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ATTITUDES OF ELEMENTARY SCHOOL TEACHERS TOWARDS ONLINE LEARNING DELIVERY IN THE TIME OF COVID-19 PANDEMIC

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ABSTRACT

Educational institutions were compelled to use the world of cyberspace, specifically through the Internet as its main infrastructure, to “effectively” transmit knowledge to the learners in the middle of the COVID-19 pandemic. It is in this light that this study investigated the attitudes of elementary school teachers towards online learning during the COVID-19 pandemic. This study determined the significant difference between respondents' assessment of teachers' attitudes towards online learning when grouped according to gender, age, and teaching experience of the 138 elementary school teachers from Districts 2, 3, and 4 of Manila City. The results indicate that elementary teachers felt that online learning devices could help improve the quality of their work. Contrary to this, the face-to-face learning delivery remains favorable for them. Furthermore, the results show that it is essential to continuously develop the quality of online education with the support of school administration and government to make online education more effective and accessible to all.

KEYWORDS: Language Education, Online learning, COVID-19, Teacher's Attitudes

INTRODUCTION

1.1.1. Background of the study

Online learning has been commonly used in the past years because of the convenience it provides. More universities worldwide are leaning towards online learning (Ali, 2020). Watson, Winograd, and Kalmon (2004) defined online learning as a form of education where instruction and methods are relayed using the Internet — caused by the continuous progression of technology. Moreover, online learning is a type of education that uses a wide range of technology applications and learning practices such as web-based learning, online collaborations, and virtual classrooms, among many others (Urdan & Weggen, 2000). This form of education is accessible through different electronic devices such as mobile phones, laptops, and tablets. Furthermore, it focuses on online contexts. The mediums utilized in this kind of setup are focused on digital technology in various learning platforms such as Zoom, Google Meetings, Microsoft Teams, and other media platforms (Almarzooq, Lopes, & Kochar, 2020).

The advancement of technology, particularly the Internet, has made its way into people's lives and upgraded itself as a life's necessity. It is employed in several fields, such as in entertainment and business. Thus, it is unavoidable that technology would make its way into education (Radovic-Markovic, 2010). According to Vonderwell (2003), online learning became a tool for conducting examinations, analyzing information, and implementing for students to inquire, analyze, and form new information. Consequently, online learning will continue to develop in the future and be utilized further to provide quality education in more countries (Pulichino, 2006).

On the other hand, in Liaw, Huang, and Chen's (2007) study, personal attitudes play a significant role in determining how individuals use information technology. Therefore, the teachers' attitudes should be investigated because they play an essential role in achieving an effective online education (Krishnakumar & Kumar, 2011). Understanding users' attitudes towards online instructional delivery facilitates the development of appropriate learning environments for teaching and learning. In addition, when teachers show favorable attitudes towards online instructional delivery, they are more likely to use it (Kisanga, 2016). Regardless of the technology's advancement, its practical implementation depends on users' positive attitudes. As a result, as people's attitudes toward e-learning improve, their behavioral intention to use it will also follow. Therefore, identifying elementary school teachers' attitudes and improving attitudes toward technology are critical to effecting change in education.

1.1.2. Online learning and teaching approach

Communication is imperative in learning. Communication is dynamic, where various factors can influence how one can effectively convey a message. Its significance is that communication is not just about discourse, but it is imperative to remember that it uses both verbal and non-verbal practices. Visual communication tools are justified when it comes to online learning and teaching. How the instructor presents, the material plays an enormous role in the success of learning (Zlatovic, 2018). The teachers utilized several learning approaches to make online learning more effective and accessible to students. Soni's (2020) study highlighted how teachers relied on online platforms to share their lessons and file mediums through PDF and PowerPoint to upload their syllabus and activities on their school websites or emails. Panda & Mishra (2007) proposed that detailed workshops and programs are essential to enhance the skills of the teachers before implementing complete digital learning to avoid unnecessary issues that might occur and cause a delay in the students' learning.

However, according to Moreno-Marcos et al. (2020), the fundamental problem in teaching through online delivery is the individual attention of every student. Numerous tools and mechanisms can help in learning, especially when a pandemic is ongoing; thus, yielding to online learning and teaching, yet on occasion, these tools can cause several problems. For instance, the rising issues are associated with new technology usage, e.g., various downloading experiences, log-in issues, internet interruption, and video problems (Hafeez, Ajmal, & Kazmi, 2021). This could result in learners

finding and experiencing online learning to be monotonous and unstable (Shrestha et al., 2021). Due to the inclination that online learning takes up more time, learners do not have the leisure time to do the amount of work. This can affect how the general experience is either a success or a failure (Betts, 2009). Hence, the online mode of education requires an insurmountable focus on awareness of the benefits and attainable variety that could encourage suitable online channels for students and educators.

