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Preparedness of Large Secondary Schools in the Implementation of e-learning

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Abstract:-

Background/Objectives: The investment in e-learning platforms is a major determinant among educational institutions, given the challenge brought by Covid-19 in order to continually support remote studies of students. This study aimed to evaluate large secondary schools' preparedness to implement e-Learning in Social Studies subjects in the Schools Division of Zambales.

Methods/Statistical analysis: The research design is descriptive and quantitative. The study used Google Forms to obtain information related to the topic. Data collection from 133 teachers from large secondary schools in the Schools Division of Zambales was voluntary and based on informed consent and anonymity.

Findings: The result revealed that the respondents were very prepared while large secondary schools were prepared for implementing e-Learning. There was a significant difference in the preparedness of teachers as to technology access as to their age and sex, while no statistically detected difference in institutional preparedness of large secondary schools in terms of administrative and resource support when respondents are grouped according to profile. An Information System action plan has been developed to further improve large secondary schools' preparedness in implementing e-Learning.

Improvements/Applications: These findings imply the need for community and stakeholders' partnership among schools to ensure effective use of e-Learning platforms, among others.

Keywords: e-learning platform, ICT, implementation preparedness, large secondary schools

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1. Introduction

Since the advent of e-learning has found itself in the heart of education, many institutions have applied the various advantages this technology offers in teaching and learning environments. Educational institutions invest in e-learning systems to bolster and support teaching and improvement. Their learners' performance and experience in the learning process.

E-learning is conducted on the Internet, where students can access their learning materials online at any place and time [1]. E-learning is important for education because it can improve the quality of students' learning

experience, provides new and creative ways of motivating and engaging learners of all abilities, and supports learning by offering differentiated learning. Particularly for those who need literacy, numeracy, and ICT support, it provides a wide range of tools that enable teachers and learners to be innovative, creative, and resourceful in all learning activities. Provides an individualized learning experience for all learners and offers personalized learning support [2]. Al-Azawei & Lundqvist (2016) enumerated the benefits of e-learning as easier information accessibility and adaptability to accommodate complex teaching approaches. Provides efficient interaction opportunities out of campus and regular work hours improves cooperation and collaboration using available communication tools, reduces cost, promotes teaching quality by consolidating different pedagogical theories, making lessons more interactive, and offers easier management of learner activities. E-learning provides freedom from the restrictions of time and place and flexibility and alleviates the factors causing stress in teaching and learning [3].

However, regardless of the many advantages this technology presents, the fact remains that not all educational institutions have adapted e-learning as a new form of learning environment or at least employed it as a learning supplement. Many educators and researchers applaud and commend e-learning over traditional learning but often fail in its implementation or obtaining the desired result. Nonetheless, an educational institution's state of preparedness for these barriers and challenges can undoubtedly pose a determining factor in its success or failure in implementing e-learning.

The findings of this research filled the gap and inked literature on the determined level of preparedness on various e-learning aspects of social science subjects and uncovered the preparedness state of sizeable secondary schools in implementing e-learning during this time of modern malady.

The rest of the paper is organized as follows i.e.; Section 2 states the Study Objectives, Section 3 presents the Hypothesis, Section 4 discusses the Methodology, and Section 5 pinpoints the Results and Discussion. Finally, Section 6 concludes the summary of the research work with a statement on the future scope.

2. Objectives of the Study

The specific objectives of this study were to evaluate the preparedness of teachers in the implementation of e-learning; determine the institutional preparedness of large secondary schools to implement e-learning in the Schools Division of Zambales; test of difference in the preparedness of teachers when they are grouped according to profile; test of difference on the institutional preparedness when teacher-respondents are grouped according to profile; and develop an action plan to improve the preparedness of large secondary schools in the implementation of e-learning.

3. Hypothesis

In this study, the following hypotheses were tested: (1) There is no significant difference in teachers' preparedness when grouped according to profile. (2) There is no significant difference in the institutional preparedness when teacher-respondents are grouped according to profile.

