Enhancing ICT Competency Among Public Elementary Teachers: A Case Study in Manolo Fortich II District, Bukidnon

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ABSTRACT

This study explores the Information and Communication Technology (ICT) domain competencies of public elementary school teachers in the Manolo Fortich II district, Bukidnon. The study aims to identify gaps and opportunities for ICT integration in teaching by assessing technological, pedagogical, social, and professional competencies. Data from 140 respondents across 12 schools were collected and analyzed using descriptive statistics. Findings highlight an intermediate-level proficiency among teachers, revealing significant challenges in using ICT as an effective teaching tool. Recommendations include targeted training, improved ICT infrastructure, and ongoing professional development.

INTRODUCTION

ICT has transformed various facets of human life, including education. As modern classrooms increasingly rely on digital tools, teachers are expected to adopt and integrate these technologies to enhance learning outcomes. The Philippines' Department of Education (DepEd) has launched several programs, such as the DepEd Computerization Program (DCP), to address the technological needs of public schools. Despite these efforts, many educators struggle with ICT usage due to limited training and resources.

The Manolo Fortich II district, a unique educational landscape comprising 12 schools, faces distinct challenges in equipping its teachers with the necessary ICT skills. This study seeks to evaluate their competencies across four domains: technological operations, social and ethical considerations, pedagogical integration, and professional development. By addressing these gaps, the study contributes to the broader goal of enhancing the quality of education through effective ICT integration, specifically in the context of the Manolo Fortich II district.

METHODOLOGY

The study used a descriptive survey approach to measure teachers' ICT abilities. Data was gathered utilizing a standardized questionnaire based on the National ICT Competency Standards (NICS). One hundred forty instructors from 12 schools were chosen as respondents using purposive sampling. SPSS was used to conduct statistical analysis and detect connections between demographic characteristics (e.g., age, gender, educational level) and ICT abilities.

While the purposive sampling strategy allowed the study to focus on particular traits essential to the research aims, it has a significant drawback in generalizability. The findings are limited to the Manolo Fortich II district and may need to accurately reflect more extensive settings or other places. This constraint emphasizes the need for care when extending results to larger groups. With this, future studies should use randomized sample procedures. This technique would broaden the scope and application of findings, providing more complete insights into ICT capabilities across various educational contexts. Future research can help us better understand the elements that influence ICT integration in teaching practices.

Significance of the Study

This research underscores the crucial role of stakeholders in addressing the pressing need to bridge the ICT competency gaps among public elementary teachers. By implementing the recommendations, stakeholders can actively empower educators to leverage technology effectively, enriching the teaching-learning process and preparing students for the demands of a digital society.

FINDINGS AND DISCUSSION

The following are the salient findings of the study.

1. Demographic Profile and ICT Exposure

The majority of respondents were female (85%) and aged between 30 and 40 years. While most held bachelor's degrees, only a small percentage pursued postgraduate education. ICT exposure varied significantly, with many teachers owning fewer than five ICT devices. This limited access impacts their ability to utilize technology effectively in teaching.

2. ICT Competency Domains

- **Technological Operations and Concepts**: Teachers demonstrated basic proficiency in using tools like word processors and slideshow presentations. However, advanced skills such as troubleshooting and utilizing specialized software needed to be improved.
- **Social and Ethical Competencies**: With a mean score of 81, teachers showed limited understanding of promoting digital citizenship and addressing ethical issues in technology use.
- **Pedagogical Integration**: The mean score of 2.22 revealed critical gaps in integrating ICT into lesson planning, classroom activities, and assessments. Teachers struggled with using tools like spreadsheets to analyze student
- **Professional Development**: Scoring a mean of 2.07, respondents rarely participated in online learning platforms or collaborative digital forums, indicating a lack of engagement in professional growth opportunities.

3. ICT Use in Classrooms

ICT usage was predominantly limited to administrative tasks. Teachers underutilized tools like PowerPoint, multimedia resources, and online platforms for interactive learning. The lack of confidence and skills hindered their ability to employ ICT in transformative teaching strategies.

4. Training and Development

Over 90% of respondents reported attending fewer than two ICT-related training sessions in the last five years. This underscores the need for consistent and relevant training programs to enhance ICT competencies.

5. Correlations and Influencing Factors

The study identified significant correlations between ICT competencies and age, educational attainment, and ICT exposure. Gender, however, was not a determinant of ICT proficiency. Teachers with extended service periods and greater exposure to ICT tools tended to perform better in competency assessments.

6. Limited access to modern technology and digital resources greatly hinders instructors' ability to effectively integrate ICT into their classes since old or inadequate equipment can inhibit learning and creativity.

7. Insufficient institutional support is another hurdle since schools may need more funds, infrastructure, or leadership to prioritize ICT training and implementation.

8. Socioeconomic barriers exacerbate the situation by limiting educators' capacity to engage in professional development programs owing to financial constraints or insufficient community support.

9. Addressing these systemic issues is critical because it creates the framework for equipping teachers with the skills and resources required to adapt to the quickly changing digital education world.

CONCLUSION

Teachers in the Manolo Fortich II district exhibit intermediate-level ICT competencies, with significant gaps in integrating technology into pedagogical and professional practices. However, by addressing these challenges through a multifaceted approach that includes training, infrastructure improvements, and policy support, educators can transform their teaching methods. With enhanced ICT skills, they can create a dynamic and engaging learning environment that prepares students for the demands of a digital society.

RECOMMENDATIONS

Based on the findings and conclusions, the following are recommended:

Comprehensive and Targeted Training Programs

Conduct district-wide in-service training to address specific ICT competency deficiencies. These programs should include hands-on workshops on creating digital lesson plans, multimedia tools, troubleshooting, and device maintenance to help educators build practical skills and confidence.

Modernizing the ICT infrastructure

Provide classrooms with reliable internet access, interactive whiteboards, and current software. Set up a regular maintenance schedule and budget for upgrading ICT equipment to ensure its long-term viability and successful use in instructional activities.

Continuous Professional Development

Create online courses, certification programs, and collaboration platforms to inspire educators to continue studying. Include regular monitoring and feedback techniques for measuring progress and adjusting training sessions.

Collaboration Training Programs Led by Peers

Give experienced teachers and ICT coordinators the resources to facilitate peer-led training and re-echo sessions. These programs should encourage cooperative learning, allowing instructors to share best practices and support one another in resolving ICT- related issues.

Support and Alignment with Strategic Policies

Promote legislation that prioritizes ICT competency development in educational strategic plans and budgets. Ensure that these policies codify training and resource provision as critical educational advancement components and that district-level activities align with national ICT goals.

Deep qualitative and contextual understanding

To acquire a better understanding of teachers' issues incorporating ICT, future study should include focus groups and interviews. These findings enhance the overall ICT strategy and guide the development of more effective training sessions.

Frameworks for Sustained Implementation and Monitoring

Provide robust methods for monitoring the impact and implementation of ICT initiatives. To ensure continued support and long-term sustainability of ICT integration in education, it is necessary to build feedback loops, perform frequent assessments, and form public- private partnerships.

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