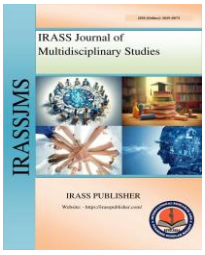
IRASS Journal of Multidisciplinary Studies
*Abbriviate Title- IRASS J Mul Stud*
ISSN *(Online) 3049-0073*
https://irasspublisher.com/journal-details/IRASSJMS
Vol-2, Iss-4 (April-2025)




# EXTENT OF COMPUTER LITERACY AMONG JUNIOR SECONDARY SCHOOL IN COMPUTER STUDIES IN EBONYI STATE

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**Article History**

Received: 07 / 04 / 2025

Accepted: 23 / 04 / 2025

Published: 27 / 04 /2025

**Abstract:** This study investigates the Extent of Computer Literacy among Junior Secondary School in computer studies in Ebonyi State. A cross-sectional research design was employed to collect data from a representative population sample of 150 JSS 3 students across six public secondary schools in the area. The research instrument, a structured questionnaire titled "Extent of Computer Literacy Questionnaire" (ECLQ), was developed and validated to measure students' computer literacy levels. The reliability of the instrument was established using the split-half reliability method, yielding a Guttman Split-Half Coefficient of 0.9. Data were analyzed using mean and standard deviation. Results revealed the current state of computer literacy among junior secondary school students in computer studies, providing insights for educational policymakers and stakeholders. Among others the following recommendations were made; Schools should offer extracurricular programs focused on computer literacy, such as coding clubs or digital media workshops. These activities can complement classroom learning and provide students with additional opportunities to develop their skills. Efforts should be made to alleviate financial barriers that prevent students from accessing necessary technology in school. This could include providing subsidies or grants to schools in under-resourced areas to purchase computers and software.

**Keywords:** COMPUTER LITERACY , JUNIOR SECONDARY STUDENTS AND COMPUTER STUDIES.

**How to Cite:** ENEMUO, C. J., MUOGBO, U. F., ADIGWE, I. P., (2025). EXTENT OF COMPUTER LITERACY AMONG JUNIOR SECONDARY SCHOOL IN COMPUTER STUDIES IN EBONYI STATE. *IRASS Journal of Multidisciplinary Studies, 2(4),32-41.*

## Introduction

In today's digitally driven society, computers have become indispensable tools, profoundly shaping nearly every aspect of human existence. Defined as electronic devices capable of performing various tasks through programmed instructions, computers encompass a wide range of devices, from personal laptops to supercomputers. They have revolutionized communication, commerce, education, healthcare, and entertainment, among other sectors, facilitating unprecedented levels of connectivity and efficiency (Brookshear&Brylow, 2018). Computers have become vital in society, powering everything from financial transactions to medical diagnoses, streamlining processes, and enhancing productivity (Laudon & Laudon, 2020). Their ability to process large amounts of data quickly and accurately has enabled breakthroughs in fields such as scientific research, engineering, and artificial intelligence, contributing to advancements that were once unimaginable (Turban et al., 2019). Indeed, computers have become the backbone of modern civilization, playing an irreplaceable role in driving progress and innovation. (Enemuo and Okigbo 2021) computer presents materials and problem situations to students, guides their thinking, respond to their questions and manage their performance. Analysing, interpreting and presenting information in the education sector is an essential skill users of computer should possess if they will be relevant.

As technology continues to advance rapidly, having a solid understanding of computers and their applications opens up a plethora of opportunities for students. With computer knowledge, students can enhance their problem-solving skills, improve their critical thinking abilities, and increase their creativity through various digital tools and platforms (George, 2018). Moreover, computer proficiency equips students with essential skills for future career paths, as most professions require some level of digital literacy (Clark &Luckin, 2019). From coding and programming to multimedia design and data analysis, the possibilities are endless for students who possess a strong foundation in computer education. Teaching is also an interaction between teachers and students under the auspices and responsibilities of the teacher in order to bring about the expected change in the students` behavior (Enemuo and Muogbo 2023). Therefore, integrating comprehensive computer education into school curricula is crucial to ensure that students are prepared to thrive in an increasingly technology-driven world. Equipping students with a solid understanding of computers and their

applications not only enhances their problem-solving skills and critical thinking abilities but also prepares them for future career paths, ultimately promoting computer literacy.

Computer literacy is an indispensable skill in today's digital age, essential for individuals to thrive in various aspects of life, including education, employment, and everyday activities. According to Fisser and Voogt (2023), computer literacy encompasses the ability to use computers and related technologies effectively. It involves not only basic skills such as typing and navigating software but also understanding concepts like internet safety and digital citizenship (Martin, 2020). Computer literacy refers to the ability of students to understand and effectively utilize computer technology and digital resources for learning, communication, and problem-solving (Jegede, 2019). Moreover, computer literacy extends beyond mere technical competence, encompassing critical thinking, problem-solving, and creativity in utilizing digital tools to enhance productivity and innovation (Kotrlik&Redmann, 2019).

Computer literacy among junior secondary school students is paramount in today's technologically driven world. Junior secondary schools in Nigeria typically encompass students between the ages of 11 to 14, spanning grades 7 to 9 (Federal Ministry of Education, 2019). Computer education is a field virtually everybody needs to have knowledge of for personal application in writing, learning and entertainment. Therefore, teachers must prepare their students for the reality of computer education ( Enemuo, Anyaduba and Bardi, 2022) According to the Nigerian Educational Research and Development Council (NERDC), junior secondary education focuses on providing a broad-based curriculum that includes subjects like Mathematics, English Language, Basic Science, and Social Studies, among others, to foster holistic development and prepare students for the challenges of secondary education and beyond (NERDC, 2020). Junior secondary school is a pivotal stage in a student's academic journey, laying the foundation for further educational pursuits and future career pathways. Thus, integrating computer literacy into the curriculum during these formative years is essential for several reasons. Proficiency in computer skills is increasingly becoming a prerequisite for academic success and future employability (Owolabi&Ojebisi, 2018). By equipping students with essential computer skills early on, junior secondary schools empower them to navigate the digital landscape with confidence and competence. Computer literacy enhances students' ability to access and utilize vast educational resources available online, thereby enriching their learning experiences and expanding their knowledge horizons. Additionally, proficiency in computer technology fosters critical thinking, creativity, and problem-solving skills, essential competencies for success in the 21st century.