Education is the initial booster of economic growth. It reduces poverty and inequality as it exemplifies an individual's life to lead a good and productive lifestyle and participate in society that helps restore civility and stability (UNICEF, 2020). The importance of implementing online learning in times of crisis, even with the countless dilemmas that accompany it, is not to be overlooked. Lange and Costley (2020) stated that evaluating struggles is as important as improving the educational process in these dire times. Considerations and attainability must be given attention to make the learning process accessible and manageable. In this way, learners can adapt to the new learning environment.

1.1.3. Effectiveness of technology in online learning and teaching

Effective use of technology is critical to efficient learning. Littleton, Twiner, and Gillen (2010) addressed in their study that online learning has helped teachers in creating various multimodal resources that could encourage students to participate in an online class. In a similar study by Somyurek, Atasoy, and Ozdemir (2009), interactive whiteboards are now being used to transform a typical classroom setup into a student-centered environment due to the continuous development of technology. Interactive whiteboards in classrooms enable the students' learning process by developing the teacher's proficiency, increasing student-centered instructional performances, and changing the teachers' attitudes about technology (Balta & Duran, 2010). Therefore, educators' knowledge of new learning modes and styles is favorable to students and teachers.

Employing different styles in online learning can strengthen a connection between a teacher and a student, create and expand the learning process, and impart a positive experience (Betts, 2009). Therefore, this gives learners and the teachers an advantage to be open and adhere to concerns. Zounek and Sudický (2013) argued that educators' approach in this new paradigm of teaching and learning deals with diversity in its account of practicing to have enthusiasm and concern. Jethro, Grace, & Thomas (2012) also noted that computer-based instruction is a tremendous additional method where students and teachers can work better and aim for active participation to eliminate the barriers in online learning.

Haddad and Drexler (2002) further explained that the effectiveness of the teaching and learning process lies in the intellectual curiosity and enjoyment that can affect the student's performance and perspective of learning, i.e., from being a passive participant of information to an active participant of knowledge building. Students and educators can communicate on a range of topics and future

applications of knowledge. As simple as using tools and applications from computers or mobile devices, learners can receive direct feedback or perform peer-based evaluations (Zounek & Sudicky, 2013). Amenyedzi, Lartey, and Dzomeku (2011) argue that the essence of online learning through computers is likely rooted in the degree of anonymity and individuality that it could offer that is more present in a virtual classroom rather than the traditional face-to-face setup. For instance, text-based online communication, such as chats and online forums, is often employed and may encourage confidence in the learner.

Sharing of information and easier collaboration is made possible using online technologies. As the authority within educators started to shift from a teacher-centered model to a learner-centered model, they became the facilitator, a mentor, or even a coach rather than someone who gives orders (Hafeez, Ajmal, & Kazmi, 2021). The educator's primary goal is to educate students on how to ask the questions and present problems, formulate hypotheses, locate knowledge, and critically evaluate that information concerning the difficulties they have been given. ICT-based learning became a tool for conducting examinations, analysis of information, and implementation for students to inquire, analyze and form new information.

Computers are widely known for the current generation—the clever move to create electronic libraries and platforms for learning management. As explained by Hakkarainen et al. (2000), students must be exposed to integrating ICT with all academic areas to prepare for the information society they will inherit. It is envisaged that tools like these help the wheel-turning in the teaching and learning process, but disadvantages cannot be avoided in these circumstances. Time and money-intensive online learning are not easy; it requires a significant investment in tools and equipment to create pleasant and effective online learning content.

1.1.4. External factors that affect online learning and teaching

Kilbas (1994) defined leisure as free time from work, obligations, and responsibilities. It is also mainly associated with the process of free will and volunteerism (Agyeiwaah, Badu Baiden, Gamor, & Hsu, 2021). Volunteering engages in enjoyable and rewarding leisure activities without pressing for a time by putting one's skills and resources to good use (Stebbins, 2013). Therefore, leisure is simply an idea of working where an individual activity mainly provides benefits.

On the other hand, leisure in online learning and teaching is described by both students and teachers as something that brings them the value of getting the work done (Agyeiwaah, Badu Baiden, Gamor, & Hsu, 2021). One of the essential facets in determining the quality of an online learning program is satisfaction (Nor Shaid, Kamruzaman, & Sulaiman, 2021). Leisure and working became a collaborative effort for online learning and teaching. Nambiar (2020) emphasized that educators' attitude toward online learning is as essential as the students' because the teachers provide education. The educational foundation becomes weak when not satisfied with how online learning goes.

