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Utilization of Digital Tools in the Classroom Instruction: Student's Engagement and Academic Performance

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Abstract—This study determines the extent of teachers' digital-tool utilization and its relationship to student engagement and academic performance in Labuan Central School, Zamboanga City, during School Year 2025–2026. Specifically, it examined teachers' use of digital tools in pedagogy and assessment, the level of student engagement when such tools are employed, and students' overall academic performance. It also tested whether significant relationships exist between teachers' digital utilization and (1) student engagement and (2) academic achievement. The research was conducted in a public elementary school serving a culturally diverse population, including Samal, Subanen, Tausug, and Kalibugan learners. Respondents consisted of thirty-three Grade 4 to Grade 6 public school teachers, chosen because upper-elementary pupils are more capable of responding to technology-based instruction and their teachers more likely to integrate digital tools. A descriptive–correlational design was used to provide a quantitative snapshot of classroom practices and to identify associations between variables without manipulating them. Data were gathered on teachers' frequency and effectiveness in using digital tools for lesson preparation, online resource gathering, assessment design, and evaluation, as well as on levels of student engagement and academic performance. Findings reveal that teachers "often" employ digital tools in both pedagogy and assessment, while students are likewise "often" engaged when technology is integrated. Student academic performance was found to be satisfactory and consistent. Statistical analysis confirmed significant positive relationships between teachers' digital-tool utilization and both student engagement and academic performance. These results underscore the value of integrating digital technologies in teaching and assessment to enhance learner participation and achievement.

***Index Terms*—Digitals Tools, Academic Performance, Pedagogy, Assessment, Utilization.**

1. Introduction

In today's era, the utilization of digital tools in classroom instruction has become an integral part in the modern classroom. The pandemic has led to a huge and rapid increase in the use of digital tools in education. (Dancsa et. al, 2023). These tools include PowerPoint presentation, Canva, Learning Management System and interactive educational apps. These resources offer students opportunities for personalized learning experiences (Engelbrecht et al., 2020), motivate and strengthen learning (Røsvik & Haukedal, 2017), provide immediate feedback and foster collaborative engagement (Barana et al., 2021; Pinto & Leite, 2020; Sadaf & Gezer, 2020). However, alongside these benefits, teachers encounter notable challenges. Technical barriers, such as limited access to devices and internet connectivity, hinder the seamless integration of digital platforms. Therefore, effective integration of digital platforms requires strategic planning, encompassing content creation, delivery modes, and assessment methods. Collaborative approaches, where teachers share experiences and resources, mitigate challenges, and foster professional growth. (Garcia, 2024).

Student engagement and academic performance are fundamental factors of effective teaching and learning. Student engagement has been defined as "participation in educationally effective practices, both inside and outside the classroom, which leads to a range of measurable outcomes" (Kuh et al., 2007), and as "the extent to which students are engaging in activities that higher education research has shown to be linked with high-quality learning outcomes" (Krause and Coates, 2008, 493) Similarly, Hu and Kuh (2001) define engagement as "the quality of effort students themselves devote to educationally purposeful activities that contribute directly to desired outcomes". Meanwhile, academic performance is defined as a student's ability to complete academic assignments, and it is assessed using objective criteria such as final course grades and grading point average (e.g., Carroll, & Garavalia, 2004; Naser, & Hamzah, 2018; Olivier et al., 2019).

The relationship between the utilization of digital tools and student engagement and academic performance has become an important area in the study. Numerous studies suggest that when digital tools are effectively used, they can foster and enhance student engagement, individualized learning, and access to diverse educational resources. (Britney, 2024) Similarly to the study of Rafiq et. al (2024), findings reveals that digital tools significantly enhance student engagement, motivation, and academic performance. However, the strength and nature of this relationship may vary depending on how these tools are integrated into instructions. There are challenges such as technical difficulties, limited access to resources, and insufficient training hinder effective utilization. (Rafiq et. al.,

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2024) and the effectiveness of these tools depends on their alignment with curriculum goals, teacher expertise, and student digital literacy. Challenges such as unequal access, technical issues, and potential distractions were also identified as barriers to optimal utilization. (Britney, 2024) It is therefore essential to investigate whether there is a significant correlation between the extent of digital usage by teachers and student engagement and academic performance. Understanding this connection can help show how effective technology is in teaching. It can also help teachers choose and use digital tools to improve learning and boost student performance.