4. Methodology

This study utilized a descriptive research design and quantitative in its analysis. Descriptive research seeks to describe the characteristics or behavior of an audience. Its purpose is to describe, as well as to explain or validate some sort of hypothesis or objective when it comes to a specific group of people. Specifically, this research employed survey that involved interviews or discussions with larger audiences and is often conducted on more specific topics [4]. This methodology was used to obtain easily quantifiable information to infer different stats and numbers related to the population studied [5].

The junior and senior high school Social Studies teachers of public secondary schools. The respondents are teaching Social Studies subjects in junior and senior high level. There were one hundred thirty- three (133) teachers participated as respondents from the large schools in this study.

This study was conducted in the Division of Zambales.The instrument used was adopted from the study of Mercado (2018) [6]. Part I is the respondents' profile that describes the age, sex, position, highest educational attainment, number of years in teaching. Part II is the preparedness among the teachers in terms of technology access, technology skills, time management and motivation. Part III is the institutional preparedness of the large secondary schools in terms of administrative and resources support. The 4- point Likert Scale will be employed from 1 is the lowest to 4 is the highest scale.

The researchers made used the google form for the questionnaire dissemination. The link was provided to the School Principals and disseminated to the respondents. The researchers collected data for 15 days via online. The information gathered was treated with outmost confidentiality. The data collected was tabulated, analyzed, and interpreted.

The study utilized the Input-Process-Output (IPO) Model.

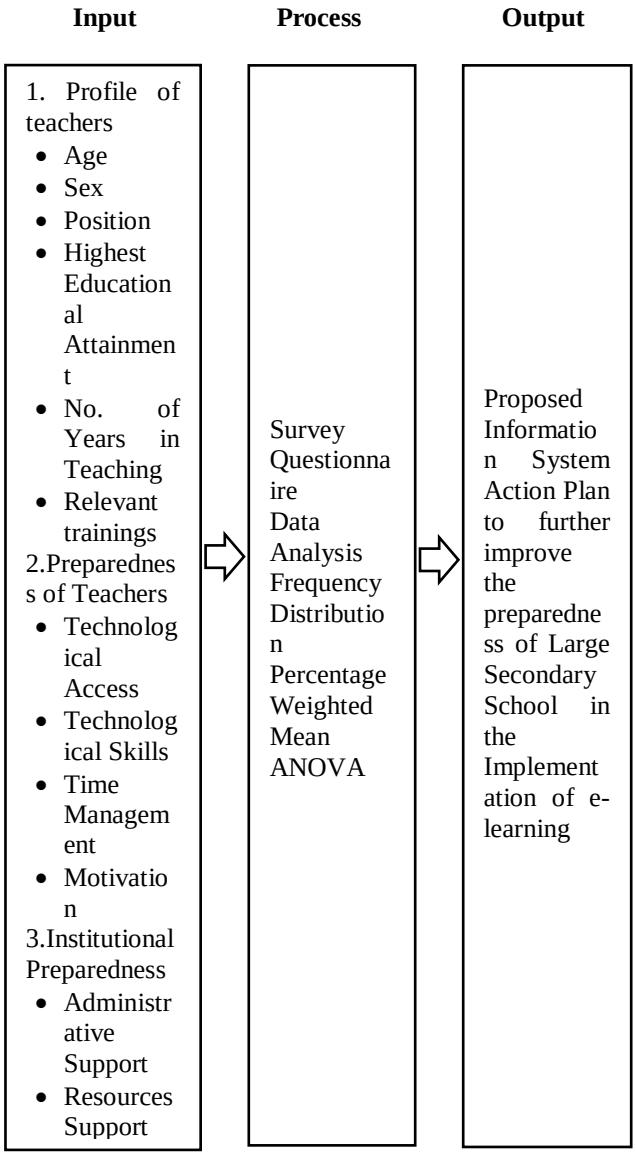

Figure 1. The Paradigm of the Study

Gleaned from the figure, the input frame deals on the social studies teachers' profiles were determined by age, sex, position, highest educational attainment, number of years in teaching, and number of relevant training. The preparedness among the teachers was described in terms of technology access, technology skills, time management, and motivation. The institutional preparedness of the large secondary schools was evaluated in terms of administrative and resources support.

The process frame shows the instrument used in data gathering. Descriptive and inferential statistics such as frequency distribution, percentage, weighted mean, and ANOVA were employed to analyze and interpret the collected data.

