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## **Technology Acceptance Model(Tam) in Educational Technology Utilization**

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### **ABSTRACT**

*This study was conducted to investigate the application of the Technology Acceptance Model in the utilization of educational technology among public elementary and secondary school teachers. The application of Technology Acceptance Model specifically examined the teachers' challenges, perceived usefulness, perceived ease of use and their attitudes toward educational technology. The quantitative-correlational research design was used with several sets of questionnaires which served as data gathering tools. The research was conducted in Sindangan, Zamboanga del Sur, where it involved teachers from the different public elementary schools in the district during the school first two quarters of the School Year 2022-2023. The participants of this study were 500 public secondary teachers from the different schools in Sindangan, Zamboanga Del Norte.*

*The participants were aware of the innovation of communication technology and used it for both social and instructional purposes. They encountered challenges due to compatibility issues and resistance to adopting new technologies. However, they found educational technology useful and easy to use, with positive attitudes towards it. Challenges had no impact on their perceived usefulness and ease of use of educational technology.*

*School heads should improve their budget allocation, strengthen their staff development programs, and monitor their staff's utilization of educational technology. Teachers should also enhance their competencies and skills in the use of platforms, multimedia and interactive activities. Future research should consider other factors.*

**KEYWORDS:** *Technology Acceptance Model, Educational Technology, Utilization*

### **INTRODUCTION**

The swift development of technology has made life of most people faster and easier. Almost everything can be done and attained in express mode. Fast transportation, speedy communication, quick and secured way of sending money, ready to cook or instant food and a lot more of innovations in technology that made life very convenient for most people.

With that advancement, working nowadays also requires the use of technology as it makes a person more productive. Majority of the tasks are done with the use of computer and some of these activities are processed through online transactions. This does not exclude the teachers who, at the moment does not only need computer to do their paper works but use it to connect and provide lessons to their students. We say that technology is indeed very beneficial and is even considered by others as an advantage. However, this advancement is also considered as a challenge among teachers when in it comes to using technology not only in conducting

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classes, but in fulfilling the necessary tasks and paperwork needed required from them. This innovation in teaching is deemed difficult by teachers especially those who are so used to the traditional way of teaching.

DepEd Order No. 11, s. 2020, [1] entitled “Policy Guidelines on the Alternative Delivery Modes or Blended Learning for the Provision of Basic Education Services for SY 2020-2021” outlines the policy guidelines for the use of technology-enabled distance and online learning in the Philippines. It encourages the use of “online platforms, digital content, and technology-enabled tools and services” as part of the blended learning approach for SY 2020-2021.

Even before the institutionalization on the utilization of technology-enabled distance and online learning, Briones [2] introduced DepEd Digital Rise which highlighted 10-point agenda where the Department of Education (DepEd) committed to the full implementation of the K to 12 Curriculum.

The DepEd Digital Rise is intended to support the implementation of Information, Media and Technology skills imbedded in the educational programs. Three important ways were emphasized to which Information and Communication Technology (ICT) can support the curriculum, namely: the delivery of ICT subjects designed to build up the competencies of the children. Prioritizing ICT-assisted teaching; and ICT-assisted learning.

Although it is already mandated that DepEd should be back to the face-to-face interaction, in some instances, teachers resort to blended instruction. There are cases when there is a need for the teachers and students to hold virtual classes or online instruction. With this view, teachers need to upgrade and equip themselves with these new tools and platforms that are commonly used to conduct their classes. This modification in the learning process requires teachers to learn new things that have something to do with technology.

According to Montiel, et.al[3], they identified three overarching reasons that justify the need for new ways of teaching that further incorporate technology to foster the innovative thinking needed to tackle imminent societal grand challenges such as climate change and increasing inequality. First, teacher education is facing a new generation of millennials and Generation Z students who are digital natives and more likely to search for educational content on their electronic devices. Second, new technologies offer opportunities to reach students globally, helping to democratize education. Third, there are intrinsic characteristics of societal grand challenges, which are complex, uncertain, and evaluative, can benefit from technology as an effective translator of multilayered concepts into more digestible action items.

