International Journal of Social Science and Human Research

ISSN (print): 2644-0679, ISSN (online): 2644-0695

Volume 07 Issue 06 June 2024

DOI: 10.47191/ijsshr/v7-i06-96, Impact factor- 7.876

Page No: 4325-4380

Elementary Teachers' Technological Skills as Predictors of Learner's Motivation in Selected Public Schools in Paranaque City

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INTRODUCTION

The trend after Technology skill is a novel idea in school skill that entails school leaders, teachers, and administrators developing and maintaining support for the efficient use of information and communication technology (ICT) in teaching and learning. Working with teachers and assisting them to improve educational processes is an essential notion in educational management. It also entails harnessing teachers' abilities and potentials and adapting them to achieve educational goals, resulting in enhanced teaching and learning. Skill is thus of major significance to learning and, as such, is required for better levels of school accomplishment. But the big argument is, Are the technological skills of teachers reflective of the learner's motivation to learn? Does it radiate to their interest to learn? Hence, this study.

In the digital age, rapid advancement in technology influence education inherently. This study will determine the technology skills of teachers and whether it can predict the learner's motivation from the selected elementary schools in Paranaque City. To achieve this, the research will use quantitative research technique by adopting the descriptive-comparative-correlational method to describe the variables of the status of technological skills in the institution and the learning motivation of the pupils when taught and managed using this form of skill. Meanwhile, the correlation part will be employed by determining the relationship between technological skills of their teachers and learning motivation.

BACKGROUND OF THE STUDY

Recently, researchers discovered a new type of skill among principals and school administrators called as technological skill. With the advent of ICT in schools in the 1980s, the notion emerged (Okeke, 2019). This was quickly followed by research on the influence of ICT on teaching and learning. These studies highlighted the necessity for principals to be trained as technology leaders in order to effectively integrate ICT into the classroom. According to Okeke (2019), the International Society for Technology in Education in America (ISTE, 2001) produced National Education Technology Standards for Administrators (NETS-A) in 2001. Its goal was to offer advice and instructions for administrators who are being trained to become successful technology leaders.

The concept of information technology skill practices refers to the traits and behaviors of school leaders, which impact teachers' learning and use of information technology by understanding how technology boosts education in the classroom and how to create conducive conditions for its implementation. Initially, technological leaders establish directions for the integration of information technology by articulating a shared vision for utilizing information technology to support teaching and learning. Teachers are then nurtured as people and collectives through the provision of educational opportunities and the setting of exemplary examples. They develop the organization by fostering collaborative cultures, facilitating school organization, allocating school resources, and leveraging networking to support teacher learning with information technology (Kulophasa & Kim, 2020).

School administrators play an important role in the administration of schools and other educational institutions by maintaining operational management, coordinating teachers and motivating pupils, and providing instructional skill. Under the constraints of decentralizing educational policy and attaining (at least a certain level of) financial independence, school principals are also expected to provide innovative,

entrepreneurial solutions to educational and social issues. In this context, the school administrators are not viewed as the 'ultimate' leaders of the school, but rather as a member of the managerial/skill team that recognizes the strengths (and limitations) of teachers and other employees and shares with them the responsibility for the school's success (Alfirević & Petković, 2017).

Therefore, school administrators should be resource management leaders and be responsible for administering the resources required for technology integration. This includes establishing expenditure priorities, which directly supports the school's technology application plan's objectives. Educational administrators must play crucial roles in keeping up with technological development and education administration, which necessitates the actual practice of technological skill (Al-Subaie and Al-Qahtani, 2020).

Today, with the extensive use of technology in educational innovations, technological skill has become an essential tool in the field, substantially in the teaching-learning processes. The effective delivery of instructions lies on the teachers' skills and competence, as teaching-learning facilitators. In this digital era, she must be digitally equipped and digitally creative to facilitate learning creatively, engaging the learners and motivating them to be critical thinker.

The Department of Education has developed assessment to gauge learning. These assessments being part of the teaching-learning processes, played an important role in the delivery of quality education, dictating the interventions to be applied, based on the results. The Comprehensive Rapid Literacy Assessment (CRLA), Rapid Mathematics Assessment (RMA), Test of Fundamental Academic Skills (TOFAS), Amplified Numeracy Assessment (ANA), and Center for Learning and Development – Asia (CLAD-Asia), are technology-based and technology-assisted assessments. In the Schools Division of Parañaque, projects such as E-Library, E-Learning Resource Centers, Future Learning Spaces for Kindergarten learners, are being developed and introduced. These required technology-adept administrators, teachers, learners, and school admin staff for effective utilization and implementation; however, many teachers in selected public elementary school in the Division of Paranaque City still find it difficult to use technology to perform some certain functions for several of them are "Digital Migrants", and this is quite challenging considering that technology is now a major part of learning in the Philippines and has become the center of innovations when it comes to addressing learning gaps and challenges. The connection of this generation of learners (the Digital Natives) to the technology is so profound that the school should emerged itself to meet and satisfy the needs of the times. Though, administrators and teachers, constantly search for new progress in delivering quality education in a more creative, engaging and motivating ways, if they do not understand the extensive effect of technology-driven instruction, adapt and adopt technological innovations, learners' performance would remain as where it is, finding difficulties in addressing learning gaps and loses caused by the pandemic

With this concerns and development, the present research aims to determine the status of technology skill in the school and its relationship to learning motivation as this will help the researcher to develop a research output that will be used to enhance the technological skill of teachers in selected elementary schools in Paranaque City. Although there are several existing studies regarding technological skills, most of the previous studies has not assessed its relationship with learning motivation; therefore, the present study will bridge that gap.

THE CONCEPT OF TECHNOLOGICAL SKILL IN PHILIPPINE EDUCATION

A great scientific revolution occurred in the twenty-first century, bringing with it several variables, the most significant of which is the technological revolution. As a result, humanity now has massive amounts of potentially growth-inducing information that must be efficiently utilized and transmitted if we are to have any hope of a prosperous future. The widespread use of new technologies has altered not just how we live but also how we lead economically and socially (Ameen & Kadhum Al-Hammashi, 2022). The Philippines is not a stranger to technological advancement, having invested billions of pesos in national research and development. In addition, it has demonstrated achievements in fields spanning from supercomputers to space exploration (Kennedy, 2018).

As the educational landscape continues to shift at a dizzying rate, educational systems have begun to focus more on continuous improvement and development as a means of adapting to the new realities. The pursuit of best practices that contribute to meeting the requirements of organizations and enhancing their performance, thereby ensuring efficiency and excellence, has led to an increased interest in

technology for communication and information. As a result of this, numerous institutions have realized the importance of investing in the training and education of its staff in order to ensure that they are able to stay up with the latest advancements in technology (Al-Subaie & Al-Qahtani, 2020).

TECHNOLOGICAL SKILL IN SCHOOLS

To achieve effective technology integration in schools, teachers must receive sufficient assistance in developing relevant competencies, self-efficacy, pedagogical perspectives, and an enabling school culture, all of which require both vision and provision from principals. The school's overall learning capacity was most affected by the principals' commitment to teacher professional development. Yet, school administrators typically struggled with technology in education. Therefore, school administrators are expected to continue learning throughout their lives. Leaders who place a premium on learning are counted on to define and convey school visions that inspire teachers to work together to achieve common goals. They facilitate collaborative learning environments and find and allocate teacher learning materials. They organized, engaged, managed, and monitored teacher learning activities as part of the learning program. By participating in teacher development and emerging as educational leaders, they demonstrated exemplary behavior and served as models for their peers. They realigned and rearranged policies, structure, and decision making across schools to empower teachers at all levels in order to focus efforts and resources on strengthening teaching teams. School leaders used internal and external resources and collaborated with parents and communities to offer teachers vital tools, skills, and infrastructure to maximize professional learning outcomes (Kulophasa & Kim, 2020).

Therefore, technological skills is a skill strategy launched on the ease of utilizing technology by school employees, alongside the option of collaborating with technology providers from within or outside the institution to ensure the success of its work. Technological skill emerged as a new approach for schools to adopt in order to reflect the realities of the constant transformation and progress seen across all of our communities. Skills with regard to technology would be responsible for things like establishing locations for technological use, making sure that the number of pupils and available resources are a good fit, and making sure that technological goals are consistent with educational objectives. To effectively lead in the technology sphere, administrators must also prioritize the education and certification of teachers so that they can effectively use technical tools in the classroom (Ameen & Kadhum Al-Hammashi, 2022).

The concept of information technology skill practices refers to the traits and behaviors of school leaders, which impact teachers' learning and use of information technology by understanding how technology boosts education in the classroom and how to create conducive conditions for its implementation. Initially, technological leaders establish directions for the integration of information technology by articulating a shared vision for utilizing information technology to support teaching and learning. Teachers are then nurtured as people and collectives through the provision of educational opportunities and the setting of exemplary examples. They develop the organization by fostering collaborative cultures, facilitating school organization, allocating school resources, and leveraging networking to support teacher learning with information technology (Kulophasa & Kim, 2020).

TECHNOLOGICAL SKILL FOR TEACHING AND LEARNING

The introduction of technological innovation into schools signifies a departure from conventional teaching and learning practices. This has led to the incorporation of information and communication technology in schools as part of the current educational transformation, where technologies are infused in instruction for teachers to facilitate and make teaching and learning processes more meaningful, to improve pupil achievement, and to increase pupils' competence and literacy (Alayan, undated). Teacher technological skills expands upon skill in the use of technology for education, with a particular concentration on the educational needs of the twenty-first century. According to the International Society for Technology in Education (ISTE) Standards for Educators, one of the seven roles of a 21st century teacher is as a leader who can support pupil learning empowerment and enhance teaching and learning (Samsudin & Ghani, 2020). There are numerous forms of media used for teaching and learning by teachers who can integrate the knowledge of technology required to promote and develop knowledge and the ability to communicate content as a method. This method or procedure requires the teacher to organize teaching and learning activities for pupils with technological approaches infused into them (Putpoonga, 2023). The work of Samsudin & Ghani, (2020) centered on the ISTE Standards for Educators skill standard for ICT

teachers. Although the concept of teacher technological skills is unfamiliar, its practices are evident, according to the findings. The teachers' technological skill is significantly enhanced by a school culture that promotes technology use.

TECHNOLOGICAL SKILL FOR ASSESSMENT AND EVALUATION

People's interests and behaviors toward their work will vary because humans are not identical. In order to determine the differences objectively and achieve the organization's goals, it is necessary to monitor and evaluate the differences between employees in an organization. Observing the activities, deficiencies, sufficiency, pluses, and inabilities of all employees, regardless of their work, constitutes performance evaluation. The primary purpose of education is teaching and learning, and if there is effective teaching, the result will be effective learning. Evaluation is required for education to fulfill its purpose. First, teacher evaluation involves documenting the nature of the teacher's performance, followed by assisting the teacher in enhancing their performance. It is also about assisting the teacher in accepting responsibility for his task. Therefore, excellent communication between teachers, administrators, and school-affiliated individuals is required for a quality teacher evaluation (Cetin et al., 2019). Organizations should select the appropriate performance assessment and evaluation method based on their objectives and the quality of their employees, and sometimes use their own approach when implementing some of the methods. In terms of technological skill, academic institutions should assess and evaluate their faculty by monitoring their use of new technology after its implementation in the school.

TECHNOLOGICAL SKILL FOR RESEARCH AND COMMUNICATION

Research has become an unprecedented strategy for bolstering the adoption of industry 4.0 at all levels (education, industry, national, and regional). Governments place a greater emphasis on science, technology, and innovation in order to enhance research and development, thereby creating a robust ecosystem for the technological industry (Bongomin et al., 2020). In light of the need for government and higher education to close research gaps and seize development opportunities, technological skill should be encouraged and practiced in institutions through the adoption, prioritization, and advancement of technology among teachers, pupils, and the learning process.

E-skill, which could be compared to technological skill, is defined as a social influence process embedded in both proximal and distal contexts mediated by sophisticated information technologies that results in a change in attitudes, feelings, thinking, and behavior. Consequently, this skill style is an abstract notion that refers to the use or non-use of information and communication technologies to influence the behaviors and mental states of followers. It is not only about specific tools and communication events, but also about creating an environment that leads to high levels of efficacy, regardless of how that is defined (high productivity, low turnover, high morale, etc.) (Roman et al., 2018).

TECHNOLOGICAL SKILL FOR EDUCATIONAL MANAGEMENT

The current social context makes it evident that we have entered a fully digital era, necessitating the use of technology in education management to enhance learning management since learning in the digital age has changed the leader's function (Putpoonga, 2023). School administrators play a crucial role in the administration of schools and other educational institutions by maintaining operational management, coordinating teachers and motivating pupils, and providing instructional skill. Under the constraints of decentralizing educational policy and attaining (at least a certain level of) financial independence, school principals are also expected to provide innovative, entrepreneurial solutions to educational and social issues. In this context, the school administrators are not viewed as the 'ultimate' leaders of the school, but rather as a member of the managerial/skill team that recognizes the strengths (and limitations) of teachers and other employees and shares with them the responsibility for the school's success (Alfirević & Petković, 2017). Therefore, school administrators should be resource management leaders and be responsible for administering the resources required for technology integration. This includes establishing expenditure priorities, which directly supports the school's technology application plan's objectives. Educational administrators must play crucial roles in keeping up with technological development and education administration, which necessitates the actual practice of technological skill (Al-Subaie and Al-Qahtani, 2020).

PUPILS' LEARNING MOTIVATION

The purpose of learning is the acquisition of knowledge, the mastery of certain competencies, and the formation of pupil attitudes. The effectiveness of learning can be determined by observing changes in pupil behavior and learning outcomes. When pupils are motivated to learn, learning activities will operate smoothly (Puspitarini & Hanif, 2019). Motivation is an internal urge or impulse that can cause, direct, and organize behavior in humans. This relates to efforts to satisfy perceived physical and spiritual requirements. Learning motivation, in relation to learning activities, refers to the overall driving force within pupils that can generate, guarantee, and direct learning activities in order to achieve expected learning objectives. With learning motivation, pupils follow a learning process with intensity and consistency (Wardani et al., 2020).

The theory of intrinsic motivation explains motivation in terms of learning. The most influential factors on intrinsic motivation are challenges, curiosity, control, and fantasy. Intrinsic motivation can encourage pupils to engage in academic activities without being influenced by external pressure or the anticipation of external rewards. Academic activity participation is influenced by the wish to experience its enjoyment, challenges, and uniqueness. Pupil motivation can be influenced directly by an attractive or stimulating medium or learning material, so an increase in pupil motivation may be largely attributable to the elements of curiosity, fantasy, and control presented via technology (Khan et al., 2019).

The teaching method refers to the interaction between teachers and pupils during the lesson. This interaction process will operate smoothly if pupils are actively engaged in learning. Therefore, it is necessary for teachers to employ instructional strategies that facilitate pupil learning. Common learning methods include lectures, discussions, and demonstrations. The use of learning methods cannot exist on its own, as the media is also required as a means of conveying materials or information to pupils. For the purpose of facilitating the learning process and achieving learning objectives, learning media is used. Learning media are physical and non-physical tools used by teachers to convey material to pupils more effectively and efficiently (Puspitarini & Hanif, 2019).

The three components of learning motivation are interest, value, and ability. Learning motivation refers to a pupil's confidence, tendency, and interest in completing a task to achieve a specific objective. The motivation theory suggests that a pupil's success is determined by his or her conviction in his or her ability to complete a task successfully. Motivation is essential for successful online learning because it enhances online learning performance by attracting learner attention and engaging pupils in active learning in the online environment (Zuo et al., 2021).

In a nutshell, motivation to learn is one of the determining factors in achieving learning goals. In addition, the proper use of learning media during the learning process will become a more effective and efficient aid in attaining the learning objectives. Consequently, as motivation and the appropriate use of learning materials and media increase the likelihood of attaining learning objectives, they also increase pupils' motivation to learn. Through learning motivation, pupils will be motivated to continue the learning process.