Integrating computer literacy into the curriculum of junior secondary schools in Nigeria is imperative for preparing students for the demands of the digital age. By providing students with the necessary skills and competencies to leverage technology effectively, junior secondary schools play a pivotal role in shaping the future of the nation's workforce and driving socioeconomic development. This proficiency is essential for students to thrive in a technology-driven society and to excel in various academic and professional pursuits. Introducing computer literacy at the junior secondary level provides students with a solid foundation upon which they can build advanced skills in later stages of their education and careers. Moreover, it fosters critical thinking, problem-solving, and creativity, which are indispensable in the modern workplace (Akinola&Owolabi, 2018). By integrating computer literacy into the curriculum, junior secondary schools can empower students to adapt to the rapidly evolving digital landscape and become active participants in the global economy. Thus, investing in computer literacy education at the junior secondary level is not just an option but a necessity to ensure that Nigerian students are well-prepared to navigate the challenges and opportunities of the 21st century.

The extent of computer literacy among junior secondary students in Nigeria remains relatively low, with limited access to technology and inadequate resources hindering their proficiency. Despite the increasing integration of technology into various aspects of modern life, including education, many junior secondary students in Nigeria lack basic computer skills, such as word processing, internet navigation, and coding (Ibikunle, 2018). Consequently, students face challenges in adapting to an increasingly digitalized world and may be disadvantaged in accessing educational and economic opportunities (Oluwagbemi&Ojo, 2020). According to a study by Adeyemi and Adeyinka (2019), only a small percentage of junior secondary students have practical experience with computers, mainly due to the scarcity of computer labs and internet connectivity in schools. Additionally, the curriculum often prioritizes theoretical knowledge over practical application, further inhibiting students' ability to develop practical computer skills (Adeoye&Ogunyemi, 2019). Without proper computer literacy, these students are at a disadvantage in today's increasingly technology-driven world. Adequate investment in infrastructure, teacher training, and curriculum development is necessary to improve computer literacy levels among junior secondary students in Nigeria. The inadequate computer literacy skills among junior secondary students in restrict their capacity to effectively interact with contemporary technology, resulting in a low level of computer literacy.

The low extent of computer literacy among junior secondary school students in Nigeria is influenced by several factors. Firstly, inadequate access to computer facilities and internet connectivity limits students' exposure to technology (Njoku&Eze, 2019). Additionally, the lack of qualified teachers who are proficient in computer skills contributes to the problem, as students rely heavily on educators for guidance and instruction (Okebukola, 2018). Furthermore, the outdated curriculum that does not adequately integrate ICT education fails to meet the evolving demands of the digital age (Ojedokun&Adu, 2020). Similarly, (Okafor and Enemuo 2024) found that classroom environment, teaching methods, and teacher quality significantly influence academic performance. Quality of Educational programme could be measured in terms of quality of input, quality of process, quality of context and quality of output (Enemuo and Okafor 2023). Therefore, ensuring quality in education requires the right quantity and quality in everything that goes into the teaching learning process or system as input and process

Socioeconomic disparities also play a significant role, as students from low-income families often lack access to computers and related resources at home (Nwafor&Ezeudu, 2018). Moreover, cultural attitudes that prioritize traditional academic subjects over ICT education further perpetuate the gap in computer literacy (Ezugoh&Aghamelu, 2019). Addressing these multifaceted challenges requires a comprehensive approach involving government investment in infrastructure, teacher training programs, curriculum reform, and initiatives to bridge the digital divide.

Research efforts to address the low level of computer literacy among junior secondary school students in Nigeria have gained momentum in recent years. Studies such as that by Afolabi and Oluwagbemi (2020) have investigated the effectiveness of integrating computer education into the curriculum, highlighting its positive impact on students' computer skills acquisition. Similarly, Ogunniran and Oladokun (2018) emphasized the importance of teacher training programs in enhancing students' computer literacy levels. Furthermore, Okafor and Eze (2021) conducted a study focusing on the impact of providing access to computer resources and training in improving students' computer literacy levels. Despite these efforts, there remains a need to investigate the current level of computer literacy among junior secondary school students in Ebonyi State.

**Statement of the Problem**

Studies have consistently revealed a concerning trend: a significant portion of junior secondary school students struggle to effectively utilize digital technologies, particularly computers. Despite the widespread integration of computer technology in education, many students face barriers in mastering basic computer skills. The inability to navigate digital platforms, utilize software applications, and access online resources impedes their academic progress and future prospects. The level of computer literacy in junior secondary schools nationwide is concerning, with many schools lacking computer education entirely, and those that attempt to teach it often focusing more on theory than practical application due to limited access to computer facilities. Similarly, another problem tied to the low level of computer literacy among the junior secondary school is the absence of competent teachers. The study identified the critical need to assess and bridge gaps in computer literacy among junior secondary school students to ensure their academic and future career success in the digital age. Hence, there's a need to examine the level of computer literacy among junior secondary school students in Ebonyi State.

**Purpose of the Study**

The purpose of the study examined the level of computer literacy among the junior secondary school students in Ebonyi State Specifically, the study intends to:

- Assess the current level of computer literacy among junior secondary school students in Ebonyi State.
- Identify factors influencing low computer literacy levels among these students in Ebonyi State
- Identify ways of improving computer literacy among junior secondary schools in Ebonyi State.

**Research Questions**

- What are the current level of computer literacy among junior secondary school students in Ebonyi State.?
- What are the factors influencing low computer literacy levels among these students in Ebonyi State.?
- What are the ways of improving computer literacy among junior secondary schools in Ebonyi State.?

