



Journal Website:  
<https://theusajournals.com/index.php/ijp>

Copyright: Original content from this work may be used under the terms of the creative commons attributes 4.0 licence.

## ASSESSING INFORMATION COMMUNICATION TECHNOLOGY PROFICIENCY AMONG SECONDARY SCHOOL TEACHERS

Submission Date: February 21, 2024, Accepted Date: February 26, 2024,

Published Date: March 02, 2024

Crossref doi: <https://doi.org/10.37547/ijp/Volume04Issue03-02>

Emmanuel Ekhaguebo

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

### ABSTRACT

Examines the level of competency and proficiency in Information Communication Technology (ICT) among educators in secondary schools. This study investigates various dimensions of ICT proficiency, including technological skills, pedagogical integration, and attitudes towards technology. Through surveys, interviews, and observation, the research assesses teachers' ability to effectively use ICT tools in their teaching practices and explores the challenges they encounter in integrating technology into classroom instruction. The findings offer insights into strategies for enhancing ICT proficiency among secondary school teachers and improving the quality of technology-enhanced education.

### KEYWORDS

Information Communication Technology (ICT), Proficiency, Secondary School Teachers, Technological Skills, Pedagogical Integration, Attitudes, Teaching Practices, Classroom Instruction.

### INTRODUCTION

In today's digital age, Information Communication Technology (ICT) plays a pivotal role in transforming

education, offering new opportunities for teaching and learning in secondary schools. As technology continues

to evolve rapidly, it is essential for educators to possess proficient skills in ICT to effectively integrate digital tools into classroom instruction and prepare students for the demands of the 21st-century workforce.

"Assessing Information Communication Technology Proficiency Among Secondary School Teachers" endeavors to explore the level of ICT proficiency among educators in secondary schools and to identify areas for improvement in this critical domain of education.

ICT proficiency among teachers encompasses a broad spectrum of competencies, ranging from basic technological skills to advanced pedagogical integration and innovative instructional practices. Proficient use of ICT enables teachers to create engaging learning experiences, differentiate instruction to meet diverse student needs, and foster critical thinking, creativity, and collaboration among students.

Furthermore, ICT proficiency among teachers is closely linked to attitudes towards technology and perceptions of its effectiveness in enhancing teaching and learning outcomes. Positive attitudes towards ICT can foster a culture of innovation and experimentation, encouraging teachers to explore new instructional strategies and leverage digital resources to enrich the educational experience for students.

However, despite the potential benefits of ICT integration, many secondary school teachers face challenges in developing and maintaining proficiency in this area. Limited access to technology infrastructure, inadequate professional development opportunities,

and resistance to change are among the barriers that hinder effective ICT integration in education.

Against this backdrop, "Assessing Information Communication Technology Proficiency Among Secondary School Teachers" seeks to examine the current state of ICT proficiency among educators, identify factors influencing ICT adoption and integration, and explore strategies for enhancing teachers' capacity to leverage technology effectively in their teaching practices.

By understanding the strengths and weaknesses in ICT proficiency among secondary school teachers, educational stakeholders can develop targeted interventions, professional development programs, and policy initiatives to support teachers in acquiring the skills and knowledge needed to harness the full potential of ICT in education.

In conclusion, this study aims to contribute to the ongoing dialogue on ICT integration in secondary education, with the ultimate goal of empowering teachers to embrace technology as a catalyst for positive educational change and student success in the digital age.

## METHOD

The process of assessing Information Communication Technology (ICT) proficiency among secondary school teachers involved several systematic steps aimed at gathering comprehensive data and insights into teachers' competency levels and integration practices.

