

# THE INTERNATIONAL JOURNAL OF HUMANITIES & SOCIAL STUDIES

## Impacts of the Use of ICT in English Language Pedagogy in English Language Department in University of Jos, Jos Plateau State, Nigeria

**Onajorame Peace Anyachi**

Assistant Chief Confidential Secretary Department of Banking and Finance,  
University of Jos, Nigeria

**Chibuisi Chigozie**

Assistant Lecturer, Department of Insurance, University of Jos, Nigeria

**Balogun Ojo Tosin**

ICT Manager, Department of Insurance, University of Jos, Nigeria

### **Abstract:**

*The purpose of the study was to establish the Impacts of the Use of Information Communication Technology on English Language Pedagogy in University of Jos. This study adopted a mixed approach; both quantitative and qualitative methods were used to collect data. The study targeted 200level and 300level students totaling 2,851, 82 teachers of English, as well as one Information Technology Officer (ITO). The researchers sampled 285 students out of 2,851 and 82 teachers. The researchers used both descriptive and inferential statistics regression analysis to establish the relationship between the independent and dependent variables of the study. The study established that most students in study area enjoy computer assisted lessons. ICT influence learning of English skills in reading, writing, speaking, listening thereby improving vocabulary. The study is comprehensive hence it x-rayed teachers' perspective on impact of use of ICT in English Language pedagogy with empirical evidence depicting white students use of ICT and results in a similar study. It reveals ICT as critical tool to pedagogy of English as a subject, stating its important resource and most effective when embedded in the curriculum and integrated into units of work. The key recommendations for the study were that there is a need for teachers to be well trained to enable integration of ICT on pedagogy of not only English Language but other subjects. The government should enhance the TETFUND and NUC towards enabling more universities access ICT infrastructure since it is the major challenges among the tertiary institutions and that there is need to examine other factors affecting adoption of ICT like lack of support from the community and understaffing.*

**Keywords:** *Information Communication Technology (ICT), English Language, Pedagogy, Tertiary Institutions, Teachers and Students, Ministry of Education, National Universities Commission (NUC), Nigeria*

## **1. Introduction**

### **1.1. Background to the Study**

Pedagogy is the profession of teaching, the activities of educating and strategies of instructions. Teaching is an art. An art which according to many teachers and researchers is constantly changing depending on the era we live and teach in. Today, teaching stands before a milestone, a major shift. A shift towards teaching through technology where in trying to follow our times, we strive to prepare students to embrace the new world that lies ahead of them.

ICT, an acronym for Information and Communication Technology is relatively increasing in its usage in Nigeria with its rapidly increasing popularity of the internet in recent years. The diversity of learning programs continues to shift and change according to the demands of society. Since the development of communicative skills, language learning requires social interaction between the teacher and the students and among the students themselves, the use of computers has for a long time been regarded as a support tool with regard to certain skill areas Higgins & Moseley (2001).

The objective of this study is to examine the Impacts of use of ICT in English Language Pedagogy in tertiary institution using the university of Jos English Language Department. Today ICT is an umbrella that includes the utilization of communication devices or application, such as radio-set, televisions, cellular phones, computer hardware and software, satellite system and so on. Broadly speaking, technology involves the modification of the natural world to suite specific purpose. From the Greek word, technology means an art of artifice or crafting but more generally, it refers to the diverse collection of the processing and knowledge that people use to extend human ability and to satisfy human needs and want. Many countries around the world have established organizations for the promotion of ICTs because it is feared that unless technology advance in developed nations, it will only serve to exacerbate the already existing economic gaps between technologies. This promotes ICTs as a means of bridging the digital device. Availability and use of ICTs as determination of effective pedagogy of English Language in Nigeria tertiary institutions cannot be over emphasized as it strengthens the

nation's education opportunities in qualified staff, books and equipments. Use of internet in the English Language pedagogy is not too a novel tradition in Nigeria and Africa as a whole. In the view of Gay & Airasian (2006) 'one of the most remarkable events in the last fifty years in Africa is the Continent's connection to the global world through the internet and mobile telecommunication'. The employment of computer mediated communication in the pedagogy of English language as a second language has been introduced to Nigerian socio-cultural setting as a result of the global networking of the new culture call 'digital literacy' which replaced the 'print literacy' in the technological world. The main use of computers, regardless of the application area, is processing or manipulation of data fast and efficiently in order to obtain information that is complete, accurate, timely, economic and relevant. Computer users today are not computer professionals; rather, they are people who need information to do their jobs effectively.