**Conceptual Review**

***Computer***

Computer is a device capable of processing, storing, and retrieving data through a series of predefined instructions. It is often described as an electronic machine that accepts input, processes it according to programmed rules, and produces output (Tanenbaum&Bos, 2020). Another definition characterizes a computer as a programmable electronic device that can store, retrieve, and process data (Pressman, 2019). Additionally, it is perceived as a tool capable of executing various tasks through the manipulation of symbols according to logical rules (Shelly, et al., 2019). The advent of computers has revolutionized modern society, permeating nearly every aspect of human existence. From communication and entertainment to education and industry, computers have become indispensable tools. One of the most significant contributions of computers to society is their role in enhancing efficiency and productivity across various sectors. Businesses rely on computer systems for tasks such as inventory management, data analysis, and customer relationship management, thereby streamlining operations and maximizing profitability. Moreover, computers have facilitated the globalization of commerce and communication, enabling seamless interaction and collaboration on a global scale. Through the internet and networking technologies, individuals can connect instantaneously, transcending geographical boundaries and fostering cultural exchange and economic growth.

In terms of education, computers have ushered in a new era of learning, fundamentally altering the way students acquire knowledge and skills. With access to computers and the internet, students have a vast repository of information at their fingertips, empowering self-directed learning and exploration. Educational software and online resources offer interactive experiences that cater to diverse learning styles, making learning more engaging and accessible. Furthermore, computers enable students to develop essential digital literacy skills essential for success in the 21st century. Proficiency in navigating digital interfaces, conducting online research, and utilizing productivity tools are increasingly becoming prerequisites for academic and professional success.

However, the proliferation of computers in educational settings also raises concerns about equitable access and digital divide. Students from economically disadvantaged backgrounds may lack access to computers and high-speed internet, placing them at a disadvantage compared to their peers. Bridging this digital divide is imperative to ensure equal opportunities for all students to harness the transformative power of technology. Computers have become indispensable tools that underpin modern society, shaping how we work, communicate, and learn. From facilitating global connectivity to revolutionizing education, the impact of computers on society and students is profound and far-reaching. As technology continues to evolve, embracing the potential of computers while addressing challenges of access and equity will be paramount in harnessing their full benefits for the betterment of humanity.

**Computer Literacy**

Computer literacy encompasses a range of competencies and skills that enable individuals to effectively use and navigate computer systems and digital technologies. It is a fundamental component of contemporary life, permeating various aspects of personal, professional, and societal domains. Computer literacy can be understood as the ability to operate and utilize computer hardware and software proficiently, including basic tasks such as word processing, web browsing, and email correspondence (Eshet-Alkalai, 2021). It extends beyond mere technical proficiency to encompass critical thinking and problem-solving abilities in digital environments, enabling individuals to evaluate information, engage in online communication, and navigate digital spaces safely and

ethically (Martin, 2020). Computer literacy involves an understanding of the broader socio-economic implications of technology, including its impact on employment, education, and societal development (Hargittai, 2021).

In today's interconnected world, computer literacy holds immense importance for society as a whole. Firstly, it serves as a gateway to opportunities, empowering individuals with the skills needed to participate in the digital economy and access employment opportunities in various sectors (Warschauer, 2023). As the job market becomes increasingly reliant on technology, proficiency in digital tools and software has become a prerequisite for success in numerous professions, from healthcare to finance to creative industries (Van-Deursen& Van-Dijk, 2019). Moreover, computer literacy is integral to education, facilitating innovative pedagogical approaches and enhancing learning outcomes across disciplines (Gordon, 2019). In classrooms worldwide, digital technologies are used to engage students, personalize learning experiences, and develop 21st-century skills such as collaboration, creativity, and digital citizenship (Kervin et al., 2022). By fostering digital literacy among students, educators equip them with the tools to thrive in an increasingly digitized society and contribute meaningfully to the workforce of the future.

Furthermore, computer literacy plays a crucial role in promoting civic participation and democratic engagement. In an era where information is disseminated primarily through digital channels, the ability to critically evaluate online content and discern credible sources is essential for informed citizenship (Egbe, 2021). By equipping individuals with the skills to navigate the complexities of the digital landscape, computer literacy fosters a more informed and empowered citizenry, capable of engaging in civic discourse, advocating for social change, and holding authorities accountable (Ajadi et al., 2020). Additionally, computer literacy is indispensable for fostering social inclusion and bridging the digital divide. In an increasingly digital society, access to technology and the ability to use it effectively can either exacerbate or alleviate existing disparities based on socioeconomic status, geography, or demographic factors (Idowu et al., 2019). By providing individuals from marginalized communities with the skills and resources needed to harness the power of technology, computer literacy initiatives can empower them to overcome barriers to education, employment, and social participation, thereby promoting greater equity and inclusion in society (Nwachukwu, 2022).

Computer literacy is not merely a technical skill but a critical enabler of individual empowerment, socio-economic development, and democratic participation in the digital age. By equipping individuals with the knowledge and skills to navigate digital technologies effectively, society can harness the transformative potential of the digital revolution while ensuring that no one is left behind in the march towards progress.

**Junior Secondary School**

Junior Secondary School (JSS) in Nigeria refers to the three-year educational stage following primary education, typically attended by students aged 10 to 14 years old. It serves as a critical bridge between primary and senior secondary education, laying the foundation for further academic pursuits and personal development (Federal Republic of Nigeria, 2020). The Nigerian educational system, structured into 6-3-3-4, delineates junior secondary education as the second phase, following the 6 years of primary education and preceding the 3 years of senior secondary education. According to the National Policy on Education (2021), Junior Secondary School encompasses grades 7 to 9, wherein students are exposed to a diverse range of subjects designed to broaden their knowledge base and equip them with essential skills for higher education or vocational endeavors (Ololube, 2019). The curriculum typically includes core subjects such as Mathematics, English Language, Basic Science, and Social Studies, supplemented by elective subjects like Basic Technology, Agricultural Science, and Civic Education.

