#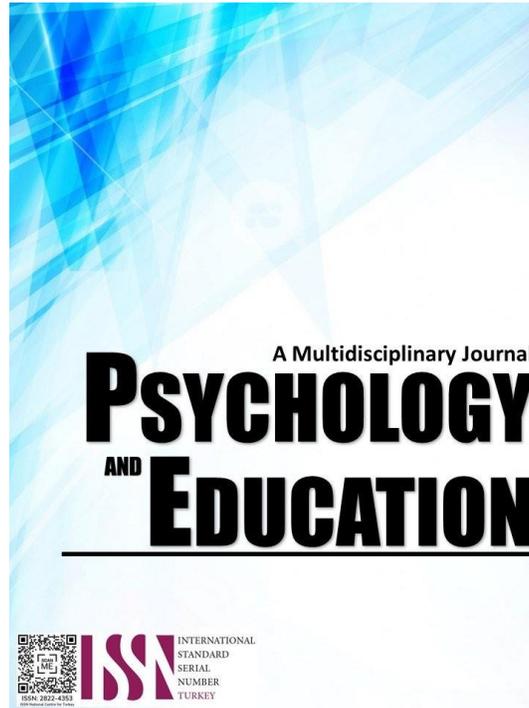 INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) INTEGRATION ITS CORRELATES TO TEACHERS' CLASSROOM OBSERVATION PERFORMANCE

Information and Communication Technology (ICT) Integration its Correlates to Teachers' Classroom Observation Performance

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Abstract

This study's primary goal was to ascertain and evaluate how Public School Teachers in Matungao District, Division of Lanao del Norte, integrated Information Technology and Communication (ICT) into their instruction for the School Year 2023-2024. The following issues were meant to be addressed: the respondents' profile; the teachers' use of ICT in the classroom as an observation tool; and the teachers' integration of ICT in terms of computer literacy, administrative assistance, and ICT use in teaching and learning. To investigate the connections between ICT integration and teachers' performance, the research used a descriptive-correlational design and a variety of statistical analyses, such as frequency, percentage, mean, standard deviation, Point-biserial correlation, Pearson correlation, and regression analysis. The regression analysis aimed at predicting teachers' classroom observational performance based on both their profiles and ICT integration revealed several significant relationships. Among subject areas taught, only Mother Tongue-Based (MTB) and Edukasyon sa Pagpapakatao (ESP) showed significant positive relationships with classroom performance, suggesting higher performance compared to the reference category of Music, Arts, Physical Education, and Health (MAPEH). Additionally, teachers with 1-4 years of experience demonstrated significantly higher classroom performance compared to those with 21 or more years. However, predictors such as age, sex, computer literacy, administrative support, and the use of ICT in teaching and learning did not show significant relationships with classroom performance. The action plan is driven by the study's findings, pinpointing areas like ICT integration, administrative support, and inclusive teaching practices for improvement.

Keywords: *teachers' ICT integration, teachers' classroom observation performance, action plan*

Introduction

Information and Communication Technology (ICT) integration in schools has become increasingly important in recent years as technology continues to play a vital role in our society. ICT integration allows teachers to access up-to-date information and stay current with the latest educational trends and practices. This not only enables them to deliver more effective lessons but also boosts their professional growth and confidence as educators. ICT can help teachers engage students, promote active learning, and cater to individual student needs. In five years of experience in our school Pendulonan Elementary School. Matungao District, the researcher noticed that some of the teachers did not use the full potential of our technology. Integrating Communication Technology (ICT) was not frequently utilized. It also noticed that we were always left behind during district competition especially when technology was in value.

This is one of the reasons why the researcher is interested in delving into the use of ICT in our school. She wanted to investigate the implementation of ICT in our school is properly done. And also, she wanted to assess if the teachers are skilled in ICT since some of them did not use digital presentations but rather traditional methods of teaching.

It is important to examine and assess from the teachers what are the technical issues they encountered and investigate the reasons for not integrating ICT into their teaching when it will affect the teachers' performance. Integration of information and communication technology (ICT) into the teaching and learning process is a growing field. Accordingly, the integration of ICT is necessary to contribute to the learning process of the students (Cartwright et al., 2018).

Information and communication technology have transformed school teachers in delivering lessons creatively, effectively, and efficiently. ICT opens the developmental profession of teachers by attending webinars, enrolling in online courses, and other educational platforms that help the teacher with continuous learning opportunities. For students, their academic performance would be greatly enhanced, learning would be life-long. In times of covid-19 pandemic, ICT plays a big role. The Department of Education interrupted face-to-face classes and adopted blended learning as a modality. Different kinds of ICT tools were used. Radio, laptop, television, cellphone, and radiogram were used to cater to the needs of the learners.

Online teaching and learning help those students who have an internet connection and continuously learn from their homes. In remote areas, audio-based was the learning modality. DepEd TV programs were established by the department. In many ways, ICT has various uses in our society not only in the Department of Education. Information and communication technology have plenty of purposes, especially for education. Teachers must be resourceful to make discussion interactive and easy to demonstrate to students (DepEd Order No. 78).

In conducting this study, the researcher aimed to examine what support is needed by the teachers to integrate ICT into their teaching. Also, the researcher wanted to assess the ICT level of the respondents and what support the administrator gave to teachers.

Research Questions

The main purpose of this study was to determine and assess ICT integration to teachers' performance among the Public School Teachers of Matungao District, Division of Lanao del Norte of School Year 2023-2024. Specifically, this study intended to answer the following questions:

1. What is the profile of the respondents in terms of:
    1.1. age;
    1.2. sex;
    1.3. length of service;
    1.4. subject taught; and
    1.5. number of ICT training attended?
2. What is the teacher's ICT integration of respondents when grouped in terms of:
    2.1. computer literacy;
    2.2. administrative support; and
    2.3. use of ICT in teaching and learning?
3. What is the teachers' classroom observation performance?
4. Is there a significant relationship between the teacher's ICT integration when grouped and the teacher's classroom observation performance?
5. Is there a significant relationship between teachers' profiles and the teachers' classroom observation performance?
6. Which of the teachers' profiles, teachers' ICT integration, and use of ICT in teaching and learning significantly predict the effect of teachers' classroom observation teaching performance?
7. What action plan can be designed to be formulated based on the results of the study?

