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Teachers' Utilization of Technology: Basis for an Intervention Plan

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Gina V. Monteclaro
Teacher II, Handumanan National High School, Department of Education, Philippines
https://orcid.org/0009-0006-8245-5843

Dr. Jose Donnie S. Sajonia
Public Schools District Supervisor, Department of Education, Philippines
https://orcid.org/0009-0004-5442-0729

Abstract:

In the digital age, educators worldwide are embracing technology to enhance their teaching methods and create more immersive, efficient learning experiences for students. The key purpose of this study is to determine the extent of teachers' utilization of technology in one of the secondary schools in the large size division in central Philippines during the School Year 2022-2023 as the basis for an intervention plan. A descriptive research design was conducted, and a 30-item survey questionnaire was used to gather data from one hundred six (106) secondary teachers and to determine the extent of their utilization of technology in teaching-learning practices. The results revealed age and sex were significant factors influencing technology utilization in digital instructions, with younger female teachers being more frequent technology users. Additionally, age played a role in using technology for digital assessments and learning resources, with teachers below 40 years old using technology more frequently in these areas. The results of this study serve as a call to the school heads and master teachers to work together to implement programs and plans providing the teachers with the opportunities for training and seminars to empower teachers to effectively integrate technology into their teaching practices.

Keywords: Teacher's utilization, technology, intervention plan, digital instruction, and digital assessment

Introduction:

Nature of Problem

In the modern age of digital advancements, technology has become an essential component of various facets of our lives, and this includes education. Educators across the globe are enthusiastically adopting technology as a potent instrument to enrich their teaching methods and craft more immersive and efficient learning encounters for students (Szymkowiak et al.; G. S., 2021). The Philippines' government-led efforts, exemplified by initiatives like the K-12 program and the Enhanced Basic Education Act of 2013 (Republic Act 10533), have opened up opportunities for the seamless integration of technology into the realm of education.

The Department of Education (DepEd) issued DepEd Order No. 42, s. 2017, through the Teacher Education Council (TEC), adopting the Philippines Professional Standards for Teachers (PPST) nationwide. PPST emphasizes integrating technology into teaching, ensuring educators are well-prepared for the K to 12 Program while maintaining high teaching standards. By incorporating technology, educators can enhance the learning process, increase student involvement, provide customized instruction, and develop students' digital skills (Kay et al., 2018). Various digital tools and instructional formats, such as videos, text, images, and web platforms, can revitalize teaching strategies, boost engagement, and deepen understanding (Díaz et al., 2020)

The researcher investigated teachers' utilization of technology and devised precise intervention strategies designed to tackle obstacles while encouraging the proficient utilization and seamless integration of technology in the teaching and learning process. The researcher desires to determine the extent of teachers' utilization of technology to propose an intervention plan.

Current State of Knowledge

The modern-day teacher must adapt to meet the needs of 21st-century students, utilizing various computer-based technologies to enhance student motivation and interest. Strengthening the use of computer-based technologies is crucial for fostering capable 21st-century learners (Baterna et al., 2020). However, teachers face challenges such as low ICT literacy, unstable internet, power interruptions, and cost issues with Computer-Based Technology (C.B.T.) implementation (Paje et al., 2018). Nueva (2019) emphasizes technology's role in instructional support, information referencing, and communication platforms in classrooms, yet highlights digital inequality stemming from competency gaps, beliefs, and institutional perceptions. This disparity, impacting students' technology use for academic purposes, is linked to teachers' technological capacity and interventions. Research evidence shows that teachers' effective preparation with ICT tools is vital for successful technology-based teaching and learning, highlighting the significance of professional development training programs Ghavifekr and Rosdy (2015). Similarly, Haleem et al. (2022) emphasized that technology enhances instruction by creating a more engaging and meaningful

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classroom environment, utilizing digital resources and tools to optimize learning through tactics like gamification and flipped classrooms.

Moreover, the utilization of technology is influenced by factors such as age, sex, civil status, highest educational attainment, plantilla position, digital instructions, digital assessment, and digital learning resources. Research studies by Teo (2009) and Ertmer, Ottenbreit-Leftwich, and York (2013) suggest that younger teachers are more comfortable and proficient in using technology compared to older teachers. Tezci (2009) found that gender may influence technology utilization among teachers, with some research indicating that male teachers exhibit higher levels of technology use for specific purposes. According to Rogers (2003), age is a strong factor that influences I.C.T. usage in teaching.

Theoretical Underpinnings

This study is anchored on the Technology Acceptance Model (TAM) theory. The TAM, proposed by Davis in 1986, aims to explain individuals' acceptance and usage of technology based on their perceptions of its usefulness and ease of use. According to the TAM, two main factors influence the utilization of technology. First is the perceived usefulness, which refers to an individual's belief that technology will enhance their performance or productivity in achieving specific goals. If individuals perceive that technology will bring benefits and help them accomplish tasks more efficiently or effectively, they are more likely to accept and utilize it. Second is the perceived ease of use. This refers to an individual's perception of the ease and simplicity of using technology. If individuals believe the technology is user-friendly, intuitive, and requires minimal effort to learn and operate, they are more likely to adopt and utilize it.

The TAM suggests that these two factors, perceived usefulness and perceived ease of use, directly influence an individual's attitude toward using technology, which subsequently affects their intention to utilize it. By using TAM theory as the theoretical framework, the researcher believes TAM offers a comprehensive understanding of technology acceptance and utilization, considering perceived usefulness and ease of use. It is highly relevant to the educational context and has been widely validated. TAM has strong predictive power, allowing the researcher to explore teachers' intentions and behaviors regarding technology use. It provides practical implications for technology implementation in education, informing strategies, training programs, and support systems.

Furthermore, drawing from the TAM, the study might investigate teachers' overall attitude toward adopting technology. Attitude plays a significant role in the TAM in influencing technology adoption. The study also considers external variables that can influence teachers' technology acceptance and utilization. These external factors include training and support, utilization of technology resources, and the school or organizational culture surrounding technology adoption. The TAM acknowledges that external variables can impact individuals' attitudes and intentions.

Objectives of the Study

The main objective of this study was to determine the extent of teachers' utilization of technology in one of the secondary schools in the large size division in central Philippines during the School Year 2022-2023 as basis for an intervention plan. Specifically, this study sought to answer the following questions: 1) the extent of teachers' utilization of technology according to the areas of digital instructions, digital assessment, and digital learning resources; 2) extent of teachers' utilization of technology when grouped according to the age, sex, civil status, highest educational attainment, and plantilla position; 3) significant difference in the extent of teachers' utilization of technology when grouped and compared according to the aforementioned variables; and 4) an intervention plan can be formulated.

Research Methodology:

This section presents the methodology of the study, which includes the research design, locale, respondents, data gathering instrument and its validity and reliability, data gathering procedure, ethical considerations, analytical schemes, and statistical tools.

Research Design

The study utilized the descriptive research design to determine the extent of teachers' utilization of technology in one of the secondary schools in the large size division in the central Philippines during the School Year 2022-2023. According to Lapid et al., (2020), descriptive research design is a research method used to describe or present an accurate picture of a situation or phenomenon. It aims to provide a detailed account of the variables under study without attempting to establish relationships between them. It involves collecting data through observation, surveys, interviews, and other methods to gather information about the characteristics of the subject of study.