Moreover, while previous studies have explored the benefits of digital tools in education, many focus on isolated aspects such as tools effectiveness or student motivation without fully examining the relationship between digital tool utilization, student engagement and academic performance within a real classroom setting. Additionally, much of the existing literature focus on higher education or in a school that has an advance technology leaving a gap in exploring how digital tools are applied in the elementary level especially on the areas with limited resources, training and support. There is a need for localized, evidence-based knowledge about how teachers use digital tools in teaching and assessment, and how this use affects student engagement and academic performance. This study aims to address the gap by examining both how often teachers use digital tools and how their use directly influences student engagement and academic performance in Labuan Central School.

Thus, this study aims to examine the extent of teacher's utilization of digital tools in classroom instruction, particularly in the areas of pedagogy and assessment, and to determine its relationship with student engagement and academic performance. Specifically, the study aims to measure how frequently and effectively digital tools are used by teachers, how such usage influence student's participation and engagement and how it correlates with their academic performance.

2. Literature Review

Online digital tools are software, applications, technologies, plug-ins, add-ons or websites that are accessible via an internet connection and enhance learners' ability to conduct a thorough literature review and to master the knowledge they need to learn. Online digital tools help learners to learn more effectively, become more aware of language errors and collaborate with their peers. The COVID-19 epidemic has made online digital tools popular and useful in the educational process. (Alordiah, O. et al, 2023)

Moreover, the use of digital tools refers to the capability to employ information and communication technologies in a safe and discerning manner for both personal and social purposes. Digital literacy involves the ability to comprehend digital media. This understanding is developed through meaningful and sustainable practices of consumption and curation that enhance an individual's ability to contribute to a genuine community. It encompasses the skills to evaluate, prioritize, and respond to the vast array of digital media that individuals encounter each day in the 21st century. Being digitally literate entails thriving, learning, and working within a digital society. A person with digital literacy is expected to have both the skills and knowledge necessary to navigate computer networks, participate in online communities, and grasp the social issues arising from digital technologies. (Ashok K.C. and Kayalvizhi R., 2023)

Additionally, the adoption of technology has become an essential tool for teachers to enhance their instruction and improve the learning experiences of students. The implementation of technology initiatives in the classroom, such as mobile devices, tablets, and computers, has transformed the classroom environment in ways that are advantageous for both educators and learners. (Mosley, 2019)

A. Student Engagement

According to glossary of education reform, student engagement is defined as the level of attention, curiosity, interest, optimism, and enthusiasm students exhibit during their learning process or when being instructed, which also encompasses their motivation to learn and advance in their education. In general, the idea of "student engagement" is based on the belief that learning is enhanced when students are curious, interested, or inspired, while it tends to decline when students feel bored, apathetic, disinterested, or otherwise "disengaged." Many educators articulate goals aimed at fostering better student engagement or enhancing engagement levels among students.

B. Academic Performance

Academic performance encompasses not only objective knowledge (Santana et al., 2017), but also attendance and behavior, which are typically recorded in school documentation (Bonhauser et al., 2005). It also includes aspects like school adjustment and academic adaptation (Durlak, 1977). The methods used for teaching and evaluating young students (Fernandez et al., 2016) can affect their mental health and their progress within an academic setting. Furthermore, occupational performance can influence mental well-being, just as mental health can impact work performance.