PUPILS' WILLINGNESS TO LEARN

In relation to all changes and unpredictability, all individuals must demonstrate a willingness to learn. Both internal and external influences impact a person's motivation for learning. Originally, the concept of willingness was defined as a psychological state that demonstrates individuals' desire and willingness to learn new things. To adapt to situations that are full of change and uncertainty, as well as to evaluate professionalism in the context of the industrial world, the most important competency is a willingness to learn. The willingness to learn will encourage learning behavior, add new knowledge while broadening one's perspective of thought, allow one to solve complex problems, increase one's self-confidence, become more adaptable, and result in high learning achievements. In the context of learning, pupils must be willing to learn in order to deal with the challenges of a time marked by change and unpredictability. The complexity of science and technology necessitates that humans have the capacity to adapt (Hotifah et al., 2020).

Motivation in teaching and learning activities is the overall driving force within pupils that raises, guarantees continuity, and provides direction for learning activities so that learning objectives can be attained. The importance of motivation for pupils is to make them aware of their position at the beginning, during, and at the end of the learning process, to inform them of the strength of their learning efforts in

comparison to their peers, to direct learning activities, to encourage learning enthusiasm, and to make them aware of the existence of a learning journey and then work with them to complete it (Wardani et al., 2020).

Huang et al. (2016) investigated the willingness to learn of 1,407 pupils through their participation in training classes. 83% of the participants demonstrated a high level of willingness to learn, while 27% of the pupils fall into the medium and low categories. Consideration of the learning topic as superb, personal experience with the learning topic, and prior knowledge of the learning topic were found to be primary characteristics of pupils with a strong desire to learn. Qian et al. (2022) examined the willingness of 2,812 residents of Nantong City, China to initiate rescue procedures. 50.50 percent of participants were willing to attempt the procedure, 70.80 percent were willing to attempt the procedure with professional supervision, and 71.23 percent were willing to attempt the procedure after learning techniques. Participants who were hesitant to attempt the procedure cited a lack of skill and legal concerns as justifications. These studies demonstrate that pupils' academic performance, regardless of their talent, is limited by their unwillingness to learn, attempt, or partake in the learning process.

Being open to learning is a critical life skill that advances people both personally and professionally. This requires being receptive to or actively seeking out new experiences, skills, and knowledge that enhance learning capabilities and enjoyment. Consequently, without a desire to learn, pupils would be unable to attend to or comprehend the lessons being taught. Pupils who are highly motivated have a great deal of vitality and are eager to engage in learning activities, demonstrating the significance of enhancing their motivation to learn.

PUPILS' TECHNOLOGICAL ENGAGEMENT

Motivation is essential for the long-term success of online education. By energizing, guiding, and maintaining pupils' behavior, online learning motivation can foster positivity throughout the online learning process, resulting in a significant correlation with online course retention. The impact of specific views (i.e., perceived ease of use, perceived usefulness, and self-efficacy) on a pupil's attitude toward utilizing technology can influence their online learning motivation (Zuo et al., 2021).

Understanding pupil engagement is a multifaceted and complex phenomenon. As it has been associated with academic achievement, pupil engagement is regarded as a crucial factor in supporting pupil learning and growth. Engaging learning environments can influence the learning process, contribute to the development of critical thinking skills, and promote pupil retention. The technological engagement of pupils would include participation in social media, video, and collaborative learning technologies (Nkomo, 2021).

As the school system and industry evolve to become more technologically inclusive, it is crucial for pupils to remain caught up with contemporary digital trends while acquiring a thorough understanding of course material. Incorporating technology into the teaching process affords educators a priceless opportunity to boost engagement among learners and academic achievement. Pupils have the ability to collaborate with peers via digital mediums, investigate their inventiveness using technological tools, engage in more complex thought processes, engage in learning through inquiry, construct information from numerous sources, and establish an online social presence. While integrating technology into the curriculum moves the learning environment to become more pupil-focused, teachers play a crucial part in steering pupils' comprehension, providing support, and taking the appropriate actions to ensure that pupils are engaged and achieving their learning objectives (D'Angelo, 2018).

The work of Puspitarini & Hanif, (2019) demonstrated that the use of lecture methods in the learning process does not engage pupils, and as a result, pupils do not comprehend the presented material, leading to a decline in pupil learning motivation. The results of subsequent interviews revealed that pupils were more engaged in the learning process when utilizing media other than books. Zuo et al., (2021) examined the effects of K-12 pupils' perceived presence and technology acceptance on their online learning motivation among 13,610 pupils in grades K-12 from Wuhan and surrounding areas in central China. Perceived usefulness, self-efficacy, social presence, and perceived ease of use have a larger positive effect on online learning motivation, while cognitive presence has a small positive effect; teaching presence positively influences online learning motivation through social or cognitive presence; and factors, such as school location, previous online learning experience, family socioeconomic status, and prior acculturation, have a positive effect on online learning motivation.

With the advancement of technology and the changes in the education environment, it is essential to comprehend and enhance pupils' technological engagement in order to improve academic performance. These technologies should also be accessible to all pupils, regardless of socioeconomic standing or background, so that each pupil has the opportunity to increase their motivation and desire to learn. Consequently, the utilization of technology as an integral component of the learning process and strategies is essential for enhancing the learning motivation of pupils.

PUPILS' MOTIVATION IN TERMS OF OVERALL PERFORMANCE

Since a person's level of success in an endeavor depends on his or her level of desire for that endeavor, it stands to reason that a pupil's ability to learn effectively correlates with the level of motivation he or she experiences. Motivation to learn is not only an energy that drives pupils to learn, but also something that directs pupils' activities toward learning objectives (Wardani et al., 2020).

As motivation plays a crucial role in the learning process, it is necessary for pupils to exert effort toward learning and improve their academic performance. Motivation is essential for fostering and maintaining self-regulated learning, which frequently leads to enhanced academic performance. Compared to unmotivated pupils, academically motivated pupils are more likely to engage, persist, and exert effort to complete tasks. Because a lack of desire can be such a significant barrier to learning, it is crucial that teachers and pupils work together to build and maintain intrinsic motivation (Khan et al., 2019).

Rafiola et al. (2020) investigated the effects of learning motivation, self-efficacy, and integrated learning on pupils' performance in the 4.0 industrial revolution in public high schools. The findings indicated that learning motivation had a positive and statistically significant effect on pupil achievement. Additionally, learning motivation, self-efficacy, and blended learning had a significant impact on pupils' achievement. Ho et al. (2021) utilized self-administered questionnaires to investigate the learning motivation of 103 Chinese college pupils. Findings indicated that undergraduate pupils were primarily motivated by concerns about their future careers and qualifications, altruism, a desire to explore themselves, and enjoyment of social life. The findings were consistent with the self-determined theory regarding professional self-identity, supported the expectancy-value theory regarding the value of education to career aspirations, and agreed with the achievement goal theory regarding the attainment of professional qualifications and personal growth.

These studies demonstrate the significance of pupil learning motivation in achieving goals and objectives set not only by themselves but also by external factors. Pupils maintain the drive to succeed in their classes, which increases the likelihood that they will earn degrees and go on to become ethical, successful professionals. Future aspirations of pupils are also influenced by their desire to improve their learning motivation. Therefore, pupils' overall performance is influenced by their learning motivation during the learning process and in the learning environment.

RELATIONSHIP BETWEEN TECHNOLOGICAL SKILL AND LEARNING MOTIVATION

Observing changes in pupil behavior and learning outcomes can determine the efficacy of learning; therefore, when pupils are motivated to learn, learning activities will run smoothly (Puspitarini & Hanif, 2019). As motivation is an internal urge or impulse that can trigger, order, and arrange behavior in humans to meet various requirements, the same can be said about learning motivation, in which pupils are motivated to generate, ensure, and direct learning activities in order to achieve expected learning objectives. Consequently, pupils pursue their learning with vigor and consistency (Wardani et al., 2020). Technological skill is a skill strategy based on the simplicity with which educational institution employees can utilize technology to ensure the success of their work. It evolved as an innovative implementation strategy through which schools would reflect the realities of our communities' constant transformation and progress. Skill in the field of technology necessitates that administrators place a premium on preparing educators to make effective use of technological resources in the classroom (Ameen & Kadhum Al-Hammashi, 2022).

To accomplish effective technology integration in schools, teachers must receive adequate support in developing relevant competencies, self-efficacy, pedagogical perspectives, and a supportive school culture, all of which require both vision and provision from principals. Principals' dedication to teacher professional development had the greatest impact on the school's overall learning capacity. Yet, school administrators struggle with technology in education on a regular basis.

Therefore, it is anticipated that school administrators will continue to learn throughout their lives (Kulophasa & Kim, 2020). In a number of nations around the world, research into technological skill and its relationship and/or effects on school administrators, teachers, and pupils has become a topic of current interest. During the literature evaluation, however, the researcher was unable to locate any studies that examined the relationship between technological skill and pupil learning motivation. Nevertheless, the focus of this research will be on the potential relationship between technological skill and learning motivation.

SYNTHESIS OF THE REVIEWED LITERATURE

Santiago et al., (2022) reported on research and science cooperation policies between the People's Republic of China and European Union. Hotifah et al., (2020) explored the concept of a willingness to learn and determinants of an individual's willingness to learn. Wardani et al., (2020) published research on the motivation of individuals. All three researchers (Santiago et al., 2022) (Hotifah et al., 2020) (Wardani et al., 2020) employed literature review as study methodology and they set different selection criteria for the journal and articles utilized.

Santiago et al., (2022) selected five policy documents for their study, and also utilized a content analysis technique. Hotifah et al., (2020) utilized science direct, emerald, Eric, and IPI / Garuda database searches for literature review and then deemed 193 articles fit for the purpose of its study. Wardani et al., (2020) did not provide further details on their study methodology. Santiago et al., (2022)'s content analysis revealed that the five most frequent words in the analyzed policy documents were: educational, China, people, cooperative, and countries. It also demonstrates a high level of government commitment to a cooperative framework between people and countries in terms of education, in the sense of fostering interpersonal relationships and bridging cultures. Hotifah et al., (2020) discussed the concepts, components, determining factors, internal factors, and external factors of willingness to learn in relation to learning. They concluded that the concept of willingness to learn had underlying factors, was a psychological condition (psychological state), and possessed a component of self-regulation as well as a component of conasi.

The study by Wardani et al. (2020) discussed intrinsic and extrinsic motivation as well as the teacher's role in fostering pupil motivation. They reported that motivation plays a significant role and contributes to the continuity and success of individual learning. This meant that the individual's achievement and learning outcomes would be greater the greater their learning motivation.

Unlike the previous studies which conducted review studies on different subjects related to technological skill and learning motivation, the studies of Kulophasa & Kim, (2020) and Zuo et al., (2022) performed quantitative and qualitative studies to investigate topics related to technological skill and learning motivation. Kulophasa & Kim, (2020) investigated how principals applied their skill and technology to support teacher professional learning in three contextually distinct Thai schools whereas Zuo et al., (2022) investigated the effects of K-12 pupils' perceived presence and technology acceptance on their online learning motivation in Wuhan and adjacent areas in central China. Kulophasa & Kim, (2020) employed a multi-site exploratory case study, which adopted semi-structured in-depth interviews, observations and school documents as the primary sources for qualitative data analysis while Zuo et al., (2022) only employed questionnaires as their medium of data collection.

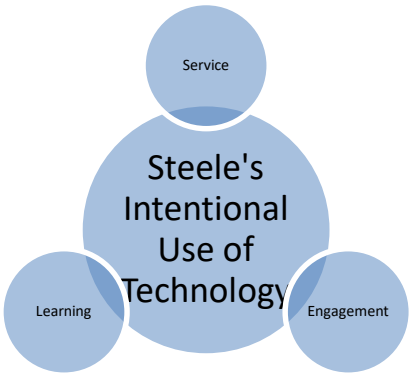
The findings of Kulophasa and Kim (2020) revealed that all three cases shared characteristics that advanced technology-based teacher learning. It also demonstrated that the principals utilized distinct and innovative practices, made possible by technology, to maximize the efficacy of teacher learning in their settings.

According to the findings of Zuo et al., (2022), perceived usefulness, self-efficacy, social presence, and perceived convenience of use have a greater positive effect on online learning motivation than cognitive presence. It was found that a teacher's social or cognitive presence positively affected online pupil motivation. It also demonstrated that certain factors may affect the acceptance of new technologies.

THEORETICAL FRAMEWORK

The concept of this study is anchored on one major theory, which is the Steele (2014)'s Intentional Use of Technology. This is further explained in detail below.

Steele's Intentional Use of Technology



Steele's Intentional use of technology model classifies advising technologies into three categories: service, engagement, and learning (Steele, 2014). The service category includes instruments like as learner information systems and degree audits that give institutional services via individualized learner's accounts. Social media, static websites, and a variety of electronic communication tools are examp les of technologies used to inform and develop communities with pupils and others at the school. Tools in the learning area include e-Portfolios, learning management systems, interactive video conferencing, and early warning systems. A significant component in this area is the ability to digitally assess pupil learning through material mastery, skill development, a project generated, a plan submitted, or display of contemplation on a topic or issue.

While it may appear obvious that tools in the learning area can help with learning outcomes, integrating tools from all three areas can result in the establishment of a more comprehensive and richer digital learning environment. A combination of such technologies can assist advisors in addressing pupil learning and program evaluation in a meaningful manner (Steele, 2014)

Research Paradigm

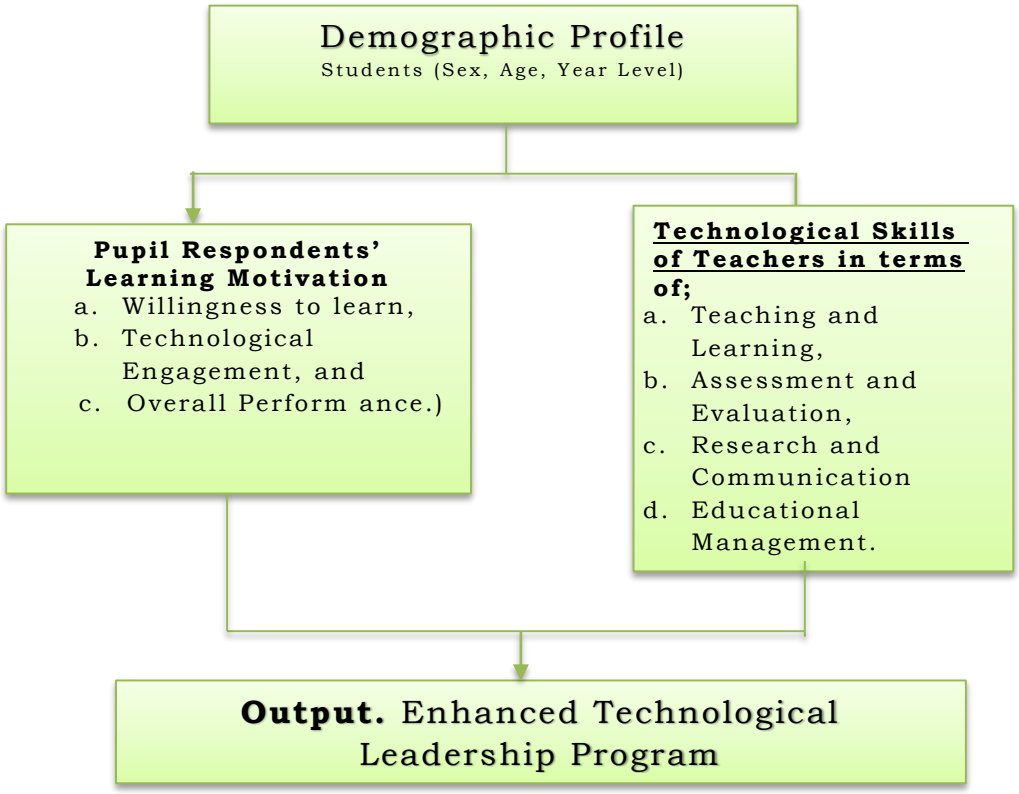


Figure 1. Research Paradigm

As presented in Figure 1 above, the study will make use of the descriptive-comparative-correlational research design. The data will be gathered from pupil-respondents and will also be analyzed quantitatively using statistical tools.