In April 2001 in Nigeria, after the Federal Executive Council approved and establish of the National Information Technology Development Agency (NITDA), the implementing body. The policy empowers NITDA to enter into strategic alliances and joint ventures to collaborate with the private sector to realize the specifics of the country's vision of 'making Nigeria an IT capable Country in Africa and a key player in information society by the year 2005 through using IT engine for sustainable development and global competitiveness'. This vision is yet to be fulfilled. On the 17<sup>th</sup> of July 2011 the President and Commander in Chief of the Nigerian Armed Forces of the Federal Republic of Nigeria, Dr. Goodluck Ebele Jonathan appointed a Minister for the new Ministry of Communication Technology. The President's action was a culmination of many years of consultations between Government and ICT stakeholders, which resulted in several policy recommendations and reports.

Nigeria had a long-term strategic vision for the ICT sector which was elaborated in the National Development Plan titled 'Nigeria Vision 20:2020'. The Vision 20:2020 amongst all others documents further acknowledged 'In respect of knowledge and digital divide the situation remains worrisome. This is, in terms of knowledge generation, penetration of ICT, access to and usage of internet and telephone penetration (fixed and mobile) and physical infrastructure. The knowledge and digital divide cuts across geographical, gender and cultural dimensions. It exists among the 36 states of the Federation plus the Federal Capital Territory, the 774 Local Governments, rural and urban areas, men and women, rich and poor, young and old, able bodied and disabled, illiterate and educated'. This National ICT Policy has been developed to organize the sector for performance and efficiency so that it can support the development goals of Nigeria's Vision 20:2020. Globalization makes it compelling for Nigeria to enhance the development of its National ICT Infrastructure in order to respond effectively to new challenges on pedagogy leading to transformation of learners. Transformation to a knowledge-based economy requires significant investment in the development of ICT skills. These skills are required to support innovation, infrastructure and effective business models that underpin a knowledge-based society.

English Language is generally acknowledged as a global language. It became a language of education, prestige, trade and commerce, politics, mass media, utility as well as science and technology due to migration of the British and American religious, commercial and colonial masters to Nigerian inter-land in the mid-19<sup>th</sup> century. The Education ordinance of 1916 and 1926 made English the language of instruction and the most important subject in Nigeria School curriculum. English is the yardstick not only to measure the students' intelligence but equally a tool used for the award of certificates in Nigeria.