Some studies have explored how digital tools can make students more active and interested in class and help improve students' academic performance. These tools help make lessons more fun and interactive which encourages student to participate more and can lead to better understanding of lessons and higher test scores.

Technology in education serves as a means to enhance the overall learning experience, with digital innovations shifting education from a passive and reactive approach to an interactive one (Raja & Nagasubramani, 2018). The US Department of Education (2017) states that technology can enrich learning and make it more engaging and relevant by offering personalized experiences, and it can aid in structuring instruction to include project-based learning along with real-world challenges. When technology is utilized effectively in the classroom setting, it boosts learning and increases student engagement (Haleem et al., 2022). Additionally, students are able to connect with the

suggested subject more directly through the use of technology, which enhances overall performance (Fonseca et al., 2014). With the increase of available technology in schools, teachers are working diligently to incorporate digital technologies into their classrooms to encourage student engagement (Carstens et al., 2021).

Furthermore, the academic performance of students is the key feature (Rono, Onderi & Owino, 2014) and one of the important goals (Narad and Abdullah, 2016) of education, which can be defined as the knowledge gained by the student which is assessed by marks by a teacher and/or educational goals set by students and teachers to be achieved over a specific period of time. The attainment of academic excellence of students through making them portray better academic performance is the foremost motive of academic institutions (Adeyemo, 2001). Further, academic performance is something immensely significant for anyone who has a concern with education (Osiki, 2001). Studies have shown that the use of digital tools can lead to improved academic performance, increased student satisfaction, and higher levels of engagement (Means et al., 2009).

C. Statement of the Problem

This study aimed to determine the extent of teacher's digital utilization tools and students' engagement in the classroom instruction in Labuan Central School, school year 2025-2026.

Specifically, this study sought to answer the following research questions:

1. What is the extent of teacher's digital utilization tools in the classroom instruction in terms of:
    1. Pedagogy
    2. assessment
2. What is the extent of student's engagement in the teacher's utilization of digital tools in classroom instruction?
3. What is the academic performance of the students?
4. Is there a significant relationship in between the extent of teacher's digital utilization tools in the classroom instruction and student's engagement?
5. Is there a significant relationship in between the extent of teacher's digital utilization tools in the classroom instruction and student's academic performance?

3. Scope and Delimitation

This study aims to examine the extent of teacher's digital utilization tools in the classroom in terms of pedagogy and assessment by Grade 4 to Grade 6 teachers at Labuan Central School. It specifically explores on the impact on student engagement and academic performance.

The respondent is only limited to Grade 4 to Grade 6 teachers not the student. The student engagement and academic performance is based on the observations and reports of average grades and grade-level completion of students. The study is exclusive to Labuan Central School and does not aim to apply its findings to other schools or educational setting.

4. Methodology

A. Design

The study utilizes a descriptive correlational research design, that seeks link between variables without attempting to manipulate any of them (Copeland, 2022). It aims to provide static pictures of situations as well as establish the relationship between different variables (McBurney & White, 2009).

Specifically, this study aims to examine the extent of teacher's digital utilization tools in the classroom focusing on the pedagogy and assessment by using quantitative research design while exploring how engaged students are when digital tools are used and assesses their academic performance. It seeks to determine whether there is a significant relationship between teachers' digital tool utilization and (1) student engagement and (2) academic performance. The researcher affirm that this design is appropriate in the study as it helps measure how frequently and effectively teachers use digital tools, how engaged students are, and their academic performance and identifies whether there is a significant relationship between digital tool utilization, student engagement, and academic achievement. This design is suitable because it does not manipulate variables, but instead observes existing conditions to determine patterns and associations.

B. Respondents of the Study

1) Sampling

This study used purposive sampling, wherein 33 teachers handling grades 4 to 6 in Labuan Central School were included as respondents. This technique was used to ensure the data collected would reflect the full range of experiences and practices related to the use of digital tools in classroom instruction. Since the total number of target respondents was manageable, including the entire population provided more reliable and comprehensive results.