The use of mobile phones and other related portable technologies have become an important part of the teaching and learning process. This is due to their potentials to inspire students’ learning interest and support the achievement of the teaching learning objectives. Many students are closely attached to their mobile phones which make it easier for educators to integrate it in pedagogy. The use of mobile phones in classrooms enables students to participate more actively in a learning process, and to engage and interact meaningfully with the teacher both within and outside the school walls (Onyema) [4].

This alteration in the teaching-learning process, due to the pandemic, has given our learners more opportunity to explore the virtual world and has helped them improve their knowledge and skills in using the internet. The teachers on the other hand, are as well challenged to keep

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up with the demand, and that is for them to be adept in using technology, not only for them to meet their learners virtually but also to comply with the necessary paperwork.

In view of this scenario, the researcher is encouraged to conduct a study which aims to determine the possible challenges that the teachers encountered in using technology, especially in the time of pandemic.

This study was conducted to investigate the application of the Technology Acceptance Model in the utilization of educational technology among SNAS teachers as part of their teaching methodologies and in fulfilling the necessary paperwork required from them. Specifically, it aimed to seek answers to the following questions:

1. What are the technology utilized by the participants?
2. What are the challenges encountered by the teachers in using educational technology?
3. What are the perceived usefulness of education technology?
4. What are the perceived ease of use of educational technology?
5. What are the attitudes of teachers on the use of educational technology?
6. Is there a significant relationship between the challenges encountered and their perceived usefulness of educational technology?
7. Is there a significant relationship between the challenges encountered and ease of use of educational technology?
8. Is there a significant relationship between the perceived usefulness and ease of use of educational technology?
9. Is there a significant relationship between the perceived usefulness and attitude of teachers on the use of educational technology?
10. Is there a significant relationship between the ease of use and attitude of teachers on the use of educational technology?

## **METHODS**

This study utilized the quantitative-correlational method of research, in probing the challenges met by the secondary teachers in using technology, perceived ease of use, perceived usefulness and attitudes. The correlational design was applied as the study investigated the significance of the relationship between the variables.

The research was conducted in Sindangan, Zamboanga del Sur, where it involved teachers from the different public elementary schools in the district during the school first two quarters of the School Year 2022-2023. The participants of this study were 500 public secondary teachers from the different secondary schools in Sindangan, Zamboanga Del Norte.

The frequency and percentage distribution were used to describe the educational technology utilized by the participants. The weighted average mean was used to analyze the data on the participants' challenges, perceived ease of use, perceived usefulness and attitudes to educational technology.

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The Spearman rho correlation coefficient was calculated to analyze and interpreted the tests of inferences on the significant relationship between the variables.

## **RESULTS AND DISCUSSION**

### **Technology Utilized by the Participants**

Teachers need to use educational technology for various reasons, as it can bring numerous benefits to their teaching practices and enhances student learning experiences. Based on the data reflected on the table, it can be observed that 492 participants or 98.40 percent used cellphones or smartphones. Aside from cellphone, most of the teachers used laptops as revealed by 399 teachers or 79.80 percent of the 500 teacher-participants. The cellphones of the teachers and students were utilized during the blended instruction, for research and collaboration with the student groups. According to Holland and Kellogg [5], teachers and students can use phones for both academic and community-building purposes.

Recent data from the Pew Research Center [6] indicates that approximately 96 percent of households have access to a mobile phone and 81 percent have access to a smartphone. Phones play a key role in bridging the gap between school and home. Students' phones were used in their learning by enhancing their ability to discuss and share. Students can use the camera and text pictures to their teachers, or post to a Padlet wall or shared google slide.