Learners and educators alike must take advantage of technology to improve the learning process and provide an adequate experience. Future instructors must be introduced to electronic instruction (Bali & Liu, 2018). Therefore, educators must understand the role of computers in the classroom, computer strategies, teaching and learning subjects, and information technology trends to develop positive attitudes and take tangible steps toward technology and computers in the classroom.

1.2. Research Objectives

The study determined the attitudes of elementary school teachers towards online learning delivery in the time of COVID-19 pandemic. The study aimed at investigating the attitudes of elementary school teachers on using computer systems, identifying the challenges and benefits of online learning, the factors that influence elementary teachers' leisure interest in online learning, and the significant difference between the respondents' assessment of teachers' attitudes towards online learning when grouped according to teaching experience, age, and gender.

Specifically, the proponent sought answers to the following questions:

1. What are the attitudes of elementary teachers on using computer systems?
2. What are the elementary teachers' benefits and challenges in online learning?
3. What are the factors that influence teachers' leisure interest in online learning?
4. Is there a significant difference between respondents' assessment of teachers' attitudes towards online learning when grouped according to teaching experience, age, and gender?

1.3. Scope and Limitations

This study primarily investigated the attitudes of public elementary school teachers in selected schools in Districts 2, 3, and 4 in Metro Manila. This research only covered a small number of elementary school teachers conducting online classes in the Philippines. The data collection was conducted on a minimum of 100 teachers from the public elementary schools of Manila in the school year 2021 - 2022. It aimed at determining the elementary teachers' attitudes towards online learning as they switch from traditional to online classes.

The researcher developed the assessment procedures where the information collected was analyzed and evaluated. However, there are some unavoidable limitations in this study. This study's results are only applicable to the respondents of this study. Hence, this study cannot be primarily held accountable to measure elementary school teachers' attitudes outside the study population.

1.4. Theoretical Framework

1.4.1. Technology Acceptance Model

The technology acceptance model (TAM) is a framework used explicitly in predicting whether people will use or reject technology. TAM serves its users to grasp and adapt to technology as a medium applied in a work setting. Since there are currently a limited number of studies that focus on elementary teachers' attitudes towards online learning, TAM was employed to gauge this phenomenon. Alhumaid et al. (2020) suggest that a person's acceptance of ICT and intention of usage depends on how they perceive the usefulness of technology and how convenient it is to use. Woen, Handoko, Sylvia, & Abdurachman (2018) posit that perceptions of effectiveness and ease of use of this model depend on external factors such as social influences, personal differences, system characteristics, and the facilitating environment.

Several researchers have been using TAM as their framework in their study to examine the acceptance of new technology in different work environments. Puangchompoo (2018) utilized TAM to evaluate how the highly educated Thais accept online courses as a medium of education, i.e., Thailand has started to digitize its learning system. Another study conducted by Portz et al. (2019) used TAM as the framework to understand the preferred interface and user experience of older adult patients with chronic medical cases. Lu et al. (2003) also expanded the TAM framework. Lu et al. analyzed more factors that influence users' acceptance of wireless Internet via mobile devices.

Moreover, Venkatesh and Morris (2000) also utilized TAM to investigate gender differences in the workplace. Other studies that employ TAM also combined it with other theories, such as the theory of planned behavior or the innovation of diffusion theory. In another parallel study, Agag and El-Masry (2016) utilized TAM and innovation of diffusion theory to investigate customers' intentions in joining an online travel community. In line with this, TAM was utilized as one of this study's founding bases to predict and explain a person's internal beliefs. The researcher aimed to determine why a person decides to adopt or reject online learning and identifies why such actions are made

1.4.2. Reasoned Action Model Theory

Another theory utilized in this study is the reasoned action model (RAM) theory pioneered by Fishbein and Azjen (1975). RAM is a theory commonly used in analyzing behaviors based on people's attitudes, intentions, and norms. According to Nguyen et al. (2018), attitude is one's positive or negative reaction towards a specific behavior. A person acts according to what they perceive to be positive. However, RAM has also been used in social psychology and marketing literature to find why people prefer to behave differently, such as having vices (Coleman, Banhan, Kelkar, & Curry, 2011).

Mirasol (2020) investigated the attitudes of Grade 5 and 6 students towards reading. The study found that female students are more likely to have a positive attitude toward reading as the students' age

rises and positive attitudes toward reading decrease. Another study that employed RAM was utilized by Nguyen et al. (2018), where they identified how RAM could determine behavior intention and beliefs and reduce behavior tendency. The study results found that attitudes and subjective norms are vital in persuasive communication.