Methodology

Research Design

This study employed descriptive-correlational design to investigate the effects of Information and Communication Technology (ICT) integration on the teachers' performance. As a descriptive type of research, an adapted and modified structured questionnaire served as the main instrument in collecting data. Correlation is appropriate in the study since it sought to determine the significant relationship between teachers' profiles of the respondents, teachers' ICT integration, and teachers' performance.

Also, which of the teachers' profiles, and teachers' ICT integration significantly predict the effects of teachers' classroom observational tools of respondents.

Respondents

Table 1 shows the number of the respondents. The respondents of this study were the population of 9 elementary public schools, 2 primary schools, and 1 integrated school in Matungao District during the school year 2023-2024. The respondents were randomly selected from the different schools of Matungao district. These respondents were classified from twelve (12) schools. These twelve (12) schools determined the actual number of respondents using the Raosoft size calculator. A total of one hundred one (101) respondents was obtained.

Table 1. *Respondents of the Study*

Schools	Total Population of Teachers	Sample Respondents	Percentage
Batal Elementary School	12	8	5.55
Batangan Elementary School	12	8	5.55
Bangco Elementary School	15	11	7.63
Bubong Elementary School	18	13	9.02
Cayonan Elementary School	9	6	4.16
Pendulonan Elementary School	7	5	3.47
Pangi Elementary School	10	7	4.86
Matampay Integrated School	18	13	9.03
Somiorang Primary School	6	4	2.80
Pasayanon Elementary School	19	14	9.72
Tamanan Elementary School	9	6	4.16
Sapot Elementary School	9	6	4.16
Total	144	101	70.13

In order to ensure that every member of the population had an equal chance of being included in the sample, the study used stratified random sampling, with each school being designated a strata.

Using the Raosoft sample size calculator, it was determined that 101 respondents, or 70.11% of the entire population, made up the sample size out of 144 respondents. A 5% margin of error was assumed when choosing the sample size.

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The distribution of sample sizes by school is shown in Table 1. At both the individual school and overall school levels, the formula for calculating the size of the sample given the school population was 70.11% times the school population (70.11%xSP).

Instrument

The researcher utilized a survey questionnaire adapted and modified from the study of Ghavifekr and Athirah (2019) as the main tool for gathering data for the study. No modification of statements was applied since it was already validated and considered reliable based on the study. However, it would still undergo pilot testing.

The questionnaires for the respondents included three parts. Part I focused on teachers' profiles in terms of age, sex, length of service, and subject taught. Part II included the teachers' ICT integration in terms of computer literacy and administrative support of the respondents. Part III included the teachers' classroom observational tool.

Meanwhile, since the survey questionnaires underwent pilot testing at a nearby school not included as respondents. Below are the results of the testing conducted at Agar-agar Elementary School with 25 teachers as respondents.

Reliability Statistics Result

Study Variables	Cronbach's Alpha	Description
ICT Integration	0.708	Acceptable
Classroom Performance	0.704	Acceptable
Overall Reliability	0.706	Acceptable

Note: Cronbach's Alpha above 0.7 is considered reliable
LEGENDS: (George and Mallery, 2003)

The table presents Cronbach's alpha values for each study variable, which measure the internal consistency of the items within the variable. A Cronbach's alpha value of 0.7 or higher is generally considered acceptable for research purposes. The Cronbach's alpha values for the study variables are higher than the acceptable threshold of .7, indicating that the reliability of these variables is excellent. This result suggests that the internal consistency of the items used to measure ICT integration, and classroom performance were met.

Thus, the instrument used in this study has acceptable internal consistency, indicating that it can be used for future research purposes.

Procedure

Before conducting the study, the researcher performed the standard research protocol to ensure the validity and reliability of the research findings. The researcher requested consent and approval from the adviser for a careful assessment and review of the manuscript and the appropriateness and the survey questionnaires. The researcher submitted a letter to the Division Superintendent of Lanao del Norte, with the recommendation from the adviser and the Dean of the Graduate Studies of St. Peter's College. to allow her to distribute the survey questionnaires to the respective teachers from public schools of Matungao District.

After all permits were signed, the researcher presented the signed letters to the respective teachers of all public schools of Matungao District. Likewise, a letter of participation for the participants requesting appointments was given. The researcher personally conducted the distribution and retrieval of questionnaires at their agreed schedules.

Participants received informed consent days before the actual data collection. The permission form tries to educate the participants about the study's setting, goal, benefits, and drawbacks. A hard copy of the questionnaires was collected from each participant after distribution.

Only those participants who signed the informed permission form were provided with surveys to complete. This denoted that they agreed to take part in the study voluntarily. Enough time was given to the participants to complete the surveys. They were assured of the ethics of research on confidentiality. Once all the data were completed, the questionnaires were classified, tallied, tabulated, and submitted to the school's satisfaction.

Data Analysis

This study utilized the following necessary and appropriate statistical tools to interpret and analyze the data gathered.

For problems 1 and 2, Frequency and Percentage, Mean, and Standard deviation were used to determine the teachers' profile in terms of age, sex, length of service, subject taught, and number of seminars attended by the respondents. Also, to determine the teachers' ICT integration in terms of computer literacy and administrative support.

For problem 3, Frequency and Percentage were used in determining the teachers' classroom observation performance and the use of ICT in teaching and learning as a variable of the study.

For problems 4, 5, and 6 Pearson Correlation and Point-Biserial Correlation were utilized to determine the relationship between the teachers' profile of the respondents and teachers' ICT integration. Multiple Regression analysis with a simultaneous entry was also utilized to test if the predictors significantly affected teachers' classroom observation performance.

Results and Discussion

This section presents the results of the data analysis and the discussions and implications.

Problem 1: What is the profile of the respondents in terms of age, sex, length of service, subject taught, and number of ICT training attended?

Table 2. *Age of the Respondents*

Age (in years)	Frequency	Percentage (%)
25-30	36	35.6
31-40	48	47.5
41-50	17	16.8
Total	101	100.0

Table 2 presents the age distribution of the respondents surveyed. Among the sample of 101 participants, the majority fall within the age brackets of 31 to 40 years, comprising 47.5% of the total respondents. Following closely behind, individuals aged between 25 to 30 years represent 35.6% of the sample. Meanwhile, respondents aged 41 to 50 years constitute a smaller portion at 16.8%. This distribution suggests a relatively balanced representation across the age groups surveyed.

The adoption of technology in the classroom can be influenced by individual factors such as age, sex, educational background, experience using computers for learning, and attitude toward computers, according to research by Lawrence (2020). Furthermore, their results highlighted that respondents were found to be more responsive in ICT integration between the ages of 31 and 40.