Educational technology provides teachers with a wide range of tools and resources to enhance their instructional delivery. With the laptops, teachers can prepare and incorporate multimedia elements, interactive activities, and engaging presentations into their lessons, making learning more dynamic and appealing to students. In addition, educational technology like the laptops and desktops facilitate active learning by providing opportunities for students to interact with content, participate in simulations, or virtual experiments, collaborate with peers, and engage in self-paced learning. It shifts the focus from passive listening to active participation, promoting higher levels of engagement and knowledge retention. In this study, most of the teachers used laptops and even desktops in the preparation of their instructional materials, facilitate in the effective communication between the teachers and students, ensure that students are given enough learning resources where they can access as uploaded by the teachers and to maintain and manage the data of the students and their learning resources.

Educational technology enables teachers to tailor instruction to individual student needs and learning styles. Through adaptive learning platforms, personalized assessments, and differentiated content, teachers can provide targeted support and challenge for each student, promoting a more individualized and effective learning experience. Technology can bridge the gap in access to educational resources, especially for students in remote areas or with limited resources. It provides access to a wealth of digital content, online libraries, educational videos, and interactive learning platforms, offering a broader range of information and perspectives for students.

Educational technology tools enable teachers and students to collaborate and communicate effectively. Online discussion boards, video conferencing, shared documents, and collaborate platforms facilitate group work, peer feedback, and global connections, fostering communication skills and teamwork.

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Educational technology streamlines the assessment process for teachers, providing tools for creating and administering quizzes, tests, and assignments digitally. It enables immediate feedback, automates grading, and generates data-driven insights for informed instruction and personalized feedback. In this particular study, teachers utilized technology to give online assessment to their students through quizzes.com. Their google classroom was created to manage online learning resources provided or uploaded by the teachers and assignments, projects and group tasks were submitted or uploaded.

From among the online platforms, there appeared top three of the list. It appeared that the FB messenger has been mostly used as an online platform among the teachers, with 483 or 96.60 percent; followed by the Google Meet with 253 or 50.60 percent; and 129 or 25.80 percent, Zoom.

Facebook Messenger is widely accessible, with a large user base around the world. Many students and teachers are already familiar with the platform, making it easier to adopt and integrate into existing communication channels.

Facebook messenger provides notifications and reminders, ensuring that students stay informed about important announcements, assignment deadlines, and upcoming events. Teachers can send reminders, notifications, and announcements directly to students, enhancing communication and reducing the chances of missed information. Facebook messenger is available as a mobile application, making it convenient for students and teachers to access educational content and communication on their smartphones or tablets. This mobile accessibility enables learning and communication beyond the confines of the classroom, facilitating continuous engagement. Messenger can be used to extend classroom discussions and provide additional learning opportunities. Teachers can create virtual office hours, host Q&A sessions, or initiate topic-specific discussions on the platform, encouraging active participation and deeper understanding of the subject matter. Messenger can foster student engagement and collaboration. Through features like group chats, students can collaborate on projects, exchange ideas, and support one another's learning. This promotes a sense of community and collective learning within the educational setting.

Other online platforms especially designed for virtual classes and discussions like Google meet, and zoom were also popular among the participants. Through Google meet, teachers can conduct virtual classes and deliver lectures using Google Meet. They can schedule and host video conferences, allowing students to join remotely and participate in real-time discussions; enables teachers to share their screens, making it possible to deliver presentations, showcase educational materials, or demonstrate software or applications; can create breakout rooms within Google Meet, allowing students to collaborate in smaller groups for discussions, group projects, or peer-to-peer activities; and provides a chat feature where teachers and students can communicate through text messages, ask questions, or share links or resources during the session. The Zoom also works for online learning or virtual meetings when the teachers wanted to interact with their students online. This has the same functionality with the Google Meet when it comes to virtual meetings and discussions.

From the foregoing discussions, it can be noted that educational technology were employed by both teachers and students in their classes.