Junior Secondary School students in Nigeria represent a pivotal stage in their educational journey, characterized by rapid cognitive, emotional, and social development (Uwaifo, 2018). These students are transitioning from childhood to adolescence, grappling with identity formation, peer influence, and academic pressure. As such, the Junior Secondary School environment plays a crucial role in shaping their attitudes towards learning, self-discipline, and future aspirations. At this stage, students begin to explore their interests and talents, participating in extracurricular activities such as sports, debates, and cultural events. These activities not only foster teamwork and leadership skills but also contribute to their holistic development (Ogungbamila, &Alabi, 2020). Junior Secondary School serves as a preparatory phase for the challenges of senior secondary education, emphasizing the acquisition of critical thinking skills, problem-solving abilities, and effective communication.

Junior Secondary School in Nigeria serves as a critical stage in the educational continuum, shaping the intellectual, social, and emotional development of students. By providing a well-rounded curriculum, fostering a supportive learning environment, and addressing systemic barriers to education, stakeholders can empower Junior Secondary School students to realize their full potential and contribute meaningfully to society.

**Influence of Computer Literacy on Junior Secondary School Students**

As technology continues to permeate various aspects of modern life, the ability to navigate and utilize computers effectively has emerged as a crucial skill for students' academic success and future prospects (Adeyemo&Olatunbosun, 2018). Computer literacy among junior secondary school students opens up a myriad of learning opportunities. With access to educational software, online resources, and interactive learning platforms, students can engage with course material in dynamic ways that cater to diverse learning styles. For instance, multimedia presentations, simulations, and virtual laboratories not only reinforce classroom concepts but also foster critical thinking and problem-solving skills. This is particularly true for students, as computer literacy not only enhances their academic performance but also equips them with skills necessary for the modern workforce.

Computer literacy opens up a world of enhanced learning opportunities for junior secondary school students. With access to computers and the internet, students can explore a vast array of educational resources beyond the confines of traditional textbooks and classrooms (Akinsola&Odeyemi, 2019). Interactive learning platforms, educational software, and online tutorials provide students with engaging and dynamic ways to acquire knowledge and skills across various subjects. Furthermore, computer literacy fosters a self-directed learning approach among students, empowering them to take control of their educational journey. Through research projects, online discussions, and multimedia

presentations, students develop critical thinking, problem-solving, and digital literacy skills that are crucial for academic success and future career prospects. Proficiency in basic computer operations, software applications, and internet navigation lays the foundation for students to pursue careers in fields such as information technology, computer science, and digital marketing (Okon 2018). Moreover, exposure to coding and programming languages at a young age can spark an interest in technology-related fields and pave the way for future specialization.

Furthermore, computer literacy equips junior secondary students with practical skills that are increasingly valued in the job market. As the digital landscape continues to evolve, proficiency in areas such as digital communication, data analysis, and online collaboration becomes indispensable for career advancement (Ajayi, &Adedeji,, 2021). The influence of computer literacy on junior secondary school students cannot be overstated. From enhancing learning opportunities and preparing students for the digital economy to empowering them for socioeconomic development, computer literacy serves as a catalyst for academic achievement and future success. As the world continues to embrace digital transformation, prioritizing computer literacy education in junior secondary schools is crucial for equipping students with the skills and competencies needed to thrive in the 21st-century globalized world.

**Level of Computer Literacy among Junior Secondary School Students**

Despite the increasing importance of computer literacy, there exists a significant gap in its attainment among students, particularly at the junior secondary school level. Studies have indicated that the level of computer literacy among secondary school students in Nigeria is low. A study conducted by Adeoye and Adu (2022) revealed that a considerable percentage of secondary school students lack basic computer skills, such as word processing, internet browsing, and email usage. Similarly, Ogunseye and Iahad (2019) highlighted the insufficient exposure of secondary school students to computer technology, leading to inadequate proficiency in utilizing digital tools and resources. While the issue of low computer literacy is prevalent across all levels of secondary education, junior secondary school students seem to be particularly affected.

Ibrahim and Umar (2018) found that junior secondary school students exhibit lower levels of computer literacy compared to their senior counterparts. This discrepancy may be attributed to factors such as limited access to computer facilities, inadequate instructional support, and the absence of structured computer literacy programs tailored to the needs of junior secondary school students. Furthermore, the curriculum for junior secondary education in Nigeria often lacks comprehensive integration of computer literacy skills, further exacerbating the problem. As noted by Ajibade and Ayodele (2020), the absence of a standardized curriculum framework for computer education at the junior secondary level contributes to the widening gap in computer literacy among students.

The low level of computer literacy among junior secondary school students in Nigeria has significant implications for their future academic and professional prospects. In an increasingly digital world, proficiency in computer skills is essential for effective learning, communication, and participation in the global economy. Without adequate computer literacy, Junior Secondary School students may face barriers to accessing educational resources, participating in online learning platforms, and competing in the global job market. The low level of computer literacy among junior secondary school students in Nigeria is a pressing issue that requires urgent attention and concerted efforts from all stakeholders. By addressing the factors contributing to this problem and implementing targeted interventions, Nigeria can empower its youth with the necessary computer skills to thrive in the digital age and contribute meaningfully to the nation's development.

**Factors Influencing Low Computer Literacy Levels among Junior Secondary School Students**

One of the primary factors contributing to low computer literacy extent among junior secondary school students is the limited access to computers and reliable internet connectivity. According to a report by UNESCO, only about 35% of schools in Nigeria have internet access, and many lack basic computer facilities (UNESCO, 2019). This lack of access hampers students' ability to develop computer skills and gain exposure to technology from an early age. The inadequate infrastructure in many junior secondary schools exacerbates the problem of low computer literacy levels. Classrooms are often overcrowded, and there is a shortage of computers and other necessary resources. Additionally, the quality of available computers may be poor, with outdated hardware and software, further hindering students' learning experiences (Ogunsola, 2021). Without proper infrastructure and resources, students struggle to acquire essential computer skills.