Table 3. *Sex of the Respondents*

Sex	Frequency	Percentage (%)
Male	8	7.9
Female	93	92.1
Total	101	100.0

Table 3 shows the distribution of respondents based on their gender. Within the sample of 101 participants, the overwhelming majority, comprising 92.1%, identify as female, whereas males constitute a much smaller proportion, accounting for only 7.9% of the total respondents. This data underscores a significant gender imbalance within the surveyed population, with females representing a substantially larger portion.

According to Lawrence's (2020) study, because of their feminine and creative qualities, female teachers were more drawn to integrating ICT. In the preschool years and at the basic education level, where visual aids are highly relevant and helpful, female teachers were more likely to integrate ICT.

Table 4. *Years in Teaching of the Respondents*

Years in Teaching	Frequency	Percentage (%)
<1	4	4.0
1-4	36	35.6
5-10	39	38.6
11-20	9	8.9
21+	13	12.9
Total	101	100.0

Table 4 displays the distribution of respondents based on their years of experience in teaching. The result reveals that the majority fall within the range of 1 to 10 years of teaching experience, constituting 78.2% of the total respondents. Specifically, 35.6% have been teaching for 1 to 4 years, while 38.6% have accumulated 5 to 10 years of experience.

Meanwhile, educators with more extensive tenure in the field are less prevalent, with only 21.8% of respondents having taught for 11 years or more. Within this group, those with 21 or more years of teaching experience make up 12.9% of the sample, while a smaller proportion of 8.9% have taught for 11 to 20 years. This breakdown provides valuable insight into the distribution of teaching experience among the surveyed population, highlighting the prevalence of relatively early-career educators while also acknowledging the presence of more seasoned professionals.

The idea of TPACK provided support for this, stating that instructors' performance is assessed based on their ICT-related abilities. It assessed the teachers' capacity, knowledge, and influence on their professional growth as well as their training. Teachers of all experience levels were able to take advantage of this. This only demonstrated that teachers were more comfortable incorporating ICT abilities, as stated by Hernandez-Ramos (2019), if they had received ICT training.

DepEd Computerization Program (DCP), aimed to provide public schools with appropriate technologies that would enhance the teaching-learning process and meet the challenges of the 21st century. This program responded to the computer backlog of public schools by providing the hardware and software and training on simple troubleshooting. Through the program, the department could

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address issues on backlogs of teachers on ICT in Education and the need of computers and other facilities for learning delivery. Further, the program intended to capacitate teachers with the required skills in ICT integration.

Indeed, despite a lot of investment in the field of pre-service training, the trainee teachers have not imparted the real competence, expertise, and skills to integrate ICTs in their teaching positively, professionally, and efficiently (Sari et al.,2019). Teacher training is identified as one important component that would support technology integration in schools (Gavifekr, 2019). Effective teacher training is required to help educators learn how to use technology in the classroom (Rosdy, 2019).

Table 5. *Subject Taught of the Respondents*

Subject Taught	Frequency	Percentage (%)
English	15	14.9
Filipino	14	13.9
Mathematics	14	13.9
Araling Panlipunan	16	15.8
Science	6	5.9
EPP	8	7.9
TLE	7	6.9
MTB	6	5.9
ESP	9	8.9
MAPEH	6	5.9
Total	101	100.0

Table 5 presents the subjects taught by the respondents in the surveyed population. Among the 101 participants, the distribution of subjects taught is quite diverse. The highest frequencies are observed in Araling Panlipunan (Social Studies) and English, each representing 15.8% and 14.9% of the total respondents, respectively. Mathematics and Filipino follow closely behind, each accounting for 13.9% of the respondents. Other subjects such as ESP (Edukasyon sa Pagpapakatao), EPP (Edukasyon sa Pagpapakatao), and TLE (Technology and Livelihood Education) also have noticeable representation, albeit to a lesser extent.

However, certain subjects like Science, MTB (Mother Tongue-Based), and MAPEH (Music, Arts, Physical Education, and Health) have relatively lower frequencies, each constituting less than 10% of the total respondents. This breakdown of subjects taught highlights the varied expertise among educators within the surveyed population, underscoring the importance of catering to diverse subject areas in educational planning and curriculum development.

The teachers' attitudes to ICT use in learning far outweighed the institutional or school factors. Teachers' use of ICT is influenced greatly by their attitudes towards the way the subject should be taught and by the skills associated with their competence in managing classroom activities and their computer-handling technical skills (Lawrence, 2020).

The analysis of the respondents' attendance at ICT training sessions revealed a varied distribution of participation levels. Among the 101 participants surveyed, the majority attended multiple training sessions, with 26.7% reporting attendance at two sessions and 34.7% at three sessions. Notably, a considerable portion of respondents, comprising 25.7%, reported attending between four to five training sessions.

On the other hand, a smaller proportion attended fewer sessions, with 6.9% attending only one session and 1.0% indicating no attendance at any training sessions. Additionally, a minority of respondents, constituting 5.0%, reported attending six or more ICT training sessions. This distribution suggests a diverse range of engagement levels among teachers regarding ICT training opportunities, with a substantial portion actively participating in multiple sessions to enhance their technological competencies and teaching practices.

Table 6. *Number of ICT Training Attended*

Number of ICT Training Attended	Frequency	Percentage (%)
0	1	1.0
1	7	6.9
2	27	26.7
3	35	34.7
4-5	26	25.7
6-up	5	5.0
Total	101	100.0

Computer literacy appears to be influenced by student background, including familiarity with computers, as well as to emphasize the placed on it inside the school premises supported and provided by ICT in educational systems. At present, there is less information about the school and classroom influences on computer literacy than there is about student background influences.

In the immediate future, the construct of computer literacy may need to accommodate increasing changes in software and hardware contexts in which it is manifested (Ainley et al., 2018).

Problem 2: What is the teacher's ICT integration of respondents when grouped in terms of computer literacy, administrative support, and use of ICT in teaching and learning?