2) Research Instrument

The research instrument used in the study is an adopted questionnaire. In part II A, it was originally developed by Obielodan et al., (2020). It was designed to determine the level of secondary school teachers' pedagogical knowledge of ICT tools for teaching. The previous study demonstrated the reliability and validity of the instrument, which led to its selection. The researcher made minor modifications to align with the context and objectives of the current research. In Part II B, it was originally developed by Pantoñal (2022). It was designed to determine the extent of utilization of technology-based instructional materials in terms of integration of technology. The researcher made minor modifications to align with the context and objectives of the current research. In part III of the study the researcher also used adopted questionnaire, it was originally developed by Pham T. C., (2022). It was designed to determine attitudes towards teachers' use of technology in the classroom. The previous study demonstrated the reliability and validity of the instrument, which led to its selection. The researcher made minor modifications to align with the context and objectives of the current research.

3) Data Gathering Procedure

In gathering the data, first, a letter of request was addressed

and submitted to the Schools Division Superintendent of Zamboanga City, seeking approval to conduct the research entitled " Utilization of Digital Tools in the Classroom Instruction: Student's Engagement and Academic Performance." Upon approval, a second letter of permission was prepared and submitted to the School Principal of Labuan Central School to formally request the conduct of the study. Once permission from the principal was obtained, the researcher coordinated and explained the purpose the study to the teachers involved in the study. The researcher distributed the survey questionnaires along with the letter to the 33 teacher-respondents from Grade 4 to 6 through google forms. The purpose of the study was clearly stated in the letter, with the assurance of confidentiality, voluntary participation and anonymity. After answering, the researcher thanked the teachers for their cooperation and support in the successful administration of the data collection process. Once completed, responses were automatically collected and organize through google sheets. The data were then encoded, processed, and prepared for statistical analysis.

5. Results and Discussion

This section discusses the results of the study after the collection of data. It also provides the data analysis and interpretation of the study.

A. Problem no.1. What is the Extent of Teacher's Digital Utilization Tools in the Classroom Instruction in Terms of Pedagogy and Assessment?

Table 1 shows the extent of teachers' digital utilization tools towards Classroom instruction in Pedagogy. Data show that among the statements on pedagogy, the highest rated statement is "finds resources via internet" with a mean of 3.55 described as always," followed by the statement "Use laptop computers for collaborating colleagues'' with a mean of 3.42 described as "Always. Next is, the statement "Prepare lesson using internet connectivity" it has a mean of 3.30 and described as "always". This means teachers are actively integrating digital tools into their pedagogical practices, particularly in lesson preparation, professional collaboration, and content acquisition.

On the other hand, statement "Use generators as alternative to power supply" has the lowest mean of 2.5 described as "never". Thus, this means that respondent rarely utilize backup power sources such as generators, which could reflect challenges in infrastructure support or a lack of resources to maintain uninterrupted access to digital tools during power outages. This could pose a limitation in areas where electricity supply is unstable, potentially affecting the continuous implementation of technology-enhanced instruction.

The overall mean on the extent of Teachers' Digital Utilization Tools Towards Classroom Instruction in Pedagogy is 2.78 described as "Often" thus this indicates that while teachers regularly use digital tools to support instruction, the level of utilization is not yet at its maximum potential. There remains room for growth, particularly in ensuring consistent access to technological infrastructure and training to further enhance digital integration in pedagogical practices. This implies that teachers already use digital tools often, but consistent, innovative integration depends on two essentials: reliable infrastructure and continuous professional development. Training builds confidence and encourages regular use, while stable power and technical support prevent disruptions. Policymakers should therefore invest in both teacher upskilling and dependable ICT infrastructure to sustain effective, technology-enhanced instruction.

