulness of ICT in teaching when grouped according to profile variables.

Table 7. ANOVA on Teachers' Preparedness in Terms of Their Perception on Using ICT in Teaching when Grouped According to Profile Variables

Profile Variable	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Interpretation
Sex	Between Groups	.176	1	.176	1.287	.262	Not Significant
	Within Groups	7.394	54	.137			
	Total	7.570	55				
Age	Between Groups	1.978	6	.330	2.888	.017	Significant
	Within Groups	5.593	49	.114			
	Total	7.570	55				
Highest Educational Attainment	Between Groups	.472	3	.157	1.153	.337	Not Significant
	Within Groups	7.098	52	.137			
	Total	7.570	55				
Length of Service	Between Groups	1.883	6	.314	2.704	.024	Significant
	Within Groups	5.688	49	.116			
	Total	7.570	55				
Teaching Position	Between Groups	.197	4	.049	.340	.850	Not Significant
	Within Groups	7.374	51	.145			
	Total	7.570	55				
Grade Level	Between Groups	.306	3	.102	.731	.538	Not Significant

Profile Variable	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Interpretation
Assignment	Within Groups	7.264	52	.140	1.787	.161	Not Significant
	Total	7.570	55				
ICT Training Level	Between Groups	.708	3	.236			
	Within Groups	6.863	52	.132			
Years of using ICT in Teaching	Total	7.570	55		.737	.535	Not Significant
	Between Groups	.309	3	.103			
	Within Groups	7.262	52	.140			
	Total	7.570	55				

It can be seen on the table that age ($F=2.888$, $p=.017$) and length of service ($F=2.704$, $p=.024$) had significance values less than the set alpha level ($\alpha=.05$). This prompted rejection of the null hypothesis. Hence, there is significant difference on the perception of teachers in using ICT in teaching when grouped according to these two profile variables. This indicates that age and length of service had influence on the teachers' perception in using ICT in teaching.

Age and length of service are related in the sense that, younger teachers have shorter length of service compared to teachers who belong to higher age bands. Belonging to younger generation, teachers who belong to lower age band are more adaptive of the usefulness of ICT in teaching. This finding involving the influence of age contradicts the finding of Kerzic, Danko, Zorko and Decma (2021) that that age is not a factor in instructional ICT use, although some age-related differences appear in teachers' personal ICT uses. The findings may inform planning for teacher support along with training and quality assurance at the school's management on ICT-supported teaching. However, Mingaine (2013) stated that teacher who adopt ICT perceive it as a very important teaching strategy which could help them improve their pedagogy and pupils' performance.

Difference in the Instructional Ability of Public Elementary School Teachers

The differences in the instructional ability of the teachers was hypothesized (null) not to be significant when grouped according to sex, age, highest educational attainment, length of service, teaching position, grade level assignment, ICT training level and years of using ICT in teaching. Table 8 presents the summarized ANOVA table on teachers' instructional ability when grouped according to profile variables.

Profile variables sex ($F=.670$, $p=.417$), age ($F=.622$, $p=.711$), highest educational attainment ($F=1.146$, $p=.339$), length of service ($F=.525$, $p=.787$), teaching position ($F=1.279$, $p=.291$), grade level assignment ($F=.803$, $p=.498$), ICT training level ($F=.401$, $p=.753$), and years of using ICT in teaching ($F=.892$, $p=.451$) have significance values greater than the set alpha level ($\alpha=.05$). These signify acceptance of the null hypothesis, hence no significant difference. This indicates that the teachers have equal level of instructional abilities regardless of sex, age, highest educational attainment, length of service, teaching position, teaching level assignment, ICT training level and years of using ICT in teaching.