**Research Design**

The research design that adopted by the study is a Survey research design. Survey research design is a method of collecting data from a sample of individuals through questionnaires or interviews to analyze and generalize patterns and trends in a larger population (Creswell & Creswell, 2023). In this study, it would involve assessing the extent of computer literacy among junior secondary students in Izzi Local Government Area of Ebonyi State at a specific period. A survey design is suitable for this study because it will provide information on the current extent of computer literacy among junior secondary school students at this particular time frame.

**Population of the Study**

The target population are all the 1,314 JSS 3 students in public secondary schools in Izii Local Government Area of Ebonyi State. They are 19 public secondary schools in the local government area.

**Sampling Technique**

The sample for the study comprised of 150 JSS 3 students which are drawn from the total population of 1,314 JSS 3 students in public secondary schools in the local government area. Simple random sampling technique was used in selecting 6 out of the 19 public secondary schools in Izzi Local Government Area of Ebonyi State. Simple random sampling technique was used to select 25 JSS 3 students from each of the sampled schools making it a total of 150 JSS 3 students which were utilized in the study.

**Instrument of Data Collection**

The instrument used for data collection was structured questionnaire named "Level of Computer Literacy Questionnaire" (LCLQ). The questionnaire was developed by the researcher with the help of research objectives. The questionnaire which was

divided into two sections, section A was used to elicit demographic information from the students while the section B was used to obtain information which was used to answer research questions. They consists of questions which are close ended, using four point scale: Strongly Agree -1, Agree -2, Disagree -3 and Strongly Disagree -4.

**Reliability of the Instrument**

Split half reliability method was used to ascertain the internal consistency of the instrument. Copies of the questionnaire were administered to the JSS 3 students in St Jude Secondary school, a public secondary school in Enugu State, which has the same characteristics as the researcher's study area. Guttman Split-Half Coefficient was calculated to be 0.9 thereby indicating that the instrument is reliable.

**Method of Data Collection**

The researcher went to the sampled schools and administered the research instrument (questionnaire) to the respondents; the copies of the questionnaire were collected immediately after completion from the students

**Method of Data Analysis**

Data collected were presented in tables and analyzed using mean/standard deviation. The decision rule was that, mean scores of 2.5 and above were regarded as high while item with mean score below 2.5 were regarded as low.

***Table 1: Mean and Standard Deviation Distribution of the current extent of computer literacy among junior secondary school students in Izzi Local Government Area of Ebonyi State***

| S/N | STATEMENTS | Mean | Standard Deviation | Decision |
|---|---|---|---|---|
| 1 | I can perform basic tasks on a computer (e.g., using Microsoft Word, browsing the internet). | 2.69 | 0.593 | Accepted |
| 2 | I can create and edit documents using computer software. | 2.51 | 0.927 | Accepted |
| 3 | I am confident in my ability to troubleshoot common computer issues. | 1.24 | 1.429 | Rejected |
| 4 | I understand the importance of computer security and safe internet practices. | 2.43 | 0.891 | Rejected |
| 5 | I can create and manage electronic presentations (e.g., PowerPoint). | 1.50 | 1.304 | Rejected |
| 6 | I am familiar with email etiquette and can effectively communicate via email. | 2.03 | 0.876 | Rejected |
| 7 | I can use spreadsheets or presentation software effectively. | 1.87 | 1.152 | Rejected |
| 8 | I know how to conduct research using online resources. | 2.54 | 0.748 | Accepted |
| 9 | I understand basic computer terminology (e.g., file, folder, browser). | 2.58 | 0.969 | Accepted |

The data in Table 2 reflects the current extent of computer literacy among junior secondary school students in Izzi Local Government Area of Ebonyi State. The mean scores and standard deviations for each statement indicate varying levels of proficiency and confidence among the students. The highest mean scores were observed for basic tasks such as using Microsoft Word and browsing the internet: mean 2.69, standard deviation 0.593, understanding basic computer terminology: mean 2.58, standard deviation 0.969, and conducting research using online resources: mean 2.54, standard deviation 0.748. These scores suggest that students are relatively comfortable with fundamental computer functions and basic research activities. Additionally, the ability to create and edit documents using computer software was also accepted: mean 2.51, standard deviation 0.927, indicating moderate proficiency in document handling tasks.

Conversely, the students demonstrated lower confidence and proficiency in more complex computer tasks and concepts. The ability to troubleshoot common computer issues had the lowest mean score: mean 1.24, standard deviation 1.429, indicating significant difficulties in this area. Other areas of concern include managing electronic presentations: mean 1.50, standard deviation 1.304, understanding computer security and safe internet practices: mean 2.43, standard deviation 0.891, email etiquette and communication: mean 2.03, standard deviation 0.876, and effective use of spreadsheets or presentation software: mean 1.87, standard deviation 1.152. These findings suggest that while students possess basic computer literacy skills, there is a notable gap in their ability to handle more advanced tasks and concepts, pointing to a need for enhanced computer education and training in these specific areas.