As supported by the findings of the study of Mayantao and Tantiado, 2024 which states that teachers "most of the time" used digital tools and that higher utilization was significantly linked to greater confidence in technology. The study recommended training, technical assistance, and collaboration to expand use of emerging tools aligning with the present recommendation for ongoing professional development. In contrast, a study conducted by Obielodan et al., (2020) shows a different challenge: ICT tools were largely unavailable, teachers had low pedagogical knowledge, and the few resources present were rarely used, prompting calls for government and NGO support to procure equipment and provide teacher retraining. Taken together, these studies illustrate a continuum of technology integration—from contexts with limited access to those, like the current setting, where teachers already use digital tools frequently but still need infrastructure improvements and continuous training to sustain and deepen technology-based

Table 1
Extent of teachers' digital utilization tools towards classroom instruction in pedagogy

Statements	Mean	Description
Prepare lesson using internet connectivity	3.30	Always
Use computer in teaching and learning	3.15	Often
Finds resources via internet	3.55	Always
Monitor learners progress via telephone	2.45	Sometimes
Use projector for effective presentations	2.18	Sometimes
Use television for practical oriented courses	3.18	Often
Use laptop computers for collaborating colleagues	3.42	Always
Install educational software on video players for instructional delivery	2.88	Often
Install educational software on audio recorders for teaching	2.64	Often
Use generators as alternative to power supply	1.70	Never
Use scanner for scanning documents for teaching	2.85	Often
Use radio to support learners learning	2.00	Sometimes
Utilize internet for research analysis	3.15	Often
Utilize projector for teaching	2.12	Sometimes
Use flash drive for the storage of software materials.	3.06	Often
Overall Mean/Description	**2.78**	**Often**

Legend: 4.00 – 3.26 (Always) 3.25–2.51 (Often) 2.50–1.76 (Sometimes) 1.75–1.0 (Never)

pedagogy.

Table 2 shows the extent of teachers' digital utilization tools towards Classroom instruction in Assessment. Data show that among the statements on assessment, the highest rated statement is "create power point presentations to be used in the class" with a mean of 3.70 described as "always", followed by the statement "Use computers in preparing hand-outs, test, quizzes" with a mean of 3.64 described as "Always. Next is, the statement "use computer in computing grades" it has a mean of 3.48 and described as "always". This means teachers consistently integrate digital tools into their assessment practices, relying heavily on computers for preparing instructional materials and processing student performance data.

On the other hand, statement "use projector in class" has the lowest mean of 2.39 described as "sometimes". That this means that respondents seldom rely on projectors during assessment activities, possibly because classrooms already have alternative display tools and projectors require extra setup and maintenance.

The overall mean on the extent of Teachers' Digital Utilization Tools Towards Classroom Instruction in Assessment is 3.24 described as "Often" thus this means that teachers regularly incorporate digital tools in designing, delivering, and evaluating assessments, demonstrating a solid integration of technology into their assessment practices. This implies a need to sustain and further develop teachers' skills through continuous professional development and timely access to updated software and hardware. The relatively low use of projectors highlights the importance of providing practical training or alternative display technologies to enrich assessment practices.

These findings align with Pantoñal (2022), who emphasize that ICT is a useful tool that gives learning opportunities in both formal and informal settings and helps increase students' motivation and participation in class. Using technology helps learners build digital-age literacy, think creatively, improve higher-order thinking skills, and develop good communication because it is a powerful learning tool.

B. Problem No.2. What is the Extent of Student's Engagement in the Teacher's Utilization of Digital Tools in Classroom Instruction?

Table 3 shows the extent of student's engagement in the teachers' digital utilization tools towards Classroom instruction. Data show that among the statements on students engagement, the highest rated statement are "Technology is very useful in learning English, Technology gives students motivation and interest, and Students like lectures with video clips, images and games." with a mean of 3.61 described as "always", followed by the statement "The lectures with the use of technology help students acquire the new knowledge more easily and Students can learn new words better through images and videos in the electronic lectures " with a mean of 3.48 described as "Always. Next is, the statement "Technology tools used in the classroom can engage students in learning English" it has a mean of 3.39 and described as "always". This means that students are consistently motivated and actively engaged when teachers incorporate digital tools in the instruction.