Table 7. *Teacher's ICT Integration of Respondents in terms of Computer Literacy*

Indicators	Mean	SD	Description
1. I can write files onto a CD.	3.34	.91	Agree
2. I can resize a photograph.	3.36	.66	Agree
3. I can print a document using a printer.	3.51	.50	Strongly Agree
4. I can create a basic word document.	3.67	.47	Strongly Agree
5. I can copy, cut, and paste text in a document.	3.40	.60	Agree
6. I can create a basic Excel spreadsheet.	3.77	.42	Strongly Agree
7. I can create a simple database using access.	3.59	.65	Strongly Agree
8. I can create a simple presentation using PowerPoint.	3.88	.33	Strongly Agree
9. I can create a simple Web page.	3.48	.83	Agree
10. I can download and save files from the Web (e.g., text, graphic, PDF files).	3.91	.29	Strongly Agree
Total Measure	3.59	.23	Strongly Agree

Note: 1.00-1.49, Strongly Disagree; 1.50-2.49, Disagree; 2.50-3.49, Agree; 3.50-4.00, Strongly Agree

Table 7 presents the mean and standard deviation (SD) scores for various indicators assessing teachers' ICT integration, specifically focusing on computer literacy. The mean score for the total measure of ICT integration is 3.59, with a relatively low standard deviation of 0.23, indicating a high level of agreement among respondents regarding their ICT competencies.

Looking at individual indicators, teachers demonstrate particularly strong proficiency in tasks such as creating a basic Excel spreadsheet (mean = 3.77), creating a simple presentation using PowerPoint (mean = 3.88), and downloading and saving files from the web (mean = 3.91). These results suggest a robust level of competence among educators in utilizing common productivity tools and applications.

However, there are areas where teachers show slightly lower but still affirmative levels of proficiency, such as creating a simple database using Access (mean = 3.59) and creating a basic word document (mean = 3.67). Nevertheless, these scores still indicate a generally positive attitude towards their ICT skills. Moreover, despite the overall high mean scores, there are slight variations in the standard deviations across indicators, suggesting differences in the level of confidence or variability among respondents in specific ICT tasks.

These findings have several implications for educational practice. Firstly, they underscore the importance of integrating ICT training and professional development opportunities into teacher education programs and ongoing support initiatives. While teachers exhibit a strong foundation in ICT skills, continuous training can further enhance their proficiency, especially in areas where competency levels are slightly lower. Secondly, understanding teachers' ICT competencies can inform curriculum design and instructional strategies that leverage technology to enhance teaching and learning experiences. By tailoring professional development programs to address specific areas of need identified in this assessment, educational institutions can better prepare teachers to integrate ICT effectively into their pedagogical practices. Additionally, these results highlight the need for ongoing assessment and monitoring of teachers' ICT competencies to ensure they remain current and aligned with evolving technological advancements in education. Overall, by investing in teachers' ICT integration, educational institutions can foster a technologically proficient workforce capable of meeting the demands of 21st-century teaching and learning environments.

As the most widely used computer operation tools, Microsoft Word and Excel are where teachers most frequently integrate ICT, according to a 2019 study by Cartwright et al. These operations are used by teachers for self-learning activity sheets or modules, documentation, and evaluation and assessments.

Furthermore, Croteau et al. (2019) noted that teachers frequently integrated ICT into their lessons by using Microsoft PowerPoint presentations to fill in the gaps left by traditional teaching methods. With the help of video learning resources, students were shown to be more engaged in class and to be largely dependent on visual aids.

Table 8 presents the level of administrative support for ICT integration as perceived by the respondents. The mean score for the total measure of administrative support is 3.06, indicating an overall agreement among teachers regarding the administrative backing for ICT integration. However, the standard deviation of 0.34 suggests a relatively low level of variability in responses, implying a consistent perception among respondents regarding administrative support.

Analysis of individual indicators reveals areas of strength and potential improvement in administrative support. Teachers strongly agree that the administration has plans for teachers regarding ICT integration in school (mean = 3.66) and that they are allowed to use ICT daily in school (mean = 3.53). Additionally, professional development opportunities and ICT resources are perceived to be employed in the school (mean = 3.36), indicating proactive efforts by the administration to support teachers in integrating technology into their teaching practices.

However, there are areas where administrative support falls short of expectations. For instance, respondents' express disagreement regarding the allocation of a budget for the regular repair of ICT equipment by the principal (mean = 1.97). This suggests a critical area for improvement to ensure the sustainability and functionality of ICT infrastructure within the school. Similarly, while the majority of

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teachers agree that administrative support aligns with the specific needs of different subjects taught in the school (mean = 2.96), there is room for enhancing this alignment to better meet the diverse requirements of subject areas.

Table 8. *Teacher's ICT Integration of Respondents in terms of Administrative Support*

Indicators	Mean	SD	Description
1. There are considerable numbers of computers provided in our school.	2.54	.87	Agree
2. The administration has plans for teachers regarding ICT integration in school.	3.66	.47	Strongly Agree
3. Professional development and ICT resources were employed in our school.	3.36	.69	Agree
4. We are allowed to use ICT daily in our school.	3.53	.56	Strongly Agree
5. We are encouraged to apply ICT integration in our daily lessons.	2.69	1.04	Agree
6. We are allowed to give feedback and suggestions regarding ICT use during administrative monitoring.	3.24	.69	Agree
7. Our Principal allotted a budget for the repair of ICT equipment regularly.	1.97	1.06	Disagree
8. The administrative Support services were aligned with the specific needs of the different subjects taught with in our school.	2.96	.87	Agree
9. The administration is always transparent regarding ICT-related policies and decisions in our school.	3.34	1.01	Agree
10. We are thinking that administrative support contributes to learners' learning outcomes and quality education in our school.	3.32	1.09	Agree
Total Measure	3.06	.34	Agree

Note: 1.00-1.49, Strongly Disagree; 1.50-2.49, Disagree; 2.50-3.49, Agree; 3.50-4.00, Strongly Agree

Furthermore, teachers' perception of administrative transparency regarding ICT-related policies and decisions (mean = 3.34) indicates a positive but not overwhelmingly strong sentiment. Improving transparency in communication can foster trust and collaboration between teachers and administrators, ultimately facilitating more effective ICT integration initiatives.

Overall, the findings highlight the importance of continued efforts to enhance administrative support for ICT integration in schools. By addressing areas of concern such as budget allocation for ICT maintenance and enhancing transparency in communication, educational institutions can create an environment conducive to meaningful ICT integration that ultimately contributes to improved learning outcomes and quality education for students. Regular assessment of administrative support perceptions enables schools to identify areas for improvement and tailor interventions to meet the evolving needs of teachers and students in a technologically advancing world.