Table 8. ANOVA on Teachers' Instructional Ability when Grouped According to Profile Variables

Profile Variable	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Interpretation
Sex	Between Groups	.064	1	.064	.670	.417	Not Significant
	Within Groups	5.181	54	.096			

Profile Variable	Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Interpretation
Age	Total	5.245	55				
	Between Groups	.371	6	.062			
	Within Groups	4.874	49	.099	.622	.711	Not Significant
	Total	5.245	55				
Highest Educational Attainment	Between Groups	.325	3	.108			
	Within Groups	4.920	52	.095	1.146	.339	Not Significant
	Total	5.245	55				
Length of Service	Between Groups	.317	6	.053			
	Within Groups	4.928	49	.101	.525	.787	Not Significant
	Total	5.245	55				
Teaching Position	Between Groups	.478	4	.120			
	Within Groups	4.767	51	.093	1.279	.291	Not Significant
	Total	5.245	55				
Grade Level Assignment	Between Groups	.232	3	.077			
	Within Groups	5.013	52	.096	.803	.498	Not Significant
	Total	5.245	55				
ICT Training Level	Between Groups	.119	3	.040			
	Within Groups	5.127	52	.099	.401	.753	Not Significant
	Total	5.245	55				
Years of using ICT in Teaching	Between Groups	.257	3	.086			
	Within Groups	4.988	52	.096	.892	.451	Not Significant
	Total	5.245	55				

The finding implies that teachers in San Narciso District demonstrate comparable levels of instructional ability. This may be attributed to the efforts of the Department of Education (DepEd) Zambales to provide equitable opportunities for teachers to improve and enhance their instructional competencies. Strengthening teachers' instructional abilities may contribute to the improvement of the teaching-learning process and, consequently, support learners' academic performance and achievement.

This finding is consistent with Andoh, who reported that teachers with positive perceptions of ICT recognize its potential to facilitate teaching, provide interactive learning opportunities for pupils, improve pedagogical practices, and enhance professional performance

(United Nations Educational, 2003). Teachers who are prepared and willing to integrate ICT into instruction may therefore be better positioned to use technology as a support for effective teaching and learning. The finding further emphasizes the importance of sustained professional development and ICT-related support to ensure that teachers are given opportunities to strengthen their instructional competencies and effectively integrate technology into classroom practices.

Relationship Between ICT Preparedness and Instructional Ability of Teachers

Table 9 shows the correlation of between ICT preparedness and their instructional abilities of the public elementary school teachers in San Narciso District.

Table 9. Correlation between ICT Preparedness and Instructional Ability of Teachers

Teacher's ICT Preparedness	Coefficients	Teachers' Instructional Ability
ICT Competence/Skills	Pearson Correlation	.519**
	Sig. (2-tailed)	.000
	N	56
Perception on the Usefulness of ICT in Teaching	Pearson Correlation	.129
	Sig. (2-tailed)	.851
	N	56

* Correlation is significant at the 0.05 level (2-tailed)

The results presented in the table show that ICT competence and skills had a moderate positive correlation with teachers' instructional ability ($r = .519$, $p = .000$). This indicates that higher levels of ICT competence and skills are associated with higher levels of teachers' instructional ability. The finding suggests that ICT competence may contribute to teachers' capacity to enhance the teaching-learning process through the appropriate use of ICT equipment, digital devices, and Internet-based platforms as instructional aids and tools for interaction between teachers and learners.

This finding supports Johnson, who emphasized that teachers can use the Internet as an instructional tool to support student achievement (United Nations Educational, 2009). Effective Internet-based instruction requires teachers to establish clear learning objectives, direct students toward appropriate and reliable websites, and maintain focus on relevant content. The teacher's content knowledge, preparation, understanding of learners, and organizational skills are also important in ensuring the effective use of the Internet in instruction [15]. Thus, strengthening teachers' ICT competencies through continuous training and professional development may help them maximize digital technologies to support effective instructional practices.

Summary of Findings

This chapter presents the summary of the findings, the conclusions arrived at and the recommendations offered by the researcher.