There are three main variables in the study. These are the demographic profile of the pupils; the pupils, assessment of the use of technology of teachers in the school in terms of teaching and learning, assessment and evaluation, research and communication, and educational management; and the pupils' assessment of their own level of motivation when technology is used in terms of willingness to learn, technological engagement, and overall assessment. For the demographic profile, the pupils' age, sex, were determined

Furthermore, a test of significant differences on the pupils' learning motivation when their profiles are taken as test factors and test of correlation between the variables of motivation and technology skills were assessed. Based on the research findings, the researcher developed a development plan to enhance technological skill practices in the school.

STATEMENT OF THE PROBLEM

This study determined the status of using technology as a tool for teachers' skill towards improvement of the pupils' learning motivation. The output of this was a proposal on how to enhance the technological skill practices of the teachers towards improving the learning motivation of the pupils in selected elementary schools in Paranaque City.

Specifically, the study sought answers to the following questions:

1. What is the profile of the pupil respondents in terms of :
   1.1. age
   1.2. sex
2. What is the assessment of the pupil respondents of the technological skills of teachers in terms of:
   2.1. teaching and learning
   2.2. assessment and evaluation
   2.3. research and communication
   2.4. educational management
3. Is there a significant difference on teachers' technological skill when the profile of the pupils is taken as test factors?
4. What is the pupils' assessment of their learning motivation in terms of:
   4.1. willingness to learn
   4.2. technological engagement
   4.3. overall performance
5. Is there a significant difference on pupils learning motivation of the respondents when their profile is taken as test factors?
6. Is there significant relationship between the assessment of technological skills of teachers and learning motivation of pupil respondents?
7. What development plan can be developed to enhance technological skills of teachers?

SIGNIFICANCE OF THE STUDY

The results of this study will make significant contributions to the educational sectors in different elementary schools and academic offices. Particularly, it will benefit the entities and groups mentioned below:

Teachers. Teachers are an integral part of the education process and the results of this study will benefit them by providing novel information on a possible new approach in using technology as a form of skill towards improving learning and motivation of the pupils in the classrooms. By utilizing technology to enhance teachers' skill, teaching will be much more effective and efficient as teachers' work will be made easier with the use of technological equipment to perform some tasks such as assessment and evaluation, teaching and learning, and research and classroom communication.

Pupils. The study will first and most significantly benefit pupils as it seeks to understand the learning motivation of the pupils in order to align it with technological skill and develop a plan that will help pupils benefit from the use of technology in schools to improve their learning motivation and engagement. Pupils will form a deeper connection with learning when technology is used to improve their

overall performance and academic engagement. Pupils will form a deeper connection with their culture and eventually contribute and mold their sense of nationalism and cultural appreciation. Lastly, by integrating technological skill into education, the learners of today's current era can inherit and pass down this form of teaching, learning, and skill to future generation of pupils.

School Leaders. Many academic institutions are prioritizing technological skill in schools; however, some school leaders such as school principals, administrators, and management has limited knowledge and information regarding technological implementations. Therefore, the current research will add to the pedagogical and technological information related to this subject and how it will impact and improve the pupils' learning motivation. Furthermore, the research will provide an output which may guide school leaders towards implementation of the proposed plan based on the study findings and conclusions.

Information and Communication Technology Administrators. The ICT department of the participating institution will benefit from this study, as it will provide insights on how technology may be used by teachers in school skill and management of pupils.

Curriculum Makers. Next, the results of the study will be of great benefit to curriculum makers towards providing information on the areas of technological skill and pupils motivation that have gaps or current issues that need reevaluation. The findings of this study will reveal possible new ideas that can be integrated in the new curricula to promote technological skill, pupil engagement, and pupil motivation. In addition to this, the data collected from this study will also provide sources that curriculum makers may use when constructing a curriculum based on the demands and needs of pupils towards improvement in modern days Philippine education system.

Department of Education Officials. The officials from DepEd and other important educational organization leaders in the country will benefit from this study as the findings will provide data that will be useful in making decisions for changes and revisions in the future curriculum towards the use of technology in schools. Also, the results of this study will also benefit the DepEd officials in the region by providing information on the current situation or status of technological skill and pupils' motivation.

Future Researchers. The study will benefit future researchers as this will act as a reference for future studies on the integration of technology in school skill, teaching, and learning. The information gathered here will also be of use when researchers need to make comparisons of future progress or situation in the use of technology in education and its relationship with pupils' motivation. Lastly, it will also aid future researchers when developing new research paths and identifying future gaps related to the use technology to enhance pupils' motivation.

SCOPE AND DELIMITATION OF THE STUDY

This current study aimed to evaluate the status of using technology as a tool for teachers' skills in order to improve the learning motivation of the pupils. The study further proposed an output to enhance the technological skill practices of the teachers towards improving the learning motivation of the pupils in the public schools.

This study was conducted in 2023 – 2024 academic year. The respondents are pupils from selected elementary schools in Paranaque City who were purposively selected to participate in the study. The pupils assessed the level of their learning motivation. The study was conducted in the participating institutions in Paranaque City. It is a descriptive-comparative-correlational study that used survey questionnaire to collect the primary data needed in the study.

Furthermore, because the study utilized Grade 6 respondents, there may be difficulties with language disparities and translation during the survey and data collection time. In other words, the phrasing of the translated research questionnaire may differ from that of the English version. So, there is a need to convert the instrument to Filipino. Nonetheless, the correctness of the final obtained data translations reviewed and confirmed to eliminate mistakes and preserve precision. Aside from language, another constraint in the study is the time frame given to the researcher to complete the investigation. The researcher may have difficulty managing the study's duties given the little time available to conduct the investigation.

Hypotheses

The following null hypotheses were proposed in the study:

Ho 1. There is no significant difference on teachers' technological skills when the profile of the pupils is taken as test factors.

Ho2. There significant differences on pupils learning motivation of the respondents when their profile is taken as test factors.

Ho3. There is no significant relationship between the assessment of technological skill of teachers and learning motivation of pupil respondents.

Definition of Terms

To further add clarity to the concepts used in the study, the following presents the operational definitions of important terms used:

Assessment and Evaluation. This refers to how technology is used in the school to assess and check pupils' records and other academic credentials.

Educational Management. This refers to how technology is used by the teachers and school administrators to manage academic affairs in the skill of the school.

Learning Motivation. This variable will be used to determine the pupils' drive and ability to keep learning in terms of their willingness to learn, technological engagement, and overall performance in the classroom.

Overall Performance. This refers to other performance of the pupils in terms of their academic performance, learning performance, motivation to achieve their goals, acquire new skills, and be able to keep up with their peers. It is one of the dimensions used to assess the level of pupils' learning motivation when technological skill is practiced in the school.

Research and Communication. This term refers to how schools are able to inculcate technology for making research and keeping effective communication among pupils, teachers, and school administrators. This is one of the dimensions used the assess the status of technological skill in the institution.

Teaching and Learning. This dimension which was also used in the assessment of technological skill determined how technology plays a role in the teaching and learning process of the school.

Technological Engagement. To determine the learning motivation of the pupils, this dimension is used to assess how technology is used by the school skill to engage with the pupils in the classroom.

Technological Skill. This is an independent variable in the study which will be answered by the teachers and school administrators with four dimensions that explained the status of technological skill in the school for teaching and learning, assessment and evaluation, research and communication, and educational management.

Willingness to Learn. This refers to one of the dimensions used to assess the pupils' learning motivation. These criteria determined the will of the pupils pertaining to their ability and motivation to learn using technological software and tools.

METHODOLOGY

This chapter of the study describes the methodology that was conducted by the researcher. It includes the research design, locale, the study's respondents, sampling technique, the research instrument, the data collection technique, and the statistical data analysis that was used in interpreting the data collected. It also includes guidelines of the decision criteria and ethical considerations of the study.

Research Design

The study utilized a descriptive- comparative- correlational approach as its research design. The descriptive-correlational design is a form of quantitative kind of research. Closed-ended questions are commonly used in quantitative research design. Respondents was not be able to make lengthy open-ended responses if they are given a predefined selection of answers. This approach assures that the quantitative research procedure is significantly more efficient than if qualitative-style open-ended questions were used. It is more efficient since it eliminates the time-consuming process of coding large amounts of open-ended replies. However, if appropriate, quantitative research design allows for the addition of an 'Other' category in the list of possible replies to questions. This permits respondents who do not fit neatly into the primary categories to have their precise replies captured and used in the results analysis (DJS research, 2020).

In this study, a quantitative approach was done when collecting, analyzing, and interpreting data from the pupils. This included their demographic profile, assessment of the status of technological skill, and the level of learning motivation. Data were collected through a questionnaire using the 4-point Likert Scale. The variables were subsequently subjected to statistical analyses to determine the significant relationships, differences, and patterns.

Research Locale

The current research was collected its data from four selected public elementary schools in Paranaque City. The respondents of the study are grade six pupils who were randomly selected from the 4 schools.

After the data was collected from four selected public elementary schools in Paranaque City, the researcher then processed the data at EAC, Manila, Philippines. Here, the researcher presented the findings and as well as propose a strategic plan for the enhancement of technological skill at four selected public elementary schools in Paranaque City to improve pupils' level of motivation in learning with technology.

Sampling Method

Random sampling was used in the study, from the selected four selected public elementary schools in Paranaque City to assess the technological skills of the teachers in the institution and the learning motivation for pupil-respondents.

The four selected schools have the detailed population and samples. Using the Qualtrics calculator with a 5% margin of error, 95% confidence level, the recommended sample size for the pupils is 1,200 pupil-respondents. Hence, 291 pupils were involved in the sample of the study.

Research Instruments

In order to gather the information needed to understand the perceptions and status of technological skill and learning motivation at four selected public elementary schools in Paranaque City, the study made use of research instrument. namely, the self-made questionnaire for the pupil respondents. These were created based on the information requested in the research questions and a study of relevant literature.

The following sections go into further information about these research tools.

Questionnaire

A self-created questionnaire, which has Tagalog translation, was created to collect information from pupil respondents and the data acquired was examined statistically by the researcher.

The questionnaire was divided into three parts. The first part is the demographic profile of the pupils in terms of age, sex.

The second part was used to assess the pupil's level of learning motivation in terms of their willingness to learn (5 items), technological engagement (5 items), and overall performance (5 items). All in all, there are 15 items in the pupils' questionnaire.

The third part was used to assess the technological skill in terms of teaching and learning (7 items), assessment and evaluation (7 items), research and communication (7 items), and educational management (7 items). All in all, there are 27 indicators in the teacher's technological skill.

Finally, before employing the study instrument to collect data, the researcher tested for its reliability and validity. This was accomplished with the support of professional evaluation and the questionnaire. It was then transferred to a Google Form for efficient and convenient process of answering the survey and collecting data. A Google Link was then generated ready for sharing to the respondents.

Data Gathering Procedure

Before beginning the data collection method, the researcher requested consent from the Schools Division Superintendent. To do so, the researcher sent a letter of request to the office of the Superintendent together with the Parent's Consent Form, and after approval, the office of the Superintendent through the Planning and Research Section sent the endorsement letter to the office of the School Principals of the four selected schools. The Parent's Consent Form was then distributed to the pupil-respondents through the class advisers. When the consent was retrieved, pupils were oriented on the online answering of the research instrument, which was in a form of a Google Link. The assistant of the Information Communication Technology (ICT) coordinator was requested on this matter. Answering the survey was done after classes to avoid disruption of classes.

Following the data collection procedure, the material was organized and analyzed and evaluated for noteworthy discoveries. The researcher made relevant inferences from the data. It is also important to note that the data collection procedure, with the final results of the research being given at the conclusion of the semester.

Ethical Consideration

Since this research paper was completed as a final project for a course at EAC Manila, the researcher made certain that it respects and supports all of the school policies, regulations, and principles. The privacy of the data is a crucial ethical factor that the researcher has highlighted.

As a result, the researcher ensured that a permission form is prepared that respondents must agree to before participating in the study, in order to define the aims of the study and how their information was used and processed. It is also vital to note that the researcher kept the data secret and only utilized to achieve the paper's objectives.

Statistical Treatment of the Data

The study employed statistical and descriptive analysis. Data was analyzed statistically using treatments with a 0.05 level of significance and with the use of the software Statistical Package for Social Sciences (SPSS). After which, the data was described, discussed, and analyzed in the subsequent sections of the study.

1. Frequency Count and Percentage

These were carried out utilizing information gathered from the demographic profile of the pupil-respondents. The information on the pupils' age, sex; and will be treated to these statistical approaches so that the researcher may have a better understanding of the characteristics of the population questioned. This was also assisted the researcher in locating important observations that are connected or correlated with age, and sex.

2. Weighted Mean

The researcher computed the weighted mean or average of the findings from the Likert Scale used for each of the indications in the questionnaire. By doing so, general information technology skill of the school and its relationship with the pupil's learning motivation is derived.

In addition to this, the researcher used a Likert Scale that consisted of four (4) points. This range from Strongly Disagree (SD = 1); Disagree (D = 2); Agree (A=3); to Strongly Agree (SA = 4). The interpretation and further details of each point can also be seen below.

Weight	Scale/Range	Description/Interpretation
4	3.51-4.00	Strongly Agree/ Highly Manifested
3	2.51-3.50	Agree/ Manifested
2	1.51-2.50	Disagree/ Slightly Manifested
1	1.00-1.50	Strongly Disagree/ Not Manifested

3. T-test / ANOVA

The researcher utilized a t-test along with the weighted means obtained to detect any existing discrepancies between the variables employed in the study's research questions in terms of the profile variables.

Specifically, this was used to find differences between the profile of the pupil-respondents and their level of learning motivation;

Meanwhile, ANOVA or Analysis of Variance was used to find if there are existing differences between the sex and age of respondents in the variables to be assessed by the pupils.

4. Pearson's (r) Correlation Analysis

To accomplish the research objectives, the researcher tested the relationship between the pupils' learning motivation as assessed by the pupils themselves and the technological skill of the teachers. The researcher analyzed the link between these two variables utilizing Pearson's (r) correlation analysis and the indicators from the questionnaire.

Decision Criteria

The researcher utilized a 0.05 point of significance when determining the relevance of the hypothesis created using the material acquired and processed in the investigation. This indicates that if the estimated significance values are more than 0.05, the hypothesis would be accepted. On the other

hand, if these significant values will be estimated to be less than this, the hypothesis was rejected in the research.

RESULTS AND DISCUSSIONS

The gathered data are presented here with the analysis and interpretation according to the statement of the problem. The profile of the student respondents in terms of age and sex, their assessments on the technological skills of their teachers, their learning motivation, differences in their assessment when their profile is taken as test factor, and the relationship between the technological skills of teachers and the learning motivation of students are hereby presented with the end view of the proposed development pal to enhance the technological skills of teachers.

I. Profile of Pupil Respondents

Table 1 presents the frequency distribution of the student respondents' profile in terms of age, and sex.

Table 1: Frequency Distribution of Student Respondents' Profile

Profile	Frequency	Percentage
Age		
11 years old	118	40.5%
12 years old	160	55.0%
13 years old	13	4.5%
Total	**291**	**100%**
Sex		
Male	114	39.2%
Female	177	60.8%
Total	**291**	**100%**

Age. One hundred eighteen (118) or 40.5% of the pupil respondents are 11 years old, one hundred sixty (160) or 55% are 12 years old, and thirteen (13) or 4.5% are 13 years old. This indicates that majority of the pupil respondents are 12 years old.

Sex. One hundred fourteen (114) or 39.2% of the pupil respondents are male, while one hundred seventy seven (177) or 608% are female. This goes to show that majority of the pupil respondents are female.

II. Pupil Respondents' Assessment on the Technological Skills of their Teachers

Tables 2-6 present the assessment of the student respondents on the technological skills of their teachers in terms of teaching and learning, assessment and evaluation, research and communication, and educational management.

2.1 On Teaching and Learning

Table 2 presents the assessment of the pupil respondents on the technological skills of their teachers in terms of teaching and learning.

