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INFORMATION AND COMMUNICATION TECHNOLOGIES AND IGBO STUDIES IN TERTIARY INSTITUTIONS IN NIGERIA: ISSUES AND CHALLENGES

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ABSTRACT.

*Purpose***:** This paper identifies ICT tools and programmes that are relevant to Igbo studies in tertiary institutions in the South East Nigeria; it examines the opportunities and challenges in applying these technologies in the enhancement and promotion of teaching and learning Igbo in Nigeria universities.

Methodology/Approach: Questionnaire, interviews, and observations were used in collecting data for this study. The population was 118, comprising 31 lecturers and 87 students randomly drawn from the Department of Igbo Studies in six selected tertiary institutions in the South East Nigeria**.**

Findings: Flash drive, video camera, electronic white board, cassette recorder and tapes, television, and a number of ICTs tools and programmes were considered relevant to Igbo studies in tertiary institutions in the South East Nigeria. These technologies enhance e-teaching, e-learning and distance education, and can simultaneously involve large class of Igbo learners in different locations. It reduces abstract concepts and provides concrete realistic learning experiences. Poor funding of tertiary institutions, low human capital development, erratic power supply, lack of interest in studying and carrying out research in Igbo by Igbo scholars were some of the challenges**.**

Implications: Positive attitudinal change toward Igbo language studies using the new information technologies by both Igbo lecturers and scholars is inevitable. Adequate provision of ICT facilities and enabling environment for their utilization in Igbo studies is very imperative in this 21st century

Value/Originality: This paper exposed the challenges facing lecturers and students of Igbo language in Nigerian universities in the contemporary global electronic and education environment. It added value and contributed immensely to the use of modern technologies researches in Igbo language research and studies.

Keywords: Nigeria, Igbo, Information technology, South East Nigeria, Education, and Communication.

Type of paper: Empirical study

INTRODUCTION

Igbo is one of the indigenous Nigeria languages that is spoken by over 16million (16,381,729) people in the South East Nigeria (**Federal Republic of Nigeria, 2007**). Igbo language is the supreme expression of the cultural heritage of the people of the South East Nigeria. Without the language, it would be difficult to talk about cultural revival, research, teaching and learning of Igbo in schools or in the world. It is the language of tradition and cultural communication in the markets, farms, village meetings and day-to-day transactions outside the offices, in the churches, public gathering, and in Igbo social and political arena. It is learned at home, schools, and colleges and in tertiary institutions, but today it is being feared of extinction due to the inversion of Western culture and the attitudes of Ndiigbo towards the language. In teaching and learning Igbo in schools today, both the teacher and the learner are no longer interested in the methodologies that would stress them much. What they need is fast, accuracy and transparency in getting information and information and communication technologies is the best bet for Igbo studies.

By Igbo studies, we mean the process of acquiring knowledge and proficiency in reading, writing, speaking, teaching, and researching in Igbo. However, the origin of the word**, *Igbo*** is not known (**Oraka, 1982).** Nevertheless, the word is used in Nigeria today and in this paper to refer to four areas of meanings:

- ✓ as a geographical or geopolitical territory in Nigeria – South East Nigeria;
- ✓ as a people inhabiting that geographical area - Ndiigbo/ Igbo people;
- ✓ as a language spoken by the people – Igbo language;
- ✓ and as a subject or course of study in schools and tertiary institutions – Department of Igbo or Igbo studies.

Igbo studies has developed through five remarkable stages and entered the sixth today. Those stages are:

- ***The period of collection of Igbo wordlist, 1766-1767***. The collection of the wordlist started in Germany and Pennsylvania by G.C.A. Oldendorp, a German Missionary of the Monravian Brethren who took interest in organizing and compiling the languages of the

African slaves he came in contact with. The wordlist, which was published in 1777 "contains thirteen (13) Igbo nouns and two sentences translated into Igbo" (Nwadike, 2008). This appeared to be the first documented records where Igbo and some other languages in Southern Nigeria like Efik, Kalabari, Ibibio, etc were made.

- *The period of translation* – At this stage Igbo language was inter-translated with foreign languages and literature. The Holy Bible and other prayer books in foreign languages and literature were translated into Igbo as a way of bringing the words of God near to the people. To facilitate the project, a translation bureau was set up at Umuahia between 1930 and 1940 by R. F. G. Adams where translations into Igbo of many materials were carried out.