**Table 1.** *Technology Utilized Among Participants*

Gadgets	Frequency	Percentage
Cellphone	492	98.40
Tablet	22	4.40
Laptop	399	79.80
Desktop	40	8.00
<b>Online Platforms</b>		
FB Messenger	483	96.60
Google Meet	253	50.60
Zoom	129	25.80
Blackboard	9	1.80
Canva	69	13.80
YouTube	60	12.00
Quizizz	17	3.40
MS Teams	65	13.00
Kahoot	12	2.40
Quizlet	2	0.40
Google Classroom	85	17.00

### **Challenges Encountered by the Teachers in Using Educational Technology**

The overall mean of 3.74 implies that most of the teachers found educational technology as highly challenging. These indicate that teachers experienced significant difficulties, obstacles, or complexities when using technology in their educational practices. It suggests that the integration and implementation of educational technology posed considerable challenges to them.

The technology may have required a substantial investment of time and effort for teachers to become proficient in using it. Complex interfaces, unfamiliar workflows, or advanced functionalities might have contributed to the steep learning curve, making it challenging for teachers to grasp and utilize the technology effectively.

Teachers might have received sufficient training or ongoing support to help them navigate and master the educational technology, inadequate professional development opportunities or limited technical assistance could have hindered their ability to overcome challenges and develop the necessary skills.

Frequent technical issues, system glitches, or unreliable performance of the educational technology could have frustrated teachers and impeded their ability to use it smoothly. These challenges may have led to a perception of the technology as highly challenging.

The technology may have faced compatibility issues with existing systems, software, or devices, making it difficult to integrate into their teaching practices. Difficulties in synchronizing or sharing data across platforms might have further complicated the usage. The educational technology might have been overly complex or feature-rich, making it overwhelming for teachers to navigate and utilize effectively. An excessive number of options, settings, or tools without adequate guidance or clarity could have contributed to the perceived challenges.

Some teachers may have encountered challenges in adopting and adapting the new technologies due to personal resistance or reluctance to change established teaching methods. A lack of motivation or confidence in incorporating technology into their pedagogical approaches could have heightened the perceived difficulty.

It is crucial to address the challenges faced by teachers when encountering educational technology to ensure successful integration and implementation. Providing comprehensive training, ongoing support, and user-friendly interfaces, along with addressing technical issues and offering clear documentation, can help alleviate the perceived challenges and enhance teachers' ability to effectively utilize educational technology in their classrooms.

**Table 2.** *Challenges Encountered by the Participants in Using Educational Technology*

Statements	WAM	Interpretation
1. Compatibility issues with different devices or software.	4.13	Highly Challenging
2. Fear of technical failures.	3.70	Highly Challenging
3. Concerns about privacy and security when using technology.	3.59	Highly Challenging
4. The complexity of understanding and adapting to frequency technological advancements.	3.61	Highly Challenging
5. Resistance from others (co-teachers, family members) to adopt new technologies.	4.09	Highly Challenging
6. Lack of support or training resources for using technology.	3.68	Highly Challenging
7. Overwhelming amount of information and options available in the digital world.	3.56	Highly Challenging
8. Difficulty in troubleshooting and resolving technical issues independently.	3.57	Highly Challenging
<b>Overall Mean</b>	<b>3.74</b>	<b>Highly Challenging</b>

Legend:      4.21 – 5.00 Extremely Challenging      3.41 – 4.20 Highly Challenging  
                   2.61 – 3.40 Challenging                    1.81 – 2.60 Less Challenging  
                   1.00 – 1.80 Not Challenging at All

### Perceived Usefulness of Educational Technology

Perceived usefulness of educational technology refers to an individual's subjective assessment of how beneficial and valuable a particular technology is in supporting their learning or educational goals. It reflects the extent to which individuals believe that using the technology will enhance their educational experiences, improve their performance, or facilitate the achievement of desired learning outcomes.

Based on the perceptions of the teachers, the highest weighted mean of 4.50 is related to educational technology which makes their teaching more meaningful not only to them but as well as for the students. Likewise, the teachers also noted that educational technology is a very important tool in education as revealed by the weighted mean of 4.30. This implies that educational technology can enhance the learning process. Individuals perceive the technology as a valuable tool that can provide access to a wealth of information, facilitate

active engagement, promote critical thinking, and support various learning activities such as research, problem-solving, and collaboration.