Little structural support from school administrators and a rigid curriculum were also some of the prominent factors hindering teachers' use of ICT. Schools usually give little time for teachers to manage and get familiarized with ICT, not to mention a lack of administrative support for teachers who are not confident enough to commence ICT. In addition to this, the levels of teachers' expertise in getting familiar with these ICT tools, the inadequacy of learning resources and learning materials, and their attitudes are also factors hindering the use of ICT (Voogt et al., 2020).

Table 9. *Teacher's ICT Integration of Respondents in terms of Use of ICT in Teaching and Learning*

Indicators	Mean	SD	Description
1. I use technology in my teaching.	3.08	.52	Agree
2. I am aware of policies that guide me in the use of ICT.	3.82	.55	Strongly Agree
3. I use non-digital learning.	3.52	.73	Strongly Agree
4. I develop digital resources for my learners.	3.73	.47	Strongly Agree
5. I can use technology tools for classroom activities.	3.77	.49	Strongly Agree
6. I am an expert in the use of technology tools for teaching.	3.69	.50	Strongly Agree
7. I have the facilities to use the technology tools on my classes.	3.49	.81	Agree
8. I am aware of ethical and legal responsibilities in the use of ICT tools.	3.54	.78	Strongly Agree
9. My students learn better with the use of technology tools.	3.65	.62	Strongly Agree
10. I enjoy using ICT tools in my teaching.	3.81	.39	Strongly Agree
Total Measure	3.61	.25	Strongly Agree

Note: 1.00-1.49, Strongly Disagree; 1.50-2.49, Disagree; 2.50-3.49, Agree; 3.50-4.00, Strongly Agree

Table 9 provides a comprehensive view of teachers' integration of ICT in teaching and learning, focusing on various indicators related to the use of technology. The total measure of ICT integration in teaching and learning yields a mean score of 3.61, indicating a strong agreement among respondents regarding the integration of ICT in their instructional practices. The relatively low standard deviation of 0.25 suggests a high level of consistency in perceptions among teachers regarding the use of technology in teaching and learning.

Upon closer examination of individual indicators, several notable trends emerge. Teachers overwhelmingly agree that they use technology in their teaching (mean = 3.08) and are aware of policies guiding them in the use of ICT (mean = 3.82), indicating a proactive approach to integrating technology into their pedagogical practices while adhering to established guidelines.

Moreover, educators strongly agree that they develop digital resources for their learners (mean = 3.73), are proficient in using technology tools for teaching (mean = 3.69) and find enjoyment in incorporating ICT tools into their teaching (mean = 3.81). These

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findings suggest a high level of competency, confidence, and satisfaction among teachers regarding their use of technology in educational settings.

Additionally, respondents express a strong belief in the efficacy of technology-enhanced learning, with high agreement that their students learn better with the use of technology tools (mean = 3.65). This highlights the perceived benefits of ICT integration in facilitating enhanced learning experiences and outcomes for students.

However, while teachers generally feel equipped with the necessary facilities to use technology tools in their classes (mean = 3.49) and are aware of ethical and legal responsibilities associated with ICT use (mean = 3.54), there is slightly less agreement compared to other indicators. This suggests the importance of ongoing support and resources to ensure teachers have access to appropriate technology infrastructure and are equipped with the knowledge and skills to navigate ethical and legal considerations in ICT integration.

Overall, the findings underscore the positive attitudes and practices of teachers towards ICT integration in teaching and learning. However, continued support, professional development opportunities, and investment in technology infrastructure are essential to sustain and enhance the integration of ICT in education, ultimately benefiting both teachers and students in achieving educational goals and fostering 21st-century skills.

Mcmahon, (2019) cited that in the context of formal education (school), especially related to the vehicle for cultural transformation, ICT has a function in the learning process, at least, is as a learning aid. The function of ICT as a learning aid can be in the form of teaching aids for teachers, learning aids for students, as well as tools for interaction between teachers and students.

Teachers will be in a position to use ICT tools and resources effectively in the classroom as discussed by Yunus and Syafi'I (2020). It only when they realize how useful these tools are in presenting materials to the pupils and the overall learning process. The influence of ICT in teaching and learning is largely based on the perceptions and attitudes of the teachers who are responsible for using this technology.

Table 10. *Consolidated Findings of the Teacher's ICT Integration of Respondents*

Indicators	Mean	SD	Description
Computer Literacy	3.59	.23	Strongly Agree
Administrative Support	3.06	.34	Agree
Use of ICT in teaching and learning	3.61	.25	Strongly Agree
Total Measure	3.42	.22	Agree

Note: 1.00-1.49, Strongly Disagree; 1.50-2.49, Disagree; 2.50-3.49, Agree; 3.50-4.00, Strongly Agree

Table 10 provides a consolidated overview of the findings regarding teachers' ICT integration, encompassing computer literacy, administrative support, and the use of ICT in teaching and learning. The total measure of ICT integration yields a mean score of 3.42, with a relatively low standard deviation of 0.22, indicating a high level of agreement among respondents across the different dimensions of ICT integration.

Analysis of individual indicators reveals that teachers strongly agree with the statements related to computer literacy, with a mean score of 3.59. This suggests that educators exhibit a high level of proficiency in various ICT skills and tasks, including basic computer operations and software usage.

However, while administrative support for ICT integration is rated slightly lower with a mean score of 3.06, teachers still express agreement with the availability of support and resources from the administration. Areas for improvement include budget allocation for ICT equipment maintenance and ensuring transparency in ICT-related policies and decisions.

On the other hand, the use of ICT in teaching and learning receives a strong endorsement from teachers, with a mean score of 3.61. Educators indicate a high level of engagement in incorporating technology into their instructional practices, developing digital resources, and leveraging technology tools to enhance student learning experiences.

Thus, the consolidated findings suggest that while teachers demonstrate a high level of computer literacy and enthusiasm for integrating ICT into teaching and learning, there is room for enhancing administrative support to further facilitate effective ICT integration initiatives. By addressing areas of concern and building upon existing strengths, educational institutions can create an environment conducive to maximizing the benefits of ICT in education, ultimately enriching teaching and learning experiences for both educators and students.

Many educational institutions and governments globally have taken the integration of ICT into teaching and learning as a major priority and that much premium is placed on its integration and implementation. The teaching and learning process is making a great impact in education as a result of the application of ICT (Reid, 2019).