- *Grammar period* **–** This age started with writing of Igbo grammar books for use in schools and colleges. The first Igbo primer to be written was by S. A. Crowther in 1875, followed by the ones written by F W Smart & W.E.L Carew; the *'Oku Ibo' by* J. F. Schon, and the *Elementary Grammar of Igbo* by J. Spencer (revised by T.J. Dennis), and other grammar books that laid the foundation for modern Igbo grammar texts.

- *The standard Igbo period, 1972-2000 AD* - a period that was characterized by setting up of a committee in the South East known as the *Society for the Promotion of Igbo Language and Culture,* the inclusion and compulsory study of Igbo language as a subject of study in schools, colleges and for public examination in the South East Nigeria,

- *The standardization* and commencement of Igbo as a course of study and research in tertiary institutions in Nigeria. That was when tertiary institutions in Nigeria (Universities of Ibadan and Nsukka, and the then Alvan Ikoku (now Federal) College of Education, Owerri) included it in their curriculum as a course of study, research, and degree awarding certificate. This period also marked a serious effort in the writing, publishing, sale, and collection of Igbo books in schools and university libraries**.**

- *The contemporary period*, 2000- present is regarded in this study as the 5th stage. It is the emerging period which is characterized by the use of Information and Communication Technologies (ICTs) to enhance the range and quality of speaking, writing, teaching, learning, and researching in Igbo. For example, the internet and the web now provide much wider access to variety of information making scholars to transcend to the era of open learning and virtual environments. Learning can be done at any time and place

making us to move from the traditional method of teaching and learning Igbo language as a subject in schools to web based or e-learning.

- *Electronic* **Igbo learning** is an instructional content or learning experiences enabled by information technology which may include web-based Igbo learning, computer-based Igbo learning, virtual Igbo classrooms, and Igbo digital collaborations. It will facilitate; greater Igbo students' engagement and participation than the traditional one way teacher talk, and students listen method; the provision of greater opportunities for active learning; greater access to globalization of learning with the possibility of online lectures or joint classes with students in remote locations; enhancement of face-to- face sessions and improved communication with students and peer groups.

REVIEW OF RELATED LITERATURE

Igbo, Information and Communication Technologies, and Pedagogy in Nigeria

Afigbo (1972); Obi (1975); Emenanjo (1981); Oraka (1982); Ilechukwu (2006); Omeje, (2008); and Nwadike (2008) observed that Igbo studies started and passed through thorny roads and setbacks before it migrated into the present era. For example, one of the major problems was that the wordlist was from the beginning beset with the problem of inconsistent orthography and therefore made publishing a comprehensive and reliable Igbo dictionary very difficult. When Adams and Ida C. Ward initiated in an effort to resolve the problem of orthography and in 1929 introduced a new Igbo orthography which generated a lot of controversy.

Obi (1975) cited Kay Williamson to have noted that the delay in producing Igbo dictionary include dialectical variation in Igbo, lack of a powerful Igbo personality to support and implement a standard Igbo language learning, and the disputed orthography. He said that these accounted for the background of poor advancement of Igbo literature. Obi regretted that both Igbo language and their literature could have benefited much through translation, but was not followed up to the present period in Igbo studies. This is because very little attention was paid to the translation in the modern period in spite of the fact that translation is a means of enriching Igbo literature and inspiring more Igbo readers and consequently encouraging more serious approach to the study of Igbo in schools.

Another setbacks include Igbo dialectical variations, the negative impressions held by the colonial imperialist scholars that Igbo language was difficult to study because it "is a tone language that depends more on the distinction or differences of sound for the meaning of its words, and for the construction of its sentences" (**Afigbo, 1972**). As many Igbo scholars acquired foreign languages and their culture, there was lack of competent and trained people to handle the job of teaching the language in schools; there was lack of schools and serious disregard and respect for the language by the people. For example, many Igbo parents, unlike their counterparts in Hausa in the Northern or Yoruba in the Western Nigeria, preferred their children to have mastery of English language at the earliest possible opportunity, instead of Igbo language. This problem had its genesis in 1882 when the obnoxious British Education Ordinance made the use of English language as a medium of instruction in schools (**Nwadike, 2008**). **Albert (2011)** commenting in support of this ugly development said "many parents (in Nigeria) now introduce English language to their children earlier than they introduce their native languages because it is considered to be a source of pride to your (their) children to be able to speak in English language". He regretted that we got it wrong when we accepted western values without actually knowing why we did it and when we encountered western civilization, we were not able to defend our own culture thinking that we were experiencing something superior, and today we are overwhelmed by that superiority. **Oni (2011)** in his criticism on this western erosion of African culture said, "The painful reality is that some Nigerian languages are going into extinction…shockingly, some Nigerian parents still believe that communicating with children in a foreign language is a mark of elitism"