Respondents
The respondents of the study were 106 teachers from a total population of 159. Since the number of respondents is quite large to handle, a random sampling- the lottery method was used and the Cochran formula was used to find the sample size.

Instruments

This study used a self-made questionnaire to gather all the data needed. It was subjected to validity (4.85-excellent) and reliability (0.952-excellent). All of them were interpreted as worthy and good, respectively. This comprised of two parts. Part I dealt with the respondents' profiles, including their age, sex, civil status, highest educational attainment, and teaching position. Part II of the questionnaire covered 30 items for teachers' utilization of technology, with ten items for each area of digital instruction, digital assessment, and digital learning resources. Each item was rated on a scale of 1 to 5, using a 5-point Likert scale rating with five as always, four as often, three as sometimes, two as rarely, and one as rarely.

Data Gathering Procedure

For the smoother conduct of the study, the researcher employed the following procedures. A letter of request addressed to the Schools Division Superintendent for the conduct of the study was submitted for approval. Upon approval, the researcher set a schedule for the data gathering with a letter of request to the School Principal. After securing the approval for the second request, questionnaires were administered to target respondents. After completing the survey, the questionnaires were promptly retrieved, and the researcher tallied, evaluated, and interpreted the data to resolve the issue with replies and arrive at a reliable result using the appropriate statistical tools.

Data Analysis and Statistical Treatment

Objective no. 1 used the descriptive analytical scheme and mean to determine the extent of teachers' utilization of technology according to digital instructions, digital assessment, and digital learning resources.

Objective No. 2 used the descriptive analytical scheme and mean to determine the extent of teachers' utilization of technology when the respondents are grouped according to the aforementioned variables.

Objective no. 3 used the comparative analytical scheme and the Mann-Whitney U test to determine if there is a significant difference in the extent of teachers' utilization of technology when the respondents are grouped and compared according to the aforementioned variables

Ethical Considerations

The guidelines that must be adhered to when performing any research are ethical considerations. The participants will receive comprehensive information about the study, including its purpose, procedures, risks, benefits, confidentiality measures, and voluntary participation. Informed consent will be obtained, and participants will have the right to withdraw at any time. Participant information will be treated with strict confidentiality, with anonymized and securely stored data accessed only by authorized personnel. Data collection methods will prioritize participant privacy and handle sensitive information carefully. Data analysis and reporting will be conducted professionally, transparently, and accurately, maintaining participant anonymity and avoiding misrepresentation. Participant well-being and safety will be prioritized, with support services and resources available. Research findings will respect participants' rights and dignity, and participants can be informed of general findings if interested. The researcher will conduct the study with honesty, integrity, and transparency and promptly address participant concerns.

Results and Discussion

In this section, the data gathered were further treated here- presented, analyzed, and interpreted to focus on the specific problems of the study. It presents the study's findings through statistical tools and treatment of descriptive and inferential data.

Table 1 *Extent of teachers' utilization of technology according to the area of Digital Instructions*

Items	Mean	Interpretation
As a teacher, I…		
1. use digital tools during my instructional sessions.	4.36	Great Extent
2. incorporate multimedia resources, such as videos and interactive presentations, in the delivery of my lesson.	4.24	Great Extent
3. personalize instructions using technology to cater to individual student needs.	3.99	Great Extent
4. utilize online platforms or learning management systems to facilitate student engagement.	3.83	Great Extent
5. integrate interactive activities or simulations using digital devices.	3.86	Great Extent
6. assess student learning through online quizzes or digital assessments.	3.19	Moderate Extent
7. provide immediate feedback to students using technology tools.	3.53	Great Extent
8. use digital tools to promote critical thinking and problem-solving skills in my students.	3.73	Great Extent
9. Use educational apps to make my lesson interactive.	3.73	Great Extent
10. use digital content (Great quality materials) in my lesson.	3.66	Great Extent
Overall Mean	**3.81**	**Great Extent**

Table 1 Extent of teachers' utilization of technology according to the area of Digital Instructions. It obtained an overall mean score of 3.81, interpreted as a great extent. The item No. 1 obtained the highest mean of 4.36, or great. On the other hand, the lowest mean score of 3.19, or moderate extent, was obtained by item No. 6. The results imply teachers encounter challenges with student learning through online quizzes and digital assessments in the realm of digital instruction. Technical issues like internet connectivity problems and software glitches can disrupt the assessment process, impacting the overall learning experience. Additionally, not all teachers have received adequate training in effectively using these digital assessment tools, leading to a lack of confidence in their implementation. This finding contradicts that of Morera, Azofra, and Hernández (2012), that the integration of online quizzes with other instructional activities in a teaching strategy has been very favorable.

Table 2 *Extent of teachers' utilization of technology according to the area of Digital Assessment*

Items	Mean	Interpretation
As a teacher, I…		
1. administer online quizzes or digital assessments to assess student learning.	3.20	Moderate Extent
2. Use computer-based tests to evaluate student performance.	3.42	Moderate Extent
3. utilize electronic portfolios to assess student progress.	3.18	Moderate Extent
4. provide immediate feedback to students using digital assessment tools.	3.29	Moderate Extent
5. use online grading systems for tracking and analyzing student performance data.	3.83	Great Extent
6. use Moodle to evaluate students' performance.	2.26	Low Extent
7. use online discussion boards or forums for assessment purposes.	2.87	Moderate Extent
8. use Quizlet to make learning fun and interactive.	2.67	Moderate Extent
9. use Google Forms to deliver my assessment online	2.99	Moderate Extent
10. Use Kahoot to help students to learn and retain information in a fun and engaging way.	2.28	Low Extent
Overall Mean	**3.00**	**Moderate Extent**

Table 2 shows the result of an overall mean of 3.00, interpreted as moderate extent teachers' utilization of technology according to the area of Digital Assessment. Further, the highest mean of 3.83, interpreted as a great extent, was on item no. 5 and the lowest mean score of 2.26, or a moderate extent, was obtained by item no. 6. This implies that in assessing student performance, the teachers still need to fully utilize the use of technology in assessing student learning with Moodle, which is the least utilized digital assessment. Moodle as a digital assessment platform is the initial setup and maintenance complexity. This result confirms the finding of this study by Putnik, Zoran and Ivanovic, Mirjana and Komlenov Mudrinski, Živana and Welzer, Tatjana and Marko, Hoelbl and Beranič, Tina (2013), that from the teachers' perspective, the major obstacle to even greater application of various online activities in their practice presents a relatively low percentage of students who use instructive and communicative features of Moodle.

Table 3. *Extent of teachers' utilization of technology according to the area of Digital Learning Resources*

Items	Mean	Interpretation
As a teacher, I…		
1. use online textbooks or e-books as learning resources.	3.54	Great Extent
2. incorporate educational apps or mobile applications into my teaching.	3.58	Great Extent
3. engage students in online collaborative projects or virtual discussions.	3.41	Moderate Extent
4. utilize multimedia materials (e.g., videos, interactive presentations) for instructional purposes.	4.12	Great Extent
5. encourage students to access open educational resources (O.E.R.s) for additional learning materials.	3.54	Great Extent
6. assign online research or web-based activities for students.	3.38	Moderate Extent
7. use educational websites or online platforms to supplement my lessons.	3.87	Great Extent
8. I use electronic class records to determine my students' grades.	4.73	Very Great Extent
9. I use PowerPoint presentations in the delivery of my lessons.	4.65	Very Great Extent
10. use mobile applications to communicate with my students.	4.61	Very Great Extent
Overall Mean	**3.94**	**Great Extent**

Table 3 depicts the extent of teachers' utilization of technology according to the area of Digital Learning Resources with an overall mean score of 3.94 and interpreted as a great extent. The highest mean of 4.73 was on item no. 8, interpreted as very great extent and the lowest mean score of 3.38 on item no. 6, interpreted as moderate extent. This implies that moderate extent of teachers' utilization of assigning online research and web-based activities and concerns over internet safety and privacy might also deter teachers from assigning online research tasks. Additionally, disparities in students' access to technology and the internet may

create equity issues, making teachers hesitant to rely heavily on digital activities. The finding relates that of Ong, S.G.T., Quek, G.C.L. (2023), that computer usage is crucial, together with the necessary teacher support, to facilitate learning through student interaction and collaboration. This would close existing gaps between teachers' current strategies used and students' expectations of their online learning environment.