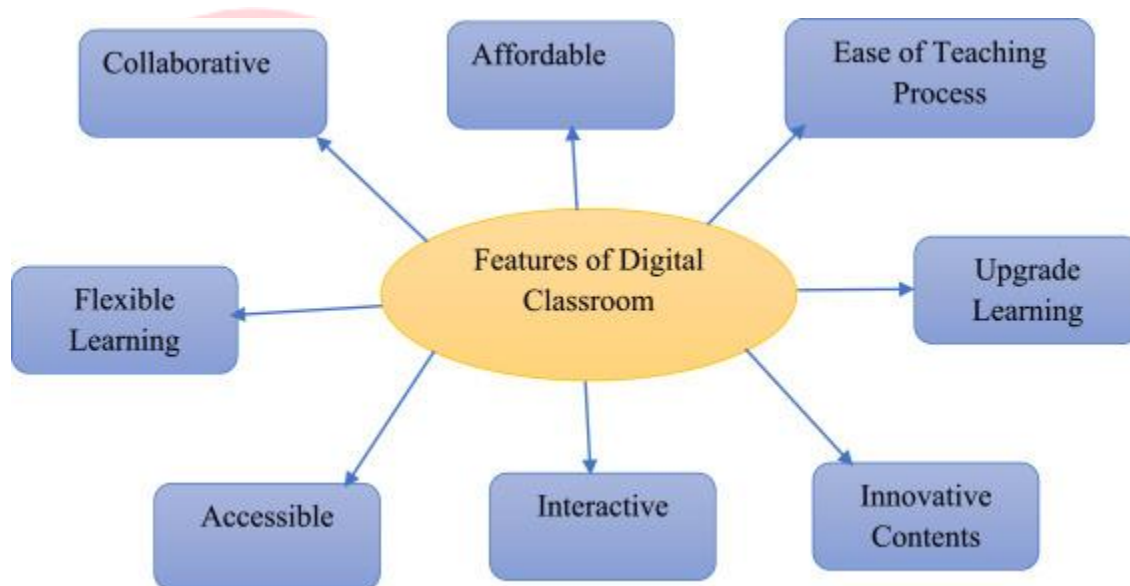
Initially, a survey instrument was meticulously designed to capture teachers' self-reported proficiency in various ICT skills and their attitudes towards technology in education. The survey

questions were crafted to cover a broad spectrum of ICT competencies, including basic computer literacy, software applications, internet research, multimedia creation, and online collaboration tools. This survey was distributed to a representative sample of secondary school teachers across different subject areas and grade levels.

In addition to the survey, structured interviews were conducted with a subset of teachers to delve deeper into their experiences, challenges, and strategies related to ICT integration in classroom instruction.

These interviews provided qualitative data and personal insights into teachers' perceptions, beliefs, and instructional practices concerning ICT.

Furthermore, classroom observations were carried out to observe firsthand how teachers integrate ICT into their teaching practices and interact with students using digital tools. The observations focused on identifying effective ICT integration strategies, levels of student engagement, and the impact of technology-enhanced instruction on learning outcomes.



Quantitative data from the survey were analyzed using statistical methods to determine the distribution of responses and identify trends in teachers' ICT proficiency levels and attitudes. Qualitative data from interviews and observations were analyzed thematically to uncover recurring themes, patterns,