The repeated failure of early works in Igbo language was attributed to lack of trained people in the language to handle the job of teaching the language, lack of dynamic leader in Igbo who would pioneer genuine interest in the progress of the language, and the uncooperative attitudes of the Igbo people themselves. Others include poor regards and remunerations for graduates of Igbo certificate holders which consequently relegate them into inferiority complexes, lowers the population of students of Igbo studies in tertiary institutions, creates shortage of Igbo lecturers, researchers, writers, publishers, textbooks, and therefore lack of interest in reading Igbo literature. The contemporary problem is the challenges imported by the new information technologies into the teaching and learning field.

However, there were some writers whose work had made great contribution to Igbo language development. One of them was the book titled *Introduction to Igbo Study* written by Miss Ida Ward in 1936. It was one of the best works on Igbo grammar and today it has served as one of the principal source of references for most modern studies on Igbo. The book which was set up to analyze Igbo phonology and Igbo morphology achieved wide distribution and readership. Another great contribution to the development and study of Igbo language was the establishment of tertiary institutions, the Universities of Ibadan and Nsukka, and the creation and commencement of Igbo language studies in the Department of Linguistics and African/Nigeria Languages. The collection and preservation of Igbo books and literature in the Kenneth Dike Library University of Ibadan, and the Nnamdi Azikiwe Library in the University of Nigeria Nsukka, were another great service to early development of Igbo studies in Nigeria.

Today information technology is rapidly changing the way learning and teaching occurs. **Liverpool**'s work (**2002**) on the introduction of ICT in education noted that technology has included ICT as a subject of study; as assisting tool for collecting data and writing assignments by students; for communicating and conducting research; as a medium for teaching and learning; as a tool for organization and management in schools, (examples is the use of ICTs to handle school records and other activities).

Slavin (2006) identified three general types of technology applications in education namely: a.) lecturers use ICTs in the classroom teaching to plan instructions and present contents to their classes, b.) students use technology to explore, practices, prepare paper for presentation and conduct researches; c.) teachers and administrators use ICTs to accomplish administrative tasks associated with their profession.

Davitt (2005) discussed how ICTs can be used in accelerated teaching and learning and said that it lowers threats and provides second and third chances of learning; allows teachers to create, store and deploy multimedia resources and activities to work; provides different points of access for learners with different learning styles; and provides new ways of making connections.

On how ICT was used by lecturers for educational instructions **Tapscott and Caston (1993), Grabe & Grabe (1998), Zhao & Frank (2003), Goldbeg (2003), Slavin (2006)** demonstrated

that word processors, electronic spreadsheets and presentation software were the most common electronic technologies that teachers use for numerous teaching tasks. They have replaced typewriters and encyclopedias, and become the most reliable technologies used by students today for a wide variety of data presentation and storage purposes.

Nworgu (2008) carried out a study on the strategies for enhancing the effectiveness of using computer assisted instruction (CAI) in teaching and learning biology in the information age and found that CAI has the potential to encourage students-students interactions, enhance individual learning and peer group discussion, and increases the time and speed with which students are involved in instructional activities, among others

Mbakwem (2008) investigated on the undergraduates' and lecturers' needs for information in the electronic age and discovered that the new technologies have caused the walls of learning space to shrink, making learners free to explore sources of information from outside their own institutions, and thereby replaced the pervasive face- to- face instruction and places the learner at the center stage during teaching learning episode.

Olibie & Agu (2008) evaluated the virtual learning competences among university lecturers in the South East Nigeria and found that majority of them lacked virtual learning skills and are lagging behind in optimizing the potentials of ICTs in the universities. **Onuka & Uko (2008)** investigated on the constraints to the utilization of ICTs by farmers in Eastern Nigeria. They found that scarcity of ICT experts, inadequate telephone lines, lack of adequate funds, use of inappropriate communication channel and irregular or absence of public power supply, impose serious constraints on the application of ICTs to the farmers.