On the other hand, statement "Students don't like the teacher using technology in the classroom" has the lowest mean of 1.76 described as "Never". Thus, this means that, students generally welcome and enjoy lessons enhanced with digital tools, viewing technology as a positive and motivating element of their learning experience.

The overall mean on the extent student's engagement in the

Table 2
Extent of teachers' digital utilization tools towards classroom instruction in assessment

Statements	Mean	Description
Use computer in computing grades	3.48	Always
Use computer in preparing hand-outs, test, quizzes	3.64	Always
Create power point presentations to be used in the class	3.70	Always
Use tutorial for self-training	3.00	Often
Use projector (a projector connected to a computer) in class	2.39	Sometimes
Overall Mean/Description	**3.24**	**Often**

Legend: 4.00 – 3.26 (Always) 3.25–2.51 (Often) 2.50–1.76 (Sometimes) 1.75–1.0 (Never)

Table 3
Extent of student's engagement in the teacher's utilization of digital tools in classroom instruction

Statements	Mean	Description
Technology is very useful in learning English	3.61	Always
Students can learn English better with technology tools	3.24	Often
Students like playing Kahoot games	2.58	Often
Power point lectures are more interesting	3.30	Always
Most of students like learning through YouTube clips	3.03	Often
Technology can't help students in learning English	1.94	Never
Technology gives students motivation and interest	3.61	Always
Students like lectures with video clips, images and games	3.61	Always
The lectures with the use of technology make students difficult to understand	2.15	Sometimes
The lectures with the use of technology help students acquire the new knowledge more easily	3.48	Always
Technology tools used in the classroom can engage students in learning English	3.39	Always
The electronic lectures are more interesting than the traditional lectures	3.09	Often
Lectures with the application of technology give students more chance to practice in class.	3.36	Always
Students can learn new words better through images and videos in the electronic lectures	3.48	Always
Students don't like the teacher using technology in the classroom	1.76	Never
Overall Mean/Description	**3.07**	**Often**

Legend: 4.00 – 3.26 (Always) 3.25–2.51 (Often) 2.50–1.76 (Sometimes) 1.75–1.0 (Never)

Teachers' Digital Utilization Tools Towards Classroom Instruction is 3.07 described as "Often" thus this means that students are regularly engaged and motivated when teachers integrate digital tools into lessons, showing consistent interest and active participation in technology-enhanced learning activities.

This implies that students' strong engagement with technology shows that digital tools effectively boost motivation and learning. Schools should ensure reliable equipment and teacher training to maintain and expand these benefits.

As supported by the study of Pham T.C, (2022). it reveals that most students are very interested in the lectures with the application of technology. The application of technology in education in general and in English teaching in specific is inevitable because of technology's great benefits to both teachers and students.

C. Problem No. 3. What is the Academic Performance of the Students?

Table 4
Academic performance of the students

	N	Mean	Std. Deviation
Average Grade	33	82.61	3.553

The respondents' academic performance has a mean score of 82.61 with a standard deviation of 3.55, indicating that, on average, students performed at a satisfactory level based on the usual 100-point grading scale. The relatively small standard deviation shows that their grades are clustered closely around the mean, suggesting a fairly consistent level of achievement across the group, with only minor variation in individual scores.

This implies that teaching strategies, including the use of digital tools, may be supporting steady performance. Schools can build on this stability by providing targeted enrichment or remedial programs to help students move from satisfactory to higher levels of achievement.

D. Problem No. 4. Is there a Significant Relationship in Between the Extent of Teacher's Digital Utilization Tools in the Classroom Instruction and Student's Engagement?