Integrating ICT into teaching and learning is a necessary condition to have access to ICT infrastructure and resources in school (Pelgrum & Law, 2018). The advent of ICT has made education non-restrictive. Teaching and learning used to be at the four walls of the classroom where teaching was based on a prescribed syllabus. The last few years have witnessed a dramatic change in the learning model. The way students are being taught today is very different from the teaching methods that were adopted a few decades back.

Problem 3: What is the teachers' classroom observation performance of the respondents?

Table 11 presents the results of teachers' classroom observation performance assessed across various indicators. The mean scores for each indicator range from 5.76 to 6.73, indicating a generally high level of performance across different aspects of teaching practice.

The standard deviations, which range from .44 to .94, suggest relatively low variability in ratings among respondents, indicating a consistent perception of performance across the surveyed population.

Table 11. *Teachers' Classroom Observation Performance*

Indicators	Mean	SD	Description
1. Apply knowledge of content within and across curriculum teaching areas.	6.32	.94	Very Satisfactory
2. Display proficient use of Mother Tongue, Filipino, and English to facilitate teaching and learning.	6.55	.59	Outstanding
3. Use effective verbal and non-verbal classroom communication strategies to support learner understanding, participation, engagement, and achievement.	6.47	.72	Very Satisfactory
4. Establish safe and secure learning environments to enhance learning through the consistent implementation of policies, guidelines, and procedures.	6.62	.61	Outstanding
5. Maintain learning environments that promote fairness, respect, and care to encourage learning.	6.56	.56	Outstanding
6. Maintain learning environment that nurture and inspire learners to participate, cooperate and collaborate in continued learning.	6.67	.53	Outstanding
7. Apply a range of successful strategies that maintain learning environments that motivate learners to work productively by assuming responsibility for their own learning.	6.19	.70	Very Satisfactory
8. Design, adapt and implement teaching strategies that are responsive to learners with disabilities, giftedness and talents.	5.76	.84	Very Satisfactory
9. Adapt and use culturally appropriate teaching strategies to address the needs of learners from indigenous groups.	6.73	.44	Outstanding
Total Measure	6.43	.23	Very Satisfactory

Note: 3.00-3.49, Needs Improvement; 3.50-4.49, Poor; 4.50-5.49, Satisfactory; 5.50-6.49, Very Satisfactory; 6.50-7.00, Outstanding

Notably, teachers demonstrate particularly strong performance in indicators related to language proficiency, classroom management, and creating inclusive learning environments. For instance, indicators such as "Display proficient use of Mother Tongue, Filipino, and English" and "Maintain learning environments that promote fairness, respect, and care" both receive outstanding mean scores, highlighting teachers' excellence in these areas.

Similarly, indicators related to creating safe and secure learning environments, fostering learner participation and cooperation, and adapting teaching strategies to diverse learner needs also receive very satisfactory to outstanding ratings.

These findings have significant implications for educational practice. Firstly, they underscore the importance of investing in professional development initiatives that support teachers in honing their language proficiency skills and mastering effective classroom communication strategies. By equipping teachers with strong language and communication skills, educational institutions can enhance the quality of instruction and promote student engagement and achievement.

Additionally, the results highlight the critical role of effective classroom management in creating conducive learning environments. Teachers' ability to establish safe, respectful, and inclusive classrooms fosters a positive learning atmosphere conducive to student learning and development. Therefore, ongoing support and training in classroom management strategies are essential for maintaining high-quality teaching practices.

Furthermore, the emphasis on adapting teaching strategies to meet the diverse needs of learners underscores the importance of inclusive education practices. By addressing the unique learning needs of students with disabilities, giftedness, talents, and cultural backgrounds, teachers can ensure that all learners have equitable access to quality education.

Thus, educational institutions should prioritize professional development opportunities that promote inclusive teaching practices and cultural competence among educators.

Thus, the findings highlight the strengths of teachers' classroom observational performance while also identifying areas for continued growth and development. By leveraging these insights and investing in targeted professional development initiatives, educational institutions can further enhance teaching quality, improve student outcomes, and foster inclusive and supportive learning environments conducive to all learners' success.

The time constraints also lead to limited use of computers or technology in the classroom. However, even when computers are available, and teachers have time; they lack the training necessary to use this technology effectively (Carlson & Reidy 2020).

Teachers report more frequent use of technology with the presence of training and exposure to technology in teaching preparation programs and the availability of technical support (Hernandez-Ramos 2019). One of the greatest hindrances in using ICTs is insufficient resources (Hew & Brush 2019).

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Problem 4: Is there a significant relationship between the teacher's ICT integration when grouped and the teacher's classroom observation performance of the respondents?

Table 12. *Relationship between the Teacher's ICT Integration and the Classroom Observation Performance*

ICT Integration	Classroom Observation Performance		Remarks
	r-value	*p-value*	
Computer Literacy	-.007	.948	Not significant
Administrative Support	-.101	.314	Not significant
Use of ICT in teaching and learning	-.064	.522	Not significant
Total Measure	-.080	.424	Not significant

Note: Analysis is based on Pearson Correlation   Not significant at .05 level

Table 12 presents the correlation results between teachers' ICT integration and their classroom observation performance. The analysis, conducted using Pearson correlation, indicates that there is no significant correlation between ICT integration and classroom observational performance for any of the dimensions assessed, as evidenced by the non-significant p-values (all above .05).

Specifically, the correlation between computer literacy and classroom observational performance yields a negligible r-value of -.007, with a non-significant p-value of .948. Similarly, administrative support, the use of ICT in teaching and learning, and the total measure of ICT integration also demonstrate non-significant correlations with classroom observational performance, with r-values of -.101, -.064, and -.080, respectively, and p-values all above .05.

These findings have several implications for educational practice. Firstly, they suggest that while teachers may possess varying levels of ICT skills and receive administrative support for ICT integration, these factors do not necessarily translate into observable differences in classroom performance as assessed through direct observation. Therefore, simply focusing on enhancing ICT skills or improving administrative support may not directly impact classroom effectiveness.

Furthermore, the non-significant correlations underscore the complex nature of classroom performance and the multitude of factors that contribute to effective teaching beyond ICT integration alone. Other variables such as pedagogical approaches, classroom management strategies, and teacher-student interactions may play significant roles in determining classroom observational performance.

Additionally, these findings highlight the importance of adopting a holistic approach to teacher professional development and evaluation. While ICT integration is undoubtedly valuable in modern education, its impact on classroom performance may be mediated by various contextual factors. Thus, educational institutions should consider incorporating multiple measures and indicators when assessing teacher effectiveness, rather than solely relying on ICT-related competencies.