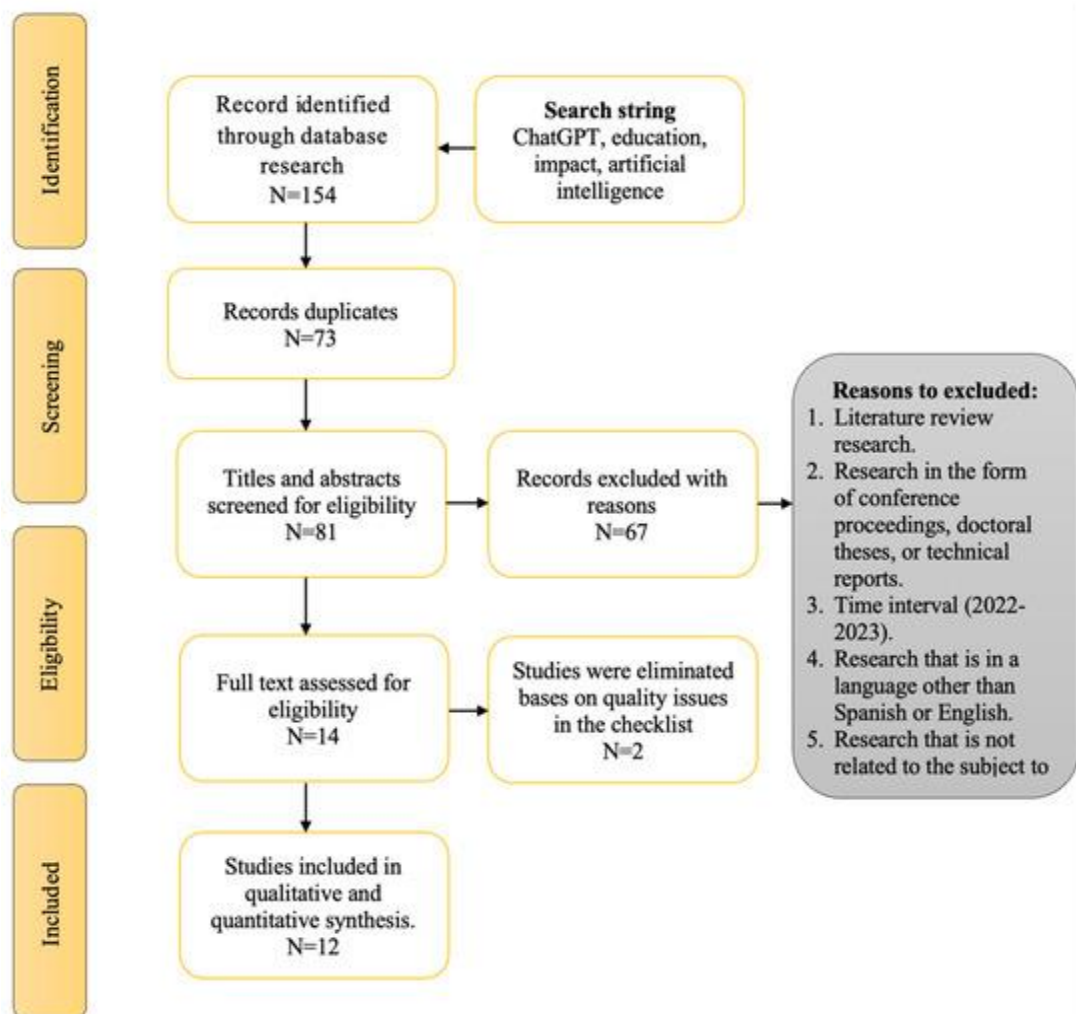
and insights related to ICT integration practices and challenges.

Throughout the assessment process, ethical considerations were carefully addressed to ensure informed consent, confidentiality, and respect for participants' privacy rights. Measures were taken to safeguard the anonymity and confidentiality of

participants, adhering to ethical guidelines for research involving human subjects.

The triangulation of data from multiple sources—surveys, interviews, and observations—enabled a comprehensive and nuanced understanding of teachers' ICT proficiency and integration practices. By

combining quantitative and qualitative methods, the assessment provided valuable insights and recommendations for supporting teachers in developing the skills and knowledge needed to effectively integrate ICT into their teaching practices and promote positive learning outcomes for students in secondary education.



The assessment of Information Communication Technology (ICT) proficiency among secondary school

