INTERNATIONAL JOURNAL OF EDUCATION TECHNOLOGY (ISSN: 2693-3497)
Volume 03, Issue 01, 2023
Published Date: - 04-01-2023 Page No: 1-8

EVALUATING DIGITAL PROFICIENCY: AN IN-DEPTH ANALYSIS OF ICT SKILLS AMONG SECONDARY SCHOOL TEACHERS

Agbani Abimbola

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

ABSTRACT:

In an increasingly digital world, the proficiency of secondary school teachers in Information Communication Technology (ICT) is of paramount importance. This study presents a comprehensive assessment of ICT skills among secondary school educators. Through a mixed-method approach that combines surveys, practical assessments, and interviews, this research uncovers the strengths, weaknesses, and challenges in teachers' ICT proficiency. The findings contribute valuable insights to inform educational policies and professional development programs aimed at enhancing ICT competency among secondary school teachers.

KEYWORDS:

ICT Proficiency; Information Communication Technology; Secondary School Teachers; Digital Literacy; Technology Integration; Educational Technology; Teacher Competence; ICT Skills Assessment

INTRODUCTION:

The Information Age has fundamentally transformed the way we live, work, and communicate. As technology continues to permeate every facet of our society, the education sector is no exception. In an era marked by digital innovation and information accessibility, Information Communication Technology (ICT) proficiency among educators is more critical than ever before. Secondary school teachers, as the conduits of knowledge and skills, play a pivotal role in equipping the next generation with the digital competencies necessary for success in a rapidly evolving world.

"Evaluating Digital Proficiency: An In-Depth Analysis of ICT Skills Among Secondary School Teachers" embarks on a journey to assess the digital literacy and technological aptitude of educators in the secondary education sector. This research recognizes that the effective integration of ICT into teaching practices is contingent upon the proficiency and confidence of teachers in using these tools. Therefore, understanding the current state of ICT skills among secondary school teachers is crucial to inform policies and strategies that aim to bridge the digital divide in education.

The study employs a mixed-method approach that combines surveys, practical assessments, and interviews to provide a comprehensive analysis of the ICT skills landscape among secondary school teachers. By examining both quantitative data, which reveals the extent of teachers' ICT proficiency, and qualitative insights, which shed light on their experiences and challenges, this research strives to identify areas of strength, weaknesses, and opportunities for growth.

As we navigate the complex terrain of modern education, this study contributes to the ongoing discourse on the role of technology in learning and teaching. It is imperative that educators are equipped not only with pedagogical knowledge but also with the digital competencies to harness the vast potential of ICT. The outcomes of this research aim to guide the development of tailored professional development programs, inform curriculum design, and influence policy decisions that enhance the digital competence of

secondary school teachers. Ultimately, it is the collective proficiency of educators that will pave the way for students to thrive in a digital world and shape the future of society.

METHOD:

To comprehensively evaluate the ICT proficiency among secondary school teachers, this study employs a mixed-method research approach. The integration of quantitative and qualitative methods allows for a holistic understanding of the current state of ICT skills and the factors that influence them.

Data Collection:

Surveys: A structured survey was designed and administered to a representative sample of secondary school teachers from various regions. The survey comprised questions related to teachers' self-assessed ICT skills, their frequency of technology use in teaching, and their perceptions of the importance of technology in education. The survey data provided a quantitative overview of teachers' ICT proficiency and their attitudes toward technology in the classroom.

Practical Assessments: In addition to self-reported data, practical assessments were conducted to gauge teachers' actual ICT skills. These assessments involved tasks such as creating and delivering a digital presentation, using educational software, and troubleshooting common technological issues. This hands-on approach allowed for the measurement of teachers' practical competence.

Qualitative Interviews: Semi-structured interviews were conducted with a subset of teachers to gather in-depth insights into their experiences, challenges, and best practices related to using ICT in teaching. These

interviews offered a qualitative dimension to the research, capturing the nuances of teachers' experiences and perceptions.

Data Analysis:

Quantitative Analysis: Survey data were analyzed using statistical software to identify patterns, trends, and correlations. Descriptive statistics, frequency distributions, and inferential statistics were employed to quantify teachers' self-assessed proficiency levels, technology usage, and attitudes.