Furthermore, a study about college students' reading intentions and behaviors was conducted using RAM as its framework by Burak (2004). The study revealed a high percentage of college students who believe that reading is a source of stress relief. By utilizing the Technology Acceptance Model and Reasoned Action Model Theory, the researcher identified the elementary teachers' attitudes as they adjust to online learning as a new mode of instruction.

2. METHOD

2.1. Research Design

This study employed a quantitative-descriptive design. Quantitative design is used to measure the data collected in quantitative and objective statistics using scientific calculations compiled from selected people requested to answer the questions in the survey to analyze and observe the frequency and percentage of their responses (Creswell, 2014).

2.2. Study Participants

The participants of this study focused on elementary school teachers from the public schools of Manila City. Participants included 125 females and 13 males between the ages of 20 and 50 years old and above. All the participants in this study voluntarily participated in answering the survey administered through an online Google form.

2.3. Data Sources and Instruments

The survey method was utilized in the study to yield data from the respondents. Yuliansyah (2016) explained that a survey collects data from a group of people or phenomena in any environment. This kind of research instrument is practical and straightforward in gathering data about people, brands, products, and context, among many others (Pfleeger & Kitchenham, 2001). A survey was used since the researcher believed it was the most suitable method to identify and verify the elementary teachers' attitudes towards online learning during the COVID-19 pandemic. The researcher asked first the gender, age, and years of teaching experiences of the respondents before they answered the adapted questionnaire. To determine the attitudes of the elementary teachers, the test of the e-Learning related attitudes scale was utilized. This scale was first used and developed by Kisanga and Ireson (2016) in their study to identify the determinants of teachers' attitudes towards e-learning. The adapted questionnaire was composed of 36 questions with a Cronbach alpha score of 0.857. The Test of e-Learning Related Attitudes (TeLRA) scale consists of a 4-point Likert response format ranging from 1- strongly disagree, 2- disagree, 3- agree, and 4-strongly agree. The adapted questionnaire consists

of 4 themes: the challenges of e-learning, the benefits, the attitudes of the teachers using computer systems, and lastly, their leisure interest in e-learning.

2.4. Research Procedures

The researcher sought permission from the Assistant Schools Division Superintendent of Manila City. To get the permit to conduct the study, an application form was filled out and submitted, accessible on DepEd Manila’s website. After that, the researcher sent an e-mail to the principal of Manila’s public elementary schools. The e-mail consists of the request letter asking for respondents and the approved permit from the Office of the Assistant Schools Division Superintendent. When the schools agreed to participate in this research, the researcher disseminated the Google form link, where the survey was done via email. The adapted questionnaire consisted of 36 questions that took approximately 10 minutes to complete.

2.5. Data Analysis

This research employed a quantitative design, specifically the descriptive approach. Quantitative descriptive design is the most appropriate approach in this study since it is used to measure or identify traits or experiences (Cresswell, 2014). To analyze the data, the frequency count was used to present the total responses given for each item in the questionnaire to analyze the gathered data. The percentage was used to present the portion of the responses that were gathered aligned with probable answers. Lastly, the weighted mean was calculated to analyze and interpret the responses in the questionnaire to ensure that the results interpreted in this study were valid and reliable.

RESULTS AND DISCUSSION

The objective of this paper is to know the attitudes of Elementary School teachers towards online learning delivery. This section presents the results and discussions of the study.

Table 1. Teachers' attitudes on using computer system in online learning

Attitudes on using computer system	Strongly Disagree	Disagree	Agree	Strongly Agree	Weighted Mean	Verbal Interpretation
	1	2	4	5		
	Frequency					
28 It will be difficult for me to become	12	73	50	3	2.32	Disagree

skillful in the use of e-learning tools.						
29 I make errors frequently when using a computer.	12	71	48	7	2.36	Disagree
30 Using a computer at home is very frustrating.	11	90	28	9	2.25	Disagree
31 Using e-learning technologies will allow me to accomplish more work than would otherwise be possible.	0	12	103	23	3.08	Agree
35 I find computer online interaction unexciting.	13	91	29	5	2.19	Disagree
36 Communicating through electronic mails is annoying	14	88	33	3	2.18	Disagree
Overall Weighted Mean					2.40	Disagree

Legend: "Strongly Disagree 1-1.75", "Disagree 1.76-2.50", "Agree 2.51-3.35", "Strongly Agree 3.26-4.00"

Most of the respondents disagree with the statements on the use of computer systems. These items include the responses' difficulty to become skillful in using e-learning tools, of which 73 respondents disagreed, while 71 respondents disagreed with the statement which states they are prone to errors when using computers. In addition, 90 respondents refuted the statement wherein using computers at home frustrates them. On the other hand, 91 respondents answered that they do not find online interaction on computers unexciting. Lastly, communicating using electronic mail to 88 respondents is not considered annoying. However, in Table 1, 103 respondents felt that using e-learning technologies would allow them to accomplish more work than would otherwise be possible, to which they agreed. To summarize the results, the respondents disagreed with the statements about using computer systems, as evident in the weighted average of 2.40.

