
Influence of Teachers' ICT Integration Practices on Teaching Performance in Selected Schools in the Division of Cagayan

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Abstract — This study determined the influence of teachers' Information and Communication Technology (ICT) integration practices on their teaching performance in selected schools of the Schools Division of Cagayan. Specifically, it assessed the level of ICT integration in terms of instructional planning, instructional delivery, assessment and evaluation, and classroom management, as well as the teaching performance of teachers based on their Individual Performance Commitment and Review Form (IPCRF) ratings. A descriptive–correlational research design was employed, with one hundred (100) teachers selected through simple random sampling. The results revealed that teachers' ICT integration practices were generally highly integrated (mean = 3.26), with higher utilization in assessment and evaluation and classroom management, while instructional planning and delivery were moderately integrated. In terms of teaching performance, the majority of teachers obtained outstanding ratings (mean = 4.78), indicating a high level of professional competence. Furthermore, the study found a moderately strong and significant relationship between ICT integration practices and teaching performance ($r = 0.653$, $p = 0.001$), suggesting that effective ICT integration contributes positively to teachers' instructional effectiveness. The findings imply that continuous enhancement of ICT skills, adequate technological resources, and institutional support are essential in sustaining high teaching performance. It is recommended that schools provide ongoing professional development and training programs to strengthen teachers' ICT integration practice.

Keywords: *ICT integration, teaching performance, instructional practices, IPCRF, descriptive-correlational design*

I. INTRODUCTION

The rapid advancement of Information and Communication Technology (ICT) has significantly transformed educational systems worldwide, redefining the roles of teachers and the nature of classroom instruction. In the 21st century, teachers are expected not only to deliver content but also to integrate digital tools effectively to enhance teaching and learning processes. ICT integration has become a vital component of quality education, enabling more interactive, learner-centered, and engaging classroom environments. The expansion of ICT has shifted traditional teaching practices toward more dynamic and technology-supported approaches, emphasizing the importance of teachers' technological knowledge and skills in improving instructional delivery.

Despite the recognized benefits of ICT in education, many teachers continue to encounter challenges in effectively integrating technology into their instructional practices. These challenges include insufficient training opportunities, limited access to technological resources, inadequate infrastructure, and varying levels of digital competence. Abel et al. (2022) emphasized that although teachers generally demonstrate positive attitudes toward ICT integration, its successful implementation depends largely on their technological competence, confidence, and the support provided within their school environment. These findings suggest that the mere availability of digital tools does not automatically translate into improved teaching performance; rather, the effectiveness of ICT integration is determined by how teachers utilize technology to enhance instruction and facilitate learning.

While existing studies have extensively examined teachers' ICT competencies, attitudes, readiness, and challenges in technology integration, limited attention has been given to the direct relationship between specific ICT integration practices and teachers' actual performance outcomes. Most previous investigations focused on determining the extent of ICT use or identifying barriers to technology adoption, rather than examining how ICT integration in instructional planning, instructional delivery, assessment and evaluation, and classroom management relates to teachers' teaching performance as measured through standardized performance indicators such as the Individual Performance Commitment and Review Form (IPCRF). Moreover, there is a scarcity of localized studies conducted in the Schools Division of

Cagayan that provide empirical evidence on this relationship. Consequently, a gap exists in understanding whether and to what extent teachers' ICT integration practices contribute to improved teaching performance within the local educational context. Addressing this gap is essential to generate evidence-based recommendations for strengthening ICT-related programs, professional development initiatives, and technology-driven instructional practices in schools.

In the Philippine context, the integration of ICT in education has been further emphasized due to the shift toward digital and flexible learning modalities, especially during and beyond the COVID-19 pandemic. However, disparities in access to technology, digital skills, and institutional support continue to affect teachers' ability to maximize ICT for instructional purposes. Espinosa (2023) revealed that while technology plays a crucial role in addressing educational challenges, issues such as limited infrastructure and digital readiness remain significant barriers in the Philippine education system. These challenges highlight the need to examine how teachers' ICT integration practices influence their overall teaching performance, particularly in public school settings.

Recent empirical studies have also demonstrated the positive impact of ICT integration on teaching effectiveness. Sabri et al. (2024) found that ICT integration enhances instructional delivery by increasing student engagement, promoting critical thinking, and making learning more interactive. Similarly, Msafiri et al. (2023) reported that ICT integration improves teaching and learning processes by enabling personalized instruction, better curriculum coverage, and innovative pedagogical practices. These studies indicate that effective ICT integration can lead to improved teaching performance; however, the extent of its influence may vary depending on teachers' practices and the context in which they operate.