The output frame is the final objective of the study, which is the proposed Information System action plan to further improve the preparedness of large secondary schools in the implementation of e-learning.

The institutional preparedness is the study's dependent variable, while the teachers' preparedness is the independent variable. Thus, the preparedness of large secondary schools in implementing e-learning will depend on teachers' preparedness.

This study was anchored on the Cognitive load theory. Cognitive load theory is built upon two commonly accepted ideas. First, there is a limit to how much new information the human brain can process at one time. The second is that there are no known limits to how much-stored information can be processed at one time. Therefore, cognitive load research aims to develop instructional techniques and recommendations that fit within the characteristics of working memory to maximize learning. Cognitive load theory supports explicit models of instruction because such models tend to accord with how human brains learn most effectively (Centre for Education Statistics and Evaluation 2017).

Cognitive load theory supports explicit models of instruction because such models tend to accord with how human brains learn most effectively (Centre for Education Statistics and Evaluation 2017). Explicit instruction involves teachers clearly showing students what to do and how to do it, rather than having students discover or construct information for themselves. Cognitive load theory is based on several widely accepted theories about how human brains process and store information [7]. These assumptions include: that human memory can be divided into working memory and long-term memory; that information is stored in the long-term memory in the form of schemas, and that processing new information results in 'cognitive load' on working memory which can affect learning outcomes.

5. Results and Discussion

Socio-Demographic Profile

Sex. The majority of the teacher-respondents, with 98 or 73.70%, are female, while 35 or 26.30% are male. The composition of respondents has more female teachers than males. This is similarly observed in the Department of Education in the Philippines, where female teachers outnumber male teachers.

Table 1. Profile of Respondents

Profile Variables		Frequency (f)	Percentage (%)
Sex	Male	35	26.30
	Female	98	73.70
	Total	**133**	**100.00**
Age **Mean = 33.85 or 34 years old**	61 years old & above	2	1.50
	51-60 years old	5	3.80
	41 -50 years old	22	16.50
	31-40 years old	44	33.10
	21-30 years old	60	45.10
	Total	**133**	**100.00**
Position	Master Teacher I	11	8.30
	Teacher III	34	25.60
	Teacher II	37	27.80
	Teacher I	51	38.30
	Total	**133**	**100.00**
Highest Educational Attainment	Ph. D./ Ed. D. degree	7	5.30
	with Ph. D./ Ed. D. units	8	6.00
	MA/ MS Degree	24	18.00
	with MA/ MS units	52	39.10
	BS/ AB Degree	42	31.60
	Total	**133**	**100.00**
No. of Years in Teaching **Mean = 7.60 or 8 years**	25 years & above	6	4.50
	20- 24 years	11	8.30
	15- 19 years	3	2.30
	10-14 years	12	9.00
	5- 9 years	42	31.60
	0- 4 years	59	44.40
	Total	**133**	**100.00**
No. of relevant trainings in e-learning **Mean = 7.94 or 8**	25 & above	7	5.30
	15- 19	10	7.50
	10-14	17	12.80
	5- 9	59	44.40
	0- 4	40	30.10
	Total	**133**	**100.00**

Age. Most of the teacher-respondents with 60 or 45.10% are from age group 21-30 years old; 44 or 33.10% are from age group 31-40 years old; 22 or 16.50% are from age group 41-50 years old; 5 or 3.80% are from age group 51-60 years old, and 2 or 1.50% are from age group 61 years old and above. The computed mean age of teacher-respondents was 33.85 or 34 years old. The study further reveals that the teacher-respondents were in their early adulthood, ranging from 21-30 years old.

Position. Most respondents are Teacher I with 51 or 38.30%; 37 or 27.80% are Teacher II; 34 or 25.60% are Teacher III, and 11 or 8.30% are Master Teacher I. Teachers in the DepEd are ranked after they applied when there is an open ranking. They are ranked based on criteria as to performance rating, experience, outstanding accomplishments, education, training, potential, and psycho-social as per Department Order 66, series of 2007.