Grammar has been taught in various ways throughout the history of language learning. In the 19<sup>th</sup> century grammar was the most important part of learning a foreign language, while during the 1980s grammar was not supposed to be taught at all. Nowadays most people agree that some grammar might benefit the students but how it is to be taught is still a controversial issue. Fakeye (2010) in Nigeria discusses that the level of knowledge of ICT possessed by English language teachers are poor and as such, they rarely use ICT in English language pedagogy. Herwisher (1991) identified certain areas of ICT as important for language teachers, for example, the use of a word processor, e-mail, and multimedia, Microsoft PowerPoint, Adobe Photoshop, Corel Draw, and Picasa. These and many more may be adopted by language teachers to enhance their effectiveness and relevance in the knowledge society where emphasis is placed on intellectual capabilities (to use ICT effectively) and not on physical input of available (ICT) resources. The use of such resources is however dependent on availability, accessibility, skills, and ease of use as noted by Glister (1997). It has become imperative for English Language teachers and learners to realize the fundamental role of information and communication technology as catalyst in the advancement of the frontiers of knowledge in language acquisition which is a prerequisite to the viability of the global economic development. In Nigeria, acquisition of basic ICT skills and capabilities is mandatory as part of the national minimum standard for teacher education and first-degree levels. The National Universities Commission (NUC), is the government agency that is responsible for registering and regulating universities has prescribed Personal Computer (PC) ownership for universities as follows; one to every four students, one PC to every two lecturers below the grade of Lecturer 1, one PC per Senior Lecturer and one notebook per Professor/Reader. A survey of ICT and Education in Africa by Osei Tutu Agyeman (June 2007) revealed that among all the universities, the University of Jos (UNIJOS) is blazing the trail for content development and e-learning in addition to campus networking, UNIJOS, in collaboration with AVOIR (African Virtual Open Initiatives and Resources) and the Carnegie Corporation (USA), has developed e-learning programmes for several departments. One notable achievement is the medicine by e-learning Web site of the Department of Anatomy of UNIJOS that permits students undertake virtual electronic dissections – a phenomenon believed to be the first of its kind in medical training worldwide. Under a collaborative programme, lecturers from the Universities of Oxford and Cambridge have facilitated courses as part of the ICT initiative sponsored by A. G. Leventis. It is worthy of mention that National Open University of Nigeria (NOUN), established in 2002, has created study centres in each of the 36 states of the federation. In each of the centre, there is a computer/cybercafé equipped with an

objective of making tertiary education available to all its citizen and by extension English Language pedagogy using ICT improved methods.

It is evident that the range of coverage of ICT is broad or wide and very relevant in English Language pedagogy proficient quest, hence the research will review literature on traditional pedagogy before integration of ICT, ICT in Communicative/Learning modes, and four English Language skills with relevance of vocabulary improvements, negative and positive impacts of the use of ICT in English Language pedagogy in University of Jos English Language department. Other empirical evidence of students' use of ICT will not be left in this study.

### 1.2. Statement of Problem

Over the past 25 years, alongside series of National and local programmes for the development of ICT in English Language pedagogy, there have been research studies on the effects of ICT in teachers training, level of resources, teacher's pedagogies and practices, teacher's attitudes and requirements of national curricula. These studies reveal disappointingly slow uptake causing less impacts of use of ICT in schools by the majority of teachers. Students are also facing some challenges of English Language problems like the unbaked learning of the four skills as a result of accessibility to information problems. This research explores the impact of the use of ICT in English Language Pedagogy.

### 1.3. Objective of Study

The objective of the study is to establish the impact of the use of ICT in English Language Pedagogy using university of Jos, English Language department, Jos Plateau State in Nigeria and to specifically: -

- To determine negative and positive impacts of use of ICT on English Language Pedagogy in English Language Department,
- University of Jos, Plateau State in Nigeria.
- English Language in English Language Pedagogy in English
- Language Department, University of Jos, Plateau State in Nigeria.
- To establish the extent to which use of ICT impacts on Teachers and Students of English Language in English Language Pedagogy in English Language Department, University of Jos, Plateau State in Nigeria.

### 1.4. Research Questions

The Study is designed to offer solutions to the following research questions;

- What are the impacts of the use of ICT on English Language Pedagogy in English Language Department, University of Jos, Plateau State, Nigeria?
- How does the use of ICT impact on Four Skills (Listening, Reading, Writing, Reading) of English Language Pedagogy in English Language Department, University of Jos, Plateau State, Nigeria?
- What are the effects of impact of the use of ICT on Teachers of English Language in English Language Pedagogy in English Language Department, University of Jos, Plateau State, Nigeria?
- How does the use of ICT impacts on Students of English Language in English Language Pedagogy in English Language Department, University of Jos, Nigeria?

### 1.5. Research Hypothesis

In this research work, Null Hypothesis (Ho) and alternative hypothesis (H1) will be used.

- H<sub>0</sub>: The use of ICT on English Language Pedagogy has a significant impact in English Language Department, University of Jos, Plateau State, Nigeria.
- H<sub>1</sub>: The use of ICT on English Language Pedagogy has no significant impact in English Language Department, University of Jos, Plateau State, Nigeria.