Given these considerations, there remains a need to investigate the specific ways in which teachers' ICT integration practices affect their teaching performance, particularly in the Schools Division of Cagayan. Understanding this relationship is essential in identifying gaps, informing professional development programs, and enhancing policy implementation related to educational technology. Moreover, such a study can provide valuable insights into how teachers can be better supported in integrating ICT effectively to improve instructional quality.

Therefore, the general objective of this study was to determine the influence of teachers' ICT integration practices on their teaching performance in selected schools of the Schools Division of Cagayan.

Literature Review

The integration of Information and Communication Technology (ICT) in education has become a significant focus of contemporary educational research, particularly in improving teaching practices and overall instructional performance. ICT integration is widely recognized as a transformative approach that enhances the teaching-learning process by promoting interactive, student-centered, and innovative instructional strategies. According to Akram et al. (2022), ICT integration positively influences teaching practices by making lessons more engaging, interactive, and motivating for learners, while also enhancing teachers' instructional effectiveness through the use of digital tools and platforms. This highlights the growing importance of equipping teachers with the necessary technological competencies to effectively deliver instruction in modern classrooms.

Moreover, recent literature emphasizes that ICT integration contributes significantly to improving teaching performance by enabling teachers to design more effective lesson plans, deliver content efficiently, and monitor student progress systematically. Koenig et al. (2024) explained that ICT integration, particularly in lesson planning, is a critical component of teachers' professional competence, as it directly influences classroom performance and instructional quality. The study further suggested that teachers' knowledge, beliefs, and pedagogical decisions play a vital role in determining how effectively ICT is integrated into classroom practices. Thus, ICT integration is not only about the availability of technology but also about teachers' ability to utilize it meaningfully in their instruction.

In addition, several studies have demonstrated the positive effects of ICT integration on teaching effectiveness and student outcomes. Msafiri et al. (2023), in their systematic review, found that ICT integration improves teaching and learning processes by enhancing curriculum delivery, enabling personalized instruction, and promoting collaborative learning environments.

Similarly, Mubarok and Iriana (2025) revealed that the use of ICT in teaching significantly enhances classroom interaction, increases student engagement, and fosters critical thinking and creativity among learners. These findings suggest that ICT integration not only benefits students but also enhances teachers' ability to deliver high-quality instruction, thereby improving their overall teaching performance.

Despite these benefits, the literature also identifies several challenges that hinder effective ICT integration in education. Abel et al. (2022) pointed out that factors such as limited infrastructure, inadequate training, and lack of technical support can negatively affect teachers' ability to integrate ICT into their teaching practices. Furthermore, Chama (2023) emphasized that the digital divide, insufficient access to reliable internet, and variations in teachers' digital literacy skills remain major barriers to effective ICT implementation in schools. These challenges indicate that while ICT has strong potential to enhance teaching performance, its effectiveness largely depends on the availability of resources, institutional support, and teachers' competencies.

Additionally, teachers' ICT competence plays a crucial role in determining the success of ICT integration. Mijares (2022) found that teachers with higher levels of ICT competence are more effective in performing their instructional tasks, as they can confidently integrate technology into their teaching practices and adapt to various learning modalities. This underscores the need for continuous professional development programs that focus on enhancing teachers' ICT skills and pedagogical knowledge.

Overall, the reviewed literature consistently shows that ICT integration has a significant influence on teaching performance, offering numerous opportunities to enhance instructional delivery, improve student engagement, and promote innovative teaching practices. However, the successful implementation of ICT in education requires addressing existing challenges and strengthening teachers' competencies to maximize its potential benefits.

Research Questions

This study aimed to determine the influence of teachers' ICT integration practices on their teaching performance in selected schools of the Schools Division of Cagayan. Specifically, this study sought to answer the following questions:

1. What are the teachers' ICT integration practices in terms of:
 - a. instructional planning
 - b. instructional delivery
 - c. assessment and evaluation
 - d. classroom management
2. What is the teaching performance of teachers based on their Individual Performance Commitment and Review Form (IPCRF) ratings?
3. Is there a significant relationship between teachers' ICT integration practices and their teaching performance?

II. METHODOLOGY

Research Design

This study employed a descriptive–correlational research design to determine the influence of teachers' Information and Communication Technology (ICT) integration practices on their teaching performance in selected schools of the Schools Division of Cagayan. The descriptive component of the design was used to assess and describe the current level of teachers' ICT integration practices in terms of instructional planning, instructional delivery, assessment and evaluation, and classroom management, as well as their teaching performance based on their Individual Performance Commitment and Review Form (IPCRF) ratings. On the other hand, the correlational component was utilized to examine the relationship between teachers' ICT

integration practices and their teaching performance, without manipulating any variables. This design is appropriate for the study as it allows the researcher to systematically gather quantifiable data and determine whether a significant relationship exists between the independent variable (ICT integration practices) and the dependent variable (teaching performance), thereby providing a basis for conclusions and recommendations aimed at improving instructional practices.