Table 2: Pupil Respondents' Assessment on the Technological Skills of their Teachers in Terms of Teaching and Learning

Teaching and Learning	Mean	SD	Qualitative Description	Interpretation	Rank
1. Assists or provides support for technological usage in the school	3.17	0.83	Agree	High Level	3
2. Supports the hiring of technical support staff that will assist teachers in the class	3.17	0.85	Agree	High Level	3

3. Uses computers to make teaching and learning meaningful	3.17	0.90	Agree	High Level	3
4. Believes that technology is an integral part of learning in modern-day's education	3.12	0.93	Agree	High Level	6
5. Manages the pupils' information using technology	3.02	0.93	Agree	High Level	7
6. Have the skills and competencies required for a tech-based teaching and learning engagement	3.16	0.90	Agree	High Level	5
7. The teachers and school administrators are trained to use technological tools in the learning culture.	3.27	0.85	Agree	High Level	1
Composite Mean	**3.16**	**0.59**	**Agree**	**High Level**	

Legend: 3.51-4.00 Strongly Agree/Very High Level;2.51-3.50 Agree/High Level; 1.51-2.50 Disagree/Low Level; 1.00-1.50 Strongly Disagree/Very Low Level

As shown in Table 2, pupil respondents agree that the teachers and school administrators are trained to use technological tools in the learning culture with the highest assessment of 3.27 interpreted to be of high level. Likewise, pupil respondents agree that their teachers assist or provide support for technological usage in the school, that they support the hiring of technical support staff that will assist teachers in the class, that they use computes to make teaching and learning meaningful, that they have the skills and competencies required for a tech-based teaching and learning engagement, and that they believe that technology is an integral part of learning in modern day's education with the mean values of 3.17, 3.17, 3.17, 3.16, and 3.12 respectively interpreted to be of high level. Though pupil respondents also agree that their teachers manage the pupils' information using technology, it was given the lowest assessment of 3.02 interpreted to be of high level. A composite mean value of 3.16 indicates that the technological skills of teachers in terms of teaching and learning is of high level as perceived by the pupil respondents. According to the International Society for Technology in Education (ISTE) Standards for Educators, one of the seven roles of a 21st century teacher is as a leader who can support pupil learning empowerment and enhance teaching and learning (Samsudin & Ghani, 2020). There are numerous forms of media used for teaching and learning by teachers who can integrate the knowledge of technology required to promote and develop knowledge and the ability to communicate content as a method. This method or procedure requires the teacher to organize teaching and learning activities for pupils with technological approaches infused into them (Putpoonga, 2023).

2.2 On Assessment and Evaluation

Table 3 presents the assessment of the pupil respondents on the technological skills of their teachers in terms of assessment and evaluation.

Table 3: Pupil Respondents' Assessment on the Technological Skills of their Teachers in Terms of Assessment and Evaluation

Assessment and Evaluation	Mean	SD	Qualitative Description	Interpretation	Rank
1. The learning management system is used to set quizzes and tests to evaluate pupils' learning outcome	3.19	0.88	Agree	High Level	1
2. The e-portfolio or learning management system (LMS) is used to assess pupils' performance	3.13	0.88	Agree	High Level	2

3. Tencent Video Conferencing or other conferencing call software are used for virtual learning	3.09	0.91	Agree	High Level	3.5
4. Technology is used to assess pupils' learning outcome so that results are easily aggregated in the digital format.	3.05	0.93	Agree	High Level	5
5. Technology is used to evaluate originality of pupils' submissions through plagiarism checkers	2.93	0.95	Agree	High Level	7
6. Used to evaluate essential learning to prove how teachers improve pupil learning while aiding program assessment	3.09	0.96	Agree	High Level	3.5
7. There are online self-assessment tools for pupils to evaluate themselves	2.99	0.97	Agree	High Level	6
Composite Mean	**3.07**	**0.63**	Agree	High Level	

Legend: 3.51-4.00 Strongly Agree/Very High Level;2.51-3.50 Agree/High Level; 1.51-2.50 Disagree/Low Level; 1.00-1.50 Strongly Disagree/Very Low Level

As shown in Table 3, pupil respondents agree that the learning management system is used to set quizzes and tests to evaluate pupils' learning outcome with the highest assessment of 3.19 interpreted to be of high level. Similarly, pupil respondents agree that the e-portfolio or learning management system (LMS) is used to assess pupils' performance, that tencent video conferencing or other conferencing call software are used for virtual learning, that teachers used to evaluate essential learning to prove how teachers improve pupil learning while aiding program assessment, that technology is used to assess pupils' learning outcome so that results are easily aggregated in the digital format, and that there are online self-assessment tools for pupils to evaluate themselves with the mean values of 3.13, 3.09, 3.09, 3.05, and 2.99 respectively interpreted to be of high level. Though pupils also agree that technology is used to evaluate originality of pupils' submissions through plagiarism checkers, it was given the lowest assessment of 2.93 interpreted to be of high level. A composite mean value of 3.07 indicates that the technological skills of teachers in terms of assessment and evaluation is of high level as perceived by the pupil respondents. The primary purpose of education is teaching and learning, and if there is effective teaching, the result will be effective learning. Evaluation is required for education to fulfill its purpose. First, teacher evaluation involves documenting the nature of the teacher's performance, followed by assisting the teacher in enhancing their performance. It is also about assisting the teacher in accepting responsibility for his task. Therefore, excellent communication between teachers, administrators, and school-affiliated individuals is required for a quality teacher evaluation (Cetin et al., 2019).

2.3 On Research and Communication

Table 4 presents the assessment of the pupil respondents on the technological skills of their teachers in terms of research and communication.

Table 4: Pupil Respondents' Assessment on the Technological Skills of their Teachers in Terms of Research and Communication

Research and Communication	Mean	SD	Qualitative Description	Interpretation	Rank
1. Technology aids in interpersonal communication skills enhancement	3.21	0.85	Agree	High Level	3
2. The use of emails is encouraged in the school for teacher-pupil engagement	3.25	0.84	Agree	High Level	2

3. Pupils use social media to interact with each other while working on school projects	3.12	0.99	Agree	High Level	6
4. Teachers make use of the Internet for academic research purposes	3.37	0.83	Agree	High Level	1
5. The internet serves as a source of reference for pupils in accomplishing tasks	3.18	0.93	Agree	High Level	4
6. Scholarly articles aid pupils and teachers to accomplish academic research papers	3.16	0.86	Agree	High Level	5
7. School papers are published using online software and digital websites.	3.04	0.94	Agree	High Level	7
Composite Mean	**3.19**	**0.59**	**Agree**	**High Level**	

Legend: 3.51-4.00 Strongly Agree/Very High Level;2.51-3.50 Agree/High Level; 1.51-2.50 Disagree/Low Level; 1.00-1.50 Strongly Disagree/Very Low Level

As shown in Table 4, pupil respondents agree that teachers make use of the internet for academic research purposes with the highest assessment of 3.37 interpreted to be of high level. Likewise, they also agree that the use of emails is encouraged in the school for teacher-pupil engagement, that technology aids in interpersonal communication skills enhancement, that the internet serves as a source of reference for pupils in accomplishing tasks, and that pupils use social media to interact with each other while working on school projects with the mean values of 3.25, 3.21, 3.18, 3.16, and 3.12 respectively interpreted to be of high level. Though pupil respondents agree that school papers are published using online software and digital websites, it was given the lowest assessment of 3.04 interpreted to be of high level. A composite mean value of 3.19 indicates that the technological skills of teachers in terms of research and communication is of high level as perceived by the pupil respondents. Governments place a greater emphasis on science, technology, and innovation in order to enhance research and development, thereby creating a robust ecosystem for the technological industry (Bongomin et al., 2020). In light of the need for government and higher education to close research gaps and seize development opportunities, technological skill should be encouraged and practiced in institutions through the adoption, prioritization, and advancement of technology among teachers, pupils, and the learning process.

2.4 On Educational Management

Table 5 presents the assessment of the pupil respondents on the technological skills of their teachers in terms of educational management.

Table 5: Pupil Respondents' Assessment on the Technological Skills of their Teachers in Terms of Educational Management

Educational Management	Mean	SD	Qualitative Description	Interpretation	Rank
1. Teachers use technology for curriculum planning	3.19	0.89	Agree	High Level	3.5
2. Teachers use more tech software for designing and planning activities.	3.30	0.84	Agree	High Level	1
3. Teachers use technology for staff development	3.08	0.91	Agree	High Level	5
4. Teachers use technological software for classroom management	3.19	0.89	Agree	High Level	3.5
5. With technology, teacher are able to articulate clear vision statements for each academic year	3.21	0.88	Agree	High Level	2

6. Technological software is used for storage and preservation of academic data	3.02	0.96	Agree	High Level	7
7. Aids in payment of fees and other administrative management protocols such as registration and access to school portal.	3.07	0.90	Agree	High Level	6
Composite Mean	**3.15**	**0.63**	**Agree**	**High Level**	

Legend: 3.51-4.00 Strongly Agree/Very High Level;2.51-3.50 Agree/High Level; 1.51-2.50 Disagree/Low Level; 1.00-1.50 Strongly Disagree/Very Low Level

As shown in Table 5, pupil respondents agree that teachers use more tech software for designing and planning activities with the highest assessment of 3.30 interpreted to be of high level. Likewise, they also agree that with technology, teachers are able to articulate clear vision statements for each academic year, that teachers used technology for curriculum planning, that teachers used technological software for classroom management, that teachers use technology for staff development, and that aids in payment of fees and other administrative management protocols such as registration and access to school portal with the mean values of 3.21, 3.19, 3.19, 3.08, and 3.07 respectively interpreted to be of high level. Though pupils also agree that technological software is used for storage and preservation of academic data, it was given the lowest assessment of 3.02 interpreted to be of high level. A composite mean value of 3.15 shows that the technological skills of teachers in terms of educational management is of high level as perceived by the pupil respondents. The current social context makes it evident that we have entered a fully digital era, necessitating the use of technology in education management to enhance learning management since learning in the digital age has changed the leader's function (Putpoonga, 2023). School administrators play a crucial role in the administration of schools and other educational institutions by maintaining operational management, coordinating teachers and motivating pupils, and providing instructional skill. Therefore, school administrators should be resource management leaders and be responsible for administering the resources required for technology integration. This includes establishing expenditure priorities, which directly supports the school's technology application plan's objectives. Educational administrators must play crucial roles in keeping up with technological development and education administration, which necessitates the actual practice of technological skill (Al-Subaie and Al-Qahtani, 2020).

2.5 Summary of the Pupil Respondents' Assessment on the Technological Skills of their Teachers

Table 6 presents the summary of the assessment of pupil respondents on the technological skills of their teachers.

Table 6: Summary of the Pupil Respondents' Assessment on the Technological Skills of their Teachers

Technological Skills Indicators	Mean	SD	Qualitative Description	Interpretation	Rank
1. Teaching and Learning	3.16	0.59	Agree	High Level	2
2. Assessment and Evaluation	3.07	0.63	Agree	High Level	4
3. Research and Communication	3.19	0.59	Agree	High Level	1
4. Educational Management	3.15	0.63	Agree	High Level	3
Over-all Mean	**3.14**	**0.56**	**Agree**	**High Level**	

Legend: 3.51-4.00 Strongly Agree/Very High Level;2.51-3.50 Agree/High Level; 1.51-2.50 Disagree/Low Level; 1.00-1.50 Strongly Disagree/Very Low Level

As shown in Table 6, the result indicates that teacher respondents exhibited a high level of technological skills in terms of research and evaluation which gained the highest assessment from the pupil respondents and ranked first among the four indicators. Second in rank was on teaching and learning which also shows a high level of technical skills, third in rank was on educational management, and the last in rank was on assessment and evaluation which obtained the lowest assessment from the pupil respondents. An over-all mean value of 3.14 reveals that teachers exhibited a high level of technological skills as perceived by the pupil respondents. School administrators should be resource management leaders and be responsible for administering the resources required for technology integration. This includes establishing expenditure priorities, which directly supports the school's technology application plan's objectives. Educational administrators must play crucial roles in keeping up with technological development and education administration, which necessitates the actual practice of technological skill (Al-Subaie and Al-Qahtani, 2020).

III. Differences in the Assessment of Pupil Respondents on the Teachers' Technological Skills when their Profile is Taken as Test Factor

Tables 7-8 present the differences in the assessment of pupil respondents on the technological skills of their teachers when their age and sex are taken as test factors.

3.1 On Age

Table 7 presents the differences in the assessment of pupil respondents on the technological skills of their teachers when their age is taken as test factor.

Table 7: Differences in the Assessment of Pupil Respondents on their Teachers' Technological Skills when their Age is Taken as Test Factor

Technological Skills	Age	Mean	SD	Computed F-value	Sig	Decision on Ho	Interpretation
1. Teaching and Learning	11 years old	3.14	0.54	0.94	0.39	Accepted	Not Significant
	12 years old	3.18	0.63				
	13 years old	2.96	0.54				
2. Assessment & Evaluation	11 years old	3.04	0.60	1.78	0.17	Accepted	Not Significant
	12 years old	3.11	0.66				
	13 years old	2.78	0.55				
3. Research & Communication	11 years old	3.15	0.57	2.01	0.14	Accepted	Not Significant
	12 years old	3.24	0.61				
	13 years old	2.95	0.33				
4. Educational Management	11 years old	3.13	0.60	1.96	0.14	Accepted	Not Significant
	12 years old	3.19	0.66				
	13 years old	2.85	0.47				
Over-all	11 years old	3.12	0.52	1.97	0.14	Accepted	Not Significant
	12 years old	3.18	0.59				
	13 years old	2.88	0.39				

As shown in Table 7, pupil respondents have obtained a computed F-value of 0.94 in terms of teaching and learning with the significance value of 0.39. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their age is taken as test factor. This goes to show that pupils have relatively the same assessment on the technological skills of their teachers in terms of teaching and learning regardless of their age.

In terms of assessment and evaluation, pupil respondents have obtained a computed F-value of 1.78 with the significance value of 0.17. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their age is taken as test factor. The result indicates that pupils have relatively the same assessment on the technological skills of their teachers in terms of assessment and evaluation regardless of their age.

In terms of research and communication, pupil respondents have obtained a computed F-value of 2.01 with the significance value of 0.14. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their age is taken as test factor. This is taken to mean that pupils have relatively the same assessment on the technological skills of their teachers in terms of research and communication regardless of their age.

In terms of educational management, pupil respondents have obtained a computed F-value of 1.96 with the significance value of 0.14. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their age is taken as test factor. The result shows that pupils have relatively the same assessment on the technological skills of their teachers in terms of educational management regardless of their age.

Generally, pupil respondents have obtained an over-all computed F-value of 1.97 with the significance value of 0.14. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their age is taken as test factor. The result reveals that pupils have relatively the same assessment on the technological skills of their teachers regardless of their age.

3.2 On Sex

Table 8 presents the differences in the assessment of pupil respondents on the technological skills of their teachers when their sex is taken as test factor.

Table 8: Differences in the Assessment of Pupil Respondents on their Teachers' Technological Skills when their Sex is Taken as Test Factor

Technological Skills	ex	Mean	SD	Computed t-value	Sig	Decision on Ho	Interpretation
1. Teaching and Learning	Male	3.13	0.61	-0.67	0.51	Accepted	Not Significant
	Female	3.17	0.58				
2. Assessment & Evaluation	Male	3.04	0.70	-0.60	0.55	Accepted	Not Significant
	Female	3.09	0.59				
3. Research & Communication	Male	3.16	0.58	-0.70	0.49	Accepted	Not Significant
	Female	3.21	0.59				
4. Educational Management	Male	3.13	0.66	-0.50	0.62	Accepted	Not Significant
	Female	3.17	0.62				
Over-all	Male	3.11	0.57	-0.67	0.50	Accepted	Not Significant
	Female	3.16	0.55				

As shown in Table 8, pupil respondents have obtained a computed t-value of -0.67 in terms of teaching and learning with the significance value of 0.51. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their sex is taken as test factor. This goes to show that male and female pupils have relatively the same assessment on the technological skills of their teachers in terms of teaching and learning.

In terms of assessment and evaluation, pupil respondents have obtained a computed t-value of -0.60 with the significance value of 0.55. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their sex is taken as test factor. This is taken to mean that male and female pupils have relatively the same assessment on the technological skills of their teachers in terms of assessment and evaluation.

In terms of research and communication, pupil respondents have obtained a computed t-value of -0.70 with the significance value of 0.49. Since the significance value is higher than the set 0.05 level of

significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their sex is taken as test factor. The result indicates that male and female pupils have relatively the same assessment on the technological skills of their teachers in terms of research and communication.