### 1.6. Significance of the Study

Information and Communication Technology is a catalyst in the advancement of the frontiers of knowledge in language acquisition through participation in Journal. So, this study is hoped to further strengthen this knowledge. The study is significant because it hopes to highlight both the positive and negative impacts of use of ICT in English Language Pedagogy. It may help teachers to identify better application of the Four skills of English Language using ICT for better pedagogical performances. It will help students participate more in the learning process making it enjoyable as learners will discover that more use of ICT can be used in improvement of vocabulary oiling their wealth of possession of knowledge of English Language. The researchers hope that the findings will be useful to Ministry of Education, National Universities Commission and University of Jos English Language Department in reviewing policies with regards to English Language Pedagogical and ICT related issues.

## 2. Literature Review

### 2.1. Theoretical Framework

The research was anchored on pedagogy theory by Ramsden (1992) who indicated that using ICT tools for pedagogy should focus beyond individual learner but to the social and cultural learning context within which they are situated. This holistic framework which applies to all subjects defines areas of ICT competency organized in four groups namely content and pedagogy, collaboration and networking, social issues and technical issue. Content and pedagogy

focus on instructional practices of teachers and their knowledge of the curriculum. It requires that teachers apply ICT in their respective disciplines to support and extend teaching and learning while collaboration and networking showcase the communicative potential of ICT to extend learning beyond the classroom and necessitate the development of new knowledge and skills. The real power of ICT comes from new ways of communicating beyond the four walls of the classroom and by locating information from worldwide sources wherever these may be located.

The implication for teachers as they assist their students in collaborating with other learning groups and using networks to research assignment topics is that they cease to be the main source of knowledge in the classroom. Instead, teacher's "roles change from being 'a sage on the stage' to becoming a guide on the side'. Through collaboration and networking, professional teachers promote democratic learning within the classroom and draw upon expertise both locally and globally (Pedro, 2006). The most crucial factor in integrating ICT into teaching and learning depends on the extent to which various guiding principles of the integration are formulated and applied.

## 2.2. Conceptual Framework

The conceptual framework for this study is based on the influence of the use of ICT on pedagogy of the writing, reading, speaking and listening skills in English language.

Figure 1 shows the relationship between the independent and dependent variables.

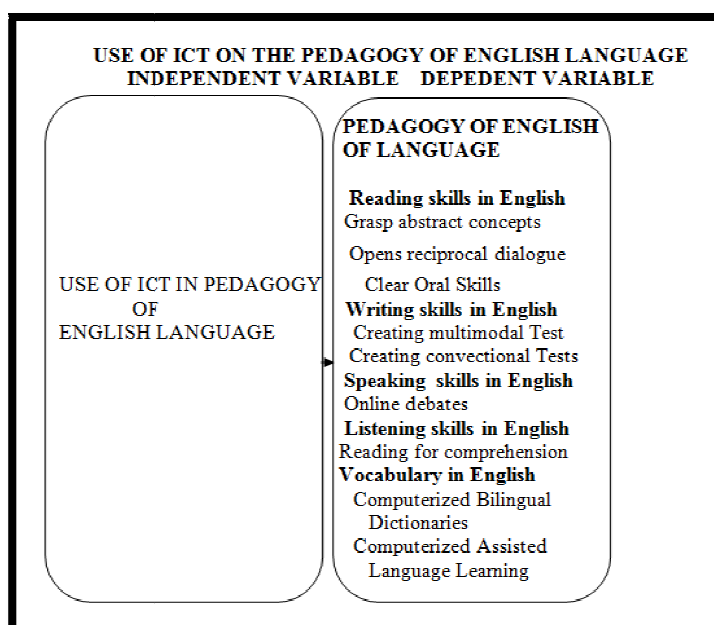


Figure 1: Conceptual Framework

In this study the researcher conceptualizes a situation where ICT enhances the pedagogy of English language and in turn lead to development of English language skills of writing, reading, listening and speaking. The ICT use in listening, writing, speaking and reading skills are the independent variables and which will lead to an outcome of influencing the English language among learners who are taught using the ICT integrated approach. It is against this background that the present study sought to establish the influence of Information Communication Technology on pedagogy of English in tertiary institution, university of Jos in order to improve the performance in the subject which has deteriorated over time as indicated in Table 1.2. The purpose of the study was to establish the influence of Information Communication Technology on pedagogy of English in university of Jos, Plateau state in Nigeria.