Highest Educational Attainment. The majority of the teacher-respondents, 52 or 39.10% are with MA/MS units; 42 or 31.60% are BS/AB degree holders; 24 or 18.00% are MA/MS degree holders; 8 or 6.00% are with Ph.D./Ed.D. units; and 7 or 5.30% are Ph.D./Ed.D. degree holders. Numerous studies reveal that teachers' academic preparation, certification type, and years of teaching experience, among others, are often taken as indicators of teacher quality.

No. of Years in Teaching. There were 59 or 44.40% with 0-4 years in teaching; 42 or 31.60% with 5-9 years in teaching; 12 or 9.00% with 10-14 years in teaching; 11 or 8.30% with 20-24 years in teaching; 6 or 4.50% with 25 years & above in teaching; and 3 or 2.30% with 15-19 years in teaching. The computed number of years teaching teacher-respondents was 7.60 or 8 years. The data suggests the required determination and commitment of the respondents in the teaching profession as reflected in their years in teaching.

No. of Relevant Teachings in E-learning. The majority of the teacher-respondents with 59 or 44.40%, are with 5-9 relevant trainings in e-learning; 40 or 30.10% are with 0-4 relevant trainings in e-learning; 17 or 12.80% with 10-14 years in e-learning; 10 or 7.50% with 15-19 relevant trainings in e-learning; and 7 or 5.30% with 25 & above relevant trainings in e-learning. The computed no. of relevant trainings in e-learning of teacher-respondents was 7.94 or 8.

Descriptive Statistics

Preparedness of Teachers in the Implementation of e-learning

The teacher-respondents were "Very Prepared" on their access to computer daily" with a rating of 3.40 (rank 1)

while their access to the computer in campus with a stable internet connection was perceived to be "Prepared" (3.08, rank 5). Overall, the implementation of e-learning as to technology access was perceived to be "Very Prepared," with a mean rating of 3.25.

Table 2. Access to Technology

	Technology Access	Weighted Mean	Descriptive Equivalent	Rank
1	1. I have access to a computer daily.	3.40	Very Prepared	1
2	2. I have access to a computer with an internet connection at home.	3.39	Very Prepared	2
3	3. I have virus protection on my computer	3.14	Prepared	4
4	4. I have access to a computer with the necessary software installed.	3.24	Prepared	3
5	5. I have access to a computer on campus with a stable internet connection.	3.08	Prepared	5
	Overall Weighted Mean	**3.25**	**Very Prepared**	

The pedagogical and socio-economic forces that have driven the learning institutions to adopt and incorporate ICTs in teaching and learning include greater information access, greater communication; synchronous and asynchronous learning; increased cooperation and collaboration, cost-effectiveness, and pedagogical improvement. However, ICTs have not permeated significantly in many learning institutions in most developing countries due to many socio-economic and technological circumstances [8].

Table 3. Technology Skills

	Technology Skills	Weighted Mean	Descriptive Equivalent	Rank
1	1. I can save/open documents to/from a hard disk or other removable storage devices.	3.53	Very Prepared	2
2	2. I can navigate the Webpage (Go to next or previous page).	3.45	Very Prepared	3
3	3. I can send and receive email attachments.	3.65	Very Prepared	1
4	4. I can resolve common errors while surfing the internet, such as page not found or connection time out.	3.17	Prepared	5
5	5. I can use advanced internet skills, such as using a search engine, identifying and downloading appropriate files, and installing or updating software.	3.29	Very Prepared	4
	Overall Weighted Mean	**3.42**	**Very Prepared**	

The teacher-respondents were "Very Prepared" on sending and receiving email attachments with a rating of 3.65 (rank 1) while resolving common errors while surfing the internet such as page not found or connection time out was perceived to be "Prepared" (3.17, rank 5). Overall, the implementation of e-learning as to technology skills was perceived to be "Very Prepared," with a mean rating of 3.42.

E-learning nowadays has become a requirement for institutions to support their learning activities. To adopt e-learning, an institution requires an effective strategy and resources for optimal application. Unfortunately, not all institutions that have used e-learning got the desired results or expectations [9].