In terms of educational management, pupil respondents have obtained a computed t-value of -0.50 with the significance value of 0.62. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their sex is taken as test factor. The result shows that male and female pupils have relatively the same assessment on the technological skills of their teachers in terms of educational management.

Generally, pupil respondents have obtained an over-all computed t-value of -0.67 with the significance value of 0.50. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their sex is taken as test factor. The result reveals that male and female pupils have relatively the same assessment on the technological skills of their teachers.

IV. Pupil Respondents' Assessment of their Learning Motivation

Tables 8-12 present the assessment of the pupil respondents of their learning motivation in terms of willingness to learn, technological engagement, and over-all performance.

4.1 On Willingness to Learn

Table 8 presents the assessment of the pupil respondents of their learning motivation in terms of willingness to learn.

Table 8: Pupil Respondents' Assessment of their Learning Motivation in Terms of Willingness to Learn

Willingness to Learn	Mean	SD	Qualitative Description	Interpretation	Rank
1. In technology-influenced classrooms, I am able to accomplish tasks assigned to me	3.30	0.68	Agree	High Level	2
2. When technology is used, I am able to understand the lectures	3.19	0.66	Agree	High Level	4
3. In virtual or blended learning, I feel confident enough to ask questions when I do not understand	2.93	0.87	Agree	High Level	5
4. Due to the use of technological software tools, I am able to accomplish and submit my homework on time	3.34	0.66	Agree	High Level	1
5. Technology boosts my willingness to learn new topics in the classroom	3.28	0.73	Agree	High Level	3
Composite Mean	**3.21**	**0.45**	**Agree**	**High Level**	

Legend: 3.51-4.00 Strongly Agree/Very High Level;2.51-3.50 Agree/High Level; 1.51-2.50 Disagree/Low Level; 1.00-1.50 Strongly Disagree/Very Low Level

As shown in Table 8, pupil respondents agree that due to the use of technological software tools, they are able to accomplish and submit their homework on time with the highest assessment of 3.34 interpreted to be of high level. Likewise, they also agree that in technology-influenced classrooms, they are able to accomplish tasks assigned to them, that technology boosts their willingness to learn new topics in the classroom, and that when technology is used, they are able to understand the lectures with the mean values of 3.30, 3.8, and 3.19 respectively interpreted to be of high level. Though pupils also agree that in virtual or blended learning, they feel confident enough to ask questions when they do not understand, but

it was given the lowest assessment of 2.93 interpreted to be of high level. A composite mean value of 3.21 reveals that pupil respondents exhibited a high level of learning motivation in terms of willingness to learn. As explained by Hotifah et al (2020) in their study, in relation to all changes and unpredictability, all individuals must demonstrate a willingness to learn. Both internal and external influences impact a person's motivation for learning. The willingness to learn will encourage learning behavior, add new knowledge while broadening one's perspective of thought, allow one to solve complex problems, increase one's self-confidence, become more adaptable, and result in high learning achievements. In the context of learning, pupils must be willing to learn in order to deal with the challenges of a time marked by change and unpredictability. The complexity of science and technology necessitates that humans have the capacity to adapt (Hotifah et al., 2020).

4.2 On Technological Engagement

Table 9 presents the assessment of the pupil respondents of their learning motivation in terms of technological engagement.

Table 9: Pupil Respondents' Assessment of their Learning Motivation in Terms of Technological Engagement

Technological Engagement	Mean	SD	Qualitative Description	Interpretation	Rank
1. I feel more attentive when the teacher uses advanced innovative techniques to teach.	3.30	0.71	Agree	High Level	2
2. I am less distracted and more eager to learn when technology such as virtual reality are used for learning.	3.00	0.75	Agree	High Level	5
3. I am more creative in a technology-influenced classroom	3.05	0.74	Agree	High Level	3
4. With technology, I feel like there is no limits to my learning ability	3.02	0.84	Agree	High Level	4
5. I believe in myself and feel more confident with my output since I have the necessary technological resources to make research and learn better.	3.35	0.72	Agree	High Level	1
Composite Mean	**3.15**	**0.49**	**Agree**	**High Level**	

Legend: 3.51-4.00 Strongly Agree/Very High Level;2.51-3.50 Agree/High Level; 1.51-2.50 Disagree/Low Level; 1.00-1.50 Strongly Disagree/Very Low Level

As shown in Table 9, pupil respondents agree that they believe in themselves and feel more confident with their output since they have the necessary technological resources to make research and learn better with the highest assessment of 3.35 interpreted to be of high level. Similarly, pupil respondents also agree that they feel more attentive when the teacher uses advanced innovative techniques to teach, that they are more creative in a technology-influenced classroom, and that with technology, they feel like there is no limits to their learning ability with the mean values of 3.30, 3.05, and 3.02 respectively interpreted to be high level. Though pupils also agree that they are less distracted and more eager to learn when technology such as virtual reality are used for learning, but it was given the lowest assessment of 3.00 interpreted also to be of high level. A composite mean value of 3.15 reveals that pupil respondents exhibited a high level of learning motivation in terms of technological engagement. Understanding pupil engagement is a multifaceted and complex phenomenon. As it has been associated with academic achievement, pupil engagement is regarded as a crucial factor in supporting pupil learning and growth. Engaging learning environments can influence the learning process, contribute to the development of critical thinking skills, and promote pupil retention. The technological engagement of pupils would include participation in social media, video, and collaborative learning technologies (Nkomo, 2021).

4.3 On Over-all Performance

Table 10 presents the assessment of the pupil respondents of their learning motivation in terms of over-all performance.

Table 10: Pupil Respondents' Assessment of their Learning Motivation in Terms of Over-all Performance

Over-all Performance	Mean	SD	Qualitative Description	Interpretation	Rank
1. Other than just passing the subjects, I feel motivated to learn new skills in my school	3.43	0.69	Agree	High Level	2
2. Due to the innovative teaching, I am able to compete with my peers from other schools when it comes to my field of study	3.02	0.73	Agree	High Level	5
3. I am able to set new goals for my future after graduating from this school	3.47	0.74	Agree	High Level	1
4. Technology has contributed in boosting my academic performance.	3.29	0.72	Agree	High Level	3
5. My ability to learn with technological software and equipment has improved my level of competency in learning and handling assigned tasks	3.26	0.70	Agree	High Level	4
Composite Mean	**3.29**	**0.49**	**Agree**	**High Level**	

Legend: 3.51-4.00 Strongly Agree/Very High Level;2.51-3.50 Agree/High Level; 1.51-2.50 Disagree/Low Level; 1.00-1.50 Strongly Disagree/Very Low Level

As shown in Table 10, pupil respondents agree that they are able to set new goas for their future after graduating from the school with the highest assessment of 3.47 interpreted to be of high level. Likewise, they also agree that other than just passing the subjects, they feel motivated to learn new skills in their school, that technology has contributed in boosting their academic performance, and that their ability to learn with technological software and equipment has improved their level of competency in learning and handling assigned tasks with the mean values of 3.43, 3.29, and 3.26 respectively interpreted to be of high level. Though pupils also agree that due to the innovative teaching, they are able to compete with their peers from other schools when it comes to their field of study, but it was given the lowest assessment of 3.02 interpreted to be of high level. A composite mean value of 3.29 reveals that pupil respondents exhibited a high level of learning motivation in terms of over-all performance. Since a person's level of success in an endeavor depends on his or her level of desire for that endeavor, it stands to reason that a pupil's ability to learn effectively correlates with the level of motivation he or she experiences. Motivation to learn is not only an energy that drives pupils to learn, but also something that directs pupils' activities toward learning objectives (Wardani et al., 2020). Similarly, Rafiola et al. (2020) investigated the effects of learning motivation, self-efficacy, and integrated learning on pupils' performance in the 4.0 industrial revolution in public high schools. The findings indicated that learning motivation had a positive and statistically significant effect on pupil achievement. Additionally, learning motivation, self-efficacy, and blended learning had a significant impact on pupils' achievement.

4.4 Summary of the Pupil Respondents' Assessment of their Learning Motivation

Table 11 presents the summary of the assessment of pupil respondents of their learning motivation.

Table 11: Summary of the Pupil Respondents' Assessment of their Learning Motivation

Learning Motivation Indicators	Mean	SD	Qualitative Description	Interpretation	Rank
1. Willingness to Learn	3.21	0.45	Agree	High Level	2
2. Technological Engagement	3.15	0.49	Agree	High Level	3
3. Over-all Performance	3.29	0.49	Agree	High Level	1
Over-all Mean	**3.22**	**0.42**	**Agree**	**High Level**	

Legend: 3.51-4.00 Strongly Agree/Very High Level;2.51-3.50 Agree/High Level; 1.51-2.50 Disagree/Low Level; 1.00-1.50 Strongly Disagree/Very Low Level

As shown in Table 11, the highest learning motivation of pupils respondents was on the over-all performance based on their own assessment. Second was on willingness to learn indicating also a high level of learning motivation, while technological engagement was the least assessed learning motivation among pupil respondents. Generally, pupils exhibited a high level of learning motivation as assessed by themselves. Motivation, according to Wardani, et al (2020) is an internal urge or impulse that can cause, direct, and organize behavior in humans. This relates to efforts to satisfy perceived physical and spiritual requirements. Learning motivation, in relation to learning activities, refers to the overall driving force within pupils that can generate, guarantee, and direct learning activities in order to achieve expected learning objectives. With learning motivation, pupils follow a learning process with intensity and consistency.

V. Differences in the Assessment of Pupil Respondents on their Learning Motivation When their Profile is Taken as Test Factor

Tables 12-13 present the differences in the assessment of pupil respondents on their learning motivation when their age and sex are taken as test factors.

5.1 On Age

Table 12 presents the differences in the assessment of pupil respondents on their learning motivation when their age is taken as test factor.

Table 12: Differences in the Assessment of Pupil Respondents on their Learning Motivation when their Age is Taken as Test Factor

Learning Motivation Skills	Age	Mean	SD	Computed F-value	Sig	Decision on Ho	Interpretation
1. Willingness to Learn	11 years old	3.20	0.40	3.34	0.08	Accepted	Not Significant
	12 years old	3.24	0.47				
	13 years old	2.91	0.46				
2. Technological Engagement	11 years old	3.12	0.47	2.73	0.07	Accepted	Not Significant
	12 years old	3.19	0.49				
	13 years old	2.88	0.53				
3. Over-all Performance	11 years old	3.29	0.46	2.60	0.08	Accepted	Not Significant

	12 years old	3.32	0.51				
	13 years old	3.00	0.37				
Over-all	11 years old	3.20	0.38	3.58	0.09	Accepted	Not Significant
	12 years old	3.25	0.45				
	13 years old	2.93	0.40				

As shown in Table 12, pupil respondents have obtained a computed F-value of 3.34 in terms of willingness to learn with the significance value of 0.08. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their age is taken as test factor. This goes to show that pupil respondents have relatively the same assessment on their learning motivation in terms of willingness to learn regardless of their age.

In terms of technological engagement, pupil respondents have obtained a computed F-value of 2.73 with the significance value of 0.07. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their age is taken as test factor. The result shows that pupil respondents have relatively the same assessment on their learning motivation in terms of technological engagement regardless of their age.

In terms of over-all performance, pupil respondents have obtained a computed F-value of 2.60 with the significance value of 0.08. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their age is taken as test factor. This is taken to mean that pupil respondents have relatively the same assessment on their learning motivation in terms of over-all performance regardless of their age.

Generally, pupil respondents have obtained an over-all computed F-value of 3.58 to learn with the significance value of 0.09. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their age is taken as test factor. The result reveals that pupil respondents have relatively the same assessment on their learning motivation in terms of over-all performance regardless of their age.

5.2 On Sex

Table 13 presents the differences in the assessment of pupil respondents on their learning motivation when their sex is taken as test factor.

Table 13: Differences in the Assessment of Pupil Respondents on their Learning Motivation when their Sex is Taken as Test Factor

Learning Motivation Skills	ex	Mean	SD	Computed t-value	Sig	Decision on Ho	Interpretation
1. Willingness to Learn	Male	3.21	0.45	0.00	0.99	Accepted	Not Significant
	Female	3.21	0.45				
2. Technological Engagement	Male	3.20	0.46	-0.74	0.46	Accepted	Not Significant
	Female	3.16	0.50				
3. Over-all Performance	Male	3.28	0.50	-0.34	0.73	Accepted	Not Significant
	Female	3.30	0.48				
Over-all	Male	3.20	0.41	-0.41	0.68	Accepted	Not Significant
	Female	3.22	0.43				

As shown in Table 13, pupil respondents have obtained a computed t-value of 0.00 in terms of willingness to learn with the significance value of 0.99. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their sex is taken as test factor. This goes to show that male and female pupil respondents have relatively the same assessment on their learning motivation in terms of willingness to learn.

In terms of technological engagement, pupil respondents have obtained a computed t-value of -0.74 with the significance value of 0.46. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their sex is taken as test factor. This is taken to mean that male and female pupil respondents have relatively the same assessment on their learning motivation in terms of technological engagement.

In terms of over-all performance, pupil respondents have obtained a computed t-value of -0.34 with the significance value of 0.73. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their sex is taken as test factor. This indicates that male and female pupil respondents have relatively the same assessment on their learning motivation in terms of over-all performance.

Generally, pupil respondents have obtained an over-all computed t-value of -0.41with the significance value of 0.68. Since the significance value is higher than the set 0.05 level of significance, null hypothesis is accepted which means that there is no significant difference in the assessment of pupil respondents when their sex is taken as test factor. The result reveals that male and female pupil respondents have relatively the same assessment on their learning motivation based on their own assessment.

VI. Relationship Between the Assessed Technological Skills of Teachers and the Learning Motivation of Pupils

Table 14 presents the relationship between the teachers' technological skills as assessed by the pupils and the pupils' learning motivation.

Table 14: Relationship Between the Teachers' Technological Skills and the Pupils' Learning Motivation

Teachers' Technological Skills	Pupils' Learning Motivation	Computed r	Sig	Decision on Ho	Interpretation
1. Teaching & Learning	Willingness to learn	0.52	0.00	Rejected	Significant
	Technological Engagement	0.55	0.00	Rejected	Significant
	Over-all Performance	0.59	0.00	Rejected	Significant
	Average	**0.62**	**0.00**	**Rejected**	**Significant**
2. Assessment & Evaluation	Willingness to learn	0.51	0.00	Rejected	Significant
	Technological Engagement	0.52	0.00	Rejected	Significant
	Over-all Performance	0.53	0.00	Rejected	Significant
	Average	0.58	0.00	**Rejected**	**Significant**
3. Research & Communication	Willingness to learn	0.46	0.00	Rejected	Significant
	Technological Engagement	0.51	0.00	Rejected	Significant
	Over-all Performance	0.51	0.00	Rejected	Significant
	Average	0.55	0.00	**Rejected**	**Significant**
4. Educational Management	Willingness to learn	0.52	0.00	Rejected	Significant
	Technological Engagement	0.56	0.00	Rejected	Significant
	Over-all Performance	0.55	0.00	Rejected	Significant

	Average	0.61	0.00	**Rejected**	**Significant**
Over-all Teachers' Technological Skills	**Over-all Pupils' Learning Motivation**	**0.65**	**0.00**	**Rejected**	**Significant**

As shown in Table 14, in terms of teaching and learning, pupil respondents have obtained a computed r-values of 0.52, 0.55, and 0.59 with significance values of 0.00 for the willingness to learn, technological engagement, and over-all performance respectively. Since the significance values are less than the set 0.05 level of significance, null hypothesis is rejected which means that there is a significant relationship between the teachers' technological skills in teaching and learning and the pupils' learning motivation in terms of willingness to learn, technological engagement, and over-all performance. The result reveals that teachers' technological skills on teaching and learning have a strong relationship with pupils' learning motivation.

In terms of assessment and evaluation, pupil respondents have obtained a computed r-values of 0.51, 0.52, and 0.53 with significance values of 0.00 for the willingness to learn, technological engagement, and over-all performance respectively. Since the significance values are less than the set 0.05 level of significance, null hypothesis is rejected which means that there is a significant relationship between the teachers' technological skills in assessment and evaluation, and the pupils' learning motivation in terms of willingness to learn, technological engagement, and over-all performance. This goes to show that teachers' technological skills on assessment and evaluation have a strong relationship with pupils' learning motivation.