## 2.3. English Language in the Traditional Classroom Setting

In the past pedagogy of English language was limited to all that the teacher had to say to the learners, a situation which made learners inactive in the pedagogy situation. Be that as it may and without mincing words, the time has come for teachers and learners of English to realize the fundamental role of information and communication technology not only in the area of language pedagogy but also in the global economy where the proficient use of English is fast assuming the indispensable engine of growth and development. It has therefore become expedient to note that the effective teaching and learning of English has gone beyond the stereotypical regimented/tradition of mere classroom teaching because of the emergence of various gadgets in information and communication technology.

According to Rodgers (2000) second language education has changed considerably, pointing out the importance of the use of an 'electric enlightened approach' to theory building but cautions that classroom contact is still very necessary for second language learners to give real-world validity to their theory building. Brown's theoretical comments about the classroom vignettes contribute to the attainment of this goal as major methodological approaches and current issues in language teaching are depicted in these vignettes. Similarly, Akinbode (2006) has admitted that technology has become a major component; a must-have in many homes around the world, with its concomitant influence permeating all

facets of human lives, including education. This is a welcome development by many as it shows the direction in which language instruction will be driven by new advancements in technology.

#### 2.4. Concept of Use of ICT in English Language Pedagogy

ICT is an enviable tool that enhances pedagogy of English Language for teachers. It is a professional resource and most effective when embedded in the curriculum and integrated into units of work Cook (1990). English teacher can maximize their impact of ICT in their classrooms by ensuring that they and their students use ICT as an integral part of lessons, present ideas dynamically, and use a range of media Best & Khan (1989), discusses that while students are using a desktop publishing package to create a school newspaper, they are also developing their ability to communicate more effectively. This provides both content and a meaning for the ICT activity. Hartoyo (2008) also asserts that English language teaching has been shaped by the search for the 'one best method' of teaching the language. Regardless of whether the focus of instruction has been reading, the grammatical rules and vocabulary of the target language (e.g., Grammar Translation Method), speaking (how to communicate the target language such as Direct Method, Audio-Lingual Method, The Silent Way, Suggestopedia, Community Language, Communicative Approach), for example. The latest method that is developing is Computer Assisted Language Learning (CALL). Some experts and practitioners of education learning language in CALL, strongly supports the utilization of ICT in language learning to improve efficiency and effectiveness of learning that can improve the quality of understanding and mastery of the language studied. In other words, the integration of ICT in the field of language learning is inevitable known that the ICT and language learning are two aspects which support each other like two sides of the coin inseparable Cohen et al (2007). Fortunately, the use of Computer Assisted-Learning language (CALL) has increased noticeably by English teachers. This tool is flexible, rich and interactive. It is flexible in terms of time and place. It is also assumed that this media can encourage students in learning language. This is due to the computer's ability to present material in more diverse ways than either book or video does. In addition, CALL is able to generate interaction and improve communicative competence, including providing authentic material to the class or self – learning. The method focuses in computer utilization to enhance language learning.