The teacher-respondents perceived to be "Very Prepared" on posting or sending assignment done ahead of time" with a rating of 3.42 (rank 1) while their ability to control their desire to postpone important tasks was perceived to be "Prepared" (3.15, rank 5). Overall, the implementation of e-learning as to time management was perceived to be "Very Prepared," with a mean rating of 3.31.

Table 4. Time Management

	Time Management	Weighted Mean	Descriptive Equivalent	Rank
1	I can schedule a time to provide timely responses to other students and the instructor.	3.35	Very Prepared	2
2	I can control my desire to postpose important tasks.	3.15	Prepared	5
3	I can post or send assignments done ahead of time.	3.42	Very Prepared	1
4	I can sacrifice personal time to complete the preparation of the lesson.	3.29	Very Prepared	4
5	I have the self-discipline to log in and participate in an online course several times a week.	3.33	Very Prepared	3
	Overall Weighted Mean	**3.31**	**Very Prepared**	

Similarly, Issa & Jaaron's (2017) study states that numerous challenges have hampered the implementation of e-learning in developing countries despite its promise. Their study examines the e-learning readiness of public secondary schools in Palestine, focusing on aspects that present as strengths and challenges. Following a literature review, the e-readiness instrument was developed, which relied upon an assessment suggested by Akaslan and Law. In 11 directorates across the West Bank region, teachers in public secondary schools completed the assessment, and several e-learning and education experts and professionals were interviewed. The overall readiness was at a Level 3, Ready but needed a few improvements based on Aydin and Tasci's assessment model. Perceived Usefulness was found to possess the highest level of readiness, whereas Content Availability was the lowest. The findings provide implications on the adoption of e-learning in public secondary schools, including a conceptual framework for understanding e-readiness in developing countries [10].

Table 5. Motivation

	Motivation	Weighted Mean	Descriptive Equivalent	Rank
1	I was able to complete the discussion even when there were online distractions.	3.18	Prepared	5
2	I can set goals and objectives for learning of the students.	3.46	Very Prepared	2
3	I consider flexibility in time as an essential motivating factor in taking an online class.	3.36	Very Prepared	4
4	I enjoy learning that is both interesting and challenging.	3.54	Very Prepared	1
5	I can teach even though some of the students are not online at all times.	3.37	Very Prepared	3
	Overall Weighted Mean	**3.38**	**Very Prepared**	

The teacher-respondents perceived to be "Very Prepared" on enjoying learning to be both interesting and challenging" with a rating of 3.54 (rank 1) while their ability in completing the discussion even when there are online distractions was perceived to be "Prepared" (3.18, rank 5). Overall, the implementation of e-learning as to motivation was perceived to be "Very Prepared" with a mean rating of 3.38.

Unique distractions are present in nonclassroom environments, and many students attempt to multitask while learning online. In relation to the study of Blasiman, Larabee, & Fabry (2018) who examined the effect of six distractions (folding laundry, playing a computer video game, texting on a cell phone, engaging in conversation, watching a low-arousal video, and watching a high-arousal video) on learning and subsequent recall as assessed by a posttest. Compared to a baseline no-distraction condition, all six of the distractions significantly impaired posttest performance. In addition to objective measurements of learning, students self-reported their own assessments of learning during the distractions. Judgments of learning were poor for the high-arousal video [11].

Institutional Preparedness of Large Secondary Schools

Table 6. Administrative Support

	Administrative Support	Weighted Mean	Descriptive Equivalent	Rank
1	An e-learning initiative is aligned with the institution's mission.	3.26	Very Prepared	8
2	The institution recognizes that large-scale course redesign for e-learning initiatives involves strong collaboration among the teachers, IT personnel, and administrators in the planning as well as the implementation.	3.26	Very Prepared	8
3	There is a commitment on the part of institutional leaders to use technology to achieve strategic academic goals.	3.30	Very Prepared	4.5
4	There is commitment on the part of institutional leaders to use technology to achieve strategic academic goals and that such commitment extends beyond just using technology.	3.28	Very Prepared	6
5	The institution is willing to employ or to assign an academically capable and/ or experienced faculty to oversee the implementation of the e-learning environment.	3.30	Very Prepared	4.5
6	The institution support employees who seek out non-traditional development programs or	3.31	Very Prepared	3

	experiences.			
7	The institution is wiling to accept e-learning as a mode for teaching and learning.	3.32	Very Prepared	2
8	The institution has a committee or is willing to put up a committee that will work directly with the development of online courses and programs.	3.24	Prepared	10
9	The institution ensures/or is willing to put in place provisions that would ensure adequate and timely support to the teacher and students when technical issues arise.	3.26	Very Prepared	8
10	The institution provides or is willing to provide teachers with professional development opportunities to assist them in improving their online teaching.	3.35	Very Prepared	1
	Overall Weighted Mean	**3.29**	**Very Prepared**	

