

The Availability, Utilisation and Impacts of Information and Communication Technology (ICT) In Teaching and Learning English as a Second Language in Secondary Schools in Borno State

Musa Abubakar

Department of English College of Education Waka-Biu Borno State

Received: 15.09.2025 / Accepted: 05.10.2025 / Published: 10.10.2025

*Corresponding Author: Musa Abubakar

DOI: [10.5281/zenodo.17311467](https://doi.org/10.5281/zenodo.17311467)

Abstract

This is a descriptive survey that analyzed the availability and utilization of Information and Communication Technology (ICT) tools by teachers and students in teaching and learning of English language in Secondary Schools in Borno State in (5) Local Government Areas of Bayo, Biu, Hawul, Kwaya-Kusar and Shani. The target population is all the secondary schools in the five selected LGAs. Ten secondary schools are selected via stratified random sampling technique. A total of 150 questionnaires (2 for administrators, 3 for teachers and 10 for students in each selected school) covering bio-data of teachers, administrators and students, availability, usage and impacts and challenges on the use of ICT tools in teaching and learning of English were distributed for the purpose of data collection. For data analysis, triangulation method utilizing quantitative and qualitative data to validate findings which is suitable for calculating frequencies and percentages and summarizing the availability and utilization of ICT tools/resources was employed. The results from the study indicate acute shortage of ICT tools, lack of teacher training on the use of ICT tools, lack of government funding and internet facilities among others that constitute the bane on the integration of ICT tools in teaching and learning English as second language in secondary schools in Borno State. The study finally recommended government intervention on supply, teacher training, proper funding and strong policy implementation to sustain the trend.

Keywords: ICT, availability, usage impacts, challenges teaching, learning, English.

Case Studies

Copyright © 2025 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0).

INTRODUCTION

The deployment and use of teaching aids to promote teaching and learning in Nigerian schools is not a recent development. The innovations brought about by technological advancement and introduced into the teaching and learning process are what is new. Globally, both educational practitioners and researchers have acknowledged that in response to the innovations brought about by technological breakthroughs, efforts have been made towards improvement of the application of teaching aids to the teaching and learning process. Akande (2005) pointed out that teaching aids are very essential in the delivery of any subject in the classroom. Akande defines instructional materials as things that assist the teacher to perform well in the classroom, thereby helping students to learn effectively.

Section 10 of the National Policy on Education highlighted the objectives of instructional materials as to; enhance teaching and improve the competence of teachers, make learning more meaningful to students, and develop the effective use of innovative materials in schools. This is to show that, the teacher alone cannot provide all necessary conditions for effective teaching and learning to occur. Thus, other supporting materials must be utilized. This is because students learn and assimilate better when most of the senses are appealed to by the instruction and the use of instructional materials provides the required sensory experiences needed by the learners for an effective and meaningful behavioral change. Ajayi et al equally observed that teaching aids promote learning by aiding the senses of seeing, hearing, and touching, they direct teaching to its goals, make learning interesting, arouse the interest of students and motivate them to learn.

In the Contemporary world, every sphere of life, including education is increasingly becoming ICT driven (B, A. Mbah 2016). There is need for both teachers and students to be acquainted with ICT in order to meet the challenges of the changing world. This paper therefore investigated the availability and utilization of ICT in the teaching and learning of English Language.

One of the innovations in the educational system is the introduction of several new teaching strategies at different levels of education.

English Language is one of the core subjects in Nigerian Secondary Schools. It is an official and second language in Nigeria, a country with many minority linguistic and ethnic groups. English Language is the language used for communication and instruction in most countries that use it as a second language. It is therefore important in the development of the students as individuals and as human resources for the wealth of a nation.

English Language has evolved and is still evolving to keep pace with many social, political, scientific and technological changes that have and are taking place in the recent time. The Nigerian child's training in the socio-cultural, scientific, and technological knowledge is largely through English Language.