Statement of the Problem

 Igbo language is the expression and identity of the people of the South East Nigeria and there is no reason why Ndiigbo should not preserve and promote their mother tongue. The mother tongue is the most effective vehicle for cultural transmission. A lot of things, ideas, philosophy which the Igbo people cherish would certainly perish if their language is allowed to disappear and if they stop expressing and codifying those ideas and knowledge. Today there is a paradigm shift in learning method and for that within the education system, there are evidences of change in

teaching and learning method. Classrooms and learning materials are no longer situated in one physical environment, but on virtual, online cyberspace. "Online availability of educational materials or digital resources has opened up new avenues for teaching and learning" (**Siddiqui, 2004**).

The declining number of scholars yeaning to study Igbo language and conduct research in Igbo demands that the approach for the teaching and learning of the language in tertiary institutions in Nigeria needed to be re-examined. Evidences of the positive impacts of information and communication technology in the promotion of teaching and learning English, French, German, Swahili, Yoruba, Hausa and other languages in tertiary institutions abound, and Igbo language, the supreme identity of the people of the South East Nigeria must not be by-passed. The contending issue or question which this paper wish to address is whether there are ICTs tools and programmes that could be applied in teaching and learning Igbo in tertiary institutions in the South East Nigeria; how these equipment can be used; the benefits and drawbacks.

Significance of the Research

This study is imperative because it would equip Igbo lecturers and students on the possibility of integrating information technology in their studies, give them job opportunity outside their region and make them to stamp their feet in the electronic environment.

The result of this study will task Igbo education planners on the inevitability of reviewing their curriculum and make ICT an inclusive vehicle in Igbo studies in schools.

Studying Igbo with information technology will not only give more recognition of the language to the outside world, it will restore more prestige to the people and their culture.

It will shift the learning paradigm of the subject from traditional method to a more challenging and interactive environment, thereby make scholars to be proactive in the learning process.

Objectives of the Study

The objectives of this study are therefore to:

1. Examine the ICTs tools and programmes that are suitable for teaching and learning Igbo language in schools in Nigeria.

2. Discuss how these hardware and software can be used or applied in teaching and learning Igbo language in tertiary institutions in Nigeria.

3. Look at the problems that may be encountered while using the new technologies in teaching and learning Igbo language and culture in Nigeria universities;

4. And suggest possible ways that will minimize the problems.

Research Questions

This study is guided by the following questions:

i. What kinds of ICT tools and programmes are suitable for studying Igbo language in tertiary institutions in Nigeria?

ii. In what areas of teaching and learning Igbo language in schools can these technologies be applied?

iii. What are the problems besetting the application of these modern technologies in teaching and learning Igbo language in tertiary institutions in the South East Nigeria?

iv. What are the various ways of minimizing these challenges?

METHODOLOGY

The design of this study was descriptive research. Questionnaire, interviews, and observation were used to collect data for this study. Oral interviews were conducted with the Heads of Department of Igbo, Education, and Linguistics in the selected institutions. The researchers observed with keen interest some of the ICT tools and facilities that were available in the institutions and how they can be applied in teaching and learning in schools. Due to the smallness of the population, the researchers purposely sampled all the lecturers and students of Igbo studies in the institutions studied. One hundred and thirty (130) sets of the questionnaire were administered in the Igbo/Education/Linguistics Departments of the six tertiary institutions in the South East Nigeria purposely selected for this study as follows: two federal universities, two state universities, and two colleges of education. The questionnaires were administered and collected on different occasions as shown in table 1 below.

Table 1: The Distribution and Total Return of Questionnaire.

S/N	Institutions	Students	Lecturers	Total
1	University of Nigeria, Nsukka (UNN)	21	9	30
2	Nnamdi Azikiwe University, Awka(NAUA)	11	5	16
3	Imo State University, Owerri (IMUO)	15	7	22
4	Ebony State University, Abakaliki (ESUA)	10	3	13
5	Alvan Ikoku Federal College of Education, Owerri.	13	3	16
6	Federal College of Education, Eha-Amufu(FCEE)	17	4	21
	Total	**87**	**31**	**118**

The working population of the study was 118, comprising 87 students and 31 lecturers of the Department of Igbo Studies who correctly completed and returned their questionnaire. To analyze the data, item mean, criterion mean (2.50), frequency tables and simple percentages were used as benchmark for judgment. The decision was that if the criterion mean is greater than the item mean (x) the statement is rejected, if on the contrary, the statement is accepted; if the percentage score of a tool/programme is 50 and above, the object is accepted, if otherwise the object in rejected.