Table 1 supports the study of Giray, Caguerhab, & Siruelo (2017), where the respondents exhibited a positive attitude towards computers. In a study conducted by Liaw, Huang, and Chen (2007), teachers are familiar with e-learning tools, which means they can use e-learning tools, such as

PowerPoint, Zoom, Google Meet, and other ICT-based platforms to facilitate an online class effectively which is similar to the results of Table 1. This implies that the teachers have positive attitudes towards computers and can maximize the use of computers. Similar results were reported by Varol (2013), where teachers are more familiar with basic computer applications, such as emails, presentations, and word processing. However, their knowledge of editing, multimedia, databases, and others is lacking. In contrast, Rameli, Alhassora, Bunyamin, and Hanri's (2020) study shows that teachers are sure of committing mistakes on online platforms.

Table 2. Benefits of e-learning

Benefits of e-learning	Strongly Disagree	Disagree	Agree	Strongly Agree	Weighted Mean	Verbal Interpretation
	1	2	4	5		
Frequency						
1 E-learning is very economical for educational institutions to adopt.	4	21	75	38	3.07	Agree
2 I believe using e-learning will improve the quality of my work.	2	11	80	45	3.22	Agree
3 Computers make work more interesting.	6	5	77	50	3.24	Agree
4 I prefer reading articles in e-learning.	3	20	92	23	2.98	Agree
5 It is easier to revise electronic educational	7	7	70	54	3.24	Agree

materials than printed material						
6 I prefer using a computer to prepare my lessons.	8	2	67	61	3.31	Strongly Agree
14 I believe using e-learning technologies will improve my job performance.	3	12	98	25	3.05	Agree
23 E-learning will increase teachers' efficiency.	2	17	95	24	3.02	Agree
34 E-learning will provide me with better learning opportunities than traditional means of learning.	3	47	69	19	2.75	Agree
Overall Weighted Mean					3.10	Agree

Legend: "Strongly Disagree 1-1.75", "Disagree 1.76-2.50", "Agree 2.51-3.35", "Strongly Agree 3.26-4.00"

Table 2 presents the benefits of e-learning, where 75 respondents believe that e-learning is an economic investment for educational institutions to follow. Meanwhile, 80 respondents assume that e-learning is a medium that could improve the quality of their work. Furthermore, 77 respondents think that computers make their work enjoyable, while 99 respondents believe that reading articles in e-learning is better than the traditional way of reading articles.

Moreover, 70 respondents felt that it is easier to revise their materials on the computer than in print. The respondents prefer to plan their lesson using a computer, of which 67 answers agree. In addition, 98 respondents concurred that e-learning technologies could improve their job performances. A total of 95 respondents perceived e-learning as a tool to increase their efficiency. Lastly, 69 respondents agreed that e-learning could provide them with better learning opportunities than the traditional way of learning. Generally, the results presented in Table 2 show that the respondents agree with the statements regarding the benefits of e-learning, with a weighted average of 3.10.

The results in Table 2 show a similar result in a study conducted by Melouka and Mohammed (2021), where they found that teachers had a positive attitude towards using electronic tools in teaching and found online learning enjoyable. Consequently, this implies that most respondents are satisfied with online learning. Furthermore, the results in Table 2 are comparable to the study of Nambiar (2020) where teachers felt that online learning has increased their skills in terms of technology, helped them with their confidence, and introduced new innovative modes for teaching and learning. Moreover, Muthuprasad, Aiswarya, Aditya, & Jha’s (2021) study complements the findings of this paper as it was presented that teachers perceived online learning to be convenient and flexible since it can be accessed instantly at a given time of day.

Table 3. Challenges of e-learning

Challenges of e-learning	Strongly Disagree	Disagree	Agree	Strongly Agree	Weighted Mean	Verbal Interpretation
	1	2	4	5		
Frequency						
7 I feel uncomfortable reading a textbook on a computer screen than a physical textbook.	5	46	65	22	2.75	Agree
10 E-learning requires expensive technical support.	3	43	75	17	2.77	Agree
11 E-learning reduces the quality of knowledge attained.	13	66	53	6	2.38	Disagree
12 Interacting with the computer system is often frustrating.	8	49	74	7	2.58	Agree
13 A face-to-face method is more learner-centred than E-learning methods.	7	23	62	46	3.07	Agree