Despite the crucial role that English Language plays in the development of the Nigerian child, West African School Certificate Examination Chief Examiner's reports in recent years show poor performance of students in senior secondary school certificate examination in English Language. Igbokwe and Asogwa (2010) stated that English Language studies in Nigeria has been on the decline for more than a decade and has come under systematic criticism over the years. Anizoba (2001) and Igbokwe (2007), Aduwa-Ogiegbaen and Iyamu (2018) lamented that students are no longer able to communicate in English and that many of them cannot compose essays nor are they able to write any type of letter. Teacher factor, students' factor, inappropriate teaching methods, insufficient instructional materials and many others have been identified as the paramount problems facing the teaching and learning of English Language (Okpala, N. V. 2023).

It is therefore imperative that Information and Communication Technology (ICT) be applied in the teaching and learning of English language to supplement and complement the conventional teaching methods and instructional materials (Robert Kozma 2003). Bambang Warsita (2008) views ICT as 'a means and infrastructure, including hardware, software, and useware, used for obtaining, sending, processing, interpreting, storing, organizing, and using data.

The impact of ICT is being felt and increasingly being pronounced worldwide in every sphere of life. ICT provides opportunity and possibility of enhancing the teaching and learning of a second language. Educational Systems all over the world are under increasing pressure to use ICT in the teaching-learning process in order to help students acquire the knowledge and skills they need in the 21st century (UNESCO, 2002). However, certain problems could pose challenges to effective utilization of ICT in teaching-learning process in secondary

schools. Some of the problems according to Ololube (2006) include: unavailability or inadequacy of ICT facilities, and incompetence in the use of ICTs in teaching learning- process. No matter the myriads of promises that ICT holds for effective teaching and learning its impact may not be felt in our schools except ICT facilities are adequately available and effectively utilized by the teachers and students. This paper therefore seeks to assess the availability and utilization of ICT facilities for the teaching and learning of English Language.

Education has been adjudged as that which aims at providing desirable outcome, and ensuring an ideal individual who is morally, physically, mentally, socially and culturally balanced. (Akpomi & Nwamadi, 2020). The benefits of education are enormous, thus individuals and government mobilize resources to ensure a formidable educational system that will not only provide the manpower needs of society but ensure that individuals are in tune with international best practices.

With the global growing needs and interests in the fields of second language acquisition via effective teaching and learning methods, the quest for optimization in the strategies or methodologies employed by teachers in teaching and learning English as a second language became imperative. This led to the global shift in the integration of Information and Communication Technology (ICT) tools in the education curriculum (M. S. Mera 2023). It is seen as a basic and necessary tool in enhancing teaching and learning to cater for the declining standards in the teaching, learning and usage of English as a second language in Nigeria as well as in many countries where English is a second and foreign language. (Igbokwe & Asogwa 2010).

Many researchers and writers have documented a lot of literature on the need and use of Information and Communication Technology (ICT) in teaching and learning in various fields of human endeavours for global acceptance. The 21st century posts the demand for all including ELT teachers to be technological up-to-date. Many scholars like Gilakjani (2013), Buabeng (2012) and Koehler et al (2013) have written on the need for the integration of ICTs and teachers knowledge as a yardstick for any meaningful achievements. For the purpose of this study; some of them are going to be reviewed.

The United Nations Development Program (UNDP 2003) as cited in N. Shalini J. & R. Vijay Kumar (2016) sees ICTs as basically information handling tools- a varied set of goods, applications and services that are used to produce, store, process, distribute and exchange information. According to UNDP, these include the 'old' or traditional ICTs like radio, television and telephones and the 'new' or modern ICTs like computers, satellites, wireless technology and the internet that work together to form our 'networked world'.

N. Shalini Jayanthi and R, Vijay Kumar (2016) on the use of ICT tools in teaching and learning English as a second language poses the question on why the emphasis on teaching English in contrast with other languages. The sufficed answer according to them is that English is the most wide spread language and that there are more than 350,000,000 native speakers and more than 400,000,000 second language users. They went to identify



the need for the integration ICT in teaching and learning English with the following advantages/impacts: availability of materials, positive students’ attitudes to ICT, autonomy, authenticity of knowledge, help to teachers, students’ centered and self-assessment tools.

Njwe (2016) investigated the use ICT tools and English language teaching and learning in easing knowledge acquisition and the improvement/mastering English language in secondary schools, with emphasis on final year students in Cameroon. His results indicated that ICT tools are not in use the schools for the purpose of enhancing teaching and learning of English in the Anglophone region. The work finally recommended the introduction and integration of ICT tools to facilitate effective teaching and learning of English language in the country.

