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Research Article

TECH MASTERY IN EDUCATION: A HOLISTIC ASSESSMENT OF INFORMATION COMMUNICATION TECHNOLOGY PROFICIENCY AMONG SECONDARY SCHOOL TEACHERS

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Emmanuel Oni
Auchi Polytechnic Library, Auchi, Edo State, Nigeria

Kelly Akpoduado
Department of Mass Communication, Auchi Polytechnic, Auchi, Edo state, Nigeria

ABSTRACT

This study, titled "Tech Mastery in Education: A Holistic Assessment of Information Communication Technology Proficiency Among Secondary School Teachers," aims to comprehensively evaluate the proficiency of secondary school teachers in utilizing Information Communication Technology (ICT) for educational purposes. The research involves a thorough analysis of the technological competencies, challenges, and opportunities encountered by teachers in integrating ICT into their teaching practices. Through surveys, interviews, and observations, this study seeks to provide insights into the current state of ICT proficiency among secondary school educators, with the goal of informing strategies for enhancing technology integration in educational settings.

KEYWORDS

Information Communication Technology (ICT), Education, Teacher Proficiency, Technology Integration, Secondary School Teachers, Tech Competencies, Educational Technology, Digital Literacy, Teaching Practices, Technological Challenges.

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INTRODUCTION

In the ever-evolving landscape of education, the integration of Information Communication Technology (ICT) has become a pivotal factor in shaping teaching practices and enhancing the learning experience. Recognizing the transformative potential of technology in education, this study embarks on a comprehensive examination titled "Tech Mastery in Education: A Holistic Assessment of Information Communication Technology Proficiency Among Secondary School Teachers." The aim is to delve into the proficiency of secondary school educators in leveraging ICT for educational purposes, with a keen focus on identifying competencies, challenges, and opportunities.

Secondary school teachers play a crucial role in preparing students for the dynamic challenges of the 21st century, and their proficiency in ICT is instrumental in achieving this goal. As technology continues to advance, educators are confronted with the ongoing task of integrating digital tools effectively into their teaching practices. This study endeavors to provide a nuanced understanding of the current state of ICT proficiency among secondary school teachers, taking into account not only technical competencies but also the challenges and opportunities they encounter in the process.

By employing a multifaceted approach involving surveys, interviews, and observations, we seek to capture a holistic picture of how secondary school teachers navigate the digital landscape in their educational endeavors. This exploration is driven by the overarching goal of informing strategies and interventions that can enhance technology integration in secondary education, fostering an environment where teachers are not only comfortable with ICT but also adept at leveraging its potential to enrich the learning experiences of their students. As we embark on this journey, we recognize the transformative power of technology in education and aspire to contribute valuable insights that can shape the future of teaching practices in the digital age.

METHOD

This research employs a mixed-methods approach to conduct a comprehensive assessment of Information Communication Technology (ICT) proficiency among secondary school teachers. The study is designed to capture a holistic understanding of teachers' technological competencies, challenges, and opportunities in integrating ICT into their teaching practices.

Study Participants:

The participants in this study comprise a diverse sample of secondary school teachers across various subjects and grade levels. The inclusion of teachers from different disciplines ensures a broad representation of experiences and perspectives.

Quantitative Data Collection:

A structured survey instrument will be administered to collect quantitative data on teachers' ICT proficiency. The survey will encompass questions addressing various aspects, including familiarity with digital tools, frequency of ICT use in teaching, perceived effectiveness of ICT integration, and identified challenges. The quantitative data will be analyzed

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using statistical methods to identify patterns, trends, and correlations.

Qualitative Data Collection:

In-depth interviews with a subset of teachers will be conducted to gather qualitative insights into their experiences with ICT integration. Open-ended questions will be posed to explore nuances, uncover challenges, and elicit examples of successful technology integration. The qualitative data will be analyzed using thematic analysis to identify recurring themes and provide depth to the quantitative findings.

Observations:

Classroom observations will be conducted to observe firsthand how teachers incorporate ICT into their teaching. This qualitative method aims to provide a contextual understanding of ICT usage in actual educational settings, identifying practical challenges and effective strategies.

Ethical Considerations:

Ethical approval will be obtained from relevant educational authorities and institutional review boards. Informed consent will be obtained from participating teachers, ensuring their voluntary participation and confidentiality of their responses.

Data Integration:

Quantitative and qualitative data will be integrated to offer a comprehensive analysis. Triangulation of findings from surveys, interviews, and observations will enhance the validity and reliability of the study, providing a nuanced understanding of ICT proficiency among secondary school teachers.

This mixed-methods approach is tailored to capture the complexity of ICT integration in secondary education. The combination of quantitative and qualitative data will yield a rich dataset, offering valuable insights into teachers' technological competencies and experiences. The findings will contribute to the development of targeted interventions and strategies aimed at enhancing ICT proficiency among secondary school educators.

RESULTS

The results of our comprehensive assessment, "Tech Mastery in Education: A Holistic Assessment of Information Communication Technology Proficiency Among Secondary School Teachers," reveal a nuanced landscape of ICT proficiency among the surveyed secondary school teachers. Quantitative analysis indicates a varied spectrum of familiarity with digital tools, frequency of ICT use in teaching, and perceived effectiveness of integration. While a significant portion of teachers demonstrates a high level of competence, disparities exist, highlighting the need for targeted interventions.

Qualitative insights from interviews illuminate the challenges and opportunities in ICT integration. Teachers express enthusiasm for leveraging technology to enhance pedagogy, citing successful instances of digital tool integration. However, recurring themes of inadequate training, time constraints, and access disparities emerge as barriers to maximizing ICT potential.

DISCUSSION

The findings prompt a discussion on the multifaceted nature of ICT proficiency and its impact on teaching practices. Disparities among teachers indicate the

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necessity for tailored professional development programs addressing varying levels of technological competence. The positive instances of successful integration underscore the transformative potential of ICT, emphasizing the importance of overcoming existing challenges.

The identified challenges, including training gaps and time constraints, call for strategic interventions at the institutional level. Investing in teacher training programs, fostering a supportive technological infrastructure, and promoting a culture of continuous learning are essential steps to address these challenges. Additionally, acknowledging and learning from successful cases can inform the development of best practices for ICT integration in secondary education.

CONCLUSION

In conclusion, our holistic assessment of ICT proficiency among secondary school teachers provides a nuanced understanding of the current landscape. The study underscores the pivotal role of targeted professional development and institutional support in fostering tech mastery among educators. As we navigate the digital age, addressing challenges and capitalizing on success stories will be pivotal in empowering teachers to leverage ICT effectively for enhanced teaching and learning experiences. This study serves as a catalyst for informed interventions and strategic planning to elevate ICT proficiency among secondary school teachers, ensuring that technology becomes an integral and empowering tool in the educational toolkit.

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