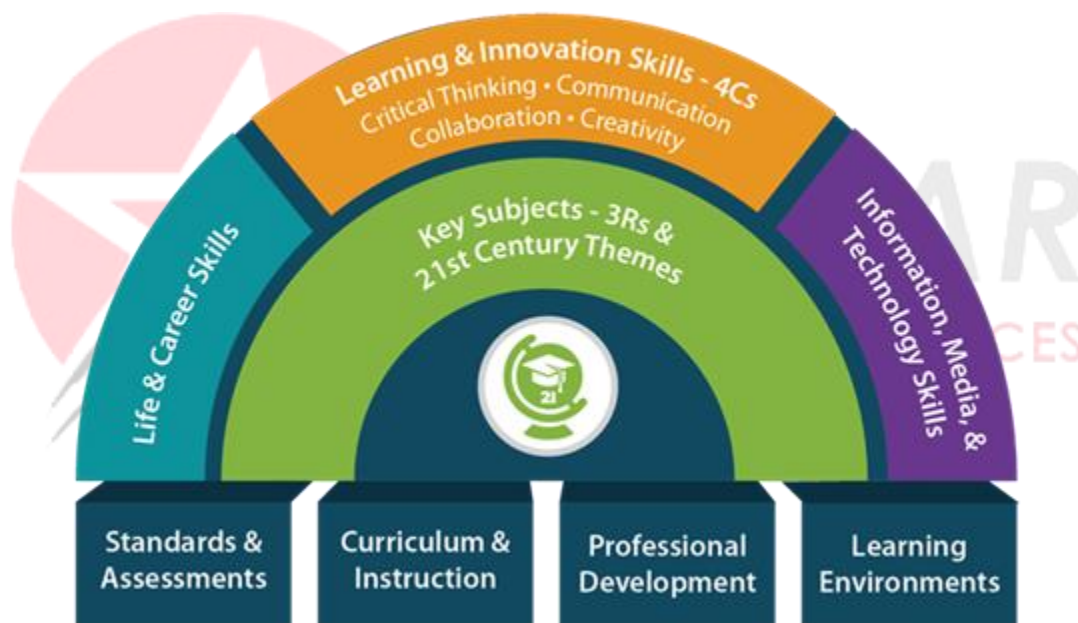


teachers employed a multifaceted approach to gather comprehensive data and insights into teachers' competency levels and integration practices.

Initially, a survey instrument was designed to assess teachers' self-reported proficiency in various ICT skills, including basic computer literacy, software applications, internet research, multimedia creation, and online collaboration tools. The survey also included questions to gauge teachers' attitudes towards ICT and their perceptions of its relevance and

effectiveness in enhancing teaching and learning outcomes.

In addition to the survey, structured interviews were conducted with a sample of secondary school teachers to delve deeper into their experiences, challenges, and strategies related to ICT integration in classroom instruction. The interviews provided qualitative data and rich narratives that complemented the quantitative findings from the survey, offering insights into teachers' perceptions, beliefs, and instructional practices related to ICT.



Furthermore, classroom observations were conducted to observe firsthand how teachers integrate ICT into their teaching practices and interact with students using digital tools. The observations focused on identifying effective ICT integration strategies, student

engagement levels, and the impact of technology-enhanced instruction on learning outcomes.

Quantitative data from the survey were analyzed using descriptive statistics to determine the distribution of responses and identify trends in teachers' ICT

proficiency levels and attitudes. Qualitative data from interviews and observations were analyzed thematically to identify recurring themes, patterns, and insights related to ICT integration practices and challenges.

Ethical considerations were carefully addressed throughout the research process, ensuring informed consent, confidentiality, and respect for participants' privacy rights. Measures were taken to safeguard the anonymity and confidentiality of participants, and ethical guidelines for research involving human subjects were strictly adhered to.

The triangulation of data from multiple sources—surveys, interviews, and observations—enabled a comprehensive and nuanced understanding of teachers' ICT proficiency and integration practices. By combining quantitative and qualitative methods, the assessment provided a holistic view of the challenges, opportunities, and strategies for enhancing ICT proficiency among secondary school teachers.

Overall, the methodological approach employed in this assessment aimed to generate valuable insights and recommendations for supporting teachers in developing the skills and knowledge needed to effectively integrate ICT into their teaching practices and promote positive learning outcomes for students in secondary education.

## RESULTS

The assessment of Information Communication Technology (ICT) proficiency among secondary school teachers revealed a diverse range of competency levels and integration practices across different subject areas and grade levels. Analysis of survey data indicated that while some teachers demonstrated

advanced proficiency in ICT skills and were adept at integrating technology into their teaching practices, others reported limited proficiency and faced challenges in effectively utilizing digital tools in the classroom.

Quantitative analysis revealed that teachers' self-reported proficiency varied across different ICT competencies, with a majority expressing confidence in basic computer literacy and internet research skills, but exhibiting less confidence in areas such as multimedia creation, programming, and online collaboration tools. Moreover, attitudes towards ICT varied among teachers, with some expressing enthusiasm for technology-enhanced instruction, while others expressed apprehension or skepticism about its effectiveness in improving learning outcomes.

