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Teachers' Perception of ICT Integration In Public Elementary Schools In Santa Marcela District

Edina R. Mamaril

Student-Author, Apayao State College-Luna Campus

Corresponding Author Email: edina.mamaril@deped.gov.ph

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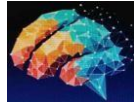
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ABSTRACT: This study examined the perceived level of Information and Communication Technology (ICT) integration among public elementary school teachers in Santa Marcela District, Division of Apayao, during the School Year 2025–2026. Specifically, the study focused on teachers' perceptions regarding the usefulness of ICT in enhancing teaching strategies, its relevance to curriculum and learning goals, ease of use and accessibility, and support from school administration and the Department of Education (DepEd). The study utilized a descriptive research design with twenty (20) purposively selected teacher respondents from four public elementary schools. Data were gathered through a validated survey questionnaire and analyzed using weighted mean and descriptive interpretation. Findings revealed that teachers perceived ICT integration as very high in terms of usefulness in enhancing teaching strategies ($M = 4.76$), relevance to curriculum and learning goals ($M = 4.65$), and support from school administration and DepEd ($M = 4.61$). Meanwhile, ease of use and accessibility obtained a high rating ($M = 4.01$). The results indicate that teachers strongly recognize the value of ICT in improving instructional delivery, supporting curriculum implementation, and enhancing learner engagement. However, challenges related to accessibility and technical support remain evident. The study recommends continuous ICT capability training, improvement of technological infrastructure, and strengthened institutional support to further enhance ICT integration in elementary education.

Keywords: ICT integration, teachers' perception, elementary education, instructional technology, teaching strategies



I. INTRODUCTION

The integration of Information and Communication Technology (ICT) into teaching and learning has become an important component of modern education. ICT includes technological tools such as computers, projectors, tablets, internet-based applications, and educational software that support instructional delivery and learner engagement. Educational institutions worldwide continue to integrate ICT into classroom instruction to improve the quality of education and develop learners' 21st-century skills.

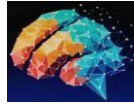
Globally, ICT integration has been recognized as an effective strategy for enhancing educational access, improving instructional practices, and supporting collaborative learning. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2016), ICT contributes significantly to inclusive and equitable quality education. Similarly, researchers emphasized that technology integration promotes learner-centered instruction and strengthens student motivation and participation.

In the Philippine educational system, the Department of Education (DepEd) continues to strengthen ICT integration through various educational policies and programs. DepEd Order No. 78, s. 2010 introduced the ICT for Education Strategic Plan, while DepEd Order No. 42, s. 2017 emphasized ICT integration under the Philippine Professional Standards for Teachers (PPST). During the COVID-19 pandemic, digital learning and ICT-based instruction became more essential through the implementation of the Learning Continuity Plan.

Despite these initiatives, the successful implementation of ICT in schools depends greatly on teachers' perceptions, readiness, and competencies. Teachers who perceive ICT as useful and relevant are more likely to integrate technology effectively in classroom instruction. Ertmer (2005) emphasized that teachers' beliefs and attitudes significantly influence technology adoption in education. Likewise, Tondeur et al. (2017) noted that teacher confidence and institutional support contribute to successful ICT integration.

In rural public schools, ICT integration remains a challenge due to limited technological resources, unstable internet connectivity, and insufficient training opportunities. These realities motivated the researcher to examine the perceived level of ICT integration among public elementary school teachers in Santa Marcela District.

This study aimed to determine the perceived level of ICT integration among public elementary school teachers in Santa Marcela District in terms of: usefulness in enhancing teaching strategies; relevance to curriculum and learning goals; ease of use and accessibility; and support from the school administration and DepEd.



II. METHODOLOGY

The study employed a descriptive research design to determine teachers' perceptions regarding ICT integration in teaching and learning. Descriptive research was appropriate because it allowed the researcher to describe the current status of ICT integration based on teachers' responses.

The study was conducted in selected public elementary schools in Santa Marcela District, Division of Apayao, during the School Year 2025–2026. The participating schools included Panay Elementary School, Nueva Elementary School, San Juan Elementary School, and Consuelo Elementary School.