Milhiretaab et al (2022) conducted research on the effects of training on ICT-assisted English teaching on secondary school teachers’ knowledge, skills and practice of using ICT tools for teaching English in Ethiopia via availability sampling with the objectives aimed at effect of training in ICT-supported English language teaching and the impacts on the English language teachers using twenty (20) teachers. The results showed that teachers’ knowledge and skills have a significant improvement from the training in ICT-assisted English language teaching and recommended teacher training in information technology-supported English language teaching.

Akpabio and Ogiriki (2017) examined the availability, the teachers’ knowledge and the extent of use of Information and Communication Technology ICT in their lessons in senior secondary schools in Akwa Ibom State of Nigeria with fifty-two English language teachers from twenty-eight randomly selected schools. Two research questions on the availability and competence of the teachers in computer operational skills in the

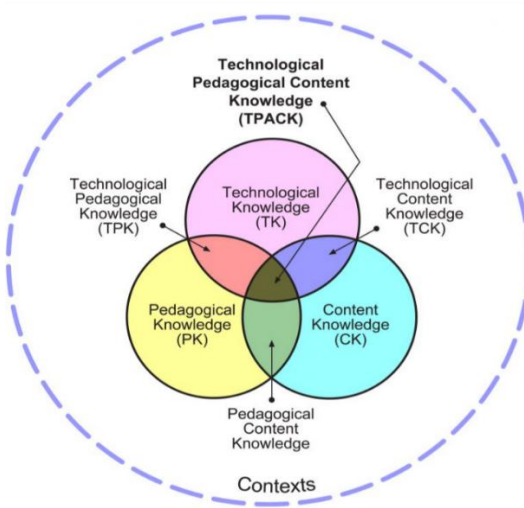
use of ICT resources. The findings indicate that there are insufficient supplies of ICT tools like computer, multi-media, internet and language laboratories and teachers agreed that the ICT tools are under-supplied in Uyo LGA of Akwa Ibom State. The work recommended that governments at federal and state levels, schools’ administrators to ensure that ICT policy statements are ‘translated’ into reality.

Theoretical Framework

Punya Mishra and Mathew J. Koehler’s TPACK theory which stands for Technological Pedagogical Content Knowledge was adopted as framework that explains the knowledge and skills needed by teachers for a successful and effective integration of technology in teaching and learning. This framework hinges on the intersection of three different components (knowledge):

- i. Teachers’ knowledge or understanding of the subject-matter they teach (CK: content knowledge).
- ii. Teachers’ knowledge or understanding of the teaching methods, classroom management and assessment (PK: pedagogical knowledge)
- iii. Teachers’ knowledge or understanding of technological tools (TK: technological knowledge) and their applications.

Based on the above analysis, the Technological Pedagogical Content Knowledge (TPACK) by Punya Mishra and Matthew J. Koehler in 2006 is suitable for this research because it improves teaching practices, enhances students’ learning and professional development. See diagram below:



Materials and Methods

A mixed-method design which relies on both quantitative and qualitative approaches that allows for a detailed and comprehensive understanding through the collection of numerical data and sound or reach contextual knowledge (Creswell 2004, Oye & Rahim 2013) was adopted for data collection in the ten (10) schools (two from each LGA). Fifteen questionnaires for each school, five (5) for administrators and teachers, ten (10) for students. A total of one-hundred and fifty questionnaires were distributed and collected for the data collection.

The corpus of the study was generated from administrators (Principals/Vice Principals) teachers and students of the selected schools in the study area only containing responses from questions covering bio-data, availability, utilization and impacts/effects and challenges in the use of Information and Communication Technology (ICT) tools in teaching and learning of English as a second language for analysis.

Probability sampling technique via stratified Sampling was employed (Creswell 2014, Bryman 2016, Kothari 2004, Gravetter et. al 2018). This technique entails the classification of the population into strata (sub-groups) based on the following characteristics:

- i. Location of school: urban or rural.
- ii. Type of school: public or private.
- iii. Region of school: Local Government Areas.