Additionally, teachers believe that using technology tools, applications, or platforms can help them better understand and grasp complex concepts, acquire new skills, practice and reinforce learning, and achieve higher levels of achievement or mastery in their educational pursuits.

The teachers also noted that with the use of educational technology, they were able to prepare and submit their reports and other requirements on time as shown by the weighted mean of 4.29. These teachers perceived usefulness of educational technology as tools that can make learning and performance more efficient and convenient. Individuals see technology as a time-saving and flexible resource that allows them to access educational materials anytime and anywhere, engage in self-paced learning, and personalize their learning experiences according to their needs and preferences.

Perceived usefulness includes the belief that educational technology can support individualized learning experiences. Individuals see technology as a tool that can adapt to their specific needs, preferences, and learning styles. Personalized feedback, adaptive learning algorithms, and customized content delivery are believed to enhance learning effectiveness and cater to individual strengths and weaknesses.

Individuals perceive educational technology as useful for promoting collaboration and communication among learners and with teachers or peers. They believe that technology can facilitate online discussions, group projects, virtual teamwork, and seamless communication, enabling rich interaction, knowledge sharing, and collective problem-solving.

Perceived usefulness plays a significant role in individuals' acceptance and adoption of educational technology. When individuals perceive technology as useful, they are more likely to embrace it, invest time and effort in utilizing it, and experience positive learning outcomes. Teachers and instructional designers should consider individuals' perceptions of usefulness when selecting and implementing educational technology, as it can influence their engagement, motivation, and overall satisfaction with the learning process.

**Table 3.** *Perceived Usefulness of Educational Technology*

Statements	WAM	Interpretation
1. I am able to submit my reports using technology.	4.29	Very Useful
2. I use technology to produce and reproduce their learning materials.	4.16	Useful
3. I use technology in performing my tasks.	4.13	Useful
4. Technology is very important tool in education.	4.30	Very Useful
5. I find technology useful in the delivery of my lesson.	4.13	Useful
6. Technology helps me to be more productive.		
7. I am more efficient when I use a computer or laptop to generate my reports.	4.18	Useful
	4.22	Very Useful
8. I cannot work on my learning materials without using a computer.	3.50	Useful



9. I can deliver meaningful lessons using technology.			
10. I don't need a computer to come up with the paperwork required from me.	4.50	Very Useful	
	3.09	Fairly Useful	
<b>Overall Mean</b>	<b>4.05</b>	<b>Useful</b>	
Legend:	4.21 – 5.00 Very Useful (VU)	3.41 – 4.20 Useful (U)	
	2.61 – 3.40 Average or Moderate (A)	1.81 – 2.60 Less Useful (LU)	
	1.00 – 1.80 Not Useful (NU)		

### Ease of Use of Technology

Ease of use of technology refers to the degree to which technology tools, devices or software are user-friendly, intuitive, and convenient for individuals to operate and interact with.

The teachers felt the ease of using technology as shown by their responses which revealed the highest mean of 4.15 related to having educational technology which makes their tasks better and faster performance. They completed their required tasks in lesser period of time and of good quality because they can access information relevant to their tasks.

Additionally, the teachers noted that it is easier for them to send files through educational technology. This is accounted for by the weighted mean of 4.08. The ease of use of technology is manifested as these are designed in a way that minimize complexity and make it easy for individuals, including teachers and studies, to navigate, access, and utilize its features. It involves clear and intuitive interfaces, simple menu structures, and well-organized functions that require minimal effort to understand and operate.

Nizomova[7] emphasized that technology should be accessible to users without significant barriers or challenges. This includes considerations for physical accessibility such as compatibility with assistive technologies, availability across different devices and platforms, and support for multiple languages or customization options to accommodate diverse user needs. Technology that is easy to use is intuitive in its design, meaning that users can quickly grasp how to interact with it without requiring extensive training or guidance. The layout, icons, and controls should be self-explanatory and follow familiar patterns, allowing users to easily navigate and perform tasks without confusion or frustration.