Table 4. *The extent of teachers' utilization of technology in the areas of Digital Instruction when grouped according to Age*

Items	**Younger**		**Older**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. use digital tools during my instructional sessions.	4.58	Very Great Extent	4.16	Great Extent
2. incorporate multimedia resources, such as videos and interactive presentations, in the delivery of my lesson.	4.46	Great Extent	4.04	Great Extent
3. personalize instructions using technology to cater to individual student needs.	4.16	Great Extent	3.84	Great Extent
4. utilize online platforms or learning management systems to facilitate student engagement.	4.02	Great Extent	3.66	Great Extent
5. integrate interactive activities or simulations using digital devices.	4.04	Great Extent	3.70	Great Extent
6. assess student learning through online quizzes or digital assessments.	3.36	Moderate Extent	3.04	Moderate Extent
7. provide immediate feedback to students using technology tools.	3.64	Great Extent	3.43	Moderate Extent
8. use digital tools to promote critical thinking and problem-solving skills in my students.	3.90	Great Extent	3.57	Great Extent
9. Use educational apps to make my lesson interactive.	3.84	Great Extent	3.63	Great Extent
10. use digital content (Great quality materials) in my lesson.	3.96	Great Extent	3.39	Moderate Extent
Overall Mean	**4.00**	**Great Extent**	**3.64**	**Great Extent**

Table 4 reveals the results wherein the extent of teachers' utilization of technology in the areas of Digital Instruction when grouped according to age was great extent in both younger and older groups, with an overall mean of 4.00 and 3.64, respectively. Examining further, the younger group attained the highest mean of 4.58, interpreted as a very great extent in item 1 and lowest mean of 3.36, interpreted as moderate extent in item 6. On the other hand, results also reveal that the older group attained the highest mean of 4.16, interpreted as great extent in item 1, and the lowest mean of 3.04 was attained, interpreted as moderate extent in item 6. The study implies that both older and younger teachers struggle with technology-related challenges when implementing online quizzes and digital assessments for assessing student learning, possibly due to a lower level of comfort or familiarity with these practices. Older educators may face a larger learning curve due to generational differences, while younger teachers might need help in breaking away from traditional assessment methods. This finding is agreed with Rogers (2003), a study revealing that age is a strong factor that influences I.C.T. usage in teaching. Roger's diffusion of innovation theory posited that the age of individuals plays an important role in their adoption and use of technology. Younger individuals are more likely to accept and use technology compared to older individuals.

Table 5. *The extent of teachers' utilization of technology in the areas of Digital Assessment when grouped according to Age*

Items	**Younger**		**Older**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. administer online quizzes or digital assessments to assess student learning.	3.36	Moderate Extent	3.05	Moderate Extent
Using computer-based tests to evaluate student performance.	3.62	Great Extent	3.23	Moderate Extent
3. utilize electronic portfolios to assess student progress.	3.50	Great Extent	2.89	Moderate Extent
4. provide immediate feedback to students using digital assessment tools.	3.52	Great Extent	3.09	Moderate Extent
5. use online grading systems for tracking and analyzing student performance data.	4.04	Great Extent	3.64	Great Extent
6. use Moodle to evaluate students' performance.	2.42	Low Extent	2.13	Low Extent
7. use online discussion boards or forums for assessment purposes.	3.06	Moderate Extent	2.70	Moderate Extent

8. use Quizlet to make learning fun and interactive.	2.96	Moderate Extent	2.41	Low Extent
9. use Google Forms to deliver my assessment online	3.24	Moderate Extent	2.77	Moderate Extent
10. Use Kahoot to help students to learn and retain information in a fun and engaging way.	2.54	Moderate Extent	2.05	Low Extent
Overall Mean	**3.23**	**Moderate Extent**	**2.80**	**Moderate Extent**

Table 5 presents the results wherein the extent of teachers' utilization of technology in the areas of Digital Assessment when grouped according to age was moderate extent in both younger and older groups, with an overall mean of 3.23 and 2.80, respectively. Further results both younger and older group attained the highest mean of 4.04 and 3.64 respectively, interpreted as great extent in item 5. Conversely, the younger group attained the lowest mean of 2.42, interpreted as a moderate extent in item 6 and older group attained the lowest mean of 2.05 was attained, interpreted as moderate extent in item 10. The findings suggest that younger teachers do so to a slightly lower extent, particularly in the use of Moodle to evaluate students' performance, possibly due to unfamiliarity with the online platform and maintenance and usage complexity. However, older teachers may have a lower extent of using Kahoot to help students learn and retain information in a fun and engaging way due to their relative unfamiliarity with the platform and a potential preference for traditional teaching methods. Saleem, N. E., Al-Saqri, M. N., & Ahmad, S. E. (2016), supports the finding that age is another factor that may play a role in Moodle acceptance. The age of three faculty members (37-59) exerts a positive effect. Possibly, these faculty members began maximizing technology at a young age, making the transition to Moodle adoption easy for these respondents.

Table 6 *The extent of teachers' utilization of technology in the areas of Digital Learning Resources when grouped according to Age*

Items	**Younger**		**Older**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. use online textbooks or e-books as learning resources.	3.82	Great Extent	3.29	Moderate Extent
2. incorporate educational apps or mobile applications into my teaching.	3.90	Great Extent	3.30	Moderate Extent
3. engage students in online collaborative projects or virtual discussions.	3.54	Great Extent	3.29	Moderate Extent
4. utilize multimedia materials (e.g., videos, interactive presentations) for instructional purposes.	4.32	Great Extent	3.95	Great Extent
5. encourage students to access open educational resources (O.E.R.s) for additional learning materials.	3.64	Great Extent	3.45	Moderate Extent
6. assign online research or web-based activities for students.	3.58	Great Extent	3.20	Moderate Extent
7. use educational websites or online platforms to supplement my lessons.	4.12	Great Extent	3.64	Great Extent
8. I use electronic class records to determine my students' grades.	4.78	Very Great Extent	4.68	Very Great Extent
9. I use PowerPoint presentations in the delivery of my lessons.	4.78	Very Great Extent	4.54	Very Great Extent
10. Use mobile applications to communicate with my students.	4.66	Very Great Extent	4.57	Very Great Extent
Overall Mean	**4.11**	**Great Extent**	**3.79**	**Great Extent**

Table 6 shows the extent of teachers' utilization of technology in the realm of digital learning resources in terms of age was great extent in both younger and older groups, with an overall mean of 4.11 band 3.79, respectively. The younger group attained the highest mean of 4.78, interpreted as a very great extent in both items 8 and 9, and the lowest mean of 3.54, interpreted as great extent" in item 3. Meanwhile, results also revealed that the older group attained the highest mean of 4.68, interpreted as a very great extent in item 8, and the lowest mean of 3.20 was attained, interpreted as moderate extent in item 6. This implies that younger teachers face challenges when it comes to utilizing technology in the area of digital learning resources according to age, particularly in engaging students in online collaborative projects or virtual discussions. However, older teachers may be less inclined to assign online research or web-based activities, possibly due to a lower level of comfort or familiarity with these practices. The results relate with that of Helen B. Boholano, Joje Mar P. Sanchez, Vincent Theodore M. Balo, and Tizza Marie M. Navarro examines how teachers utilize e-portfolios in education, particularly in relation to age groups. Younger teachers tend to adopt e-portfolios more extensively than older teachers, possibly due to varying comfort with technology.