#### 2.5. ICT in Communicative/Learning Modes

In any pedagogy situation, learners can respond at ease for communicative mode of teaching. According to Rodgers (2000) communicative method for learning languages combines extensively high-quality content with flexible and interactive multimedia technology. This comprehensive language learning method can act as a total solution for self-teaching, as well as teaching support to formal courses. Through a wide range of activities, a variety of skills could be developed in a learner. A learner needs to communicate in oral and written comprehension, as well as oral and written expression. In order to achieve those stated objectives, Rodgers (2000) has identified three possible learning modes as:

- The Guided Mode: this offers a step-by-step course. When organized into learning paths, this mode focuses on the acquisition of functional language patterns across a broad spectrum of themes. In this mode, a learner at the Junior Secondary School (JSS) level in Nigeria or lower intermediate level in some other countries can learn pronunciation, grammar, functions of words and vocabulary by applying the rules.
- The Free-to-roam: this gives a learner the option of learning by topic or by linguistic skill. This mode is particularly useful for learners who are at the senior secondary school (SSS) in Nigeria or intermediate level of learning and also for teachers who want to familiarize themselves with the content available to them.
- The dynamic mode: here, the advanced learners (undergraduates) can immediately be immersed in an authentic learning context through the various dialogues and videos which illustrate every day and professional life and line with current pedagogical trends, familiarize learners with the voicing of the language using recordings made by native speakers. Closely related to the communicative/learning modes is the use of language laboratory which can be used to enhance language teaching and learning processes through teacher's console with language learning software. This serves as a platform for learning, practicing and producing language of teaching. The functional use of language according to Aborisade (1977) is attributed to the following objectives:
  - To maintain good linguistic competence through accuracy in grammar, pronunciation and vocabulary.
  - To develop pragmatic competence, to understand the grammar form, function and state of normality.
  - To enrich the discourse competence, to prepare the learner to be able to produce contextualized text and speech.
  - To acquire strategic competence to use both spoken and written language to use in a wide range of communicating strategies.
  - On pedagogy of phonetics for example, the sound of English Language can be written down using the International Phonetic Alphabet (IPA) for adequate exercises. The use of minimal pair perception exercises (sheep-ship, zeal – seal, ten – then, bird-board, port-pot) helps learners learn the sound of English. This can be well practiced on pronunciation exercises with the help of software or by using CDs in language laboratory.

#### 2.6. ICT Reading, Listening, Writing and Speaking Skills in English

Reading is the process of interpreting written language. In reading skills, Osei (2007), states that learning should be focused on reading for comprehension. Language activities involved in reading include asking questions after reading a story, keeping a reading log on the kind of material read and how often they are read and because of its interactive and dynamic nature of learning, ICT has the potential to meet the needs of individual students by providing opportunities to direct their learning and to pursue information or complete tasks, in ways which meet their own interests and computer technologies-based needs in English. Teachers can use a range of teaching tools such as discussion boards, forums, videos

tools for delivery of class program. This opens reciprocal dialogue between members of the clad community and may be attended to the school community at large through activities such as blogs. But not all of them are appropriate for every situation; so, it's the instructional designers' responsibility to investigate which tools offer the best solution for the different tasks in synchronous and asynchronous interactions and collaboration Murray (2000). As Murithi (2005) suggests, the combination of several online tools can be much more powerful to match the strengths and features of each with the requirements of the activity at hand. So, the use of one of them does not mean that you have to abandon other useful tools. According to this idea, we think that every tool that has been developed fulfills with the requirements for which it has been designed. There are different applications, but all of them are somehow useful and the election depends on the type of activity that you want to design

The use of ICT in teaching writing skills in English as Second Language (ESL) classrooms is still not very encouraging. This study attempts to seek findings on the use of ICT in the teaching of ESL writing skills University of Jos, English Language department. Writing is a language skill in which students communicate in written language. Using ICT changes the nature of composing and allows the writing process to become more fluid with students creating both traditional and multimodal tests using ICT and will often attend to the visual and spatial qualities of test creation early in the design process as in selecting fonts, templates or choosing images (Interactive Education, 2016). ICT enabled students to organize and present information in variety of forms and compose their work more easily and professionally. Successful use of ICT is most effective when embedded in the curriculum, and intergraded into units of work.