Hence, while the correlation analysis did not find significant relationships between teachers' ICT integration and classroom observation performance, this does not diminish the importance of ICT skills and support. Instead, it underscores the need for comprehensive approaches to teacher development and evaluation that consider a wide range of factors influencing effective teaching and learning in today's educational landscape.

Technology has brought about various changes in the way education is delivered and received. From self-learning to the flipped classroom approach, the author has seen technology make a considerable impact on learning and teaching methodologies (Vishal, 2023). With numerous benefits to offer, digital learning has become an important part of the education system. Information and Communication Technology (ICT) brings in multiple benefits for digital learning and student-centric engagement.

At present, there is less information about the school and classroom influences on computer literacy than there is about student background influences. In the immediate future, the construct of computer literacy may need to accommodate increasing changes in software and hardware contexts in which it is manifested (Ainley et al.,2018).

Problem 5: Is there a significant relationship between teachers' profiles and the teachers' classroom observation performance of the respondents?

Table 13 presents the correlation results between teachers' profiles and their classroom observation performance. The analysis, conducted using Point-Biserial correlation, reveals that none of the teachers' profiles have a significant correlation with classroom observation performance, as indicated by all p-values exceeding the .05 threshold.

Examining specific teacher profiles, such as the subject taught, age group, sex, and years in teaching, none show a statistically significant correlation with classroom observational performance. For instance, the correlation coefficients for subjects taught range from -.129 to .158, indicating weak and non-significant relationships. Similarly, correlations based on age group, sex, and years in teaching also fail to reach significance, with all p-values above .05.

These findings suggest that factors such as the subject taught, age, gender, and years of teaching experience do not significantly predict classroom observation performance. While these variables may influence teaching practices and approaches, their impact on observable

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classroom performance appears to be negligible based on this analysis.

Table 13. *Relationship between the Teacher's Profiles and the Classroom Observation Performance*

Teachers' Profile	Classroom Observation Performance		Remarks
	r-value	*p-value*	
Subject Taught=English	-.017	.869	Not significant
Subject Taught=Filipino	.051	.609	Not significant
Subject Taught=Mathematics	-.047	.642	Not significant
Subject Taught=Araling Panlipunan	-.094	.348	Not significant
Subject Taught=Science	.097	.336	Not significant
Subject Taught=EPP	-.055	.586	Not significant
Subject Taught=TLE	-.003	.975	Not significant
Subject Taught=MTB	.158	.114	Not significant
Subject Taught=ESP	.086	.391	Not significant
Subject Taught=MAPEH	-.129	.198	Not significant
Age=25-30	-.028	.784	Not significant
Age=31-40	-.051	.609	Not significant
Age=41-50	.104	.301	Not significant
Sex=Female	-.071	.481	Not significant
Years in Teaching=1-4	.087	.388	Not significant
Years in Teaching=5-10	-.014	.892	Not significant
Years in Teaching=11-20	.018	.857	Not significant
Years in Teaching=21+	-.123	.222	Not significant

Note: Analysis is based on Point-Biserial Correlation   *Not significant at .05 level*

These results have important implications for educational practice and teacher evaluation. They underscore the need for a comprehensive approach to assessing teacher effectiveness, considering a wide range of factors beyond demographic characteristics. While these factors may inform professional development initiatives and support strategies tailored to individual needs, they may not directly correlate with classroom performance as assessed through observational measures.

Furthermore, these findings highlight the importance of ongoing research and evaluation to better understand the complex interactions between teacher profiles and classroom performance. By exploring additional variables and employing diverse assessment methods, educators and policymakers can gain deeper insights into the factors that contribute to effective teaching and learning outcomes.

Thus, while the correlation analysis did not reveal significant relationships between teachers' profiles and classroom observation performance, these results contribute to a broader understanding of teacher effectiveness and inform the development of evidence-based approaches to teacher evaluation and support.

In the present scenario assessment of learners, their testing, scoring giving feedback, processing the data obtained through assessment, and preparing grade cards are computerized. There are provisions for online tests, online submissions, and portfolios. ICT is the technology used to communicate, create, manage, and distribute information. It is considered a powerful tool various studies have found that an appropriate use of ICT can raise educational quality and connect learning to real-life situations (Sang et al.,2020).

Pertaining issues in technology use and implementation in the classroom from the teachers' perspective, Das, (2020) examined existing research and compared that to the new data resulting from this study. New findings within this research show that teachers want to use technology but feel that they need to be included in the development of teacher technology training. Teachers indicated that only they could provide a true perspective on issues within the classroom that can illustrate things such as the construction of time and curriculum.

Problem 6: Which of the teachers' profiles, teachers' ICT integration and use of ICT in teaching and learning significantly predicts the effect of teachers' classroom observation performance on the respondents?

Table 14 presents the results of a regression analysis aimed at predicting teachers' classroom observation performance based on both their profiles and ICT integration. The analysis utilizes multiple regression to assess the significance of various predictors.

The regression coefficients provide insights into the relationship between each predictor and classroom observation performance. Among the subject areas taught, only Mother Tongue-Based (MTB) and Edukasyon sa Pagpapakatao (ESP) show significant positive relationships with classroom observation performance, with coefficients of .333 and .312, respectively.

This suggests that teachers specializing in these subjects tend to demonstrate higher classroom performance compared to those teaching Music, Arts, Physical Education, and Health (MAPEH), which serves as the reference category.

Regarding years of teaching experience, only teachers with 1-4 years of experience show a significant positive relationship with classroom performance, with a coefficient of .195. This indicates that relatively early-career teachers may exhibit higher classroom performance compared to those with 21 or more years of experience, which serves as the reference category.