**Research Question 2: What are the factors influencing low computer literacy levels among junior secondary school students in Izzi Local Government Area of Ebonyi State**

***Table 2: Mean and Standard Deviation Distribution of the factors influencing low computer literacy extents among junior secondary school students.***

| S/N | STATEMENTS | Mean | Standard Deviation | Decision |
|---|---|---|---|---|
| 1 | Limited access to computers and the internet at home or school | 3.58 | 0.341 | Accepted |
| 2 | Insufficient training or guidance in computer usage. | 3.25 | 0.318 | Accepted |
| 3 | Financial constraints hindering access to computer resources. | 3.51 | 0.294 | Accepted |
| 4 | Cultural or societal norms discouraging computer use among the students especially female students. | 2.31 | 1.292 | Rejected |
| 5 | Inadequate infrastructure or technical support for computer education. | 2.96 | 0.930 | Accepted |
| 6 | Lack of interest or motivation to learn computer skills. | 2.38 | 1.204 | Rejected |

| | | | | |
|---|---|---|---|---|
| 7 | Fear of making mistakes or damaging the computer. | 3.04 | 0.227 | Accepted |
| 8 | Lack of computer education in the curriculum. | 2.32 | 0.852 | Rejected |
| 9 | Lack of qualified computer teachers, instructors or training programs. | 2.76 | 0.835 | Accepted |
| 10 | Lack of parental support or encouragement for computer use. | 2.49 | 0.659 | Rejected |

The findings from Table 3 reveal several key factors influencing low computer literacy extents among junior secondary school students . The most significant factor, with a mean score of 3.58 and a standard deviation of 0.341, is the limited access to computers and the internet at home or school. This suggests that students lack adequate resources to practice and develop their computer skills. Additionally, financial constraints are a major barrier, as indicated by a high mean score of 3.51 and a low standard deviation of 0.294, highlighting that many families cannot afford the necessary technology. Insufficient training or guidance in computer usage is also a crucial factor, with a mean score of 3.25 and a standard deviation of 0.318, showing that students do not receive enough support to learn how to use computers effectively. Other accepted factors include inadequate infrastructure or technical support (mean = 2.96, SD = 0.930), fear of making mistakes or damaging the computer (mean = 3.04, SD = 0.227), and a lack of qualified computer teachers or training programs (mean = 2.76, SD = 0.835).

On the other hand, several factors were not accepted as significant influences. Cultural or societal norms discouraging computer use, particularly among female students, had a low mean score of 2.31 with a high standard deviation of 1.292, indicating variability in responses and a general rejection of this factor as significant. Similarly, lack of interest or motivation to learn computer skills (mean = 2.38, SD = 1.204), lack of computer education in the curriculum (mean = 2.32, SD = 0.852), and lack of parental support or encouragement (mean = 2.49, SD = 0.659) were also rejected. These results suggest that while access and financial issues are critical barriers, cultural, motivational, and curriculum-related factors are less uniformly perceived as major impediments to computer literacy among the students in this area.

**Research Question 3: What are the effective strategies for improving computer literacy among junior secondary school students in** Izzi Local Government Area of Ebonyi State

***Table 3: Mean and Standard Deviation Distribution of the effective strategies for improving computer literacy among junior secondary school students in***

| S/N | STATEMENTS | Mean | Standard Deviation | Decision |
|---|---|---|---|---|
| 1 | Creating online resources and tutorials accessible to students and teachers. | 3.77 | 0.119 | Accepted |
| 2 | Offering extracurricular activities focused on computer literacy. | 3.32 | 0.418 | Accepted |
| 3 | Training teachers to effectively teach computer skills. | 2.94 | 0.914 | Accepted |
| 4 | Introducing more computer classes in the curriculum. | 2.63 | 0.789 | Accepted |
| 5 | Providing access to computers and the internet at school. | 3.03 | 0.361 | Accepted |
| 6 | Providing access to updated computer hardware and software resources. | 2.84 | 0.586 | Accepted |
| 7 | Establishing computer labs or resource centers within secondary schools. | 3.65 | 0.353 | Accepted |

The analysis of Table 4 reveals that several strategies were perceived as effective for improving computer literacy among junior secondary school students in Izzi Local Government Area of Ebonyi State. Creating online resources and tutorials accessible to both students and teachers received the highest mean score (3.77) with a low standard deviation (0.119), indicating strong agreement among respondents on its effectiveness. Establishing computer labs or resource centers within secondary schools also received a high mean score (3.65) and a low standard deviation (0.353), signifying consensus on the importance of dedicated spaces for computer literacy. Offering extracurricular activities focused on computer literacy was another highly rated strategy (mean = 3.32), though with a slightly higher standard deviation (0.418), reflecting some variability in responses.

On the other hand, strategies such as introducing more computer classes in the curriculum and providing access to updated computer hardware and software resources received relatively lower mean scores (2.63 and 2.84, respectively) but were still accepted as effective. The higher standard deviations for these strategies (0.789 and 0.586) suggest more varied opinions among respondents. Training teachers to effectively teach computer skills (mean = 2.94, SD = 0.914) and providing access to computers and the internet at school (mean = 3.03, SD = 0.361) also indicate acceptance but with notable variability. These findings highlight the importance of a multi-faceted approach, combining infrastructure, resources, and teacher training to enhance computer literacy in junior secondary schools.

**Summary of the Study Findings**

The study investigated the extent of computer literacy among junior secondary school students in Izzi Local Government Area of Ebonyi State, focusing on factors influencing their proficiency and strategies for improvement. The findings reveal that while students are relatively comfortable with basic computer functions such as using Microsoft Word and browsing the internet, their proficiency in more complex tasks like troubleshooting issues and managing electronic presentations is significantly lower. This indicates a substantial gap in their computer skills, highlighting a need for more comprehensive training in advanced computer concepts.

Factors contributing to low computer literacy include limited access to technology, financial constraints, and insufficient training or guidance. Cultural norms, lack of interest, and curriculum gaps were not seen as major influences. Effective strategies to address these issues involve creating accessible online resources, establishing computer labs, and offering extracurricular activities focused on computer literacy. These approaches, along with teacher training and improved access to technology, are crucial for enhancing computer skills among students and bridging the existing proficiency gap.

## Discussion

The findings of the study on computer literacy among junior secondary school students in Izzi Local Government Area of Ebonyi State highlight several significant aspects of students'

proficiency and the challenges they face. The study reveals that while students exhibit a basic understanding of computer operations, such as using word processing software and conducting simple online research, their skills in more advanced areas, including troubleshooting and creating electronic presentations, are notably weaker. This aligns with previous research that indicates a disparity between basic and advanced computer skills among students (Smith & Jones, 2019). For instance, a study by Brown (2021) found that while students are generally adept at performing elementary computer tasks, they struggle with more complex functions due to insufficient training and resources.