Samples were selected randomly from each strata or sub-group.

Triangulation method combining both quantitative and qualitative data to validate findings which is suitable for calculating frequencies and percentages and summarizing the availability and utilization and challenges in the use of ICT tools/resources in teaching and learning (Dezin, N. K. 2017, Miles, and Huberman & Saldana 2014) was utilized. Based on this, Convergence, Complementarities and Divergence results can be obtained.

Results and Discussion

The researcher presents, analyzes, and discusses findings on the availability and utilization of ICT tools in teaching English as a second language in ten secondary schools drawn from five selected Local Government Areas (LGAs) of Borno State. The data collected are presented in tables, followed with discussions. The study revealed an acute shortage or total absence of ICT facilities, which directly affects teachers' capacity to integrate technology in teaching.

Table 1: Schools and Population of the Study:

S/N	School	Type	Students	Teachers	Administrators
1	G Senior Science Secondary School Biu	Public	10	3	2
2	Godiya Private School Biu	Private	10	3	2
3	Community Day Secondary School Shaffa	Public	10	3	2
4	Government Day Secondary School Marama	Public	10	3	2
5	Government Secondary School Kwaya Kusar	Public	10	3	2
6	Dthlakwa Academy Wandali	Private	10	3	2
7	Government Secondary School Shani	Public	10	3	2
8	Mailafiya Academy Shani	Private	10	3	2
9	Government Secondary School Wuyo	Public	10	3	2
10	Government Day Secondary School Briyel	Public	10	3	2

Source: fieldwork 2025

Table 2: Availability of ICT Tools in Selected Schools (N = 10 schools)

S/N	ICT Tools	Available (schs)	% Available	Not Available (Schs)	% Not Available
1	Desktop Comp.	2	20%	8	80%
2	Laptops	1	10%	9	90%
3	Projectors	1	10%	9	90%
4	Printers/Scanners	2	20%	8	80%
5	Interactive Boards	0	0%	10	100%
6	Internet Access	1	10%	9	90%
7	Language Software	0	0%	10	100%

Source: fieldwork 2025

Table 2 above indicates an acute shortage/absence of ICT tools across the schools. The ration indicate only two schools have desktop computers (20%), one school with a laptop (10%), one

school with project (10%), two schools with printers/scanners printers (20%), none of the schools has an interactive board (0%), one school with internet access with no subscription



(10%) and no single school with any language software. Advanced ICT resources like interactive boards and language learning software are completely absent (0%).

This presentation indicates acute shortage of ICT tools which point to the fact that the ICT integration into English language

teaching is nearly not feasible. The chalk-and-talk method still dominates most classrooms in the schools. This creates a huge gap in the effectiveness of technology-driven second language instruction.

Table 3: Utilisation of ICT Tools by Teachers

Frequency of ICT Utilisation by Teachers in class (N = 30 teachers)

S/N	ICT Tools	Always (%)	Sometimes%	Rarely	Never %	
1	Desktop Computers	0 (0%)	0 (0%)	0 (0%)	30 (100%)	
2	Laptops	0 (0%)	0 (0%)	0 (0%)	30 (100%)	
3	Projectors	0 (0%)	0 (0%)	0 (0%)	30 (100%)	
4	Internet Access	0 (0%)	0 (0%)	0 (0%)	30 (100%)	
5	Language Software	0 (0%)	0 (0%)	0 (0%)	30 (100%)	

Source: fieldwork 2025

Table 3 above summed up the frequency of use of ICT tools in English language teaching in the schools. All of the teachers reported that they “never” use any ICT tools in the classroom to facilitate teaching and learning even in the school with a single projector (80%), internet (80%), and language software (96%). The available computers in some schools are largely used for administrative rather than pedagogical purposes.

This tally with the indicators of acute shortage or absence of ICT tools in the schools—teachers cannot use what is not available. Even where minimal resources exist, teachers lack access, proper training or infrastructure support to fully utilize the ICT tools to facilitate teaching and learning.