Practical Assessment Evaluation: The practical assessment results were quantitatively analyzed to measure the actual ICT skills of teachers. This analysis provided concrete data on their abilities to effectively use technology in teaching.

Qualitative Analysis: Transcriptions of the interviews were analyzed thematically to identify recurring themes and provide context to the quantitative findings. Qualitative data analysis software was used to code and categorize responses.

Integration of Data: The findings from the surveys, practical assessments, and interviews were integrated to present a comprehensive analysis of the ICT skills landscape among secondary school teachers. This triangulation of data allowed for a well-rounded interpretation of the research questions.

Ethical Considerations: The study followed ethical guidelines, ensuring informed consent from participants, anonymity, and data security.

By employing this mixed-method approach, this research seeks to provide a detailed and nuanced assessment of ICT proficiency among secondary school teachers, facilitating a deeper understanding of the challenges and opportunities in equipping educators with the digital skills necessary for effective teaching in the 21st century.

RESULTS:

The evaluation of ICT proficiency among secondary school teachers yielded a rich dataset that provides insights into the current state of digital competence in this educational context. The results are summarized as follows:

Self-Assessed Proficiency: Survey data revealed that the majority of secondary school teachers reported a moderate level of self-assessed ICT proficiency. While a significant portion felt confident in basic tasks such as using email and word processing, a smaller proportion expressed confidence in more advanced skills like creating multimedia presentations or coding.

Practical Assessments: The practical assessments, which measured teachers' actual ICT skills, showed a somewhat lower level of proficiency compared to self-assessments. While many teachers demonstrated competence in basic tasks, challenges arose when tasks required more advanced skills, such as incorporating interactive elements into presentations or using data analysis software.

Attitudes Towards ICT: Teachers generally acknowledged the importance of technology in education, with a majority expressing positive attitudes toward integrating ICT into their teaching. However, some teachers also identified barriers such as lack of time for training, inadequate resources, and concerns about technology-related distractions.

Discussion:

The discussion section delves into the nuances and implications of the results, considering factors that contribute to the observed patterns and their significance:

Discrepancy between Self-Assessment and Practical Skills: The results reveal a gap between teachers' self-assessed ICT proficiency and their actual skills, suggesting that some educators may overestimate their digital competence. This raises questions about the accuracy of self-assessments and the need for targeted professional development to bridge this gap.

Challenges and Opportunities: The study highlights several challenges faced by secondary school teachers in enhancing their ICT proficiency. These include limited access to training and resources, as well as concerns about technology misuse in the classroom. Recognizing these challenges opens opportunities to design effective professional development programs and address infrastructure limitations.

Attitudes and Willingness to Adapt: The positive attitudes expressed by teachers toward ICT integration underscore their willingness to adapt to digital innovations in education. These attitudes, if harnessed effectively, can be a catalyst for change and the integration of technology in teaching practices.

CONCLUSION:

In conclusion, this research provides a comprehensive evaluation of ICT proficiency among secondary school teachers. The findings suggest that while many educators in this context acknowledge the

importance of technology in education and have some level of digital competence, there are notable discrepancies between self-assessments and practical skills. Bridging this gap is essential for ensuring that technology is harnessed effectively to enhance teaching and learning.

To address these findings, several recommendations emerge:

Targeted Professional Development: Design and implement professional development programs tailored to the specific needs of teachers, offering hands-on training and support to enhance their ICT skills.

Resource Allocation: Allocate resources to improve infrastructure, including access to hardware, software, and reliable internet connections in schools.

Monitoring and Evaluation: Establish mechanisms for ongoing monitoring and evaluation of teachers' digital proficiency to track progress and adapt professional development initiatives accordingly.

Collaboration and Sharing Best Practices: Encourage collaboration among teachers to share best practices and innovative approaches for integrating ICT into the curriculum.

This study underscores the importance of equipping secondary school teachers with the digital skills necessary to meet the demands of modern education. By addressing the challenges and building on the positive attitudes of educators, educational institutions can better prepare students for the digital future.

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