### 2.7. Empirical Evidence of Student Use of ICT

A study carried out by Kabaka & Akinbode in 2006 showed noteworthy findings with regard to undergraduate students' use of information technology to enhance their learning experience. They launched the first study on how students use technology driven by four major questions. (a) What kind of information technology do students use and, what are their preferences, (b) With what levels of skills are they using these technologies? (c) What value does the use of information technology add in terms of learning gains. (d) How does information technology contribute to their undergraduate experience. The researcher employed multiple ways to collect data which involved literature review, review of other higher education ICT surveys, review and comparison with ECAR faculty use of Course Management Systems Study, quantitative survey of 4,374 students from 13 institutions in the limited states and qualitative interviews with 132 students and 23 administrators of 4,374 students who replied to the survey, 95% were 25 years old or younger and 95% were full time students. The majority of them were white consisting of 38.8% male and 61.2% female students. As for hardware ownership almost all students (93.4%) owned a computer, a personal desktop 62.8% and or a laptop (46.8%) and 82% of them had cell phones. The rates of personal digital assistant (PDA) and smartphone purchases were not significant. Laptop ownership was higher for freshmen than for seniors and gradually increasing. With regard to the use of IT application, it was reported that virtually all of them used computers for writing document (99.5%), emails (99.5%), surfing the internet for pleasure (97.2%) and classroom activities (96.4%) which indicates that the students primary use of computers were for communication and study. It turned out however, that they did not frequently use computers for specialized application. (e.g., Creating webpages, creating video/audio)

Similar findings emerged when looking at hours of using ICT. That is, the students spent a great deal of time on entertainment and communication activities while very little time on specialized application (less than an hour per week) when asked about their level of skills that students rated themselves as highly skilled in graphics, creating webpages, creating and editing audio and video.

Generally, the student's student showed a tendency to overestimate their level of skills, which was confirmed by the qualitative interviews indicating insufficient application knowledge of problem-solving skills or problem-solving skills. Some of the findings were not consistent with their expectations. For example, the student's preference for ICT in the classroom was not as high as had it been expected, showing that they preferred classes with moderate use of ICT, instead. This indicated that students saw ICT as a tool that could be an asset only if appropriately used, not a panacea. The majority of the students had taken a class using Course Management System (CMS) (83%) and had positive experiences using CMS (76.1%) especially for finding a syllabus (95%), online reading (94.7%) and tracking grades (89.4%). The primary benefits of using ICT in the classroom turned out to be convenience control. Surprisingly enough, however, only 12.7% of students answered that the most valuable benefits were improved learning.

In 2005 ECAR study was carried out again with similar focus but the summary of the finding reveals that the results were consistent with 2004 study, the students came up with (a) convenience, (b) connection (Communication the instructor and other students) (c) Control (Management of course activities), and (d) improved learning as primary benefits of ICT use. Based on the framework, the research team classified student's activities into four groupings. In summary, five themes emerged from the 2005 study.

- College Students live with abundant technology and networks.
- College students prefer moderate ICT use in their courses.
- College students are comfortable with a basic set of technologies and less comfortable with more specialized technology applications.
- College students see technology in the classroom as supplemental to their course experience, not as transformational. They still prefer face to face interaction with their instructors and classmates.
- Core ICT skill levels are comparable across class status (e.g., freshmen vs seniors)