The institutional preparedness in pproviding or willingness to provide teachers with professional development opportunities to assist them in improving their online teaching was perceived to be "Very Prepared" with a rating of 3.35 (rank 1). In contrast, the institutional preparedness in the presence of committee in the institution or the willingness to put up a committee that will work directly with the development of online courses and programs was perceived to be "Prepared" (3.24, rank 10). Overall, the institutional preparedness of the large secondary schools in administrative support was perceived as "Very Prepared" with a mean rating of 3.29.

Economic, social and technological trends are shifting the global economy and the schools' behavior worldwide. The need to acquire and provide students with knowledge and skills beyond geographic borders drives educational institutions to an astute state of cogitation. e-Learning is becoming an answer to continuous learning and changes in the new economy. It responds to this need by offering new ways of learning and alternative ways of teaching. Before even considering any e-learning solutions or tools, it is imperative to assess and address the factors that can cause failures in education. Success in online learning comes about by understanding the needs and the readiness of major players in the online learning environment. By understanding these critical factors that foster online learning, the success of implementing an online learning-ready environment is more likely to be achieved [12].

Table 7. Resources Support

	Resources Support	**Weighted Mean**	**Descriptive Equivalent**	**Rank**
1	The institution is financially ready to venture into e-learning.	2.99	Prepared	10
2	The institution is willing to create a budget for implementing e-learning.	3.04	Prepared	7.5
3	The institution has experienced human resources or a department that organizes trainings related to online learning.	3.14	Prepared	5.5
4	The institution has adequate human resources to support an e-learning initiative.	3.16	Prepared	3
5	When technical issues arise, adequate and timely support is available to the teacher and students.	3.04	Prepared	7.5
6	The institution has a courseware delivery system (LMS) through which courses and programs are delivered.	3.15	Prepared	4
7	The current technological infrastructure is adequate to build and/or sustain an online learning environment.	3.03	Prepared	9
8	The online platform used for course delivery has the necessary system capacity to support the course's learning activities.	3.14	Prepared	5.5
9	The online platform provides appropriate tools for communication and collaboration.	3.20	Prepared	1.5
10	The online platform used for course delivery has the	3.20	Prepared	1.5

	necessary system capacity to support the course's learning activities.			
	Overall Weighted Mean	**3.11**	**Prepared**	

The institutional preparedness in the online platform that provides appropriate tools for communication and collaboration and the online platform used for course delivery has the necessary system capacity to support the course's learning activities were perceived to be "Prepared" with a rating of 3.20 (rank 1). In contrast, the institutional preparedness in terms of being financially ready to venture into e-learning was perceived as "Prepared" (2.99, rank 10). Overall, the institutional preparedness of the large secondary schools in resource support was perceived as "Prepared" with a mean rating of 3.11.

According to Azimi (2013), understanding users' readiness is paramount to the success of any e-learning program. Implementing e-learning by educational institutions has substantial benefits, one of which is that e-learning provides consistent content that assists students to overcome problems involved with instructors different teaching styles. E-readiness assessment is a helpful tool for determining a country's starting point and can be considered as an initial phase of the national strategy building for an area that needs ICT as a precondition for strategy implementation [13].