FINDINGS AND DISCUSSION

This article looked at some ICT tools or equipment and programmes that are relevant to the improvement and promotion of Igbo studies in tertiary institutions in the South East Nigeria; the techniques or opportunities for applying these modern technologies in the promotion and increased interest in Igbo studies in the South East Nigeria, and the challenges ahead. To carry out this investigation, respondents were asked to tick good (-/) against some ICT tools or equipment which they considered relevant to the teaching and learning of Igbo language and culture in their schools in this 21st century. Their responses were presented in table below.

Table 2: ICT Tools and Programmes for studying Igbo in tertiary institutions in the South East Nigeria

S/N	ICT Tools & Programmes	Respondents	% of Responses
1	Cassettes and Tape recorders	94	79.7
2	Chalk and duster	54	45.8
3	Desk top, and Laptop computers	81	68.6
4	Digital and video cameras.	67	56.8
5	Electronic white board.	65	55.1
6	CD-ROM, flash drive, & floppy.	98	83.1
7	Photocopier, printer, and scanner,	93	78.8
8	Television & Satellite.	112	94.9
9	Radio & wireless phone.	110	93.2
10	Blackboard and white board	56	47.5
11	The Internet & www.	101	85.6
12	Word Processor and PowerPoint presentation	73	61.9
13	Electronic Spread Sheet/excel.	78	66.1

A greater number of respondents agreed that many of ICT tools and programmes listed in the table above were relevant for improving Igbo studies in tertiary institutions in the South East Nigeria. Three conventional or traditional teaching aids were rated low as being no longer relevant in this century for teaching Igbo. They were chalk- duster (54; 45.8) and blackboard (56; 47.5).

APPLICATIONS & OPPORTUNITIES FOR USING ICTS IN IGBO STUDIES

Respondents were given Very Correct (VC), Correct(C), Incorrect (I), and Very Incorrect (VI) as options, and asked to use them to indicate their levels of rating on the usefulness of ICT tools and programmes listed in the teaching and learning Igbo in tertiary institutions. Table 5 below shows their response.

Table 3: Mean score of Applications and opportunities for using cassettes, radio, Gsm, satellite, and television in Igbo Studies.

S/N	Opportunities	Mean (x)	Decision
1	Radio, GSM, and television are used in sending and receiving on Igbo studies.	2.76	Accept
2	To make announcement or broadcast in Igbo language	2.67	✓
3	For conducting education radio and TV programmes, Instructional TV	2.71	✓
4	Promotion of e-Igbo learning or distance education.	2.63	✓
5	Organize studies and teaching skills in Igbo.	2.55	✓
6	Field work, data collection and presentation	2.62	✓
7	Teaching large class and organize lectures in Igbo.	2.51	✓
8	Scanning & photocopying notes and documents by Igbo students and lecturers	2.77	✓

The above table shows that as the item mean(x) were greater than the criterion mean radio, satellite, cassettes, global system for mobile communications, GSM and television were useful technologies for enhancing teaching and learning Igbo in tertiary institutions in the South East Nigeria. Radio is excellent for listening to Igbo programmes that are broadcast to millions of Igbo listeners. They are useful for news in Igbo, education broadcast, music, drama, cultural activities, and radio programmes such as radio links or radio conferencing in Igbo (*Ka Oha Malu*) Igbo request programmes such as *ozi ekele* and *ugbo ndioma;* dialectical variations like *Afikpo jookwa, Owerri ndeewo, Imo unuabila*, *Nsukka Deeje/alaa*, *Udi Ndee, Awgu Uleejee, Awka Deeme, Abakaliki Tokwee*, and others. Cassettes are very useful to students and lecturers of Igbo studies because they "are multipurpose electronic devices for recording and presenting Igbo lectures for (class) discussion" (Ike, 1995). They are very good for teaching debating, oral Igbo, Igbo pronunciations, reading and listening skills, as well as field works and data collection. Television is found to be useful because it possesses the ability to use audio-visual images in Igbo educational instructions to appeal to the sense organs; creates curiosity on the students of Igbo for drama presentation, spelling, pronunciations, festival shows and quiz contests. It is capable of transmitting these programmes simultaneously to millions of Igbo students and viewers in various tertiary institutions in other parts of the country. Videotaped teaching practices, seminars, workshops, conferences, and so on can be played back and discussed in and outside the class room.

Table 4: Mean Score of Applications and Opportunities for using DVD, VCD, Digital and Video Cameras in Tertiary Institutions.