In the same vein, Xashimov and Khaydarova[8] noted that easy to use is associated with the efficiency of technology tools. Users should be able to accomplish tasks efficiently and without unnecessary steps or complications. This includes features such as shortcuts, automation, and clear workflows that streamline processes and save time for users. Technology should minimize the occurrence of errors and provide mechanisms for users to recover from mistakes easily. Clear instructions, error messages, and the ability to undo or revert actions can enhance the ease of use by reducing frustrations and allowing users to correct errors without significant consequences. Easy-to-use technology often provides accessible help and support resources, such as user guides, tutorials, online documentation, and customer support channels. These resources can assist users in troubleshooting issues, understanding features, and maximizing the potential of the technology tool. Technology that prioritizes ease of use takes into account user feedback and iterates on its design based on user experiences. Regular updates and improvements address user needs, fix usability issues, and refine the user interface to ensure a more intuitive and satisfying user experience over time.

By prioritizing ease of use in technology design and implementation, individuals, including teachers and students, can more readily adopt and integrate technology into their daily activities. This facilitates smoother workflows, reduces learning barriers, and encourages greater engagement and productivity when utilizing technology tools for various purposes, including education, communication, collaboration, and problem-solving.

**Table 4.** *Ease of Use of Educational Technology*

Statements	WAM	Interpretation
1. I can operate a computer on my own.	3.83	Satisfied
2. I encode and print my own learning materials.	3.59	Satisfied
3. I use online platforms to conduct classes.	3.32	Satisfied
4. I can send files online.	4.08	Satisfied
5. Technology makes it easier for me to perform my tasks.	4.15	Satisfied
6. I don't need anyone to guide me in using the computer.	3.61	Satisfied
7. I can easily access my email using any gadget.	3.65	Satisfied
8. I find it easy to send communications through email.	3.51	Satisfied
9. I prefer to meet my students online than manually sending them a module.	3.51	Satisfied
10. I can make quizzes using interactive online platforms.	3.56	Satisfied
<b>Overall Mean</b>	<b>3.68</b>	<b>Satisfied</b>
Legend:	4.21 – 5.00	Very Satisfied (VS)
	2.61 – 3.40	Average or Moderate (A)
	1.00 – 1.80	Unsatisfied (U)
	3.41 – 4.20	Satisfied (S)
	1.81 – 2.60	Less Satisfied (LS)

### Attitudes of Teachers on the Use of Educational Technology

Table 5 manifests that the teachers have favorable attitudes toward educational technology as evident by the overall mean of 4.07. This implies that the teachers have positive and optimistic perspective regarding the use of technology in educational settings. The teachers were open and willing to embrace technology as a valuable tool for enhancing the learning experience.

Teachers as they are positive about educational technology usage are receptive to using technology in educational settings. They are open to exploring new technological tools, platforms, and resources, that can support and enhance their teaching and students learning. They display enthusiasm and excitement about incorporating educational technology into their learning process. They recognize the potential benefits and advantages that technology can bring to their educational journey.

Teachers with positive attitudes toward educational technology believe that technology can significantly contribute to the educational development of their students. They recognize the students' ability to improve access to information, facilitate interactive learning experiences, promote collaboration, and enhance the overall quality of education. The teachers are also willing to adapt their teaching methods effectively embracing technology. They actively seek

opportunities to acquire the necessary skills and knowledge required to effectively use educational technology tools.

Akram et al. [9] believed that teachers with positive attitudes towards technology exhibit positive perceptions regarding technology integration in teaching-learning practices. They believed that technology-incorporated teaching assists them in enhancing their instructional practices effectively, making the learning process exciting and interactive, and keeping learners motivated.