Inferential Statistics

Table 8. Test of difference on the preparedness of teachers on the implementation of e-learning when they are grouped according to profile

Sources of Variations	**Technology Access**		**Technological Skills**		**Time Management**		**Motivation**	
	F	Sig	F	Sig	F	Sig	F	Sig
Age	**6.198**	**0.014***	1.366	0.245	2.536	0.114	3.043	0.083
Sex	**2.495**	**0.046***	2.214	0.071	2.137	0.080	0.948	0.439
Position	0.059	0.981	1.013	0.389	0.934	0.426	0.271	0.846
Highest Educational Attainment	1.323	0.265	0.587	0.673	0.733	0.571	0.267	0.899
No. of Years in Teaching	1.695	0.141	2.180	0.060	0.967	0.441	0.847	0.519
No. of Relevant Trainings in e-learning	0.732	0.572	0.445	0.776	0.584	0.675	1.022	0.398

Significant

Technology Access. There was a significant difference on the preparedness of teachers as to technology access when grouped according to age (Sig. = 0.014) and sex (Sig. = 0.046). The computed significance values (Sig.) were less than (<) 0.05 alpha level of significance; therefore, the null hypothesis was rejected. On the other hand, the computed significance value (Sig.) for the position (Sig. = 0.981), highest educational attainment (Sig. = 0.265), no. of years in teaching (Sig. = 0.141), and no. of relevant training (Sig. = 0.572) were all greater than (>) 0.05 alpha level of significance. The results indicate no significant difference in teachers' preparedness regarding technology access when grouped according to position, highest educational attainment, no. of years in teaching, and no. of relevant training. Therefore, the null hypothesis was accepted.

The role of Information and Communication Technologies (ICTs) in the school classroom is becoming increasingly prominent, both because children need to develop skills that will empower them in modern society and because of the potential value of such technologies as tools for learning. One of the challenges facing teacher educators is ensuring that graduate teachers have the necessary combination of skills and pedagogical knowledge that will enable them to effectively use today's technologies in the classroom and continue developing and adapting to new technologies that emerge in the future. This study explores first-year teacher education student preparedness to use ICTs in the classroom. The primary data source for the study is a set of intensive interviews with eight teacher education students. The results suggest that despite the prevailing view that this generation of University students are 'Digital Natives) Threesomes of barriers to their preparedness to use ICTs in the classroom. In particular, the study suggests that as well as looking at the teacher education curriculum and other aspects of the formal preparation of these preservice teachers, the preservice teachers' personal preparedness including differences in their age, sex, attitude, motivation, and confidence, along with various social factors are essential. The results are discussed in the context of various preservice teacher ICT pedagogical development models. As well as being important for teacher educators, the findings are also significant in the context of academic staff development associated with the use of ICTs as a learning tool in tertiary education, as well as in the context of other disciplines where similar assumptions about the ICT literacy of first-year university students are being made [14].

Technology Skills. The computed significance value (Sig.) for age (Sig. = 0.245), sex (Sig. = 0.071), position (Sig. = 0.389), highest educational attainment (Sig. = 0.673), no. of years in teaching (Sig. = 0.060), and no. of

relevant training (Sig. = 0.776) were all greater than (>) 0.05 alpha level of significance. The results indicate no significant difference in teachers' preparedness as to technology skills when grouped according to age, sex, position, highest educational attainment, no. of years in teaching, and no. of relevant training. Therefore, the null hypothesis was accepted.

Time Management. The computed significance value (Sig.) for age (Sig. = 0.114), sex (Sig. = 0.080), position (Sig. = 0.426), highest educational attainment (Sig. = 0.571), no. of years in teaching (Sig. = 0.441), and no. of relevant training (Sig. = 0.675) were all greater than (>) 0.05 alpha level of significance. The results indicate no significant difference in teachers' preparedness as to time management when grouped according to age, sex, position, highest educational attainment, no. of years in teaching, and no. of relevant training. Therefore, the null hypothesis was accepted.

Motivation. The computed significance value (Sig.) for age (Sig. = 0.083), sex (Sig. = 0.439), position (Sig. = 0.846), highest educational attainment (Sig. = 0.899), no. of years in teaching (Sig. = 0.519), and no. of relevant training (Sig. = 0.398) were all greater than (>) 0.05 alpha level of significance. The results indicate that there was no significant difference on the preparedness of teachers as to motivation when grouped according to age, sex, position, highest educational attainment, no. of years in teaching, and no. of relevant training. Therefore, the null hypothesis was accepted.