S/N	Opportunities	Mean(x)	Decision
1	They are good for data collection, data storage and presentation	2.61	Accept
2	For recording and preserving events in Igbo language and culture	2,56	✓
3	Recorded events are represented in the classroom.	2.51	✓

From the illustrations in table 6, it shows that as the item mean was greater than the criterion mean, digital video disc (DVD), Video compact discs (VCD), video cameras, and digital cameras are applicable in teaching and learning Igbo in schools in the South East. They possess greater chances in using them to improve teaching and learning Igbo in the classroom because as electronic device for capturing moving objects and sceneries, they are useful for data collection, storage, preservation and presentation of events and researches in Igbo lectures. They are excellent for recording and presenting Igbo ceremonies for discussion in the class.

Table 5: Mean score of Applications and Opportunities for using personal and laptop computers in Igbo studies in tertiary Institutions in the South East.

S/N	Opportunities	Mean(x)	Decision
1	For Internet browsing	2.64	Accept
2	For computer networking of Igbo departments	2.56	✓
3	Typing term papers, memos, and other correspondences	2.61	✓
4	For computer assisted instructions (CAI)	2.58	✓
5	PowerPoint presentation	2.51	✓
6	Data collection, data analysis, data presentation and storage	2.73	✓
7	Attend seminars, workshops and conferences	2.52	✓

Table 5 and figure 1 shows that desktop and laptop computers can perform the following operations in Igbo studies: PowerPoint presentation; computer-assisted instructions; data collection, analysis and presentation; writing of correspondences and term papers. Judging with

the observations of Best & Kahan (2006), these electronic resources are capable of making complicated research design (in Igbo studies) very simple. Because of its calculations at almost the speed of light, this technology is considered as one of the most useful tools in the teaching and learning Igbo in universities. PowerPoint packages help lecturers and students to organize and design professional presentations using computer in teaching Igbo phonology, syntax, stylistics, history, and so on. It is an excellent instrument for summarizing paper presentation and lecture notes using keywords.

Figure 1: Mean score showing opportunities for ICT Applications in Igbo studies
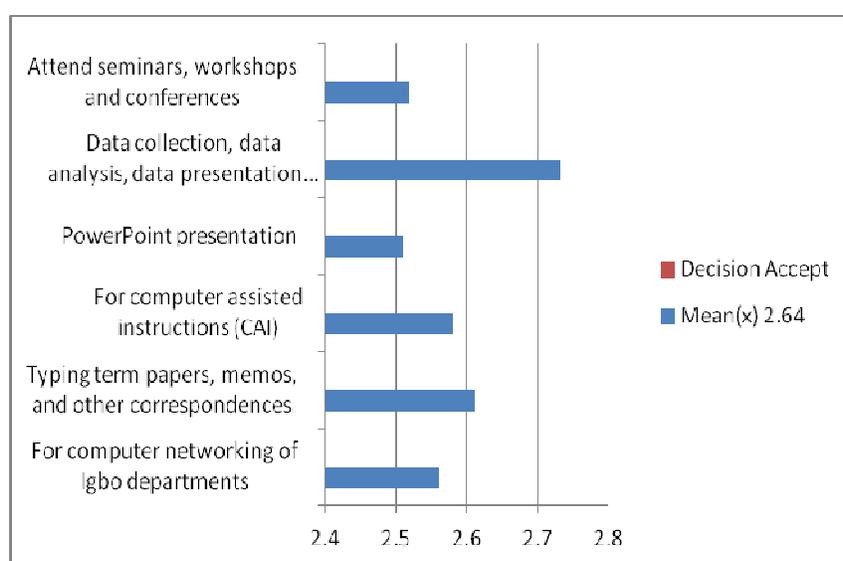

Table 6 demonstrates the various ways in which the Internet can be used to improve Igbo studies. It shows that the Internet provides opportunities for students and lecturers of Igbo to send and receive e-mails; it permits access simultaneously, to vast stores of information including databases on every imaginable subjects. Students and lecturers can use the Internet to perform web quest in which they can search the web for the subject contents of a specific document. Students, lecturers and parents can make payments, register courses, access results and choose research topics online through the Internet. **Mahajan (2006**) and **Adogbeji & Tayo (2006**) in their respective studies found that majority of lecturers and students at Punjab University, Chandigarh, and at the Delta State University Abraka, Nigeria mostly use the Internet in their departments for academic purposes. The Internet is a tremendous educational resources for Igbo studies which enables researchers to communicate with students in other universities, and

through this capability, they can carry out co-operative research with other scholars in other parts of the world. Students can visit the museum, the library and many other interesting places without leaving their classrooms.