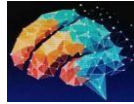
The respondents consisted of twenty (20) public elementary school teachers selected through purposive sampling. Participants were chosen based on their involvement in classroom instruction and their experience in using ICT tools for teaching and learning. A validated survey questionnaire was used to gather data regarding teachers' perceptions of ICT integration. The questionnaire consisted of indicators focusing on usefulness in enhancing teaching strategies, relevance to curriculum and learning goals, ease of use and accessibility, and support from school administration and DepEd.

The weighted mean was used to determine the perceived level of ICT integration among teachers. Descriptive interpretations were applied to classify the results.

III. RESULTS AND DISCUSSIONS

Summary of the teachers' perception in ICT integration

Factors	Mean	Descriptive Value
Usefulness in Enhancing Teaching Strategies	4.76	Very High
Relevance to Curriculum and Learning Goals	4.65	Very High
Ease of Use and Accessibility	4.01	High
Support from the School Administration and DepEd	4.61	Very High



1. Usefulness in Enhancing Teaching Strategies

The findings revealed that teachers perceived ICT integration as very high in terms of usefulness in enhancing teaching strategies, with an overall mean of 4.76. The highest-rated indicator was “ICT enables teachers to use multimedia tools that improve learners’ understanding” with a mean of 4.95. This suggests that teachers

strongly recognize the role of ICT in making lessons more interactive, engaging, and effective.

The findings support the study of Tondeur et al. (2017), which emphasized that ICT integration enhances instructional effectiveness and promotes active learning among students. Likewise, Schindler et al. (2017) reported that technology-based instruction improves learner engagement and participation.

2. Relevance to Curriculum and Learning Goals

In terms of relevance to curriculum and learning goals, the respondents obtained an overall mean of 4.65, interpreted as very high. Teachers believed that ICT helps align lessons with the Most Essential Learning Competencies (MELCs) and supports the development of higher-order thinking skills.

The result indicates that teachers view ICT as an important tool for achieving curriculum objectives and improving educational quality. This finding is supported by Voogt et al. (2015), who emphasized that ICT contributes to the development of critical thinking, problem-solving, and 21st-century learning competencies.

3. Ease of Use and Accessibility

The respondents obtained an overall mean of 4.01, interpreted as high, in terms of ease of use and accessibility. This indicates that teachers generally find ICT tools manageable and accessible for classroom instruction. However, indicators related to internet connectivity and technical troubleshooting received relatively lower ratings.

The findings suggest that while ICT integration is positively perceived, technical limitations and infrastructure concerns still affect its implementation. Hew and Brush (2007) identified insufficient technical support and unstable internet connectivity as common barriers to effective ICT integration in schools.

4. Support from School Administration and DepEd

Teachers perceived support from school administration and DepEd as very high, with an overall mean of 4.61. Teachers acknowledged that school leaders encourage ICT integration through monitoring, training opportunities, and policy implementation.



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The findings indicate that institutional support plays a significant role in motivating teachers to integrate ICT into classroom instruction. Ertmer and Ottenbreit-Leftwich (2010) emphasized that administrative support and professional development opportunities contribute positively to teachers' technology integration practices.

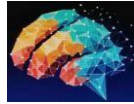
CONCLUSIONS

The study concluded that public elementary school teachers in Santa Marcela District have a highly positive perception of ICT integration in teaching and learning. Teachers strongly recognize ICT as useful in enhancing teaching strategies, relevant to curriculum and learning goals, and supported by school administration and the Department of Education. Although ICT tools are generally perceived as accessible and manageable, challenges related to internet connectivity and technical support remain evident. Overall, the findings indicate that ICT integration is widely accepted among teachers and is considered an important component of effective classroom instruction. Strengthening technological infrastructure, providing continuous ICT training, and improving technical support systems may further enhance teachers' confidence and capability in integrating ICT into the teaching-learning process.

RECOMMENDATIONS

Based on the findings and conclusions of the study, the following recommendations are offered:

1. Schools should continue strengthening ICT integration by providing additional technological resources and instructional devices.
2. School administrators and DepEd officials should conduct regular ICT capability training and professional development programs for teachers.
3. Schools should improve internet connectivity and technical support services to ensure effective ICT implementation.
4. Teachers should be encouraged to integrate ICT consistently in lesson planning and instructional delivery.
5. Future researchers may conduct similar studies involving larger populations and other educational settings.



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