Participants of the Study

The participants of this study were one hundred (100) teachers from selected public schools in the Allacapan South District, Division of Cagayan during the school year 2025-2026. The respondents were selected using simple random sampling to ensure that each teacher had an equal chance of being chosen to participate in the study. This sampling technique was employed to minimize bias and to obtain a representative sample of the population. The selected teachers are actively involved in classroom instruction and ICT integration, making them suitable sources of data for examining the influence of ICT integration practices on teaching performance.

Instrumentation

This study utilized a researcher-made questionnaire as the primary data-gathering instrument. The questionnaire was designed to collect relevant information on teachers' Information and Communication Technology (ICT) integration practices and their teaching performance. It consisted of two main parts. The first part focused on assessing the level of teachers' ICT integration practices in terms of instructional planning, instructional delivery, assessment and evaluation, and classroom management. The second part aimed to determine the level of teaching performance of teachers based on their Individual Performance Commitment and Review Form (IPCRF) ratings. Before its administration, the instrument was subjected to validation by experts in the field of education and research to ensure its clarity, relevance, and appropriateness. Necessary revisions were made based on their suggestions to improve the quality

of the instrument. This ensured that the questionnaire was suitable for gathering accurate and reliable data needed for the study.

Analysis of Data

The data collected in this study were analyzed using both descriptive and inferential statistical techniques. Descriptive statistics, particularly the mean, were used to determine the level of teachers' Information and Communication Technology (ICT) integration practices in terms of instructional planning, instructional delivery, assessment and evaluation, and classroom management. Furthermore, the teaching performance of the respondents was described based on their Individual Performance Commitment and Review Form (IPCRF) ratings. For the interpretation of the computed mean values, the following scale was used:

Range	ICT Integration Practices	Range	Teaching Performance
1.00 – 1.74	Not Integrated	Below 1.500	Poor
1.75 – 2.49	Slightly Integrated	2.499 – 1.500	Unsatisfactory
2.50 – 3.24	Moderately Integrated	3.499 – 2.500	Satisfactory
3.25 – 4.00	Highly Integrated	4.499 – 3.500	Very Satisfactory
		5.000 – 4.500	Outstanding

Moreover, the Pearson Product-Moment Correlation Coefficient (Pearson r) was employed as an inferential statistical tool to determine the presence, strength, and direction of the relationship between teachers' ICT integration practices and their teaching performance. This statistical method enabled the researcher to establish whether a significant relationship exists between the

independent variable (ICT integration practices) and the dependent variable (teaching performance)

III. RESULTS AND DISCUSSION

Teachers' ICT integration practices in terms of the following dimensions

Table 1 shows the findings reveal that teachers demonstrate a generally high level of ICT integration practices, as reflected in the overall mean of 3.26, interpreted as highly integrated. Among the four dimensions, assessment and evaluation (mean = 3.40) and classroom management (mean = 3.36) obtained higher mean scores, both interpreted as highly integrated, indicating that teachers are more adept at utilizing ICT tools in monitoring student performance, providing feedback, organizing classroom activities, and managing learning tasks. On the other hand, instructional planning (mean = 3.10) and instructional delivery (mean = 3.18) were rated as moderately integrated, suggesting that while teachers can incorporate ICT in preparing lessons and delivering instruction, there is still room for improvement in maximizing technology for more effective and innovative pedagogical practices. Overall, the results imply that teachers are already embracing ICT in their teaching, particularly in assessment and management aspects, but need further enhancement in planning and delivery to achieve a more balanced and fully integrated use of technology in the teaching-learning process.

The findings of the study are supported by literature, which emphasizes the growing integration of ICT in various aspects of teaching and learning. Msafiri et al. (2023) reported that ICT integration enhances teaching effectiveness by improving assessment practices, facilitating efficient monitoring of learner progress, and supporting classroom management through digital platforms and tools. This may explain why assessment and evaluation as well as classroom management obtained the highest mean scores in the present study. Similarly, Koenig et al. (2024) emphasized that while teachers increasingly utilize technology in instructional processes, the integration of ICT in lesson planning and instructional delivery often requires higher levels of pedagogical and technological competence. As such, teachers may find it easier to employ ICT for routine management and assessment tasks than for designing and implementing technology-

enhanced instructional strategies. The present findings therefore suggest that teachers have already developed confidence in using ICT for administrative and evaluative purposes, yet continuous professional development is still necessary to strengthen technology integration in instructional planning and delivery for a more comprehensive application of ICT in teaching.