Table 6: Mean Score of Applications & opportunities for using the Internet in Igbo Studies in Tertiary Institutions in the South East Nigeria**.**

S/N	Opportunities	Mean(x)	Decision
1	Sending and receiving e-mails	2.71	Accept
2	Allows access to enormous stores of information in Igbo	2.63	✓
3	For e-Igbo books and e-Igbo journal publishing	2.76	✓
4	For payment of school fees, registration of courses, publication of, and access to students results.	2.52	✓
5	For web quests on specific Igbo topic	2.56	✓
6	Helps in choosing research topics and conducting of research	2.65	✓

Table 7: Mean Score of Applications and Opportunities for Using CD-ROM, Flash drive, and Electronic white Board in Igbo studies in Tertiary Institutions in the South East Nigeria.

S/N	Opportunities	Mean(x)	Decision
1	Storage of massive data or information	2.74	Accept
2	Helps in data communication and data transfers/transportation	2.52	✓
3	Convenient for Internet browsing	2.61	✓
4	Records and keeps information on what the lecturers says and writes in the class	2.59	✓
5	E-white board permits recovery of discussed and erased notes and information on previous lectures	2.54	✓

As illustrated in table 7, the criterion mean was less than the entire item mean and therefore, all the statements were accepted as true opportunities for students of Igbo education to apply the new technologies in Igbo studies. Compact disk read only memory (CD-ROM), floppy disk, flash drive, and electronic whiteboard are data conveying computer software which enable Igbo scholars to carry large volume of information such as dictionaries and encyclopedias to their homes. Their capability of importing and exporting data into and from the computer make them creditable tools for Internet and www navigation. CD- ROM allows users to carry out in-house

access to large store of databases that are formally in print only. **Schamber (1989)** described it as "a mass storage device that is capable of holding about 550 megabytes of data" (about 300,000 pages of A4 size text information). "One CD ROM disk has a storage capacity that is equivalent to 300,000 printed pages" (**Kao, 2003**).

Electronic white board has the potentials of recording and keeping information of what lecturers discussed in the class. It also permits opportunities for students to recover such information especially when they are lost during the lecture.

These devices are relevant to students in the study of history of the Igbo, Igbo encyclopedias, dictionary, Igbo who is who, census, voters list, and other documents that are adjudged worthy of permanent preservation.

CHALLENGES TO THE APPLICATION OF ICTs IN IGBO STUDIES

Table 8: Mean Score of Challenges to the use of ICT in Igbo studies in the South East Nigeria.

S/n	Challenges	Mean(x)	Decision
1	Environment of ICT facilities in the South East is not conducive.	2.91	Accept
2	Electricity supply is erratic.	2.94	✓
3	Most lecturers and students are deficient in computer knowledge.	2.96	✓
4	Poor funding of tertiary institutions in the South East Nigeria	2.87	✓
5	Most of the tertiary institutions have no ICT policy.	2.67	✓
6	Lack of interest in the study of Igbo with information technology	2.34	Reject
7	Difficulties in translating ICT books into Igbo	2.65	Accept
8	Inadequate number of ICT technicians.	2.60	✓
9	Graduates of Igbo studies end up as teachers, television/radio broadcasters.	2.58	✓
10	Lack of interest in offering the language as a course of study in higher institutions.	2.72	✓
11	Computer obsolescence, and constantly changing hardware and software make access to Igbo literature in electronic version difficult	2.63	✓

in the long run.

Table 8 above shows that the entire statements were accepted as constituting impediment to the application of ICT in Igbo studies in the South East. An exception was that students and some lecturers lack interest in the study of Igbo with information technologies which has item mean 2.34, and was negatively rated and therefore rejected.

In view of this result, this paper has empirical facts, backed up with observations that the environment of ICT is precarious for Igbo education is the South East Nigeria. Eze (2002) found that the physical and psychological environment of learning in public schools in Nigeria was not adequate to support the integration of new ICTs in our school system. Also inadequate, is good telecommunications networks required for appropriate sharing of information and service delivery in the area. There was weak human capital development and lifelong learning for ICT initiatives in the institutions. Employee resistance to change is still the biggest barrier to the use of ICT in schools. Most lecturers and students have weak disposition to the use of ICT facilities, may be because they lack the skills and competences required to use these technologies in teaching and learning Igbo.