Table 5 presents the relationship between the teacher's digital utilization tools and student's engagement using the Pearson correlation coefficient "r". It can be seen that there is a strong positive relationship (r=0.674) between the extent of teacher's digital utilization tools and student's engagement by Garette (1996). Since the p-value (0.000) is less than the level of significance (α=0.05), there is enough evidence to reject the null hypothesis implying that the the extent of teacher's digital utilization tools is significantly related to the student's engagement.

The result indicates that as teachers' make greater use of digital tools in the classroom instruction, students tend to show higher levels of engagement. Thus, the relationship between the level of teacher readiness is directly proportional to their engagement in the classroom instruction.

E. Problem No. 5. Is there a Significant Relationship in Between the Extent of Teacher's Digital Utilization Tools in the Classroom Instruction and Student's Academic Performance?

Table 6. presents the relationship between the teacher's digital utilization tools and student's academic performance using the Pearson correlation coefficient "r". It can be seen that there is a strong positive relationship (r=0.540) between the extent of teacher's digital utilization tools and academic performance by Garette (1996). Since the p-value (0.001) is less than the level of significance (α=0.05), there is enough evidence to reject the null hypothesis implying that the the extent of teacher's digital utilization tools is significantly related to the academic performance of students.

The result indicates that as teachers' make greater use of digital tools in the classroom instruction, students tend to show high academic performance. Thus, the relationship between the level of teacher readiness is directly proportional to their academic performance in the classroom instruction.

6. Conclusion

Based on the findings, the researcher concludes that:

1. The extent of teachers' digital utilization tools towards classroom instruction in pedagogy is "*often"*, indicating that they regularly integrate digital tools for lesson preparation, online resource gathering, and professional collaboration.
2. The extent of teachers' digital utilization tools towards classroom instruction in assessment is "*often"*, showing that teachers regularly use digital tools to design, deliver, and evaluate assessments.
3. The extent of students' engagement in teachers' digital utilization tools towards classroom instruction is "*often"*, indicating that students are regularly motivated and actively involved when technology is integrated into their learning.
4. The academic performance of the students is satisfactory and consistent level.
5. There is a significant relationship in between the extent of teacher's digital utilization tools in the classroom instruction and student's engagement. On the same manner there is a significant relationship in between the extent of teacher's digital utilization tools

Table 5
Significant relationship in between the extent of teacher's digital utilization tools in the classroom instruction and student's engagement

Variables	n	r	p-value	Interpretation	Decision
Digital Utilization	33	0.674	0.000		Reject
Student's Engagement	33			Significant	

Table 6
Significant relationship in between the extent of teacher's digital utilization tools in the classroom instruction and academic performance

Variables	n	r	p-value	Interpretation	Decision
Digital Utilization	33	0.540	0.001		Reject
Academic Performance	33			Significant	

in the classroom instruction and student's academic performance.

7. Recommendations

Based on the conclusion of the study, the researcher recommends the following:

1. *Department of Education (DepEd:* should provide national policy direction, allocate funding, and organize large-scale training programs to strengthen teachers' digital skills. It must also monitor and evaluate the overall impact of technology integration on teaching, student engagement, and academic performance.
2. *School Administrators:* should ensure reliable ICT infrastructure, including stable internet access and backup power sources. They are also responsible for organizing professional development activities, forming professional learning communities, and assessing the consistent use of digital tools in both pedagogy and assessment.
3. *Teachers:* must integrate digital tools creatively into lessons and assessments, participate in continuous professional development, and share best practices with colleagues. They should also lead enrichment and remedial programs that use technology to help students achieve higher levels of performance.
4. *District Supervisors and ICT Coordinators:* should provide technical guidance, monitor the progress of digital integration across schools, and recommend improvements or additional resources to maintain high-quality implementation.
5. *Parent–Teacher Associations (PTAs):* should assist in raising funds, maintaining equipment, and supporting programs that enhance student engagement and performance through technology. Their active involvement helps sustain the resources needed for effective digital learning.

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