Dimensions	Mean	Interpretation
Instructional Planning	3.10	Moderately Integrated
Instructional Delivery	3.18	Moderately Integrated
Assessment and Evaluation	3.40	Highly Integrated
Classroom Management	3.36	Highly Integrated
Overall Mean	3.26	Highly Integrated

Teaching performance of teachers based on their Individual Performance Commitment and Review Form (IPCRF) ratings

The findings reveal that teachers demonstrate a very high level of teaching performance based on their Individual Performance Commitment and Review Form (IPCRF) ratings, as indicated by the overall mean score of 4.78, which is interpreted as Outstanding. A large majority of the respondents, comprising 97 percent, fall within the Outstanding category, while only 3 percent are rated as Very Satisfactory. This indicates that most teachers consistently meet and even exceed the expected performance standards in their professional duties. The results suggest that teachers in the selected schools are highly competent in delivering instruction, managing classrooms, and fulfilling their responsibilities effectively. Furthermore, the predominance of outstanding ratings implies that teachers can adapt to the demands of modern teaching, including the integration of ICT in their instructional practices, which may have contributed to their high

level of performance. Overall, the findings reflect a strong teaching workforce capable of maintaining high standards of educational quality.

The findings are consistent with previous studies that highlighted the contribution of technology-related competencies to teachers' professional effectiveness and instructional performance. Mijares (2022) found that teachers who possess higher levels of ICT competence are more capable of performing instructional responsibilities efficiently, adapting to changing educational demands, and implementing innovative teaching strategies. Likewise, Akram et al. (2022) emphasized that the effective integration of technology enhances teachers' instructional effectiveness by improving lesson delivery, increasing access to educational resources, and promoting more engaging learning experiences. The outstanding teaching performance observed among the respondents may therefore be attributed to their ability to leverage technological tools to support instructional processes and professional responsibilities. These findings suggest that teachers' commitment to continuous learning and adaptation to technology-enhanced teaching environments contribute significantly to maintaining high levels of performance and educational quality.

Teaching Performance	Frequency	Percent
4.499 – 3.500 (Very Satisfactory)	3	3.00
5.000 – 4.500 (Outstanding)	97	97.00
Mean	4.78	

Relationship between teachers' ICT integration practices and their teaching performance

The findings reveal that there is a significant relationship between teachers' ICT integration practices and their teaching performance, as indicated by the computed correlation coefficient ($r = 0.653$) and probability value ($p = 0.001$), which is lower than the 0.05 level of significance. This result implies that teachers who demonstrate higher levels of ICT integration in instructional planning, delivery, assessment, and classroom management tend to exhibit better teaching

performance as reflected in their IPCRF ratings. The moderately strong positive relationship underscores the importance of ICT as a critical tool in enhancing instructional effectiveness, promoting efficient teaching practices, and improving overall classroom outcomes. Consequently, the integration of ICT should be continuously strengthened through adequate support, training, and access to digital resources to sustain and further improve teachers' performance.

This finding is supported by several studies discussed in the review of related literature. Akram et al. (2022) emphasized that ICT integration enhances teaching effectiveness by enabling more interactive and engaging instructional strategies, leading to improved teacher performance. Similarly, Msafiri et al. (2023) found that ICT use in education contributes to better instructional delivery, personalized learning, and improved assessment practices, all of which positively influence teaching outcomes. In addition, Mubarak and Iriana (2025) reported that teachers who effectively integrate ICT in their classrooms demonstrate higher levels of productivity and instructional competence. These studies affirm that ICT integration plays a vital role in improving teaching performance, which is consistent with the results obtained in the present study.

Variable	Coefficient (r)	Probability	Statistical Inference	Remarks
ICT Integration Practices and Their Teaching Performance	0.653	0.001	Significant	Reject Ho

IV. CONCLUSION

Based on the findings of the study, it can be concluded that teachers in the selected schools of the Schools Division of Cagayan demonstrate a high level of ICT integration practices and an outstanding level of teaching performance. Moreover, there exists a moderately strong and significant relationship between ICT integration practices and teaching performance, indicating

that effective use of ICT contributes positively to teachers' instructional effectiveness. This suggests that ICT integration plays a crucial role in enhancing teaching quality, particularly in planning, delivery, assessment, and classroom management. Therefore, strengthening teachers' ICT competencies through continuous professional development, adequate technological resources, and institutional support is essential in sustaining and further improving teaching performance in the evolving educational landscape.

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