In terms of research and communication, pupil respondents have obtained a computed r-values of 0.46, 0.51, and 0.51 with significance values of 0.00 for the willingness to learn, technological engagement, and over-all performance respectively. Since the significance values are less than the set 0.05 level of significance, null hypothesis is rejected which means that there is a significant relationship between the teachers' technological skills in research and communication, and the pupils' learning motivation in terms of willingness to learn, technological engagement, and over-all performance. This is taken to mean that teachers' technological skills on research and communication have a strong relationship with pupils' learning motivation.

In terms of educational management, pupil respondents have obtained a computed r-values of 0.52, 0.56, and 0.55 with significance values of 0.00 for the willingness to learn, technological engagement, and over-all performance respectively. Since the significance values are less than the set 0.05 level of significance, null hypothesis is rejected which means that there is a significant relationship between the teachers' technological skills in educational management, and the pupils' learning motivation in terms of willingness to learn, technological engagement, and over-all performance. The result indicates that teachers' technological skills on educational management have a strong relationship with pupils' learning motivation.

Generally, pupil respondents have obtained an over-all computed r-value of 0.65 with significance value of 0.00. Since the significance value is less than the set 0.05 level of significance, null hypothesis is rejected which means that there is a significant relationship between the teachers' technological skills, and the pupils' learning motivation. This reveals that teachers' technological skills greatly influence the learning motivation of pupils.

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDTIONS

This study determined the status of using technology as a tool for teachers' skill towards improvement of the pupils' learning motivation. Profile of the pupil respondents, differences in their assessments when their profile is taken as test factor, their learning motivation, and the relationship between the technological skills of teachers and the learning motivation of pupils were also determined. The findings of this study helped the researcher with the proposed development plan to enhance the technological skills of teachers.

Summary of Findings

I. Profile of the Teacher Respondents

Majority of the pupil respondents are female (60.8%) while 39.2% are male. More than half of them (55%) are 12 years of age, 40.5% are 11 years old, and 4.5% of them are 13 years old.

II. Pupil Respondents' Assessment on the Technological Skills of their Teachers

The result indicates that teacher respondents exhibited a high level of technological skills in terms of research and evaluation which gained the highest assessment from the pupil respondents and ranked first among the four indicators. Second in rank was on teaching and learning which also shows a high level of technical skills, third in rank was on educational management, and the last in rank was on assessment and evaluation which obtained the lowest assessment from the pupil respondents. An over-all mean value of 3.14 reveals that teachers exhibited a high level of technological skills as perceived by the pupil respondents.

2.1 On Teaching and Learning

Pupil respondents agree that the teachers and school administrators are trained to use technological tools in the learning culture with the highest assessment given interpreted to be of high level. Likewise, pupil respondents agree that their teachers assist or provide support for technological usage in the school, that they support the hiring of technical support staff that will assist teachers in the class, that they use computes to make teaching and learning meaningful, that they have the skills and competencies required for a tech-based teaching and learning engagement, and that they believe that technology is an integral part of learning in modern day's education interpreted to be of high level. Though pupil respondents also agree that their teachers manage the pupils' information using technology, it was given the lowest assessment interpreted to be of high level. A composite mean value of 3.16 indicates that the technological skills of teachers in terms of teaching and learning is of high level as perceived by the pupil respondents.

2.2 On Assessment and Evaluation

Pupil respondents agree that the learning management system is used to set quizzes and tests to evaluate pupils' learning outcome with the highest assessment given interpreted to be of high level. Similarly, pupil respondents agree that the e-portfolio or learning management system (LMS) is used to assess pupils' performance, that tencent video conferencing or other conferencing call software are used for virtual learning, that teachers used to evaluate essential learning to prove how teachers improve pupil learning while aiding program assessment, that technology is used to assess pupils' learning outcome so that results are easily aggregated in the digital format, and that there are online self-assessment tools for pupils to evaluate themselves interpreted to be of high level. Though pupils also agree that technology is used to evaluate originality of pupils' submissions through plagiarism checkers, it was given the lowest assessment interpreted to be of high level. A composite mean value of 3.07 indicates that the technological skills of teachers in terms of assessment and evaluation is of high level as perceived by the pupil respondents.

2.3 On Research and Communication

Pupil respondents agree that teachers make use of the internet for academic research purposes with the highest assessment given interpreted to be of high level. Likewise, they also agree that the use of emails is encouraged in the school for teacher-pupil engagement, that technology aids in interpersonal communication skills enhancement, that the internet serves as a source of reference for pupils in accomplishing tasks, and that pupils use social media to interact with each other while working on school projects interpreted to be of high level. Though pupil respondents agree that school papers are published using online software and digital websites, it was given the lowest assessment interpreted to be of high level. A composite mean value of 3.19 indicates that the technological skills of teachers in terms of research and communication is of high level as perceived by the pupil respondents.

2.4 On Educational Management

Pupil respondents agree that teachers use more tech software for designing and planning activities with the highest assessment given interpreted to be of high level. Likewise, they also agree that with technology, teachers are able to articulate clear vision statements for each academic year, that teachers used technology for curriculum planning, that teachers used technological software for classroom management, that teachers use technology for staff development, and that aids in payment of fees and other administrative management protocols such as registration and

access to school portal interpreted to be of high level. Though pupils also agree that technological software is used for storage and preservation of academic data, it was given the lowest assessment interpreted to be of high level. A composite mean value of 3.15 shows that the technological skills of teachers in terms of educational management is of high level as perceived by the pupil respondents.

III. Differences in the Assessment of Pupil Respondents on the Teachers' Technological Skills when their Profile is Taken as Test Factor

3.1 On Age

Based from the result, there were no significant differences in the assessment of the pupil respondents when their age is taken as test factor. This goes to show that pupils have relatively the same assessment on the technological skills of their teachers in the aspects of teaching and learning, assessment and evaluation, research and communication, and educational management regardless of their age.

3.2 On Sex

The result indicates that there were no significant differences in the assessment of the pupil respondents when their sex is taken as test factor. This further indicates that male and female pupils have relatively the same assessment on the technological skills of their teachers in the aspects of teaching and learning, assessment and evaluation, research and communication, and educational management.

IV. Pupil Respondents' Assessment of their Learning Motivation

The result indicates that the highest learning motivation of pupil respondents was on the over-all performance based on their own assessment. Second was on willingness to learn indicating also a high level of learning motivation, while technological engagement was the least assessed learning motivation among pupil respondents. Generally, pupils exhibited a high level of learning motivation as assessed by themselves.

4.1 On Willingness to Learn

Pupil respondents agree that due to the use of technological software tools, they are able to accomplish and submit their homework on time with the highest assessment given interpreted to be of high level. Likewise, they also agree that in technology-influenced classrooms, they are able to accomplish tasks assigned to them, that technology boosts their willingness to learn new topics in the classroom, and that when technology is used, they are able to understand the lectures interpreted to be of high level. Though pupils also agree that in virtual or blended learning, they feel confident enough to ask questions when they do not understand, but it was given the lowest assessment interpreted to be of high level. A composite mean value of 3.21 reveals that pupil respondents exhibited a high level of learning motivation in terms of willingness to learn.

4.2 On Technological Engagement

Pupil respondents agree that they believe in themselves and feel more confident with their output since they have the necessary technological resources to make research and learn better with the highest assessment given interpreted to be of high level. Similarly, pupil respondents also agree that they feel more attentive when the teacher uses advanced innovative techniques to teach, that they are more creative in a technology-influenced classroom, and that with technology, they feel like there is no limits to their learning ability interpreted to be high level. Though pupils also agree that they are less distracted and more eager to learn when technology such as virtual reality are used for learning, but it was given the lowest assessment interpreted also to be of high level. A composite mean value of 3.15 reveals that pupil respondents exhibited a high level of learning motivation in terms of technological engagement.

4.3 On Over-all Performance

Pupil respondents agree that they are able to set new goas for their future after graduating from the school with the highest assessment given interpreted to be of high level. Likewise, they also agree that other than just passing the subjects, they feel motivated to learn new skills in their school, that technology has contributed in boosting their academic performance, and that their ability to learn with technological software and equipment has improved their level of competency in learning and handling assigned tasks interpreted to be of high level. Though pupils also agree

that due to the innovative teaching, they are able to compete with their peers from other schools when it comes to their field of study, but it was given the lowest assessment interpreted to be of high level. A composite mean value of 3.29 reveals that pupil respondents exhibited a high level of learning motivation in terms of over-all performance.

V. Differences in the Assessment of Pupil Respondents on their Learning Motivation When their Profile is Taken as Test Factor

5.1 On Age

Based from the result, there were no significant differences in the assessment of the pupil respondents when their age is taken as test factor. This goes to show that pupils have relatively the same assessment on their learning motivation in terms of willingness to learn, technological engagement, and the over-all performance regardless of their age.

5.2 On Sex

The result indicates that there were no significant differences in the assessment of the pupil respondents when their sex is taken as test factor. This is taken to mean that male and female pupils have relatively the same assessment on their learning motivation in terms of willingness to learn, technological engagement, and the over-all performance.

VI. Relationship Between the Assessed Technological Skills of Teachers and the Learning Motivation of Pupils

As reflected in the results, significant relationship was found between the teachers' technological skills and the pupils' learning motivation. This goes to show that the technological skills of teachers particularly in the aspects of teaching and learning, assessment and evaluation, research and communication, and educational management are highly correlated positively with the pupils' learning motivation in terms of willingness to learn, technological engagement, and the over-all performance. This is taken to mean that the technological skills of teachers can greatly influence the learning motivation of the pupils.

CONCLUSIONS

Based on the findings, the following have been concluded:

1. Majority of the pupils are female twelve years of age.
2. Teachers exhibited a high level of technological skills allowing them to have a more effective and efficient communication between them and the students as well as with the parents, and providing a more engaging and interactive lessons that better meet the needs of the pupils.
3. Pupils have relatively the same perceptions of the technological skills of their teachers regardless of their age and sex.
4. Pupils are highly motivated to learn showing their drive and ability to keep learning in terms of their willingness to learn, their technological engagement, and the overall performance in the classroom.
5. Pupils also have relatively the same perceptions of their learning motivation regardless of their age and sex.
6. The higher the level of the technological skills of teachers, the more the pupils become motivated to learn.

RECOMMENDATIONS

In view of the summary of findings and the conclusions, the researcher highly /recommends the following:

1. Teachers must be updated regularly about new technologies applicable in their subject, and refresher or orientation must be regularly conducted for them for a continuous learning on how to integrate new technologies in an effective way in the teaching learning process.
2. Ensure that there is a continuous support for teachers in overcoming problems they face while using technology for educational purposes to make the integration efficient and effective.
3. Teachers should ensure that they integrate the values of technology integration in their everyday teaching, and promote the positive use of technology inside the classroom in a way that pupils will learn from it.

4. Teachers are encouraged to employ varied motivation strategies as this will enhance pupils' learning and improve their academic achievement.
5. Enhance the way of creating an active learning environment with the integration of technology in the classroom teaching that enhances the learning motivation of pupils.

PROPOSED DEVELOPMENT PLAN TO ENHANCE TECHNOLOGICAL SKILLS OF TEACHERS

I. Rationale of the Program

The integration of technology has become paramount in fostering effective teaching and learning environments. As educational paradigms shift towards digital platforms and online resources, it is imperative for teachers to possess advanced technological skills to meet the diverse needs of 21st Century Learners. Recognizing this necessity, the researcher proposed a comprehensive development plan aimed at enhancing the technological proficiency of teachers across various key result areas.

The rationale behind this development plan stems from the critical role that technology plays in shaping contemporary education. With the proliferation of digital tools and resources, teachers are presented with unprecedented opportunities to innovate their instructional practices, engage students more effectively, and personalize learning experiences. However, realizing these benefits hinges upon educators' adeptness in leveraging technology to its fullest potential. By equipping teachers with advanced technological skills, we aim to empower them to embrace pedagogical innovation, facilitate dynamic learning experiences, and nurture 21st-century competencies among students.

The importance of this development plan to teachers cannot be overstated. In an increasingly digitized world, proficiency in technology is no longer merely desirable but essential for educators to remain effective and relevant in their profession. By enhancing their technological skills, teachers can unlock new avenues for creativity, collaboration, and student-centered learning. Moreover, adeptness in technology enables teachers to transcend traditional classroom boundaries, cater to diverse learning styles, and cultivate digital literacy skills essential for students' future success in an interconnected global society. Thus, this development plan not only elevates teachers' professional competence but also enhances their capacity to inspire, motivate, and empower the next generation of learners.

II. Objectives

This proposed development plan is to enhance technological skills of teachers intends to equip teachers and personnel with the appropriate skills which they can utilize and optimize in the exercise of their inherent role.

Specifically, the proposed development plan below needs to be implemented, monitored and evaluated for all the concerned stakeholders.

Key Result Area	Activity/ies	Persons Involved	Performance Indicators	Budget
Research and Evaluation	Provide training workshops on advanced internet research techniques and digital tools for academic research.	Technology trainers, educational experts	Percentage increase in teachers' utilization of advanced research techniques and digital tools for academic research.	

Teaching and Learning	Implement regular professional development sessions focusing on integrating technology into teaching methodologies and lesson planning.	Technology integration specialists, educational leaders	Observation and assessment of technology integration in classroom teaching practices.	
Assessment and Evaluation	Conduct workshops on utilizing learning management systems and online assessment tools effectively for evaluating student learning outcomes.	Educational technologists, assessment experts	Increase in the use of online assessment tools and learning management systems by teachers.	
Research and Communication	Facilitate seminars on utilizing digital communication tools for effective teacher-student and peer communication, as well as collaborative project work.	Communication experts, technology trainers	Improved communication efficiency and collaboration among teachers and students measured through feedback and project outcomes.	
Educational Management	Provide training sessions on using educational software for curriculum planning, classroom management, and administrative tasks.	Educational software experts, administrative staff	Increase in the efficiency of administrative tasks and classroom management through the use of educational software.	

Overall Performance	Establish a mentorship program where proficient teachers mentor others in integrating technology effectively into their teaching practices.	Experienced technology-integrated teachers, educational leaders	Percentage increase in the adoption of technology-integrated teaching practices among mentored teachers.	
Relationship with Learning Motivation	Organize joint workshops for teachers and students focusing on leveraging technology to enhance learning motivation and engagement.	Educational psychologists, technology specialists	Improvement in students' self-reported motivation levels and academic performance.	

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APPENDIX A
QUESTIONNAIRE (for Pupils)
TECHNOLOGICAL SKILL AND PUPILS' LEARNING MOTIVATION

Part I: Demographic Profile of Pupils

Directions: This part of the survey will collect some of your personal details. Kindly check the items that best apply to you.
(*Ang bahaging ito ng Pagsisiyasat ay layong kokolektahin ang ilang mga detalye ng iyong personal na impormasyon. Pakilagyan ng Tsek (/) ang bilog sa tabi ng angkop na kasagutan).*

1. Age
   - 11 years and below *(11 taong gulang at mas mababa pa)*
   - 12 years old *(12 taong gulang)*
   - 13 years and above *(13 taong gulang at mas mataas pa)*

2. Sex
   - Male *(Lalaki)*
   - Female *(Babae)*

Part II: Pupils' Assessment of their Learning Motivation

Directions:

This assessment is based on your own viewpoint or opinion and thus, this part of the survey will focus on how you view or assess your motivation level in different dimensions when technological skills are practiced.

(Ang pagtatasang ito ay base sa iyong sariling hinuha o kaisipan, at kaya naman ang bahaging ito ng pagsisiyasat ay tututok kung paano mo tinitingnan o sinusukat ang antas ng iyong motibasyon kung ang kasanayan sa tecnolohiya ay ginagamit).

Please rate each of the presented statements according to your level of motivation in technological skill by putting a check (✓) mark on the box opposite the description shown.

(Sukatin ang bawat salaysay o paglalarawan na prinesenta ayon sa antas ng iyong motibasyon sa kasanayan sa teknolohiya sa pamamagitan ng paglagay ng markang tsek (/) sa kahon katapat ng paglalarawan o salaysay).