Tertiary institutions in the South East were not adequately funded. The Nigeria government seems not to be willing to allocate 26 percent of her annual budget to education, the minimum percentages recommended by the UNESCO. The consequences include, poor funding of education, lack of space, infrastructural facilities and poor maintenance of existing ones, inadequate laboratory equipment, inability to procure quality equipment, absence of competent technicians, and incessant closure of our tertiary institutions. A lot of money is required for digital or e-learning because computer software and hardware are never constant like hard copies. They change and become inaccessible in the long run. This therefore requires adequate financial support to keep on updating them if they are to be useful in future

Most tertiary institutions used in this study have no strong ICT policy, a framework or blueprint that makes for mandatory training programmes in ICT for the benefit of every staff and student. South East is known for epileptic electricity supply and high cost of running generator where one is available. Erratic power supply can cause serious damages on ICT equipment. "It can destroy

computer hardware and crash databases" (Bakpo, 2005). Mabawonku, (1990); and Eze, (2002) in their studies noted this adversities and predicted that lecturers who are confronted with intermittent power supply is less likely to plan for the use of information technologies for teaching in their subsequent classes, since electricity is basically needed for the use of ICTs.

CONCLUSION AND RECOMMENDATIONS

This paper has revealed that the first documentary records about formal studies for Igbo language began outside Igbo land. Beginning in Germany, it passed through five, tortuous stages and setbacks before its present study. Many forces were responsible for this: colonial legacy, controversial and inconsistent orthography, its complicated dialectical variations and tones, weak translation bureau, lack of dynamic Igbo language leadership, the roles of some Igbo parents who do not teach their children Igbo language at the earliest possible opportunity, it richness in prefixes and suffixes, poor reading habit of Ndiigbo, use of traditional teaching methods in this electronic age, and other.

In view of these setbacks, information and communication technology has come to rescue the language from total collapse and extinction because there are ICT programmes and facilities that could be integrated into Igbo studies to energize interest, make it prestigious and internationalize the study and research. These technologies have made the chalk- board approach to be out of model, and lecturers and students in our tertiary institutions are no longer comfortable with the tradition. Some of these equipment that these learner approved and which are the acceptable tools in the electronic classrooms today include; radio, television, digital cameras, scanner, word processor, spreadsheets, short message services (SMS), CD-ROM, DVD, databases, electronic whiteboard, flash drive, etc. These modern ICTs could be used for instructional games and simulations, Computer Assisted Instructions (CAI), Drill and practices, field works and research, etc.

Using ICTs for Igbo studies in tertiary institutions in the South East Nigeria was at a crossroads due to poor ICTs infrastructures and under funding of universities in the area. In the face of this educational innovation, if Igbo language and culture, and their scholars are not going to be extinct; if the teaching and learning of the language in schools and tertiary institutions are to

survive (the threats brought in by ICTs) in tomorrow's world educational order, it must be prepared to move with the inevitable changes in today's international learning environment.

Thinking about the future is very important for educators, and preparing students for that future requires some consideration of skills which students will need. In view of these inevitable challenges, the following recommendations are submitted.

- Since information technologies have the potentials to widen access to learning opportunities and improve the quality of Igbo studies and Igbo scholars, ICT-based teaching and learning in tertiary institutions is seriously needed since it will produce school leavers who are better placed to cope with the global challenges in the education sector.

- Based on this therefore, computer education/literacy should be highly emphasized and made compulsory in Nigeria schools right from primary school to university level. Nevertheless, the new 9-year basic education curriculum caption *Computer for All Nigeria initiative* (CANi) that took effect in Nigeria in the 2007/2008 session and which has computer studies as one of the core compulsory subjects is a welcome development. In view of this laudable objective, every tertiary institution in the South East Nigeria and indeed other tertiary institutions in country deserve to own computers and benefit from the federal government CANi project.

- Curriculum planners and educational policy makers in the South East Nigeria should enact ICT policies that will favour electronic/technology applications in schools. New information technologies should replace the conventional talk-to-class, chalk-board approach in the teaching and learning Igbo in Nigeria universities so that instead of being told about things and how they occur, Igbo scholars and learners would be able to apply ICTs in researches by themselves and report about their discoveries.

- Experts in ICT should be employed in tertiary institutions in the South East to handle the procurement, installation, repair and maintenance of frequent break down of ICT facilities in the institutions. In addition to providing adequate funds and infrastructural facilities for the new technologies, and training or employing competent administrators in

that field, encourage and sponsor regular workshops, conferences and seminars on ICT in Igbo research is very imperative.

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