Table 7. *Extent of teachers' utilization of technology in the areas of Digital Instructions, when grouped according to Sex*

Items	**Male**		**Female**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. use digital tools during my instructional sessions.	4.50	Very Great Extent	4.31	Great Extent
2. incorporate multimedia resources, such as videos and interactive presentations, in the delivery of my lesson.	4.29	Great Extent	4.22	Great Extent
3. personalize instructions using technology to cater to individual student needs.	4.29	Great Extent	3.88	Great Extent
4. utilize online platforms or learning management systems to facilitate student engagement.	4.07	Great Extent	3.74	Great Extent
5. integrate interactive activities or simulations using digital devices.	4.04	Great Extent	3.79	Great Extent
6. assess student learning through online quizzes or digital assessments.	3.46	Moderate Extent	3.09	Moderate Extent
7. provide immediate feedback to students using technology tools.	3.75	Great Extent	3.45	Moderate Extent
8. use digital tools to promote critical thinking and problem-solving skills in my students.	4.07	Great Extent	3.60	Great Extent
9. Use educational apps to make my lesson interactive.	3.89	Great Extent	3.67	Great Extent
10. I will use digital content (Great quality materials) in my lesson.	3.86	Great Extent	3.59	Great Extent
Overall Mean	**4.02**	**Great Extent**	**3.73**	**Great Extent**

Table 7 shows the extent of teachers' utilization of technology in the areas of Digital Instructions, when grouped according to sex was great extent in both male and female groups, with an overall mean of 4.02 and 3.73, respectively. The male group attained the highest mean of 4.50, interpreted as very great extent and female group attained 4.31, interpreted as great extent in both items 1. Conversely, moderate extent in item 6 in both male and female with the lowest mean 3.46 and 3.09 respectively. This implies that both male and female teachers utilize digital instructional methods actively, with male teachers using them to a slightly greater extent. The use of online quizzes and digital assessments by both male and female teachers may have the lowest mean extent of technology utilization due to their perception as more traditional, less high-tech, and less innovative in the education field. The results align with the study by Jem Cloyd M. Tanucan, Ma. Rosita A. Hernani, and Felix Diano Jr (2021) underscored the importance of equipping teachers with the knowledge and skills needed to integrate technology effectively into their teaching practices. It suggests that gender-based differences in technology utilization are not innate but can be addressed through targeted capability-building activities tailored to teachers' demographics and backgrounds.

Table 8. *The extent of teachers' utilization of technology in the areas of Digital Assessment when grouped according to Sex*

Items	**Male**		**Female**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. administer online quizzes or digital assessments to assess student learning.	3.46	Moderate Extent	3.10	Moderate Extent
2. Use computer-based tests to evaluate student performance.	3.61	Great Extent	3.35	Moderate Extent
3. utilize electronic portfolios to assess student progress.	3.32	Moderate Extent	3.13	Moderate Extent
4. provide immediate feedback to students using digital assessment tools.	3.64	Great Extent	3.17	Moderate Extent
5. use online grading systems for tracking and analyzing student performance data.	3.93	Great Extent	3.79	Great Extent
6. use Moodle to evaluate students' performance.	2.50	Moderate Extent	2.18	Low Extent
7. use online discussion boards or forums for assessment purposes.	3.07	Moderate Extent	2.79	Moderate Extent
8. use Quizlet to make learning fun and interactive.	2.82	Moderate Extent	2.62	Moderate Extent
9. use Google Forms to deliver my assessment online	3.11	Moderate Extent	2.95	Moderate Extent
10. Use Kahoot to help students to learn and	2.68	Moderate Extent	2.14	Low Extent

retain information in a fun and engaging way.				
Overall Mean	**3.21**	**Moderate Extent**	**2.92**	**Moderate Extent**

Table 8 shows the extent of teachers' utilization of technology in the areas of Digital Assessment, when grouped according to sex was moderate extent in both male and female groups, with an overall mean of 3.21 and 2.92, respectively. The male and female groups attained the highest mean of 3.93 and 3.79 respectively, interpreted as great extent in both items 5. Conversely, male group attained the lowest mean of 2.50, interpreted as a moderate extent in item 6 and female attained the lowest mean of 2.14, interpreted as low extent in item 10. This implies that both male and female teachers tend to use technology in digital assessment to a slightly greater extent than their female counterparts. The use of Moodle to evaluate students' performance may have the lowest mean in males because they might find it less user-friendly or have less experience and unfamiliarity with the platform. However, in female groups, the lowest mean is the use of Kahoot to help students learn and retain information in a fun and engaging way due to they might be less familiar with the tool or prefer different teaching methods. This finding differs from that of Saleem, N. E., Al-Saqri, M. N., & Ahmad, S. E. (2016), who found no gender effects on Moodle use; that is, both the male faculty members and female teachers apply Moodle in their instruction.

Table 9. *The extent of teachers' utilization of technology in the areas of Digital Learning Resources when grouped according to Sex*

Items	**Male**		**Female**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. use online textbooks or e-books as learning resources.	3.75	Great Extent	3.46	Moderate Extent
2. incorporate educational apps or mobile applications into my teaching.	3.89	Great Extent	3.47	Moderate Extent
3. engage students in online collaborative projects or virtual discussions.	3.68	Great Extent	3.31	Moderate Extent
4. utilize multimedia materials (e.g., videos, interactive presentations) for instructional purposes.	4.32	Great Extent	4.05	Great Extent
5. encourage students to access open educational resources (O.E.R.s) for additional learning materials.	3.68	Great Extent	3.49	Moderate Extent
6. assign online research or web-based activities for students.	3.71	Great Extent	3.26	Moderate Extent
7. use educational websites or online platforms to supplement my lessons.	3.86	Great Extent	3.87	Great Extent
8. I use electronic class records to determine my students' grades.	4.68	Very Great Extent	4.74	Very Great Extent
9. I use PowerPoint presentations in the delivery of my lessons.	4.54	Very Great Extent	4.69	Very Great Extent
10. Use mobile applications to communicate with my students.	4.57	Very Great Extent	4.63	Very Great Extent
Overall Mean	**4.07**	**Great Extent**	**3.90**	**Great Extent**

Table 9 shows the extent of teachers' utilization of technology in the areas of Digital Learning Resources, when grouped according to sex was great extent in both male and female groups, with an overall mean of 4.07 and 3.90, respectively. The male and female groups attained the highest mean of 4.68 and 4.74 respectively, interpreted as vey great extent in both items 8. Conversely, male group attained the lowest mean of 3.68, interpreted as a great extent in both item 3 and 5 and female attained the lowest mean of 3.26, interpreted as moderate extent in item 6. This implies that both male and female teachers actively utilize digital learning resources, with slightly higher utilization among males. Findings agreed with the study of Tezci, E. (2009), who revealed that the comparisons in terms of gender, I.C.T. knowledge, their use in education, and attitudes towards the Internet show statistical differences. Male teachers had higher scores than female teachers in terms of knowledge and usage. They had more positive attitudes than female teachers did.