Note: Please use the following Likert Scale indicators for your reference while answering:
(Gamitin ang mga sumusunod na Likert Scale Indicators para sa iyong sanggunian)

1 - Strongly Disagree (SD) (very low level)
(Lubos na Hindi Sumasang-ayon)
2 - Disagree (D) (low level)
(Hindi Sumasang-ayon)
3 - Agree (A) (high level)
(Sumasang-ayon)
4 - Strongly Agree (SA) (very high level)
(Lubos na Sumasang-ayon)

A. Willingness to Learn *(Kusang Pagkatuto)*	**4 (SA)**	**3 (A)**	**2 (D)**	**1 (SD)**
1. In technology-influenced classrooms, I am able to accomplish tasks assigned to me				

	(Natatapos ko ang mga gawaing iniatas sa akin dahil sa impluwensya ng teknolohiya sa classroom)				
2.	When technology is used, I am able to understand the lectures *(Nauunawaan ko ang aralin kapag ginagamit ang teknolohiya)*				
3.	In virtual or blended learning, I feel confident enough to ask questions when I do not understand *(sa birtuwal o blended na pag-aaral, nakakapagtanong ako ng walang pag-alinlangan kapag hindi ko naunawaan ang aralin)*				
4.	Due to the use of technological software tools, I am able to accomplish and submit my homework on time *(Dahil sa paggamit ng mga kasangkapang pang teknolohiya, natatapos at naipapasa ko ang aking mga takdang-aralin sa itinakdang araw.)*				
5.	Technology boosts my willingness to learn new topics in the classroom *(Ang teknolohiya ay nagpapalakas ng aking kagustuhan na matuto ng bagong aralin sa klase.)*				
B.	**Technological Engagement *(Ugnayang pang Teknolohiya)***	**4 (SA)**	**3 (A)**	**2 (D)**	**1 (SD)**
1.	I feel more attentive when the teacher uses advanced innovative techniques to teach. *(Masigasig akong nakikinig kapag gumagamit ang aking guro ng makabagong teknolohiya sa pagtuturo)*				
2.	I am less distracted and more eager to learn when technology such as virtual reality used for learning. *(Hindi ako madaling maabala at masigasig akong matuto kung ginagamit sa pag-aaral ang teknolohiya tulad ng "virtual reality")*				
3.	I am more creative in a technology-influenced classroom *(Nagiging mas malikhain ako sa klase na may impluwensiya ng teknology)*				

4. With technology, I feel like there are no limits to my learning ability *(Sa teknolohiya, pakiramdam ko walang limitasyon ang aking kakayahan sa pagkatuto)*				
5. I believe in myself and feel more confident with my output since I have the necessary technological resources to make research and learn better. *(Mas nagtitiwala ako sa sarili at sa mga natapos na gawain dahil sa tulong ng mga kasangkapang pang teknolohiya sa pananaliksik at ibayong pagkatuto.)*				
C. **Overall Performance** *Pangkalahatang Pagganap*	**4 (SA)**	**3 (A)**	**2 (D)**	**1 (SD)**
1. Other than just passing the subjects, I feel motivated to learn new skills in my school *(Bukod sa pagpasa ng mga asignatura, naganyak akong matuto ng bagong kasanayan sa aming paaralan.)*				
2. Due to the innovative teaching, I am able to compete with my peers from other schools when it comes to my field of study. *(Dahil sa makabagong pamamaraan sa pagtuturo, nakakasabay ako sa kapareho kong mag-aaral pagdating sa aking larangan ng pag-aaral.)*				
3. I am able to set new goals for my future after graduating from this school *(Nakakapagtakda ako ng bagong layunin para sa aking kinabukasan sa pagtatapos ko sa paaralang ito.)*				
4. Technology has contributed in boosting my academic performance. *(Ang teknolohiya ay may naitutulong sa pagpapalakas ng aking "academic performance".)*				
5. My ability to learn with technological software and equipment has improved my level of competency in learning and handling assigned tasks *(Ang aking kakayahan sa pagkatuto sa "software" at kagamitan na pang teknolohiya ay nagpabuti sa antas ng aking kakayahan sa pagkatuto at paghawak ng iniatas na Gawain.)*				

Part III: Assessment of Technological Skill

(Pagtatasa ng Kakayahang Pang-tecknolohiya)

Directions:

This part of the questions will explore your assessment on technological skill in different dimensions.

(Ang bahaging ito ng mga tanong ay sisiyasatin ang iyong pagtatasa sa kasanayan ng teknolohiya sa iba't-ibang sukat.)

Please rate your teachers for each statement according to your observations on the status of technological skill practices in your school by putting a check (✓) mark on the box opposite the description shown.

(Bigyan ng kaukulang antas ang iyong guro ayon sa iyong nakikitang kalagayan ng mga gawaing pang-teknolohiya sa inyong paaralan sa pamamagitan ng paglagay ng marking tsek (/) sa kahon katapat ng inilalagay na paglalarawan.)

Note: Please use the following Likert Scale indicators for your reference while answering:

(Gamitin ang "Likert Scale" na tagapagpahiwatig para sa iyong sanggunian.)

1 - Strongly Disagree (SD) (very low level)
(Lubos na Hindi Sumasang-ayon)
2 - Disagree (D) (low level)
(Hindi Sumasang-ayon)
3 - Agree (A) (high level)
(Sumasang-ayon)
4 - Strongly Agree (SA) (very high level)
(Lubos na Sumasang-ayon)

MY TEACHERS IN TERMS OF: **A. Teaching and Learning** ***(Ang aking guro ayon sa:*** ***A. Pagtuturo at Pagkatuto)***	**4 (SA)**	**3 (A)**	**2 (D)**	**1 (SD)**
1. Assists or provides support for technological usage in the school *(Tumutulong o nakapagbibigay ng suporta sa paggamit ng teknolohiya sa paaralan)*				
2. Supports the hiring of technical support staff that will assist teachers in the class *(Tumataguyod sa pagkuha ng "support staff" na magiging katuwang ng mga guro sa klase.)*				
3. Uses computers to make teaching and learning meaningful *(Gumagamit ng kompyuter upang maging makabuluhan ang pagtuturo at pagkatuto.)*				
4. Believes that technology is an integral part of learning in modern-day's education *(Naniniwala na ang teknolohiya ay isang "integral" na bahagi ng pagkatuto sa makabagong panahon ng edukasyon.)*				
5. Manages the pupils' information using technology *(Pinamamahalaan ang mga impormasyon ng mag-aaral gamit ang teknolohiya).*				
6. Have the skills and competencies required for a tech-based teaching and learning engagement				

(May kasanayan at kakayahan na kinakailangan para sa basihang teknolohiya saugnayang pagtuturo at pagkatuto				
7. The teachers and school administrators are trained to use technological tools in the teaching-learning processes. *(Ang mga guro at mga tagapangasiwa ng paaralan ay sinanay na gumamit ng mga kagamitang pang-teknolohiya sa proseso ng pagtuturo-pagkatuto)*				
MY TEACHERS IN TERMS OF: **B. Assessment and Evaluation** ***(ANG AKING GURO SA MGA TUNTUNIN NG: B. Pagtatasa at Pagsusuri)***	**4 (SA)**	**3 (A)**	**2 (D)**	**1 (SD)**
1. The Learning Management System (LMS) is used to set quizzes and tests to evaluate pupils' learning outcome *(Ang "Learning Management System (LMS)" ay ginagamit sa pagtakda ng pagsusulit upang ma suri ang kinalabasan ng pagkatuto ng mga mag-aaral)*				
2. The e-portfolio or Learning Management System (LMS) is used to assess pupils' performance *(Ang "electronic portfolio" o LMS ay ginagamit upang matasa ang pagsasagawa ng mga mag-aaral)*				
3. Video Conferencing or other conferencing call software are used for virtual learning *(Ang pagpupulong gamit ang video o iba pang software na ginagamit sa pagpupulong ay mga ginagamit sa birtuwal na pag-aaral)*				
4. Technology is used to assess pupils' learning outcome so that results are easily aggregated in the digital format. *(Ang teknolohiya ay ginagamit upang masuri ang kinalabasan ng pagkatuto ng mga mag-aaral nang sa gayun ang kinalalabasan ay madaling mapagsama-sama sa isang digital na pagkaayos).*				
5. Technology is used to evaluate originality of pupils' submissions through plagiarism checkers *(Ang teknolohiya ay ginagamit upang masuri ang pagka-orihinal ng mga isinumite ng mga mag-aaral sa pamamagitan ng "Plagiarism chekers".*				
6. Technology is used to improve learning with the aid of assessment system. *(Ang teknolohiya ay ginagamit upang mapabuti ang pagkatuto sa tulong ng Sistema ng pagtatasa).*				
7. There are online/offline self-assessment tools for pupils to evaluate themselves *(May mga "online/offline self-assessment" na kagamitan para sa mga mag-aaral upang masuri ang kanilang sarili).*				
MY TEACHERS IN TERMS: **C. Research and Communication** ***(ANG AKING GURO SA MGA TUNTUNIN NG: C. Pagsusuri at Komunikasyon)***	**4 (SA)**	**3 (A)**	**2 (D)**	**1 (SD)**
1. Technology aids in interpersonal communication skills enhancement				

(Ang teknolohiya ay tumutulong sa pagpapahusay ng "interpersonal" na komunikasyon na kasanayan).				
2. The use of online communication tools is encouraged in the school for teacher-pupil engagement *(Ang paggamit ng mga kagamitan para sa "online" na komunikasyon ay hinihikayat sa paaralan para sa ugnayang guro-mag-aaral)*				
3. Pupils use group messenger to interact with each other while working on school projects/academic tasks *(Ang mga mag-aaral ay gumagamit ng "Group Messenger" sa pakikipag-ugnayan sa isa't-isa habang gumagawa sa isang proyekto o "academic tasks")*				
4. Teachers make use of the online sites for academic research purposes *(Gumagamit ang guro ng mga "online sites" para mga layuning pananaliksik)*				
5. The online sites serve as a source of reference for pupils in accomplishing tasks/projects *(Ang "online Sites" ay nagsisilbing sanggunian ng mga mag-aaral sa upang matapos ang mga proyekto at Gawain)*				
6. Scholarly articles aid pupils and teachers to accomplish academic research papers *(Ang "scholarly article" ay tumutulong sa mga mag-aaral at guro upang matapos ang akademik na pananaliksik)*				
7. School papers are published using online software and digital websites. *(Ang pahayagang pam-paaralan ay inilathala gamit ang "online software and digital website").*				
MY TEACHERS IN TERMS OF: **D. Educational Management** ***(ANG AKING GURO SA MGA TUNTUNIN NG: D. Pangasiwaang Pang-edukasyon)***				
1. Teachers use technology for curriculum planning *(Ang guro ay gumagamit ng teknolohiya sa pagpla-plano ng kurikulum)*				
2. Teachers use more tech software for designing and planning activities. *(Ang guro ay gumagamit ng higit pa sa isang "technology software" sap ag desenyo at pagplano ng mga Gawain)*				
3. Teachers use technology for self-development *(Ang guro ay gumagamit ng teknolohiya para sa pag-unlad ng sarili).*				
4. Teachers use technological software for classroom management *(Ang guro ay gumagamit ng "technology software" para sa pamamahala sa silid-aralan).*				
5. With technology, teachers are able to articulate clear vision statements for each academic year				

	(Gamit ang teknolohiya, ang mga guro ay nakapagpapahayag ng malinaw na pagsasalaysay ng pananaw sa bawat taon).				
6.	Technological software is used for storage and preservation of academic data *(Ang "Technological software" ay ginagamit sap ag-imbak at pangangalaga ng "academic" na datos).*				
7.	Technology aids in administrative management protocols such as registration and access to school portal. *(Ang teknolohiya ay tumutulong sa Pamamahalang pang-administratibo na mga protocol tulad ng pagpaparehistro at pag-access sa "school portal").*				

RELIABILITY TESTS

```
RELIABILITY
  /VARIABLES=learn1 learn2 learn3 learn4 learn5 learnave engagement1 engagemen
t2 engagement3 engagement4 engagement5 engagementave performance1 performance2
 performance3 performance4 performance5 performanceave LEARNING
  /SCALE('Learning Motivation') ALL
  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE
  /SUMMARY=MEANS.
```

Reliability

Notes

Output Created		21-Mar-2024 16:13:54
Comments		
Input	Active Dataset	DataSet0
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	28
	Matrix Input	
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=learn1 learn2 learn3 learn4 learn5 learnave engagement1 engagement2 engagement3 engagement4 engagement5 engagementave performance1 performance2 performance3 performance4 performance5 performanceave LEARNING /SCALE('Learning Motivation') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE /SUMMARY=MEANS.
Resources	Processor Time	00:00:00.015
	Elapsed Time	00:00:00.016

[DataSet0]

Scale: Learning Motivation

Case Processing Summary

		N	%
Cases	Valid	28	100.0
	Excluded[a]	0	.0
	Total	28	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.854	.880	19

Item Statistics

	Mean	Std. Deviation	N
learn1	3.3929	.49735	28
learn2	3.4286	.50395	28
learn3	2.7500	.64550	28
learn4	3.5714	.50395	28
learn5	3.4643	.57620	28
Willingness to Learn	3.3214	.27401	28
engagement1	3.3929	.68526	28
engagement2	2.9286	.71640	28
engagement3	3.2857	.59982	28
engagement4	3.2143	.87590	28
engagement5	3.5714	.50395	28
Technological Engagement	3.2786	.42283	28
performance1	3.6429	.55872	28
performance2	3.2857	.65868	28
performance3	3.6429	.48795	28
performance4	3.4286	.63413	28
performance5	3.3929	.62889	28
Overall Performance	3.4786	.39380	28
LEARNING MOTIVATION	3.3596	.29935	28

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.360	2.750	3.643	.893	1.325	.049	19

```
RELIABILITY
  /VARIABLES=teaching1 teaching2 teaching3 teaching4 teaching5 teaching6 teach
ing7 teachingave assessment1 assessment2 assessment3 assessment4 assessment5 a
ssessment6 assessment7 assessmentave research1 research2 research3 research4 r
esearch5 research6
research7 researchave educ1 educ2 educ3 educ4 educ5 educ6 educ7 educave SKILLS
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  /MODEL=ALPHA
  /STATISTICS=DESCRIPTIVE
  /SUMMARY=MEANS.
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Reliability

Notes

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	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
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[DataSet0]

Scale: Technological Skills

Case Processing Summary

		N	%
Cases	Valid	28	100.0
	Excluded[a]	0	.0
	Total	28	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.931	.941	33

Item Statistics

	Mean	Std. Deviation	N
teaching1	3.2857	.76290	28
teaching2	3.0000	.94281	28
teaching3	2.9286	.89974	28
teaching4	3.1786	.94491	28
teaching5	2.9286	.89974	28
teaching6	3.3571	.91142	28
teaching7	3.1071	1.03062	28
Teaching & Learning	3.1121	.53425	28
assessment1	3.4286	.74180	28
assessment2	3.2143	.87590	28
assessment3	3.4286	.79015	28
assessment4	2.8571	.97046	28
assessment5	2.8214	.77237	28
assessment6	3.0000	.94281	28
assessment7	3.0000	.86066	28
Assessment & Evaluation	3.1068	.48635	28
research1	3.2500	.92796	28
research2	3.2857	.80999	28
research3	3.2857	1.08379	28
research4	3.3214	.77237	28
research5	3.2857	.85449	28
research6	3.0714	.89974	28
research7	3.1429	.89087	28
Research & Communication	3.2343	.50595	28
educ1	3.1786	.98333	28
educ2	3.2143	.87590	28
educ3	3.0000	.81650	28
educ4	3.2143	.95674	28
educ5	3.4286	.79015	28
educ6	3.1429	.89087	28
educ7	3.0714	.85758	28
Educational Management	3.1779	.60256	28
TECHNOLOGICAL SKILLS	3.1593	.47133	28

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.158	2.821	3.429	.607	1.215	.025	33

SAMPLE STATISTICAL COMPUTATIONS

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FREQUENCIES VARIABLES=age sex
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Frequencies

Notes

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[DataSet0]

Statistics

		Age	Sex
N	Valid	291	291
	Missing	0	0

Frequency Table

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	11 years old	118	40.5	40.5	40.5
	12 years old	160	55.0	55.0	95.5
	13 years old	13	4.5	4.5	100.0
	Total	291	100.0	100.0	

Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	114	39.2	39.2	39.2
	Female	177	60.8	60.8	100.0
	Total	291	100.0	100.0	