Table 9. Test of difference on the institutional preparedness when teacher-respondents are grouped according to profile

Sources of Variations	Administrative Support		Resources Support	
	F	Sig	F	Sig
Age	2.959	0.088	3.841	0.052
Sex	0.834	0.506	0.565	0.689
Position	0.438	0.726	0.503	0.681
Highest Educational Attainment	0.356	0.840	0.205	0.935
No. of Years in Teaching	0.527	0.756	0.874	0.501
No. of Relevant Trainings in e-learning	0.569	0.685	1.230	0.301

Administrative Support. The computed significance value (Sig.) for age (Sig. = 0.088), sex (Sig. = 0.506), position (Sig. = 0.726), highest educational attainment (Sig. = 0.840), no. of years in teaching (Sig. = 0.756), and no. of relevant training (Sig. = 0.685) were all greater than (>) 0.05 alpha level of significance. The results indicate no significant difference in the institutional preparedness of the large secondary schools in terms of administrative support when teacher-respondents are grouped according to age, sex, position, highest educational attainment, no. of years in teaching, and no. of relevant training. Therefore, the null hypothesis was accepted.

Resources Support. The computed significance value (Sig.) for age (Sig. = 0.052), sex (Sig. = 0.689), position (Sig. = 0.681), highest educational attainment (Sig. = 0.935), no. of years in teaching (Sig. = 0.501), and no. of relevant training (Sig. = 0.301) were all greater than (>) 0.05 alpha level of significance. The results indicate no significant difference in the institutional preparedness of the large secondary schools in terms of resource support when teacher-respondents are grouped according to age, sex, position, highest educational attainment, no. of years in teaching, and no. of relevant training. Therefore, the null hypothesis was accepted.

The proposed Information System action plan has been developed to improve the preparedness of large secondary schools further to implement e-learning in social studies subjects.

Table 10. Proposed Information System Action Plan

Dimension	Needing Preparedness	Proposed Action Plan
Technology Access	Access to the computer in campus with stable internet connection.	Partnership with the Department of Information and Communications Technology (DICT) to increase internet bandwidth among large secondary schools.
	Establishing and strengthening networks with local government units and other agencies to implement technology-based instruction and the needs for the program's success.	Partnership to local government units and other agencies.
Technology Skills	Ability to resolve common errors while surfing the internet, such as page not found or connection time out.	Training on resolving internet-related issues among teachers.
	Strengthen and enhance the ICT skills of teachers with recent	Training and upgrading on technology skills development.

	applications that are needed in the new normal.	
Time Management	Control the desire to postpone important tasks.	Review on schedules should be considered to include internal and external activities that will affect learning schedules.
	Develop time management skills to focus attention on what matters.	Training for teachers on how to improve time management.
Motivation	Ability to complete the discussion even when there are online distractions.	Training for teachers on the creation of video lessons as a strategy may be considered to ensure synchronous lessons are facilitated to address online distractions.

6. Conclusion and Future Scope

In this study, majority of the teacher-respondents are female, in their early adulthood, Teacher I, with MA/MS units, new in the teaching profession, and adequate relevant training in e-learning. The teacher-respondents perceived the implementation of e-learning to be "Very Prepared". The teacher-respondents perceived the institutional preparedness of the large secondary schools to be "Prepared."There was a significant difference in the preparedness of teachers as to technology access when grouped according to age and sex. There was no significant difference in the institutional preparedness of the large secondary schools in terms of administrative support and resources support when teacher-respondents are grouped according to profile. An Information System action plan has been developed to improve large secondary schools' preparedness to implement e-learning in social studies subjects.

School Principals may establish to build linkages to increase internet bandwidth for a stable in-campus internet connection. Teachers are encouraged to join online webinars on resolving common errors while surfing the internet. Teachers are encouraged to allot time and comply with the schedule in completing their lesson preparation before uploading on an e-learning portal. School Principals may consider partnering with barangays/municipalities to ensure measures on distractions such as noise during online classes. School Principals are encouraged to put up a committee that will work directly with the development of online courses and programs. School Principals may consider to ensure the adequacy of current technological infrastructure to build and sustain an online learning environment. To conduct a follow-up study with in-depth and broader in scope to validate the findings obtained in the study.

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