Table 10. *Extent of teachers' utilization of technology in the areas of Digital Instruction when grouped according to Civil Status*

Items	**Single**		**Married**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. use digital tools during my instructional sessions.	4.53	Very Great Extent	4.26	Great Extent
2. incorporate multimedia resources, such as videos and interactive presentations, in the delivery of my lesson.	4.33	Great Extent	4.18	Great Extent

3. personalize instructions using technology to cater to individual student needs.	4.13	Great Extent	3.91	Great Extent
4. utilize online platforms or learning management systems to facilitate student engagement.	3.83	Great Extent	3.83	Great Extent
5. integrate interactive activities or simulations using digital devices.	3.85	Great Extent	3.86	Great Extent
6. assess student learning through online quizzes or digital assessments.	3.30	Moderate Extent	3.12	Moderate Extent
7. provide immediate feedback to students using technology tools.	3.73	Great Extent	3.41	Moderate Extent
8. use digital tools to promote critical thinking and problem-solving skills in my students.	3.80	Great Extent	3.68	Great Extent
9. Use educational apps to make my lesson interactive.	3.78	Great Extent	3.70	Great Extent
10. I will use digital content (Great quality materials) in my lesson.	3.78	Great Extent	3.59	Great Extent
Overall Mean	**3.90**	**Great Extent**	**3.75**	**Great Extent**

Table 10 shows the extent of teachers' utilization of technology in the areas of Digital Instruction, when grouped according to civil status was great extent in both single and married group, with an overall mean of 3.90 and 3.75, respectively. The single and married groups attained the highest mean of 4.53 and 4.26 respectively, interpreted as very great extent in single group and great extent in married both in item 1. Conversely, single and married group attained the lowest mean of 3.30 and 3.12 respectively, interpreted as a moderate extent both in item 6. This implies both single and married teachers actively embrace technology in the domain of digital instruction, with slightly higher utilization among single teachers. The lowest mean of both single and married teachers who assess student learning through online quizzes or digital assessments due to limited time and energy due to family responsibilities, and their diverse teaching roles, including part-time or substitute teaching, work-life balance, and teaching schedules can hinder their effective use of digital assessments. This finding which reveals that both single and married teachers actively employ technology in digital instruction, resonate with the broader context of technology's role in education, as emphasized by the study conducted by Helen B. Boholano, Joje Mar P. Sanchez, Vincent Theodore M. Balo, and Tizza Marie M. Navarro (2020).

Table 11. *Extent of teachers' utilization of technology in the areas of Digital Assessment when grouped according to Civil Status*

Items	**Single**		**Married**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. administer online quizzes or digital assessments to assess student learning.	3.40	Moderate Extent	3.08	Moderate Extent
2. Use computer-based tests to evaluate student performance.	3.58	Great Extent	3.32	Moderate Extent
3. utilize electronic portfolios to assess student progress.	3.48	Moderate Extent	3.00	Moderate Extent
4. provide immediate feedback to students using digital assessment tools.	3.63	Great Extent	3.09	Moderate Extent
5. use online grading systems for tracking and analyzing student performance data.	3.98	Great Extent	3.74	Great Extent
6. use Moodle to evaluate students' performance.	2.30	Low Extent	2.24	Low Extent
7. use online discussion boards or forums for assessment purposes.	2.88	Moderate Extent	2.86	Moderate Extent
8. use Quizlet to make learning fun and interactive.	2.80	Moderate Extent	2.59	Moderate Extent
9. use Google Forms to deliver my assessment online	3.05	Moderate Extent	2.95	Moderate Extent
10. use Kahoot to help students to learn and retain information in a fun and engaging way.	2.50	Moderate Extent	2.15	Low Extent
Overall Mean	**3.16**	**Moderate Extent**	**2.90**	**Moderate Extent**

Table 11 shows the extent of teachers' utilization of technology in the areas of Digital Assessment, when grouped according to civil status was moderate extent in both single and married group, with an overall mean of 3.16 and 2.90, respectively. The single and married groups attained the highest mean of 3.98 and 3.74 respectively, interpreted as great extent in both item 5. Conversely, the single group attained the lowest mean of 2.30, interpreted as low extent in item 6 and married group the lowest mean of 2.15 was

attained, interpreted as low extent in item 10. This implies single teachers tend to use technology in digital assessment to a slightly greater extent than their married counterparts. The lowest mean utilization of digital assessment, particularly in using Moodle to evaluate students' performance, within the single civil status group may be linked to individual workloads and personal commitments. However, the low use of digital assessments like Kahoot in married groups is likely due to family responsibilities, limited time, work-life balance differences, and unfamiliarity with digital tools. Findings on teachers' use of digital assessment technology by marital status highlight the need to address digital inequality, as those with family responsibilities may struggle to find time and resources for technology integration (Arnone et al., 2011).

Table 12. *The extent of teachers' utilization of technology in the areas of Digital Learning Resources when grouped according to Civil Status*

Items	**Single**		**Married**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. use online textbooks or e-books as learning resources.	3.90	Great Extent	3.32	Moderate Extent
2. incorporate educational apps or mobile applications into my teaching.	3.80	Great Extent	3.45	Moderate Extent
3. engage students in online collaborative projects or virtual discussions.	3.48	Moderate Extent	3.36	Moderate Extent
4. utilize multimedia materials (e.g., videos, interactive presentations) for instructional purposes.	4.28	Great Extent	4.03	Great Extent
5. encourage students to access open educational resources (O.E.R.s) for additional learning materials.	3.63	Great Extent	3.48	Moderate Extent
6. assign online research or web-based activities for students.	3.43	Moderate Extent	3.35	Moderate Extent
7. use educational websites or online platforms to supplement my lessons.	4.05	Great Extent	3.76	Great Extent
8. Use chronic class records to determine students' grades	4.73	Very Great Extent	4.73	Very Great Extent
9. I use PowerPoint presentations in the delivery of my lessons.	4.75	Very Great Extent	4.59	Very Great Extent
10. Use mobile applications to communicate with my students.	4.70	Very Great Extent	4.56	Very Great Extent
Overall Mean	**4.07**	**Great Extent**	**3.86**	**Great Extent**

Table 12 shows the extent of teachers' utilization of technology in the areas of Digital Learning Resources, when grouped according to civil status was great extent in both single and married group, with an overall mean of 4.07 and 3.86, respectively. The single group attained the highest mean of 4.75, interpreted as a very great extent in item 9, and attained the lowest mean of 3.43, interpreted as a moderate extent in item 6. Meanwhile, the married group attained the highest mean of 4.73, interpreted as a very great extent in item 8, and the lowest mean of 3.32 was attained, interpreted as moderate extent in item 1. This implies that single teachers tend to use digital learning resources slightly more than their married counterparts, but their lowest usage, particularly in promoting O.E.R.s, may be due to time constraints, diverse teaching roles, and lack of training. Married teachers' lower use of online textbooks and e-books can be influenced by work-life balance issues and greater family responsibilities, limiting their ability to integrate these resources effectively. This finding relates to the study Nueva, (2019) that both single and married teachers actively use digital learning resources, reflecting technology's multifaceted role in education as instructional support, information reference, and communication platform. However, digital inequality persists due to varying digital competencies, beliefs, and institutional perceptions.