Table 4: Major Challenges Reported by Teachers (N = 50, Multiple responses allowed)

S/N	Challenges	frequency	percentage
1	Acute shortage of ICT facilities	50	100%
2	Inadequate Teacher Training	50	100%
3	Lack of Government Funding	50	100%
4	Poor/lack of Internet Connectivity	50	100%
5	Irregular Power Supply	50	100%
6	High Maintenance Cost	50	100%

Source: fieldwork 2025

Table 4 above captures the most pressing challenges bordering on acute shortage of ICT tools, inadequate teacher training, lack of government funding, poor /lack of internet connectivity where few tools are available, erratic power supply and high cost of maintenance even if they are available which are agreed upon by all the teachers and administrators which stood at 100% each.

The challenges identified above indicate general or systemic neglect of ICT development in the educational sector across these LGAs. The integration of ICT tools in teaching and learning English as a second language in the schools will remain a mirage or a far-fetched dream without reliable infrastructure, funding, and training.

Table 5: ICT tools used by students in learning.

S/N	ICT Tools	Always (%)	Sometimes%	Rarely	Never %	Total %
1	Desktop Computers	0 (0%)	10 (10%)	15 (0%)	75 (75%)	100%
2	Laptops	0 (0%)	5 (5%)	10 (10%)	85 (85%)	100%



3	Social Media platforms	70(70%)	15(15%)	10 (0%)	5 (5%)	100%
---	------------------------	---------	---------	---------	--------	------

Source: fieldwork 2025

Table 5 above mirrored students' access to ICT tools in learning. The data indicate high rate of access to ICT tools in learning via social platforms using android phones which stood at 70%. Most of the students visit social media platforms like facebook, whatsapp and varied types of AI platforms. The data also indicates that desktop computers and laptops are out of reach for the students.

Summary of Findings

From the data presented and analyzed, ICT tools/facilities are grossly inadequate/non-existence advanced tools in the surveyed schools in the five LGA's of Borno State. On the aspect of teachers' utilization of ICT tools in classrooms, the result is extremely low with many indicating 'never' on the use if ICT tools in teaching. The challenges being faced by both teachers and students in the integration of ICT tools in teaching and learning boarders on insufficient ICT tools or resources, lack of teacher training, inadequate government funding, erratic power supply, high of maintenance and poor internet connection among others.

Conclusion and Recommendations

This study indicate that multimedia media resources/platforms can greatly enhancing teaching and learning of English as a second language if the challenges of acute shortage, inadequate teacher training and proper funding among others as identified or highlighted are taken into considerations. The following recommendations can be made based on the results of the study:

1. There is the need for government to prioritize teacher training and professional development which provide regular training workshop on capacity building, pedagogical focus and continuous support.
2. Government should focus on infrastructural development through an increased availability of ICT resources in schools, reliable electricity supply and internet connectivity or accessibility.
3. Implementation of context-sensitive strategies like plans for maintenance and sustainability of ICT available or needed.
4. Integration of ICT into curriculum to support English language curriculum goals with special attention to the four basic language skills of listening, speaking, reading and writing. This must also be followed with the development of relevant English language learning materials or resources.
5. Partnership and collaboration with non-governmental agencies and bodies to boast supply and support in integrating ICT in teaching and learning.

6. Ensuring accessibility of ICT resources to all students by considering needs of the nature and diversities of learners.

Acknowledgment this research work is sponsored by Tertiary Education Trust Fund (TETFUND).

REFERENCES

- Aduwa-Ogiegbaen and Iyamu, S. E. (2018). *Factors Affecting Quality of Language Teaching and Learning in Secondary Schools in Nigeria*. College Student Journal.
- http://findarticles.com/p/articleslmi-mofcr/s_340/ainll67.
- A Gilakjani (2013). *Factors Contributing to Teachers' Use of Computer Technology in the Classroom*. Universal Journal of Educational Research, Vol. 1, no. 3, pp. 262-267.
- A Buabeng (2012). *An Exploration of Teachers' Skills, Perceptions and Practices of ICT in Teaching and Learning in the Ghanaian Second-Cycle Schools*. Contemporary Educational Technology, Vol. 3, no. 1, pp. 36-49.
- Akande , S. O. (2005). *Social Studies: A Book on Methodology*, Ibadan: Evans Brothers.
- Akpabio, M. E. and Ogiriki, I. B. (2017). *Teachers Use of Information and Communication Technology (ICT) in Teaching English Language in Senior Secondary School in Akwa Ibom State*. Equatorial Journal of Education and Curriculum Studies, 2017; 2,(2): 28:33.
- ISSN Online: 0184-7937.
- Bambang Warsita (2008). *Teknologi Pembelajaran: Landasan & Aplikasinya (Learning Technology: Foundation and Applications)*. ISSN: 978-979-518-955-8. Rineka Cipta Jakarta
- B. A. Mbah (2016). *An Assessment and Utilization of Information and Communication Technology (ICT) for the Teaching and Learning of English Language*. Developing Country Studies ISSN 2224-607X ISSN 2225-0565 (Online), Vol 6, No. 11.
- Bryman, A. (2016). *Social Research Methods*. Oxford University Press.



Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods*

Approaches. Sage Publication.

Denzin, N. K. (2017). *The Research Act: A Theoretical Introduction to Sociological Methods*.

Routeledge.

Federal Republic of Nigeria (2014). *National Policy on Education*, Abuja, NERDC.

Gravetter, F. J., & Forzano, L. B. (2018). *Research Methods for the Behavioral Sciences*.

Cengage Learning.

Igbokwe, U. C, and Asogwa, U. (2010). *English Language Teachers Self Efficacy in the use of*

Computers, Nigerian Journal of Curriculum Studies, 17(2), 137-148.

Jayanthi, N. S. & Kumar R.V. (2016). *Use of ICTE in English Language Teaching and Learning*,

Journal of English Language and Literature (JOELL). An International Peer Reviewed Journal. Vol.3, Spl Issue2

Kothari, C. R. (2004). *Research Methodology: Methods and Techniques*. New Age International.

M. Koehler, P. Mishara, M. Akcaoglu, and J. M. Rosenberg (2013). *The Technological*

Pedagogical Content Knowledge Framework for Teachers and Teacher Education,

Commonwealth Educational Media Centre for Asia (CEMCA).

Mihireteab Abraham, Zeleke Arficho and Tesfaye Hbtemariam (2022). *Effects of Training in*

ICT- Assisted English Language Teachers' Knowledge, Skills and Practice of Using ICT

Tools for Teaching English. Hidawi Education Research International Volume 2022,Article

ID 6233407, 10.

Miles, M. B., Huberman, A. M., & Saldana, J. (2024). *Qualitative Data Analysis: A Methods*

Sourcebook. Sage Publications.

Muhammad Saratu Mera (2023). *Effects of Teaching Aids on Students' Academic Performance*

in English Language in Selected Public Senior Secondary Schools in Kano Metropolis: An

Implication for Policy Making. Tahdzib Al-Akhlaq, Jurnal Pendidikan Islam 2721-2521.

Universitas Islam As-Syafi'iyah.

Njwe Eyovi Nee Amah Ntonglieh (2016). *ICT and English Language Teaching and Learning in*

Cameroon. Global Journal of Human Social Science: G Linguistics & Education. Volume

16 Issue 6 Version 10. Global Journal Incorporation (USA).

Okpla Nzube Vivian (2023). *Problems of Teaching and Learning of English Language Among*

Secondary Schools in Nigeria: An Implication for Post-Covid-19 Sustainable Development.

Sapientia Foundation Journal of Education, Sciences and Gender Studies (SF-JESGS).

ISSN:2734-2522. (Print): 2734-2514 (online).

Oye, N. D., & Rahim, N. A. (2013). *Integration of ICT in Teaching and Learning: A Review of*

Literature. Journal of Education and Practice, 4(10), 78-87.

Robert B. Kozma (2003). *Technology, Innovation, and Educational Changes: A Global*

Perspectives. United Nations Educational, Scientific and Cultural Organization 7, place de

Fontenoy, 75352 Paris 07 SP, France.

UNESCO, UNESCO (2018) *ICT Competency Framework for Teachers Version 3*, UNESCO,

France.

UNESCO (2002). *Information and Communication Technology in Education: A Curriculum for*

Schools and Programmes for Teacher Development. Paris.

UNDP, (2003). *Kenya Human Development Report: Participatory Governance for Human*

Development.