18 E-learning increases learners' social isolation.	5	33	81	19	2.83	Agree
19 E-learning technologies are difficult to use.	15	67	52	4	2.33	Disagree
20 Discussions on e-learning technologies are uninteresting	4	36	80	18	2.81	Agree
21 Using computer systems requires a lot of mental effort.	16	87	30	5	2.17	Disagree
26 Supporting learners in an e-learning environment is very difficult.	2	46	75	15	2.75	Agree
27 E-learning infrastructure is very expensive for the government to afford.	8	33	82	15	2.75	Agree
33 E-learning is a threat to teachers' employment	15	86	31	6	2.20	Disagree
Overall Weighted Mean					2.62	Agree

Legend: "Strongly Disagree 1-1.75", "Disagree 1.76-2.50", "Agree 2.51-3.35", "Strongly Agree 3.26-4.00"

As presented in Table 3, the results show the challenges of e-learning. It is notable on Table 3 that face-to-face methods are more learner-centered than e-learning methods, according to a total of 62 respondents. Meanwhile, 75 respondents believe that extensive technical support is essential in e-learning, while 80 respondents recognized that e-learning infrastructures are expensive for the government to maintain and afford. Additionally, 80 respondents agreed that discussions made on e-learning are uninteresting.

On the other hand, 66 respondents do not believe that e-learning reduces the quality of learning. Furthermore, e-learning tools are not hard to follow, according to 67 respondents. The idea that

computer systems need to have adequate mental effort yielded a total of 87 responses from the respondents. Lastly, there were 86 respondents who did not believe that e-learning threatens the teachers' employability. Generally, the respondents agree toward the statements in Table 3 about the challenges of e-learning, as shown in the weighted mean of 2.62.

Relevant to the findings in Table 3 is the study of Rasmitadla et al., (2020) where they found that teachers' motivation to teach decreases because of not being able to interact with their students physically. Furthermore, the findings in Table 3 also support the studies of Andarwulan, Al Fajri, and Damayanti (2021), and Fauzi and Khusuma (2020) wherein teachers are unlikely to execute new innovative teaching methods as they are all accustomed to the traditional way of teaching. Rasmitadla et al., 2020 asserts that the challenges faced by teachers are linked to technical problems, such as poor facilities, internet connections, and time consumed in preparing materials. Thus, based on the findings, it appears that Table 3 shows similar results with the previous study. However, Rameli, Alhassora, Bunyamin, and Hanri's (2020) study contradicts with the results in Table 3 because the teachers believed that a strong mental effort is a must to comprehend online systems while the findings in this paper did not feel that strong mental effort is required in using computer systems.

Table 4. Leisure interest on e-learning

Leisure interest on e-learning	Strongly Disagree	Disagree	Agree	Strongly Agree	Weighted Mean	Verbal Interpretation
	1	2	4	5		
Frequency						
8 I enjoy teaching using computers.	1	15	82	40	3.17	Agree
9 Delivering a lecture through electronic technologies is very difficult.	10	64	48	16	2.51	Disagree
15 Communicating through social networks is fun.	2	20	92	24	3.00	Agree
16 I like reading magazines on new	0	24	96	18	2.96	Agree

technology innovations.						
17 Teaching through e-learning is tiresome	8	68	51	11	2.47	Disagree
22 My institution has enough teaching-learning resources to carry out e-learning.	5	23	94	16	2.88	Agree
24 Working with computers is exciting.	2	14	95	27	3.07	Agree
25 I like discussing about new e-learning innovations	0	8	102	28	3.14	Agree
32 I enjoy computer games very much.	10	60	56	12	2.51	Disagree
Overall Weighted Mean					2.86	Agree

Legend: "Strongly Disagree 1-1.75", "Disagree 1.76-2.50", "Agree 2.51-3.35", "Strongly Agree 3.26-4.00

Table 4 shows the results for leisure interest of the teachers in online learning. This table reveals a total of 82 respondents that enjoyed teaching via computers. It is also shown that 92 respondents agree that communicating using social networks is entertaining, while 96 respondents believe that reading magazines on new technology innovation are enjoyable. In addition, according to 94 respondents, their institution provides teaching-learning materials that enable them to teach in an online environment. On the other hand, 95 respondents also note that working with computers is exciting. A total of 102 respondents are pleased to discuss new technological developments. Besides that, 64 respondents believe that online discussions are not challenging to do. Teaching in an online class is not tiresome based on the 68 respondents who answered. Moreover, 60 respondents are not immensely thrilled with computer games. It is evident in Table 4, the respondents agreed on the statements toward leisure interest in e-learning based on the weighted average of 2.86.