Table 13. *The extent of teachers' utilization of technology in the areas of Digital Instruction, when grouped according to Highest Educational Attainment*

Items	**Lower**		**Higher**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. use digital tools during my instructional sessions.	4.23	Great Extent	4.48	Great Extent
2. incorporate multimedia resources, such as videos and interactive presentations, in the delivery of my lesson.	4.10	Great Extent	4.37	Great Extent
3. personalize instructions using technology to cater to individual student needs.	3.85	Great Extent	4.13	Great Extent
4. utilize online platforms or learning management systems to facilitate student engagement.	3.75	Great Extent	3.91	Great Extent

5. integrate interactive activities or simulations using digital devices.	3.75	Great Extent	3.96	Great Extent
6. assess student learning through online quizzes or digital assessments.	3.12	Moderate Extent	3.26	Moderate Extent
7. provide immediate feedback to students using technology tools.	3.38	Moderate Extent	3.67	Great Extent
8. use digital tools to promote critical thinking and problem-solving skills in my students.	3.60	Great Extent	3.85	Great Extent
9. Use educational apps to make my lesson interactive.	3.60	Great Extent	3.85	Great Extent
10. I will use digital content (Great quality materials) in my lesson.	3.54	Great Extent	3.78	Great Extent
Overall Mean	**3.69**	**Great Extent**	**3.93**	**Great Extent**

Table 13 shows the extent of teachers' utilization of technology in the areas of Digital Instructions, when grouped according to highest educational attainment was great extent in both lower and higher group, with an overall mean of 3.69 and 3.93, respectively. The lower and higher group attained the highest mean of 4.23 and 4.48 respectively, interpreted as great extent both in item 1. Conversely, the lower and higher attained the lowest mean of 3.12 and 3.26 respectively, interpreted as moderate extent both in item 6. This implies that teachers, regardless of educational attainment, actively embrace digital instruction, with slightly higher usage among those with higher educational attainment. However, both groups show the lowest mean utilization in assessing student learning through online quizzes, likely due to limited exposure to advanced digital methods in the lower attainment group and a preference for traditional methods among those with higher attainment. The findings relate to the 2021 study by Tanucan, Hernani, and Diano underscores the importance of educational attainment in incorporating digital instruction, emphasizing that teachers need content knowledge, pedagogy, and technology proficiency. It highlights the need for personalized professional development to equip teachers with the skills for effective digital instruction.

Table 14. *The extent of teachers' utilization of technology in the areas of Digital Assessment when grouped according to Highest Educational Attainment*

Items	**Lower**		**Higher**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. administer online quizzes or digital assessments to assess student learning.	3.15	Moderate Extent	3.24	Moderate Extent
2. Use computer-based tests to evaluate student performance.	3.29	Moderate Extent	3.54	Great Extent
3. utilize electronic portfolios to assess student progress.	3.19	Moderate Extent	3.17	Moderate Extent
4. provide immediate feedback to students using digital assessment tools.	3.19	Moderate Extent	3.39	Moderate Extent
5. use online grading systems for tracking and analyzing student performance data.	3.94	Great Extent	3.72	Great Extent
6. use Moodle to evaluate students' performance.	2.19	Low Extent	2.33	Low Extent
7. use online discussion boards or forums for assessment purposes.	2.81	Moderate Extent	2.93	Moderate Extent
8. use Quizlet to make learning fun and interactive.	2.58	Moderate Extent	2.76	Moderate Extent
9. use Google Forms to deliver my assessment online	2.79	Moderate Extent	3.19	Moderate Extent
10. Use Kahoot to help students to learn and retain information in a fun and engaging way.	2.23	Low Extent	2.33	Low Extent
Overall Mean	**2.94**	**Moderate Extent**	**3.06**	**Moderate Extent**

Table 14 shows the extent of teachers' utilization of technology in the areas of Digital Assessment, when grouped according to highest educational attainment was moderate extent in both lower and higher group, with an overall mean of 2.94 and 3.06, respectively. The lower and higher group attained the highest mean of 3.94 and 3.72 respectively, interpreted as a great extent both in item 5. Conversely, the lower group attained the lowest mean of 2.19, interpreted low extent in item 6 and higher group attained lowest mean of 2.33, interpreted as low extent in item 6 and 10. This implies that while both groups of teachers use technology for digital assessment, those with higher educational attainment do so slightly more. Lower utilization of Moodle among teachers with lower educational attainment may be due to less exposure and confidence with advanced digital tools. For teachers with higher educational attainment, low utilization of tools like Moodle and Kahoot may result from a preference for traditional methods and limited technological skills. The findings highlight the need to equip teachers with digital assessment literacy and skills, as technology-driven strategies like online quizzes and electronic portfolios can enhance assessment efficiency

and provide immediate feedback. Farjon, D., Smits, A., & Voogt, J. (2019) emphasizes that digital assessments offer data-driven insights into student performance, enabling more personalized and effective instruction.

Table 15. *The extent of teachers' utilization of technology in the areas of Digital Learning Resources when grouped according to Highest Educational Attainment*

Items	Lower		Higher	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. use online textbooks or e-books as learning resources.	3.42	Moderate Extent	3.65	Great Extent
2. incorporate educational apps or mobile applications into my teaching.	3.54	Great Extent	3.63	Great Extent
3. engage students in online collaborative projects or virtual discussions.	3.23	Moderate Extent	3.57	Great Extent
4. utilize multimedia materials (e.g., videos, interactive presentations) for instructional purposes.	4.08	Great Extent	4.17	Great Extent
5. encourage students to access open educational resources (O.E.R.s) for additional learning materials.	3.37	Moderate Extent	3.70	Great Extent
6. assign online research or web-based activities for students.	3.29	Moderate Extent	3.46	Moderate Extent
7. use educational websites or online platforms to supplement my lessons.	3.75	Great Extent	3.98	Great Extent
8. I use electronic class records to determine my students' grades.	4.69	Very Great Extent	4.76	Very Great Extent
9. use power point presentations in the delivery of my lessons.	4.67	Very Great Extent	4.63	Very Great Extent
10. Use mobile applications to communicate with my students.	4.62	Very Great Extent	4.61	Very Great Extent
Overall Mean	**3.87**	**Great Extent**	**4.02**	**Great Extent**

Table 15 reveals the extent of teachers' utilization of technology in the areas of Digital learning Resources, when grouped according to highest educational attainment was great extent in both lower and higher group, with an overall mean of 3.87 and 4.02, respectively. The lower and higher group attained the highest mean of 4.69 and 4.76 respectively, interpreted as a very great extent both in item 8. However, the lower group attained the lowest mean of 3.23, interpreted moderate extent in item 3 and higher group attained lowest mean of 3.46, interpreted as moderate extent in item 6. This implies that teachers, regardless of educational attainment, embrace digital learning resources, with slightly higher use among those with higher attainment. Lower utilization of online collaborative projects and virtual discussions in the lower attainment group may stem from limited exposure and confidence with advanced digital tools. In contrast, the higher attainment group's lower use of online research and web-based activities could be due to a preference for traditional methods and a lack of advanced technological skills and training. The findings align with Ghavifekr and Rosdy's (2015) study, emphasizing the importance of teachers being well-prepared with ICT tools. They indicate that teachers, regardless of educational background, actively integrate technology into their teaching.