Qualitative insights from interviews and observations provided valuable context and depth to the understanding of teachers' experiences, perceptions, and challenges related to ICT integration. Interviews revealed a range of factors influencing teachers' ICT proficiency, including access to technology resources, professional development opportunities, administrative support, and personal motivation. Classroom observations highlighted effective ICT integration strategies, such as interactive multimedia presentations, online collaboration platforms, and blended learning approaches, as well as challenges encountered in implementing technology-enhanced instruction, such as technical issues, time constraints, and pedagogical concerns.

## DISCUSSION

The discussion of findings underscores the importance of addressing barriers to ICT proficiency and promoting effective ICT integration practices among secondary school teachers. Strategies aimed at enhancing teachers' ICT proficiency include providing access to technology resources and infrastructure, offering targeted professional development and training programs, fostering a culture of collaboration and innovation, and providing ongoing support and mentoring for teachers as they navigate the complexities of technology-enhanced instruction.

Furthermore, the discussion emphasizes the need for a systemic approach to ICT integration that addresses not only technological skills but also pedagogical considerations, curriculum alignment, assessment practices, and student engagement. Collaborative efforts among educators, administrators, policymakers, and stakeholders are essential for creating a supportive ecosystem that empowers teachers to harness the full potential of ICT to enhance teaching and learning outcomes in secondary education.

## CONCLUSION

In conclusion, the assessment of ICT proficiency among secondary school teachers provides valuable insights into the challenges and opportunities for promoting technology-enhanced instruction in secondary education. By understanding teachers' ICT proficiency levels, attitudes, and integration practices, educational stakeholders can develop targeted interventions, professional development initiatives, and policy recommendations to support teachers in effectively leveraging technology to enhance student learning experiences and prepare them for success in the digital age. Through collaborative efforts and a commitment

to continuous improvement, we can build a future where all students have access to high-quality, technology-rich learning environments that empower them to thrive in an increasingly interconnected and digital world.

## REFERENCES

1. Abolade, A. O. & Yusuf, M. O. (2005). Information and communication technologies (ICTs) and the Nigeria teacher education program. *African Journal of Educational Studies*, 3(1), 1-9.
2. Adebayo, F. O. (2008). Usage and challenges of information technology (ICT) in teaching and learning in Nigerian universities. *Asian Journal of Information Technology*, 7(7), 290-295.
3. Aduwa-Ogiegbaen, S. E., & Iyamu, E. O. S. (2005). Using information and secondary schools in Nigeria: Problems and prospects. *Educational Technology Society*, 8(1), 104-112.
4. Ayere, F., Odera, Y. & Agak, J. (2012). E-learning in secondary schools in Kenya: A case of the NEPAD E- Schools. *Educational Research and Previous*, 5(5), 218 – 223.
5. Egbule, J. F & Okobia, D. O. (2001). *Research methods in education for colleges and universities*. Agbor: Dimension Educational Publishers.
6. Federal Republic of Nigeria, (2004). *National policy on education*. Abuja : NERDC.
7. Foddy, W. H. (2004). *Constructing questions for interview and questionnaire: Theory and practices in social research*.
8. Cambridge, UK: Cambridge University Press
9. Gray, D. S. & Souter, N. (2004). *Secondary science teachers use of and attitude towards ICT in Scotland a report*. Glasgow: UK University of Strathclyd.

10. Jegede, P. O. (2008). ICT attitudinal Characteristics and use level of Nigeria Teachers Issues in Information Science and Information Technology. Obafemi Awolowo University Ileife: Institute of Education.
11. Jimoyiannis, A. & Komis, V. (2007). Examining teachers' beliefs about ICT in Education: Implications of a teacher preparation program, teacher development. An International Journal of Teachers Professional Development, 11(2), 149 -173.
12. Lau, B. T & Sim, C. H (2008). Exploring the Extent of ICT Adoption among secondary school teachers in Malaysia. International Journal of Computing and Research, 2(2), 19-36
13. Martin, M (2013). Expertise In sustainable ICTs for the Developing World: 12 Challenges Facing Computer Education. Kenya.
14. McCarney, J. (2004). Effective use of staff development in ICT. European Journal of Education 27(1), 61-72.
15. Mselle, L. J. (2012). The Use of ICTs in Tanzania: Teaching and Learning Improvement in Higher Education. Proceedings of a workshop held at the University of Dodoma. 1: 80 – 99.