The recent study of Andarwulan, Al Fajri, & Damayanti (2021) supports the results in Table 4 since it reveals that there are enough available resources made for elementary school teachers to use in class. To explain further, Table 4 presents that the respondents concurred towards having enough tools and resources for their classes. On the other hand, Asegedom's (1998) study reported that there are limited available materials for instructions used by teachers in schools, thus contradicting the

results found in Table 4. Moreover, in Rameli, Alhassora, Bunyamin, and Hanri’s (2020) study, teachers felt that online learning is a great medium to enhance their teaching experience as it helps improve their knowledge of the online environment. This parallel study strengthens the findings in Table 4, as it supports the claim that the respondents acknowledged that teaching in an online environment is enjoyable.

Table 5. Comparison between respondent assessment on teachers’ attitudes towards online learning when grouped according to gender

Indicator	Gender	Mean	f-value	p-value	Decision	Remarks
Challenges of e-learning	Female	2.60	1.973	0.162	Retain Ho	Not Significant
	Male	2.78				
Benefits of e-learning	Female	3.11	1.502	0.222	Retain Ho	Not Significant
	Male	2.95				
Attitudes on using computer system	Female	2.39	0.755	0.387	Retain Ho	Not Significant
	Male	2.50				
Leisure interest on e-learning	Female	2.85	0.641	0.425	Retain Ho	Not Significant
	Male	2.92				

Note: If p value less than or equal to the level of significance which is 0.05 reject null hypothesis otherwise retain.

Table 5 presents the comparison between respondents’ assessment of teachers’ attitudes towards online learning when grouped according to gender. As seen in the Table 5, challenges of e-learning, benefits of e-learning, attitudes on using a computer system, and leisure interest in an e-learning platform do not have a significant difference when the respondents are grouped according to gender. This is because the p-value is more significant than the level of significance, which is 0.05, therefore, the null hypothesis should be retained. This implies that the respondents’ level of assessment was similar when grouped according to gender. Similar results were obtained from the study of Semerci and Aydin (2018). It was found that there are no significant differences in terms of gender when it comes to willingness to use technological devices. However, in Masry-Herzallah and Stavissky’s (2021) study, contradicting results were obtained because it was revealed that men are more technologically adept than women as opposed to the results seen in Table 5.

Table 6. Comparison between respondent assessment on teachers’ attitudes towards online learning when grouped according to teaching experience

Indicator	Teaching experience	Mean	f-value	p-value	Decision	Remarks
Challenges of e-learning	1 to 5 years	2.65	0.957	0.434	Retain Ho	Not Significant
	6 to 10 years	2.73				
	11 to 15 years	2.61				
	16 to 20 years	2.53				
	21 years and above	2.55				
Benefits of e-learning	1 to 5 years	3.19	0.826	0.511	Retain Ho	Not Significant
	6 to 10 years	3.15				
	11 to 15 years	2.98				
	16 to 20 years	3.11				
	21 years and above	3.05				
Attitudes on using computer system	1 to 5 years	2.37	0.178	0.950	Retain Ho	Not Significant
	6 to 10 years	2.42				
	11 to 15 years	2.35				
	16 to 20 years	2.38				
	21 years and above	2.44				
Leisure interest on e-learning	1 to 5 years	2.98	1.821	0.128	Retain Ho	Not Significant
	6 to 10 years	2.85				
	11 to 15 years	2.78				
	16 to 20 years	2.89				

21 years and above 2.79

Note: If p value less than or equal to the level of significance which is 0.05 reject null hypothesis otherwise retain

Table 6 presents the significant difference between the respondent's assessment to teachers' attitudes towards online learning when grouped according to teaching experience using One-Way ANOVA. It was revealed on Table 6 that challenges of e-learning, benefits of e-learning, attitudes on using a computer system, and leisure interest in an e-learning do not have a significant difference when the respondents are grouped according to teaching experience. This is because the p-value is more significant than the level of significance, which is 0.05, therefore, retains the null hypothesis. This implies that the respondents' level of assessment was similar to each other when grouped according to teaching experience.

The findings in Table 6 vary from the results of Lau and Sim's (2008) study, who argue that older teachers tend to use computers more than younger ones. Another study in contrast with the findings in Table 6 was conducted by Baek, Zhang, and Yun (2017), where they suggest that teachers with more than 15 years of teaching experience have a more positive attitude towards online teaching than those with 9 to 15 years of teaching experience. Meanwhile, Semerci and Aydin's (2018) study found that young teachers have a more positive attitude toward online learning than older teachers. Similarly, Deniz's (2005) study affirms that teachers who have less teaching experience exhibited more positive attitudes with computers. This result may be due to the fact that these teachers are newly graduates and already inclined with technology and its uses.