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Table 14. *Regression Analysis of Predicting Teachers' Classroom Observation Performance by Teachers' Profile and ICT Integration*

Predictors	Regression Coeff, B	Std. Error	t-value	p-value	Remarks
Subject Taught=English	.147	.117	1.254	.213	Not significant
Subject Taught=Filipino	.211	.120	1.751	.084	Not significant
Subject Taught=Mathematics	.132	.122	1.086	.281	Not significant
Subject Taught=Araling Panlipunan	.102	.119	.859	.393	Not significant
Subject Taught=Science	.231	.146	1.581	.118	Not significant
Subject Taught=EPP	.109	.133	.818	.415	Not significant
Subject Taught=TLE	.161	.136	1.183	.240	Not significant
Subject Taught=MTB	.333	.142	2.341*	.022	Significant
Subject Taught=ESP	.312	.137	2.280*	.025	Significant
Subject Taught=MAPEH (Ref)	--	--	--	--	--
Age=25-30	-.074	.074	-.994	.323	Not significant
Age=31-40	-.051	.072	-.718	.475	Not significant
Age=41-50 (Ref)	--	--	--	--	--
Sex=Female	.009	.094	.094	.925	Not significant
Years in Teaching=1-4	.195	.092	2.119*	.037	Significant
Years in Teaching=5-10	.154	.089	1.734	.087	Not significant
Years in Teaching=11-20	.136	.115	1.183	.240	Not significant
Years in Teaching=21+ (Ref)	--	--	--	--	--
Computer Literacy	.077	.135	.571	.570	Not significant
Administrative Support	-.033	.127	-.256	.798	Not significant
Use of ICT in teaching and learning	-.068	.088	-.771	.443	Not significant

Note: Analysis is based on Multiple Regression Analysis   *significant at .05 level   R2 = .149   Ref-Reference category

Regarding years of teaching experience, only teachers with 1-4 years of experience show a significant positive relationship with classroom performance, with a coefficient of .195. This indicates that relatively early-career teachers may exhibit higher classroom performance compared to those with 21 or more years of experience, which serves as the reference category.

However, other predictors such as age, sex, computer literacy, administrative support, and the use of ICT in teaching and learning do not show significant relationships with classroom observation performance based on the regression analysis.

Overall, the regression model explains 14.9% of the variance in classroom observation performance, suggesting that while certain factors such as subject area taught and years of teaching experience may influence classroom performance, there are likely additional unaccounted for variables contributing to teachers' effectiveness in the classroom.

These findings have implications for educational practice, suggesting the importance of considering teachers' subject areas taught and years of teaching experience when assessing classroom performance. Additionally, they underscore the complexity of teacher effectiveness, highlighting the need for ongoing research to better understand the multitude of factors contributing to effective teaching and learning outcomes.

Educational technology today includes the exploration of teacher knowledge for the integration of technology in many different areas. The integration of technology into the process of teaching and learning is thought to increase pupils and teachers' productivity and at the same time, it allows both teachers and pupils to find mounds of information they need for the lessons (Fu, 2019).

The use of appropriate instructional tools makes teachers better and effective. Learning what materials to use and of teaching to use them comes with experience. Classroom management is an integral part of teaching and the techniques of managing students can be acquired by the teacher to improve the academic performance of students. While supervision serves as an essential step in an on-going attempt to improve teaching and instructional procedures.

Bransford et al. (2020) cited that several studies had reviewed the literature on ICT and learning. The study had concluded that ICT had great potential to enhance teacher performance. Another study by Dawes (2021) viewed that new technologies had the potential to support education across the curriculum. This provided opportunities for effective communication between teachers and students in ways that had not been possible before.

Problem 7: What action plan can be designed to be formulated based on the results of the study?

Rationale

The rationale for the action plan is rooted in addressing key findings from the study that identified areas for improvement in ICT integration, administrative support, inclusive teaching practices, and classroom management skills. By implementing targeted strategies such as comprehensive ICT training, transparent communication channels, professional development on inclusive teaching methods, and support for effective classroom management, educational institutions aim to empower teachers with the necessary skills and resources to enhance their effectiveness in the classroom. This approach aligns with the overarching goal of promoting student learning outcomes and fostering a supportive and inclusive learning environment conducive to student success.

Conclusions

Based on the findings of the study, the following conclusions were drawn:

This study revealed a positive outlook on both teachers' ICT integration and classroom observation performance. Teachers exhibit strong proficiency in computer literacy and demonstrate high engagement in utilizing technology tools to enhance student learning experiences. However, there is a slight lag in administrative support for ICT integration, particularly in budget allocation and policy transparency. Despite this, teachers excel in various aspects of classroom performance, particularly in language proficiency, classroom management, and creating inclusive learning environments. These results underscore teachers' dedication to fostering conducive learning environments and highlight the importance of addressing administrative support gaps to further enhance pedagogical practices. Overall, the findings emphasize the significant role of teachers in driving student success through effective integration of technology and creation of inclusive learning environments.

Thus, the study concluded and observed noteworthy relationships between teachers' classroom performance and specific profiles, such as subjects taught and years of experience. Mother Tongue-Based (MTB) and Edukasyon sa Pagpapakatao (ESP) teachers demonstrate superior performance compared to their counterparts teaching Music, Arts, Physical Education, and Health (MAPEH). Moreover, educators with 1-4 years of experience exhibit notably higher performance than those with over 21 years. However, factors like age, gender, computer literacy, administrative support, and ICT usage in teaching do not significantly impact classroom performance. Overall, while these factors offer some insights, additional unexplored variables likely contribute to teachers' effectiveness in the classroom, indicating the need for a more comprehensive understanding of teacher performance determinants.

Based on the conclusions drawn from this study, several recommendations can be provided to various stakeholders within the educational setting.

For School Administrators, it is crucial to prioritize enhancing administrative support for ICT integration by allocating sufficient budget resources and ensuring transparent communication regarding ICT-related policies and decisions. Additionally, providing ongoing professional development opportunities for teachers focused on inclusive teaching practices and effective classroom management can further contribute to creating conducive learning environments.

ICT Coordinators should collaborate closely with teachers to provide tailored ICT training and support, addressing specific needs and areas for improvement identified in the study. This may involve offering workshops, resources, and guidance on utilizing technology tools effectively in teaching and learning activities.

Teachers should continue to embrace opportunities for professional development in ICT integration and inclusive teaching practices, while also advocating for increased administrative support in these areas. By actively engaging in ongoing learning and refining their pedagogical approaches, teachers can further enhance their effectiveness in the classroom.

Learners can benefit from the positive outcomes of improved ICT integration and inclusive teaching practices. School administrators and teachers should strive to create learning environments that foster student engagement and participation, leveraging technology tools to enhance learning experiences and accommodate diverse learning needs.

For future researchers, there is a need to delve deeper into the underlying factors influencing teacher effectiveness in the classroom, beyond the variables explored in this study. Exploring additional variables and adopting diverse research methodologies can contribute to a more comprehensive understanding of teacher performance determinants, guiding the development of targeted interventions to support effective teaching practices and student learning outcomes.

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