Table 16. *The extent of teachers' utilization of technology in the areas of Digital Instructions, when grouped according to Plantilla Position*

Items	Lower		Higher	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. use digital tools during my instructional sessions.	4.39	Great Extent	4.26	Great Extent
2. incorporate multimedia resources, such as videos and interactive presentations, in the delivery of my lesson.	4.29	Great Extent	4.07	Great Extent
3. personalize instructions using technology to cater to individual student needs.	4.04	Great Extent	3.85	Great Extent
4. utilize online platforms or learning management systems to facilitate student engagement.	3.84	Great Extent	3.81	Great Extent
5. integrate interactive activities or simulations using digital devices.	3.84	Great Extent	3.93	Great Extent
6. assess student learning through online quizzes or digital assessments.	3.24	Moderate Extent	3.04	Moderate Extent
7. provide immediate feedback to students using technology tools.	3.57	Great Extent	3.41	Moderate Extent

8. use digital tools to promote critical thinking and problem-solving skills in my students.	3.71	Great Extent	3.78	Great Extent
9. Use educational apps to make my lesson interactive.	3.67	Great Extent	3.89	Great Extent
10. Use digital content (Great quality materials) in my lesson.	3.65	Great Extent	3.70	Great Extent
Overall Mean	**3.82**	**Great Extent**	**3.77**	**Great Extent**

Table 16 reveals the extent of teachers' utilization of technology in the areas of Digital Instructions, when grouped according to plantilla position was great extent in both lower and higher group, with an overall mean of 3.82 and 3.77, respectively. The lower and higher group attained the highest mean of 4.39 and 4.26 respectively, interpreted as a great extent both in item 1. However, the lower and higher group attained the lowest mean of 3.24 and 3.04, respectively, interpreted moderate extent both in item 6. This implies that teachers in lower positions utilize digital instruction slightly more than those in higher positions, with both groups showing low utilization of digital assessment methods. Limited experience, training, and access to professional development may hinder digital assessment use in lower positions, while administrative responsibilities may prioritize other tasks in higher positions. The findings relates with Zhu, Valcke, and Schellens (2009) and Weston and Bain (2010) investigated how technology utilization varies among classroom teachers, subject specialists, and school administrators.

Table 17. *The extent of teachers' utilization of technology in the areas of Digital Assessment when grouped according to Plantilla Position*

Items	**Lower**		**Higher**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**
1. administer online quizzes or digital assessments to assess student learning.	3.28	Moderate Extent	2.96	Moderate Extent
2. Use computer-based tests to evaluate student performance.	3.47	Moderate Extent	3.26	Moderate Extent
3. utilize electronic portfolios to assess student progress.	3.16	Moderate Extent	3.22	Moderate Extent
4. provide immediate feedback to students using digital assessment tools.	3.33	Moderate Extent	3.19	Moderate Extent
5. use online grading systems for tracking and analyzing student performance data.	3.85	Great Extent	3.78	Great Extent
6. use Moodle to evaluate students' performance.	2.33	Low Extent	2.07	Low Extent
7. use online discussion boards or forums for assessment purposes.	2.90	Moderate Extent	2.78	Moderate Extent
8. use Quizlet to make learning fun and interactive.	2.67	Moderate Extent	2.67	Moderate Extent
9. use Google Forms to deliver my assessment online	3.01	Moderate Extent	2.93	Moderate Extent
10. Use Kahoot to help students to learn and retain information in a fun and engaging way.	2.24	Low Extent	2.41	Low Extent
Overall Mean	**3.02**	**Moderate Extent**	**2.93**	**Moderate Extent**

Table 17 shows the extent of teachers' utilization of technology in the areas of Digital Assessment, when grouped according to plantilla position was moderate extent in both lower and higher group, with an overall mean of 3.02 and 2.93, respectively. The lower and higher group attained the highest mean of 3.85 and 3.78 respectively, interpreted as a great extent both in item 5. However, the lower attained the lowest mean of 2.24, interpreted as low extent in item 10, and the higher group lowest mean of 2.07 was attained, interpreted as moderate extent in item 6. This implies that both lower and higher-positioned teachers use technology for digital assessment, with lower-positioned teachers doing so slightly more. Lower use of Kahoot in the lower group may be due to limited resources, training time, and focus on classroom management. Higher-positioned teachers show low use of Moodle due to administrative duties that limit exposure and training in advanced digital assessment methods. The findings highlights that teachers across various positions utilize technology for digital assessment, aligning with the evolving 21st-century education landscape. The modern teaching role requires adaptability to foster student motivation and engagement through technology. Baterna et al. (2020) emphasize digital literacy as essential for careers in the new industrial era.

Table 18. *The extent of teachers' utilization of technology in the areas of Digital Learning Resources when grouped according to Plantilla Position*

Items	**Lower**		**Higher**	
As a teacher, I…	**Mean**	**Interpretation**	**Mean**	**Interpretation**

1. use online textbooks or e-books as learning resources.	3.57	Great Extent	3.44	Moderate Extent
2. incorporate educational apps or mobile applications into my teaching.	3.58	Great Extent	3.59	Great Extent
3. engage students in online collaborative projects or virtual discussions.	3.42	Moderate Extent	3.37	Moderate Extent
4. utilize multimedia materials (e.g., videos, interactive presentations) for instructional purposes.	4.18	Great Extent	3.96	Great Extent
5. encourage students to access open educational resources (O.E.R.s) for additional learning materials.	3.56	Great Extent	3.48	Moderate Extent
6. assign online research or web-based activities for students.	3.38	Moderate Extent	3.37	Moderate Extent
7. use educational websites or online platforms to supplement my lessons.	3.95	Great Extent	3.63	Great Extent
8. I use electronic class records to determine my students' grades.	4.71	Very Great Extent	4.78	Very Great Extent
9. use power point presentations in the delivery of my lessons.	4.68	Very Great Extent	4.56	Very Great Extent
10. use mobile applications to communicate with my students.	4.59	Very Great Extent	4.67	Very Great Extent
Overall Mean	**3.96**	**Great Extent**	**3.89**	**Great Extent**

Table 18 shows the extent of teachers' utilization of technology in the areas of Digital Learning Resources, when grouped according to plantilla position was great extent in both lower and higher group, with an overall mean of 3.96 and 3.89, respectively. The lower and higher group attained the highest mean of 4.71 and 4.78 respectively, interpreted as a very great extent both in item 8. However, the lower and higher group attained the lowest mean 3.38 and 3.37 respectively, interpreted as moderate extent in item 6. This implies that both groups of teachers, irrespective of their plantilla positions, actively embrace technology in the domain of digital learning resources, with slightly higher utilization among those with higher plantilla positions. The lower utilization of digital learning in the lower position group may be due to limited time, resources, and exposure to advanced tools. In the higher position group, administrative priorities, heavier workloads, and inadequate training hinder the use of online collaborative projects, virtual discussions, and web-based activities. The findings show that teachers at both lower and higher positions actively use technology in digital learning, aligning with Ghavifekr and Rosdy's (2015) emphasis on the importance of ICT tools for effective teaching. The findings highlight the need for professional development programs to enhance student learning experiences through technology integration.