**Table 5.** *Attitudes of Teachers on Educational Technology*

Statements	WAM	Interpretation
1. I enjoy using educational technology in the teaching and learning processes.	4.14	Favorable
2. I have a positive attitude toward using technology for educational purposes.	4.00	Favorable
3. I believe that educational technology can improve the overall educational experience.	3.96	Favorable
4. I find educational technology to be engaging and interactive.	4.10	Favorable
5. I see educational technology as a valuable tool for educational advancement.	4.13	Favorable
<b>Overall</b>	<b>4.07</b>	<b>Favorable</b>
Legend:	4.21 – 5.00	Very Favorable (VF)
	2.61 – 3.40	Average or Moderate (A)
	1.00 – 1.80	Not Favorable (NP)
	3.41 – 4.20	Favorable (F)
	1.81 – 2.60	Less Favorable (LF)

**Table 6.** *Test for Significant Relationship Between the Challenges and Perceived Usefulness of Educational Technology*

Variables	Spearman rho correlation coefficient	p-value	Decision
Challenges and Perceived Usefulness of Educational Technology	0.060	0.30	Not Significant

The Spearman rho correlation coefficient was calculated through SPSS to determine the significance of the relationship between the challenges encountered and perceived usefulness of educational technology. The data shows that the r-value of 0.060 is not significant at the p-value of 0.30, hence the hypothesis is not rejected. This suggests that the difficulties or obstacles tackled when using educational technology are not strongly connected to how useful teachers perceive the technology to be. The challenges experienced while using educational technology do not have a substantial impact on teachers' general assessment of its value and benefits. Teachers may have recognized the potential advantages of educational technology despite the fact that they face a lot of challenges during its integration. Teachers perceived that educational technology are valuable and relevant to the instructional practices, even if they have encountered challenges along its use.

The challenges encountered when using educational technology can vary and might include technical issues, lack of training or support, limited access to resources, time constraints, resistance to change, or concerns about privacy and security. Although these challenges can be significant and impact teachers' experiences with the technology, they may not necessarily diminish their perceptions of its overall usefulness (Smith and Kuipers) [10].

**Table 7.** *Test for Significant Relationship Between the Challenges Encountered and Their Perceived Ease of Use of Educational Technology*

Variables	Spearman rho correlation coefficient	p-value	Decision
Challenges and Perceived Ease of Use of Educational Technology	0.054	0.35	Not Significant

Table 7 shows that the Spearman rho correlation coefficient is 0.054 which is not significant at the p-value of 0.35. Hence, there is no significant relationship between the challenges and perceived ease of use of educational technology. The findings indicate that the difficulties or obstacles encountered when using educational technology do not have a substantial impact on how easy or difficult teachers perceive the technology to be. This implies that teachers may separate their perception of the technology's ease of use from the challenges they encounter while using it. They might acknowledge and experience difficulties, such as technical issues, lack of training or complex interfaces, but still perceive the overall ease of using the technology as unaffected.

The lack of relationship between the challenges and ease of use of educational technology could be attributed to prior experience with similar technologies, the alignment of the technology with their teaching needs, or their own technological proficiency (Kant) [11].

**Table 8.** *Test for Significant Relationship Between the Perceived Usefulness and Ease of Use of Educational Technology*

Variables	Spearman rho correlation coefficient	p-value	Decision
Perceived Usefulness and Ease of Use of Educational Technology	0.66	0.00	Significant

In Table 8, it shows that the Spearman rho correlation coefficient of 0.66 is significant at the p-value of 0.000. Hence, the hypothesis is significant. The correlation coefficient is indicative of how the ease of use of the teachers in using educational technology relates to the teachers' use of educational technology. This could be understood that the teachers' ease or difficulty in the use of technology bears impact on their willingness or frequency of incorporating technology in their teaching practices. As technology seems to be user-friendly or challenging to explore, teachers' adoption and utilization of educational technology are dependent by its ease of use. In addition, there could be other factors such as training

opportunities, pedagogical alignment, or personal preferences which could be relevant on their usage of educational technology.

The above finding is consistent with the research findings revealed by Ibrahim and Shiring[12]. Using the Technology Acceptance Model (TAM) and Pearson product moment correlation for data analysis, the study concluded that there existed relationship between perceived ease of use and perceived usefulness instructional and web-based technologies.