```
DESCRIPTIVES VARIABLES=teaching1 teaching2 teaching3 teaching4 teaching5 teach
ing6 teaching7 teachingave assessment1 assessment2 assessment3 assessment4 ass
essment5 assessment6 assessment7 assessmentave research1 research2 research3 r
esearch4 research5
research6 research7 researchave educ1 educ2 educ3 educ4 educ5 educ6 educ7 educ
ave SKILLS
  /STATISTICS=MEAN STDDEV MIN MAX.
```

Page 1

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
teaching1	291	1.00	4.00	3.1718	.83337
teaching2	291	1.00	4.00	3.1718	.85381
teaching3	291	1.00	4.00	3.1718	.90479
teaching4	291	1.00	4.00	3.1237	.93134
teaching5	291	1.00	4.00	3.0206	.93195
teaching6	291	1.00	4.00	3.1581	.89967
teaching7	291	1.00	4.00	3.2715	.85410
Teaching & Learning	291	1.29	4.00	3.1555	.59350
assessment1	291	1.00	4.00	3.1856	.88275
assessment2	291	1.00	4.00	3.1306	.87698
assessment3	291	1.00	4.00	3.0893	.91289
assessment4	291	1.00	4.00	3.0515	.92890
assessment5	291	1.00	4.00	2.9347	.94643
assessment6	291	1.00	4.00	3.0928	.95862
assessment7	291	1.00	4.00	2.9897	.96663
Assessment & Evaluation	291	1.00	4.00	3.0677	.63268
research1	291	1.00	4.00	3.2131	.85256
research2	291	1.00	4.00	3.2474	.84320
research3	291	1.00	4.00	3.1237	.99229
research4	291	1.00	4.00	3.3746	.82665
research5	291	1.00	4.00	3.1787	.92979
research6	291	1.00	4.00	3.1581	.86049
research7	291	1.00	4.00	3.0447	.93665
Research & Communication	291	1.29	4.00	3.1911	.58547
educ1	291	1.00	4.00	3.1856	.89052
educ2	291	1.00	4.00	3.2990	.84484
educ3	291	1.00	4.00	3.0825	.91354
educ4	291	1.00	4.00	3.1856	.89439
educ5	291	1.00	4.00	3.2131	.87649
educ6	291	1.00	4.00	3.0206	.95750
educ7	291	1.00	4.00	3.0687	.90330
Educational Management	291	1.00	4.00	3.1507	.63276
TECHNOLOGICAL SKILLS	291	1.39	4.00	3.1414	.55712
Valid N (listwise)	291				

```
ONEWAY teachingave assessmentave researchave educave SKILLS BY age
  /STATISTICS DESCRIPTIVES
  /MISSING ANALYSIS
  /POSTHOC=LSD ALPHA(0.05).
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Oneway

Notes

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[DataSet0]

Descriptives

		N	Mean	Std. Deviation	Std. Error
Teaching & Learning	11 years old	118	3.1403	.54165	.04986
	12 years old	160	3.1829	.63248	.05000
	13 years old	13	2.9562	.54427	.15095
	Total	291	3.1555	.59350	.03479
Assessment & Evaluation	11 years old	118	3.0425	.59504	.05478
	12 years old	160	3.1095	.66172	.05231
	13 years old	13	2.7815	.54884	.15222
	Total	291	3.0677	.63268	.03709
Research & Communication	11 years old	118	3.1507	.56959	.05244
	12 years old	160	3.2407	.60785	.04805
	13 years old	13	2.9462	.33283	.09231
	Total	291	3.1911	.58547	.03432
Educational Management	11 years old	118	3.1273	.59647	.05491
	12 years old	160	3.1928	.66491	.05257
	13 years old	13	2.8454	.46820	.12986
	Total	291	3.1507	.63276	.03709
TECHNOLOGICAL SKILLS	11 years old	118	3.1154	.51579	.04748
	12 years old	160	3.1817	.59260	.04685
	13 years old	13	2.8815	.39064	.10834
	Total	291	3.1414	.55712	.03266

Descriptives

		95% Confidence Interval for Mean		Minimum	Maximum
		Lower Bound	Upper Bound		
Teaching & Learning	11 years old	3.0415	3.2390	1.57	4.00
	12 years old	3.0842	3.2817	1.29	4.00
	13 years old	2.6273	3.2851	2.14	3.71
	Total	3.0870	3.2240	1.29	4.00
Assessment & Evaluation	11 years old	2.9340	3.1509	1.00	4.00
	12 years old	3.0062	3.2128	1.00	4.00
	13 years old	2.4499	3.1132	1.86	4.00
	Total	2.9947	3.1407	1.00	4.00
Research & Communication	11 years old	3.0468	3.2545	1.71	4.00
	12 years old	3.1458	3.3357	1.29	4.00
	13 years old	2.7450	3.1473	2.43	3.57
	Total	3.1235	3.2586	1.29	4.00
Educational Management	11 years old	3.0185	3.2360	1.29	4.00
	12 years old	3.0890	3.2966	1.00	4.00
	13 years old	2.5625	3.1283	2.00	3.71
	Total	3.0777	3.2237	1.00	4.00
TECHNOLOGICAL SKILLS	11 years old	3.0214	3.2095	1.71	4.00
	12 years old	3.0892	3.2742	1.39	4.00
	13 years old	2.6455	3.1176	2.18	3.68
	Total	3.0771	3.2057	1.39	4.00

ANOVA

		Sum of Squares	df	Mean Square
Teaching & Learning	Between Groups	.664	2	.332
	Within Groups	101.486	288	.352
	Total	102.150	290	
Assessment & Evaluation	Between Groups	1.419	2	.710
	Within Groups	114.664	288	.398
	Total	116.083	290	
Research & Communication	Between Groups	1.367	2	.684
	Within Groups	98.036	288	.340
	Total	99.403	290	
Educational Management	Between Groups	1.560	2	.780
	Within Groups	114.551	288	.398
	Total	116.111	290	
TECHNOLOGICAL SKILLS	Between Groups	1.217	2	.609
	Within Groups	88.795	288	.308
	Total	90.013	290	

ANOVA

		F	Sig.
Teaching & Learning	Between Groups	.943	.391
	Within Groups		
	Total		
Assessment & Evaluation	Between Groups	1.782	.170
	Within Groups		
	Total		
Research & Communication	Between Groups	2.008	.136
	Within Groups		
	Total		
Educational Management	Between Groups	1.961	.143
	Within Groups		
	Total		
TECHNOLOGICAL SKILLS	Between Groups	1.974	.141
	Within Groups		
	Total		

Post Hoc Tests

Multiple Comparisons

LSD

Dependent Variable	(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.
Teaching & Learning	11 years old	12 years old	-.04268	.07203	.554
		13 years old	.18410	.17347	.289
	12 years old	11 years old	.04268	.07203	.554
		13 years old	.22678	.17120	.186
	13 years old	11 years old	-.18410	.17347	.289
		12 years old	-.22678	.17120	.186
Assessment & Evaluation	11 years old	12 years old	-.06704	.07657	.382
		13 years old	.26092	.18439	.158
	12 years old	11 years old	.06704	.07657	.382
		13 years old	.32796	.18197	.073
	13 years old	11 years old	-.26092	.18439	.158
		12 years old	-.32796	.18197	.073
Research & Communication	11 years old	12 years old	-.09007	.07080	.204
		13 years old	.20452	.17050	.231
	12 years old	11 years old	.09007	.07080	.204
		13 years old	.29460	.16826	.081
	13 years old	11 years old	-.20452	.17050	.231
		12 years old	-.29460	.16826	.081
Educational Management	11 years old	12 years old	-.06552	.07653	.393
		13 years old	.28190	.18430	.127
	12 years old	11 years old	.06552	.07653	.393
		13 years old	.34743	.18188	.057
	13 years old	11 years old	-.28190	.18430	.127

Group Statistics

	Sex	N	Mean	Std. Deviation	Std. Error Mean
Teaching & Learning	Male	114	3.1266	.61007	.05714
	Female	177	3.1741	.58356	.04386
Assessment & Evaluation	Male	114	3.0389	.69744	.06532
	Female	177	3.0862	.58854	.04424
Research & Communication	Male	114	3.1612	.57624	.05397
	Female	177	3.2103	.59216	.04451
Educational Management	Male	114	3.1278	.65993	.06181
	Female	177	3.1655	.61607	.04631
TECHNOLOGICAL SKILLS	Male	114	3.1139	.57210	.05358
	Female	177	3.1591	.54817	.04120

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
Teaching & Learning	Equal variances assumed	.141	.708
	Equal variances not assumed		
Assessment & Evaluation	Equal variances assumed	3.990	.047
	Equal variances not assumed		
Research & Communication	Equal variances assumed	.653	.420
	Equal variances not assumed		
Educational Management	Equal variances assumed	.514	.474
	Equal variances not assumed		
TECHNOLOGICAL SKILLS	Equal variances assumed	.500	.480
	Equal variances not assumed		

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
learn1	291	1.00	4.00	3.2990	.68226
learn2	291	1.00	4.00	3.1856	.66431
learn3	291	1.00	4.00	2.9278	.86997
learn4	291	1.00	4.00	3.3436	.65820
learn5	291	1.00	4.00	3.2784	.73450
Willingness to Learn	291	1.20	4.00	3.2069	.44870
engagement1	291	1.00	5.00	3.3024	.70805
engagement2	291	1.00	4.00	3.0034	.75429
engagement3	291	1.00	4.00	3.0515	.73865
engagement4	291	1.00	4.00	3.0241	.84452
engagement5	291	1.00	4.00	3.3471	.71906
Technological Engagement	291	1.20	4.00	3.1457	.48644
performance1	291	1.00	4.00	3.4261	.68773
performance2	291	1.00	4.00	3.0172	.72615
performance3	291	1.00	4.00	3.4674	.73915
performance4	291	1.00	4.00	3.2921	.71961
performance5	291	1.00	4.00	3.2612	.69518
Overall Performance	291	1.40	4.00	3.2928	.48599
LEARNING MOTIVATION	291	1.27	4.00	3.2151	.42190
Valid N (listwise)	291				

```
ONEWAY learnave engagementave performanceave LEARNING BY age
  /STATISTICS DESCRIPTIVES
  /MISSING ANALYSIS
  /POSTHOC=LSD ALPHA(0.05).
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Oneway

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[DataSet0]

Descriptives

		N	Mean	Std. Deviation	Std. Error
Willingness to Learn	11 years old	118	3.1983	.40467	.03725
	12 years old	160	3.2375	.47168	.03729
	13 years old	13	2.9077	.45910	.12733
	Total	291	3.2069	.44870	.02630
Technological Engagement	11 years old	118	3.1203	.46640	.04294
	12 years old	160	3.1863	.49252	.03894
	13 years old	13	2.8769	.52623	.14595
	Total	291	3.1457	.48644	.02852
Overall Performance	11 years old	118	3.2915	.46162	.04250
	12 years old	160	3.3175	.50576	.03998
	13 years old	13	3.0000	.37417	.10377
	Total	291	3.2928	.48599	.02849
LEARNING MOTIVATION	11 years old	118	3.2033	.37922	.03491
	12 years old	160	3.2471	.44608	.03527
	13 years old	13	2.9277	.39802	.11039
	Total	291	3.2151	.42190	.02473

Descriptives

		95% Confidence Interval for Mean		Minimum	Maximum
		Lower Bound	Upper Bound		
Willingness to Learn	11 years old	3.1245	3.2721	2.00	4.00
	12 years old	3.1639	3.3111	1.20	4.00
	13 years old	2.6303	3.1851	2.20	3.60
	Total	3.1551	3.2586	1.20	4.00
Technological Engagement	11 years old	3.0353	3.2054	1.20	4.00
	12 years old	3.1093	3.2632	1.20	4.00
	13 years old	2.5589	3.1949	1.80	3.60
	Total	3.0896	3.2018	1.20	4.00
Overall Performance	11 years old	3.2074	3.3757	2.00	4.00
	12 years old	3.2385	3.3965	1.40	4.00
	13 years old	2.7739	3.2261	2.40	3.60
	Total	3.2367	3.3489	1.40	4.00
LEARNING MOTIVATION	11 years old	3.1342	3.2724	2.33	4.00
	12 years old	3.1774	3.3167	1.27	4.00
	13 years old	2.6872	3.1682	2.20	3.47
	Total	3.1664	3.2637	1.27	4.00

ANOVA

		Sum of Squares	df	Mean Square
Willingness to Learn	Between Groups	1.322	2	.661
	Within Groups	57.064	288	.198
	Total	58.386	290	
Technological Engagement	Between Groups	1.278	2	.639
	Within Groups	67.344	288	.234
	Total	68.622	290	
Overall Performance	Between Groups	1.212	2	.606
	Within Groups	67.283	288	.234
	Total	68.495	290	
LEARNING MOTIVATION	Between Groups	1.254	2	.627
	Within Groups	50.366	288	.175
	Total	51.620	290	

ANOVA

		F	Sig.
Willingness to Learn	Between Groups	3.337	.079
	Within Groups		
	Total		
Technological Engagement	Between Groups	2.733	.067
	Within Groups		
	Total		
Overall Performance	Between Groups	2.595	.076
	Within Groups		
	Total		
LEARNING MOTIVATION	Between Groups	3.584	.090
	Within Groups		
	Total		

Post Hoc Tests

Notes

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[DataSet0]

Descriptive Statistics

	Mean	Std. Deviation	N
Teaching & Learning	3.1555	.59350	291
Assessment & Evaluation	3.0677	.63268	291
Research & Communication	3.1911	.58547	291
Educational Management	3.1507	.63276	291
TECHNOLOGICAL SKILLS	3.1414	.55712	291
Willingness to Learn	3.2069	.44870	291
Technological Engagement	3.1457	.48644	291
Overall Performance	3.2928	.48599	291
LEARNING MOTIVATION	3.2151	.42190	291

Correlations

		Teaching & Learning	Assessment & Evaluation	Research & Communication
Teaching & Learning	Pearson Correlation	1	.779**	.778**
	Sig. (2-tailed)		.000	.000
	N	291	291	291
Assessment & Evaluation	Pearson Correlation	.779**	1	.778**
	Sig. (2-tailed)	.000		.000
	N	291	291	291
Research & Communication	Pearson Correlation	.778**	.778**	1
	Sig. (2-tailed)	.000	.000	
	N	291	291	291
Educational Management	Pearson Correlation	.767**	.758**	.784**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291
TECHNOLOGICAL SKILLS	Pearson Correlation	.910**	.911**	.914**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291
Willingness to Learn	Pearson Correlation	.517**	.509**	.460**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291
Technological Engagement	Pearson Correlation	.550**	.521**	.509**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291
Overall Performance	Pearson Correlation	.587**	.528**	.509**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291
LEARNING MOTIVATION	Pearson Correlation	.620**	.583**	.553**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291

**. Correlation is significant at the 0.01 level (2-tailed).

Correlations

		Educational Management	TECHNOLOGICAL SKILLS	Willingness to Learn
Teaching & Learning	Pearson Correlation	.767**	.910**	.517**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291
Assessment & Evaluation	Pearson Correlation	.758**	.911**	.509**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291
Research & Communication	Pearson Correlation	.784**	.914**	.460**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291
Educational Management	Pearson Correlation	1	.910**	.518**
	Sig. (2-tailed)		.000	.000
	N	291	291	291
TECHNOLOGICAL SKILLS	Pearson Correlation	.910**	1	.550**
	Sig. (2-tailed)	.000		.000
	N	291	291	291
Willingness to Learn	Pearson Correlation	.518**	.550**	1
	Sig. (2-tailed)	.000	.000	
	N	291	291	291
Technological Engagement	Pearson Correlation	.560**	.587**	.703**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291
Overall Performance	Pearson Correlation	.545**	.595**	.685**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291
LEARNING MOTIVATION	Pearson Correlation	.608**	.649**	.888**
	Sig. (2-tailed)	.000	.000	.000
	N	291	291	291

**. Correlation is significant at the 0.01 level (2-tailed).