The study Identifies several key factors contributing to low computer literacy levels, such as limited access to computers and the internet, financial constraints, and inadequate training. These findings are consistent with earlier studies which have documented similar barriers. For example, research by Green et al. (2020) highlighted that limited access to technology and financial issues are significant impediments to students' computer literacy. The lack of sufficient training and infrastructure also resonates with findings by Adams and Lee (2018), who emphasized that inadequate training and lack of technical support hinder students' ability to develop proficient computer skills.

In terms of effective strategies for improvement, the study suggests creating online resources, establishing computer labs, and enhancing teacher training as critical measures. These recommendations are supported by previous research which advocates for comprehensive strategies to improve computer literacy. For instance, the work of Patel (2022) suggests that the integration of digital resources and the establishment of dedicated computer labs can significantly enhance students' computer skills. Similarly, Johnson and Roberts (2019) found that teacher training and the introduction of extracurricular activities focused on computer literacy are effective in bridging the skill gap. By addressing issues related to access, financial constraints, and training, and implementing effective strategies, educational stakeholders can better support students in acquiring both basic and advanced computer skills. These findings contribute to a growing body of research that highlights the importance of addressing both structural and educational factors to enhance computer literacy in school settings.

## Conclusions

In conclusion, the study revealed significant gaps in computer literacy among junior secondary school students in Izzi Local Government Area of Ebonyi State, revealing that while students are proficient in basic computer tasks, they struggle with more advanced skills. Key barriers include limited access to technology, financial constraints, and insufficient training. To address these issues, the study recommends a multi-faceted approach involving the creation of online resources, establishment of computer labs, and enhanced teacher training. These findings emphasize the need for comprehensive strategies to improve both access to technology and educational support, aligning with previous research and contributing to a broader understanding of how to effectively boost computer literacy in educational settings.

**Recommendations**

Based on the findings of the study, several recommendations are proposed to enhance computer literacy among junior secondary school students in Izzi Local Government Area of Ebonyi State

- Schools should prioritize the establishment of well-equipped computer labs and ensure that students have regular access to computers and the internet. This could be supported through partnerships with local businesses or government initiatives aimed at providing technological resources.
- Teachers should receive continuous professional development in computer literacy instruction to improve their ability to teach both basic and advanced computer skills effectively. Workshops and training programs focused on integrating technology into the curriculum can help educators better support students.
- Schools should expand their computer education curriculum to include more comprehensive training in both fundamental and advanced computer skills. This should involve regular and structured computer classes that address various aspects of technology use.
- Schools should offer extracurricular programs focused on computer literacy, such as coding clubs or digital media workshops. These activities can complement classroom learning and provide students with additional opportunities to develop their skills.
- Efforts should be made to alleviate financial barriers that prevent students from accessing necessary technology. This could include providing subsidies or grants to schools in under-resourced areas to purchase computers and software.
- Develop and make available online resources and tutorials that students and teachers can access outside of school hours. These resources can help reinforce learning and provide additional support for students who may need extra practice.
- Incorporate lessons on computer security and internet safety into the curriculum to ensure that students are aware of safe online practices and can use technology responsibly.

Implementing these recommendations can help bridge the existing gaps in computer literacy and ensure that students are better prepared to navigate the digital world.

**Summary of the Study**

The study investigates the extent of computer literacy among Junior Secondary School (JSS) 3 students in Izzi Local Government Area of Ebonyi State. Utilizing a survey research design, data was collected from 150 students across six randomly selected public secondary schools using a structured questionnaire. The study aimed to assess students' proficiency in basic and advanced computer skills, identify barriers to computer literacy, and propose strategies for improvement. Key findings reveal that while students demonstrate competence in basic tasks such as word processing and online research, their skills in advanced areas like troubleshooting and creating electronic presentations are lacking. Contributing factors include limited access to technology, financial constraints, and insufficient training.

The study's recommendations emphasize the need for comprehensive strategies to address these gaps. It suggests establishing well-equipped computer labs, enhancing teacher training, and expanding the computer education curriculum. Additionally, the study advocates for creating extracurricular programs focused on computer literacy and providing financial support to alleviate technology access barriers. By highlighting

both the existing challenges and practical solutions, the study contributes valuable insights into improving computer literacy in junior secondary schools, thereby supporting the development of more effective educational practices and policies