Based on the gathered data and analysis of the results, the researcher summarized the following findings:

1. Majority (71.43%) or 40 out of 56 respondents were female while there were 28.57% (16 out of 56) male.
2. Greater proportion (28.57%) or 16 of the 56 respondents were aged 38-52 with a mean of 40.82 years old.
3. Majority (64.29%) of the teacher respondents have earned their masteral units.
4. The teacher respondents have a mean length of service of 15.48 years..
5. Greater proportions (32.14%) or 18 of the 56 respondents were equally distributed as Teacher I and Teacher II.
6. Highest percentage (32.14%) of the respondents are teaching in the Grade 5.
7. Majority (57.14%) of the 56 respondents have attended ICT training in the Division level.
8. Majority (57.14%) of the 56 respondents have been using ICT in teaching for 5 years and below with a mean of 5.98 years.
9. The public elementary school teachers have and Outstanding (3.88) level in Basic Computer Application. The composite value 3.64 indicates that they have an Outstanding level of ICT competence/skills
10. The respondents garnered the highest mean 3.86 (Strongly Agree) which indicates their confidence in learning new computer skills. The lowest mean rating 3.52 indicates that the teachers Strongly Agree that classroom management is in control if ICT is used in teaching.

11. A composite value 6.76 (Integrating) indicates that the elementary teachers have an outstanding instructional ability which aggregate means that they have outstanding (6.89, Integrating) application of knowledge of content within and across curriculum teaching areas as well as in using differentiated, developmental appropriate learning experiences to address learners' gender, needs, strengths and experiences.
12. Age ($F=3.388$, $p=.007$), length of service ($F=3.736$, $p=.004$), and ICT training level ($F=3.868$, $p=.014$) had significance values less than the set alpha level ($\alpha=.05$) which signifies rejection of the null hypothesis. Hence, there is significant difference on the level of ICT competence/skills when teachers are grouped according to these three profile variables.
13. Age ($F=2.888$, $p=.017$) and length of service ($F=2.704$, $p=.024$) had significance values less than the set alpha level ($\alpha=.05$) that prompted rejection of the null hypothesis. Hence, there is significant difference on the perception of teachers in using ICT in teaching when grouped according to these two profile variables.
14. All profile variables had significance values greater than the set alpha level ($\alpha=.05$) which signifies acceptance of the null hypothesis, hence no significant difference.
15. Teachers' ICT competence/skill level ($r=.519$, $p=.000$) has moderate positive correlation with teacher's instructional ability significant at .05 level.

Conclusion

From the findings of this study the researcher formulated the following conclusions:

First, public elementary school teachers in San Narciso District have an outstanding level of ICT competence/skills and utilize instructional technology e.g. ICT in the classroom to enhance teaching-learning outcomes.

Second, they have an outstanding level of instructional ability in establishing interactions

with the learners in classrooms by providing emotional, organizational, and instructional supports that contribute to children's social, developmental, and academic achievement.

Third, the age, length of service and the ICT training level of the teachers influences their preparedness in terms of ICT competence/skills in terms while only their age and length of service influences their preparedness in terms of their perception on using ICT in teaching.

Fourth, the public elementary school teachers have the same level of instructional ability.

Fifth, higher level of ICT competence could has a positive relationship to higher level of the teacher's instructional ability.

Recommendation

From the findings and conclusions drawn, the researcher suggests the following courses of action:

1. Management of the public elementary schools in San Narciso District may see to it that ICT tool and equipment are available and sufficient to maximize the competence/skills of teachers. Additionally, the ICT tools and equipment is recommended.
2. The teachers may maintain their outstanding ability in providing instructions through the ICT integration.
3. The division office may provide more trainings for the public elementary teacher with the ICT integration to enhance teacher ICT competencies and skills.
4. Other profile variables that may influence the instructional abilities of the public elementary school teachers may identified may contribute to their differences in their instructional abilities.
5. The schools may encourage the teachers to nurture their ICT competence/skills and provide a more stable internet connection for the public elementary teachers to easily access platforms that they need in the improvement of teaching-learning process.

6. Further study may be conducted to validate and continue positive results of this research.

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