Table 19. *Differences in the extent of teachers' utilization of technology in the area of Digital Instructions when grouped and compared according to variables*

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. Level*	Interpretation
Age	Younger	50	62.05	972.500	0.007	0.05	Significant
	Older	56	45.87				
Sex	Male	28	63.89	801.000	0.037		Significant
	Female	78	49.77				
Civil Status	Single	40	57.71	1151.500	0.271		Not Significant
	Married	66	50.95				
Highest Educational Attainment	Lower	52	48.16	1126.500	0.079		Not Significant
	Higher	54	58.64				
Plantilla Position	Lower	79	54.42	993.500	0.596		Not Significant
	Higher	27	50.80				

Table 19 shows the differences in the extent of teachers' utilization of technology in the area of Digital Instructions when grouped and compared according to variables. The results reveal significant differences in teachers' technology use in digital instruction based on age and sex, with U values of 972.500 ($p = 0.007$) and 801.000 ($p = 0.037$), respectively, leading to the rejection of the null hypothesis for these factors. However, no significant differences were observed based on civil status, highest educational attainment, or plantilla position, with p-values exceeding 0.05, leading to the acceptance of the null hypothesis for these factors. The study implies that younger, more tech-savvy teachers benefit from programs that refine pedagogical skills and integrate technology, while older teachers need comprehensive, hands-on training to bridge the digital divide. Gender-sensitive approaches in technology training are

necessary, with tailored programs addressing the specific challenges of male and female educators for more effective technology integration. Recognizing these differences can lead to more inclusive and impactful training initiatives. The study highlights the need for tailored support for teachers based on age and sex, emphasizing administrative backing, as identified by Lam & Yuen (2020), as crucial for overcoming technology integration challenges. Administrators can foster a supportive culture by providing financial resources, professional development time, and recognition. Although no significant differences were found based on civil status, educational attainment, or teaching position, administrative support is essential for all teachers to effectively use technology to enhance instruction and improve student outcomes.

Table 20. *Differences in the extent of teachers' utilization of technology in the area of Digital Assessment when grouped and compared according to variables*

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. Level*	Interpretation
Age	Younger	50	61.99	975.500	0.007	0.05	Significant
	Older	56	45.92				
Sex	Male	28	60.30	901.500	0.172		Not Significant
	Female	78	51.06				
Civil Status	Single	40	59.30	1088.000	0.130		Not Significant
	Married	66	49.98				
Highest Educational Attainment	Lower	52	51.24	1286.500	0.457		Not Significant
	Higher	54	55.68				
Plantilla Position	Lower	79	54.73	696.500	0.481		Not Significant
	Higher	27	49.91				

Table 20 shows differences in the extent of teachers' utilization of technology in the area of Digital Assessment when grouped and compared according to variables. The results reveal the significant difference in teachers' technology use for digital assessment based on age (U = 975.500, p = 0.007), leading to the rejection of the null hypothesis for this factor. However, no significant differences were observed for sex, civil status, highest educational attainment, or plantilla position, with p-values exceeding the 0.05 threshold, leading to the acceptance of the null hypothesis for these factors. This implies that age influences how teachers incorporate digital assessment tools, with potential proficiency and comfort variations between younger and older educators. Younger teachers may benefit from advanced training in innovative assessment methods, while older teachers may need targeted support to bridge the generational gap and adapt to digital tools. However, factors such as sex, civil status, educational attainment, and teaching position may not significantly impact technology integration in assessment practices. The study highlights age-related disparities and the importance of addressing the digital divide through tailored support for educators. Despite age-related differences in technology adoption, research emphasizes the numerous benefits of technology integration in education, including enriched teaching strategies, enhanced student engagement, and personalized instruction (Kay et al., 2018).

Table 21. *Differences in the extent of teachers' utilization of technology in the area of Digital Learning Resources when grouped and compared according to variables*

Variable	Category	N	Mean Rank	Mann Whitney U	p-value	*Sig. Level*	Interpretation
Age	Younger	50	61.59	995.500	0.010	0.05	Significant
	Older	56	46.28				
Sex	Male	28	60.02	909.500	0.190		Not Significant
	Female	78	51.16				
Civil Status	Single	40	60.01	1059.500	0.089		Not Significant
	Married	66	49.55				
Highest Educational Attainment	Lower	52	50.50	1248.000	0.324		Not Significant
	Higher	54	56.39				
Plantilla Position	Lower	79	54.57	982.000	0.540		Not Significant
	Higher	27	50.37				

Table 21 shows differences in the extent of teachers' utilization of technology in the area of Digital Learning Resources when grouped and compared according to variables. The results reveal significant differences in teachers' technology use for digital learning resources based on age (U = 995.500, p = 0.010), leading to the rejection of the null hypothesis for this factor. However, no significant differences were observed for sex, civil

status, educational attainment, or plantilla position, with p-values exceeding the 0.05 threshold, leading to the acceptance of the null hypothesis for these factors. This implies that different age groups may approach digital tools differently. Younger teachers, typically more tech-savvy, may naturally integrate digital resources into their teaching. On the other hand, older teachers may benefit from targeted training to enhance their digital skills and effectively utilize digital learning resources. The study highlights the significant age-related differences in the utilization of digital learning resources highlighting the transformative potential of technology in education. These resources, such as online quizzes, digital portfolios, and learning management systems, enable real-time data collection, personalized feedback, and enhanced engagement. Addressing age-related disparities in technology use and providing training and support for educators are crucial to ensure the effective integration of these resources into teaching practices, as suggested by Lyublinskaya (2022).

Conclusion

Based on the foregoing findings, the conclusions that were arrived at are as follows: regardless of age, sex, civil status, highest educational attainment, and teaching position, the teachers have not fully utilized technology in their instructions, assessing their student learning and performance, and as student learning resources. This study found age and sex significantly influence technology use in digital instruction, with younger female teachers more frequently utilizing technology. Teachers below 40 years old tend to use technology more in assessing student learning and performance and in providing student learning resources. This study found Civil status, highest educational attainment, and teaching position do not significantly affect teachers' utilization of technology in instruction, assessment, and learning resources. Given that teachers overall have not fully utilized technology in these areas, an intervention plan is needed.

Based on the findings the following recommendations were advanced: 1) teachers should increase their utilization of technology in teaching, assessment, and resource creation through workshops focused on tools like Google Forms, Quizlet, Moodle, and Kahoot, with specific emphasis on supporting teachers aged 40 and above and male educators in enhancing their technological proficiency in instruction and assessment; 2) school and department heads can collaborate to implement training programs for teachers, focusing on assessment tools like Google Forms and Quizlet, integrating Moodle and Kahoot for assessing student learning, and utilizing online research and web-based platforms; 3) the school planning team, section counselors, and parent-teacher association will host parent conferences to inform parents about the significance of teachers' technology integration in classrooms, aiding their children's academic success by introducing them to diverse educational technology tools, applications, and software for digital preparedness; 4.) Master teachers will conduct Learning Action Cell (LAC) sessions for all teachers to empower them in effectively integrating technology into teaching practices, fostering improved student outcomes and responsive professional learning communities to emerging educational technology trends and needs; 5) a project proposal titled I.TEACHUnology as an intervention plan is suggested based on the study results, outlining strategies and activities to enhance teachers' technology utilization in digital instruction, assessments, and learning resources.

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