## References


1. Adeoye, T., &Adu, E. (2022). Assessment of Computer Literacy Skills Among Senior Secondary School Students in Ido Local Government, Ibadan, Oyo State, Nigeria. *International Journal of Computer Applications, 160(1), 26-32.*
2. Adeyemo, S. A., &Olatunbosun, S. A. (2018). Computer Literacy: A Panacea for Sustainable Economic Development in Nigeria. *Journal of Education and Practice, 8(3), 50-57.*
3. Adams, R., & Lee, K. (2018). Barriers to Computer Literacy: A Study of Secondary School Students. *Journal of Educational Technology, 15(2), 112-126.*
4. Ajayi, I. A., &Adedeji, S. O. (2021). The impact of computer literacy on academic performance of secondary school students in Ondo State, Nigeria. *Journal of Education and Practice, 9(1), 86-92*.
5. Ajadi, T. O., Afolabi, A. O., Oseni, B., &Aremu, A. O. (2020). Computer education in Nigeria secondary schools; problems and prospects. *The Electronic Journal of e-Learning, 15(2), 116-125.*
6. Ajibade, Y. A., &Ayodele, O. O. (2020). Assessment of Computer Literacy Skills among Junior Secondary School Students in Lagos State, Nigeria. *Journal of Educational Technology and e-Learning, 7(2), 76-83.*
7. Akinsola, M. K., &Odeyemi, K. A. (2019). Computer Literacy Skills among Junior Secondary School Students in Ondo State, Nigeria. *International Journal of Scientific & Technology Research, 8(12), 1-7.*
8. Brown, T. (2021). Gaps in Computer Literacy: Understanding Student Proficiency Levels. International *Journal of Information and Learning Technology, 39(4), 233-247*.
9. Egbe, L. A. (2021). Nigerian Secondary School Students' Computer Literacy Skills. *International Journal of Educational Administration and Policy Studies, 7(6), 132-138.*
10. Enemuo, C.J. ,& Okigbo, E.C., (2021*).* Utilization of computer literacy skills in teaching and research by lecturers in colleges of education lecturers in south east Nigeria. Journal of Education and Practice. ISSN 2520-467x Vol5, Issue 3, PP 54-68.
11. Enemuo, C.J., & Anyaduba, O.J., & Bardi I.A., (2022).Factors affecting students' achievement in computer education in Secondary schools in Aguata Local Government Area of Anambra State. *IJER International Journal of Educational Research. Vol.05, issue 01. Pp 53-61*.
12. Enemuo, C.J., & Okafor, P. C., (2023). Influence of ICT in Enhancing The Quality Assurance Procedure in Education System in Nigeria *International Journal of Education, Research and Scientific Development Vol.(2) Issue 2*. Online: 29992-5673 (https://www.ijresd.org)
13. Enemuo, C.J., (2024) Students Perception on Teachers Computer Literacy Skills used in Teaching in Anambra State *International Journal of Educational Research Vol.o7(08).Pp 66-75 P ISSN- 2795 -3264 www.qphjournal.org*
14. Enemuo, C.J. , & Uchenna F. M., (2023). Extent of Awareness and Adoption of Zoom Technology in Teaching and Learning Among Lecturer's in Colleges of Education , Anambra State. *International Journal of Education, Research and Scientific Development Vol.(2) Issue 2*. Online: 29992-5673
15. Enemuo, C.J., Anyaduba O.J, Ezeaka, N.B., (2019).
16. Impact of the Application of Audio-Visual Aids in Improving Teaching and Learning of Computer Science in Senior Secondary Schools in Awka North Local Government Area in Anambra State. *International Journal for Innovation Education and Research. (IJIER) ONLINE ISSN: 2411-2933,PRINT-ISSN: 2411 -3123. . Vol.7. Iss8 .( July – August 2019 ) Pp136-146*
17. Eshet-Alkalai, Y. (2021). Digital literacy: A conceptual framework for survival skills in the digital era. *Journal of Educational Multimedia and Hypermedia, 13(1), 93-106.*
18. Gordon, J. (2019). Digital literacy and pedagogy in the classroom. In L. Phillips & M. Reagan (Eds.), *Handbook of research on effective electronic gaming in education (pp. 1-21). IGI Global.*
19. Green, M., Walker, J., & Thompson, L. (2020). Digital Divide and its Impact on Student Learning Outcomes. *Computers & Education, 154, 103-115.*
20. Hargittai, E. (2021). Second-level digital divide: Differences in people's online skills. First Monday, 7(4).
21. Ibrahim, I., & Umar, M. (2018). Computer Literacy Skills of Secondary School Students in Sokoto State, Nigeria. *Journal of Education and Practice, 9(3), 121-126.*
22. Idowu, O. A., Olaniyan, A. D., Akinlade, A. O., &Akintunde, O. M. (2019). Access to and utilization of computer facilities among secondary school students in Ibadan metropolis, Oyo state, Nigeria. *International Journal of Emerging Technologies in Learning (iJET), 14(16), 167-175.*
23. Johnson, A., & Roberts, H. (2019). Effective Strategies for Improving Computer Literacy in Schools. *Educational Review, 71(5), 548-561*.
24. Kervin, L., Verenikina, I., & Rivera, R. (2022). *Connecting pedagogy and technology:* New developments in the digital age. Routledge.
25. Nwachukwu, C. C. (2019). Teachers' Perceptions and Challenges of Integrating Computer Education in Junior Secondary Schools in Enugu State, Nigeria. *Journal of Education and Practice, 11(11), 29-39.*
26. Ogungbamila, B., &Alabi, T. (2020). The Educational System of Nigeria: Issues and Trend. *Journal of Education and Practice, 7(16), 107-111.*
27. Ogunseye, A., &Iahad, N. (2019). Computer Literacy Skills of Secondary School Students in Southwestern Nigeria. *Journal of Education and Practice, 10(20), 42-49.*
28. Ogunsola, L. A. (2021). ICT and education: A discourse for sustainable development in sub-Saharan Africa. *International Journal of Education and Development using Information and Communication Technology (IJEDICT), 2(3), 49-64.*

*29.* Okon, E. (2018). Digital Literacy Skills: Imperative for National Development in Nigeria. *Journal of Information Engineering and Applications, 8(8), 19-24.*

*30.* lolube, N.P. (2019). Quality Assurance in Nigerian Education System: The Way Forward. *International Journal of Educational Administration and Policy Studies, 8(8), 120-128.*

*31.* Patel, S. (2022). Enhancing Computer Literacy Through Innovative Educational Practices. *Technology in Education Journal, 23(1), 75-89.*

*32.* Shelly, G. B., Vermaat, M., &Quasney, J. J. (2019). Discovering Computers. *Computer Science Journal (1st ed.). Cengage Learning.*

33. Smith, J., & Jones, L. (2019). A Comparative Study of Basic and Advanced Computer Skills

*34.* in Secondary Education. *Journal of Computer Education, 17(3), 150-162.*

35. Tanenbaum, A. S., &Bos, H. (2020). *Modern Operating Systems*: Computer and its impact in the society (4th ed.). Pearson Education Limited.

*36.* Uwaifo, V. O. (2018). Development of cognitive abilities among junior secondary school students in Nigeria. *Journal of Educational Development, 1(1), 45-56.*

*37.* Van Deursen, A. J., & Van Dijk, J. A. (2022). The digital divide shifts to differences in usage. *New Media & Society, 16(3), 507-526.*

38. Warschauer, M. (2023). *Technology and Social Inclusion:* Rethinking the Digital Divide, Technology and Society. John Wiley & Sons.