Table 7. Comparison between respondent assessment on teachers' attitudes towards online learning when grouped according to age

Indicator	Age	Mean	f-value	p-value	Decision	Remarks
Challenges of e-learning	20 to 25 years old	2.53	1.034	0.406	Retain Ho	Not Significant
	26 to 30 years old	2.73				
	31 to 35 years old	2.76				
	36 to 40 years old	2.65				
	41 to 45 years old	2.54				
	46 to 50 years old	2.48				
	51 years old above	2.56				
Benefits of e-learning	20 to 25 years old	3.42	2.214	0.046		

	26 to30 years old	2.96				
	31 to35 years old	3.27				
	36 to 40 years old	3.07			Retain	Not
	41 to 45 years old	3.13			Ho	Significan
	46 to 50 years old	3.28				t
	51 years old above	2.96				
	20 to 25 years old	2.47				
	26 to30 years old	2.36				
	31 to35 years old	2.41				
Attitudes on using computer system	36 to 40 years old	2.47	0.318	0.927	Reject	Significan
	41 to 45 years old	2.30			Ho	t
	46 to 50 years old	2.40				
	51 years old above	2.42				
	20 to 25 years old	2.89				
	26 to30 years old	2.86				
	31 to35 years old	2.93				
Leisure interest on e- learning	36 to 40 years old	2.92	0.782	0.586	Retain	Not
	41 to 45 years old	2.85			Ho	Significan
	46 to 50 years old	2.87				t
	51 years old above	2.76				

Note: If p value less than or equal to the level of significance which is 0.05 reject null hypothesis otherwise retain.

Table 7 presents the significant difference between the respondent's assessment to teachers' attitudes towards online learning when grouped according to age using One-Way ANOVA. Based on Table 7, challenges of e-learning, benefits of e-learning, and leisure interest in an e-learning platform do not have a significant difference when the respondents are grouped according to age. This is because the p-value is more significant than the level of significance, which is 0.05, therefore, retains the null hypothesis.

The respondents' assessment on the attitudes on using a computer system shows a significant difference when grouped according to age, as seen in the p-value, which is less than the level of

significance that is 0.05. On the other hand, the respondents' assessment on challenges of e-learning, benefits of e-learning, and leisure interest in e-learning did not exhibit significant differences when grouped according to age.

The study of Teo (2008) found no significant differences in the teachers' computer attitudes in terms of their age, which suggests that their attitudes toward computers are positive. However, this study negates the results found in Table 7, wherein there is a significant difference in age in the respondents' attitudes on the use of computer systems. Moreover, Cavas et al. 's (2009) study pointed out that younger teachers can utilize technological tools better in the classroom compared to the findings in Table 7 which presents different results.

3. CONCLUSION AND RECOMMENDATIONS

This study aimed to determine the attitudes of public elementary school teachers in selected schools in Metro Manila towards online learning delivery during the COVID-19 pandemic. The overall findings imply that the teachers exhibit a positive attitude towards online learning. Nevertheless, it is noteworthy that respondents still prefer face-to-face to online learning. Teachers' attitudes toward online learning influence students' knowledge about this educational platform since teachers play an essential role in molding their students. By determining the attitudes of the elementary school teachers, this study is hoped to contribute to school administration and policymakers by identifying the strengths and weaknesses to improve the effectiveness of online learning.

In addition, this study did not yield significant differences between the teachers' online learning assessments when grouped according to gender and teaching experiences. This implies that the respondents' levels of assessment were similar when grouped according to gender and teaching experiences. Meanwhile, when grouped according to age, the respondents' assessment of their attitudes on the use of computer systems created a significant difference. This entails that the respondents' age plays a significant factor in the teachers' attitudes on the use of computer systems. This study offers a valuable discussion that could be used in future research regarding teachers' attitudes, specifically on how online learning technologies enable teachers to accomplish more work than possible, i.e., since the findings revealed a favorable attitude towards online learning. Moreover, future research could investigate why teachers feel that online learning discussions are not as engaging as face-to-face learning. Thus, this study is beneficial to schools, students, and stakeholders in general in showing support to the teachers regarding the resources they could provide to enhance further the online learning set up in the country.

Future research is recommended to prioritize seeking ways to know more about teachers' attitudes and to further improve the quality of online learning in the Philippines. Conducting with a larger group of participants may elicit more helpful and relevant findings, which could help analyze and understand teachers' attitudes. A positive attitude is essential for applying technology as a medium used in education. Programs that would foster positive attitudes among educators toward online learning are

imperative in equipping helpful knowledge to the students. Finally, educational institutions must support educators in applying modern technologies in education. Being able to adapt and implement a more online learning environment in schools can be substantial and beneficial in the future.

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