**Table 9.** *Test for Significant Relationship Between the Perceived Usefulness and Attitude on the Use of Educational Technology*

Variables	Spearman rho correlation coefficient	p-value	Decision
Perceived Usefulness and Attitude on the Use of Educational Technology	0.00	0.99	Not Significant

There is no significant relationship between the perceived usefulness and attitude on the use of educational technology. This is observed from the data analysis done which shows that the Spearman rho correlation coefficient of 0.00 is not significant at the p-value of 0.99. The findings imply that even if the teachers recognize the usefulness and potential benefits of educational technology, their attitudes toward its use are not significantly affected. Teachers may hold positive or negative attitudes toward using technology in the classroom regardless of their perceptions of its usefulness. This lack of significant relationship may be attributed to the fact that teachers' attitudes might be shaped by personal preferences, beliefs about traditional teaching methods, concerns about technology's impact on student engagement or academic integrity, or perceived challenges associated with integrating technology into existing instructional practices.

Understanding the factors that influence teachers' attitudes toward educational technology can inform strategies for promoting its adoption and effective implementation. Providing training, support, addressing concerns, and highlighting the benefits of educational technology can help shape positive attitudes and encourage its integration into teaching practices.

The above findings contrast the previous findings of Wong et al. [13]. Wong reported that student-teachers' attitude towards computer use is determined by the perceived usefulness of computers in the educational practices.

**Table 10.** *Test for Significant Relationship Between the Ease of Use and Attitude on the Use of Educational Technology*

Variables	Spearman rho correlation coefficient	p-value	Decision
Ease of Use and Attitude on the Use of Educational Technology	0.022	0.70	Not Significant



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Table 10 presents the non-significant relationship between the ease of use and attitude of teachers on the use of educational technology ( $r$ -value = 0.022;  $p$ -value = 0.70). There is no significant relationship between the ease of use and attitude on the use of educational technology. The findings indicate that the perceived ease of use of educational technology does not strongly influence teachers' attitudes toward its use.

Even if teachers perceived educational technology as easy to use, their attitudes towards its use are not significantly affected. It signified that teachers may hold positive or negative attitudes toward using technology in the classroom regardless of how user-friendly they perceived the technology to be. The lack of relationship may be due to the fact that teachers' attitudes may be the outcomes of some prior experiences with technology, like comfort level with digital tools, pedagogical beliefs, concerns about the impact of technology on classroom dynamics or student engagement, or the perceived value of traditional teaching methods.

Wong et al [13] reported that perceived ease of use of computers did not have a significant influence on the student-teachers' attitudes toward computer use. However, Teo, Milutinov and Zhou [14] revealed that perceived usefulness, perceived ease of use, subjective norm, facilitating conditions, and technological complexity influenced the Siberian Mathematics pre-service teachers' attitudes towards computer use.

## **CONCLUSIONS AND RECOMMENDATIONS**

The participants were abreast with the innovation of communication technology as evident by the cellphones and laptops as tools not only for social communication but for instructional purposes. They employed social communication tools and applications not only to communicate with colleagues, friends and family but for instruction with students and pupils. They have managed their online learning resources through Google classroom. The participants encountered high level of challenges in the utilization of communication and information technology. They considered educational technology very useful. The participants have ease in the use of educational technology. They have favorable attitudes to educational technology. The challenges encountered by the participants have no impacts on their perceived usefulness and ease of use of educational technology. The participants' perceived usefulness have relevance on their perceived ease of use of educational technology. The participants' attitudes were not attributed on their perceived usefulness and ease of use of educational technology.

That the school heads improve their budget allocation to improve technology in their respective schools to encourage teachers and students to effectively utilize educational technology in their teaching and learning processes. The school heads may prepare and implement educational technology utilization enhancement plan and activities specifically in the use of blackboard for interactive discussions, multimedia presentations, and Quizizz, Kahoot and Quizlet for online assessment and immediate feedback mechanism. A need assessment study may be conducted to identify the needed enhancement competencies and skills in the utilization and integration of platforms, preparation of multimedia and interactive activities to encourage students' collaboration, interaction and self-paced learning. That future researches conduct similar studies to consider other factors which may have intervene or mediate the research variables.

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