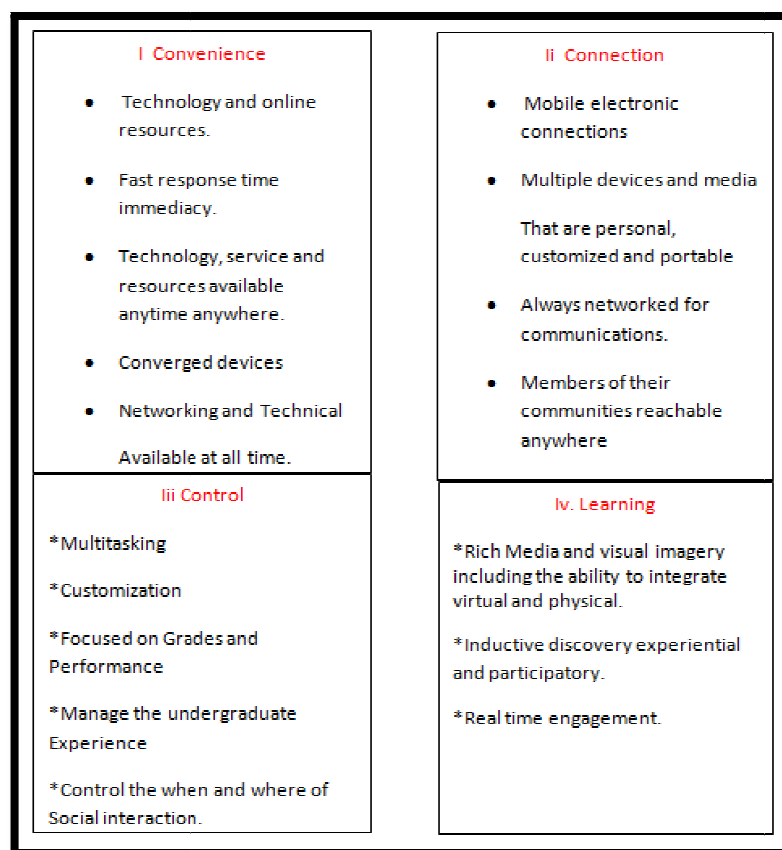


Figure 2

### 2.8. Summary

This chapter provides an extensive literature on Theoretical Framework, Conceptual Framework, English Language Pedagogy in the Traditional Classroom Setting which discussed on pedagogy of English language that was limited to only all that the teacher had to say to the learners, a situation which made learners inactive in the pedagogy situation. The Concept of Use of ICT on pedagogy of English Language which explained the use of Computer Assisted-Learning language (CALL) tool, which usage has increased noticeably by English teachers. This tool is flexible, rich and interactive. It is flexible in terms of time and place. It is also assumed that this media can encourage students in learning language. This is due to the computer's ability to present material in more diverse ways than either book or video does. ICT in Communicative/Learning modes is method for learning languages that combines extensively high-quality content with flexible and interactive multimedia technology ICT and the four skills (Listening, reading, speaking, writing). The researcher presents a broader outlook of the Positive and Negative impacts of use of ICT that reflected on teacher's perspectives and empirical evidence of Students use of ICT. In addition, this section contains the theoretical framework and conceptual framework.

## 3. Research Methodology

### 3.1. Research Design

This study employed a within-stage mixed model research design integrating quantitative and qualitative approaches by using a questionnaire that included both open-ended and closed-ended questions. In other words, the quantitative and qualitative data were collected concurrently in one phase of the research study (Cresswell, 2003). The research design was chosen to best accommodate the research questions addressed in the current study in a holistic view. Quantitative and qualitative purists have confronted each other for more than a century, advocating their contrasting paradigms of research (e.g., beliefs, values, and assumptions) (Cresswell, 2003; Johnson & Christensen, 2004). While quantitative researchers argue for time- and context-free generalizations, theory/hypothesis-testing, explanation, and prediction, qualitative researchers favor value-bound, multiple constructed realities, discovery, exploration, and theory/hypothesis-generation. However, numerous educational researchers have tried to stop the research paradigm war by basing their knowledge claims on pragmatism (Creswell, 2003; Johnson & Christensen, 2004). They view the differences between the two dominant paradigms as important and state that these differences should not be ignored (Maxwell & Loomis, 2003). Instead, in an effort to make sense of interdisciplinary, complex social phenomena in the postmodern era, they choose more than one method within a single study Cresswell (2003) The current study collected both quantitative and qualitative data simultaneously by using the questionnaire to explore the use of ICT among students of university of Jos, English language department. It was especially hoped that the analysis of qualitative data from a series of open-ended questions would further elaborate the findings from quantitative data.

This study was intended to benefit from all those questionnaires can ever measure through factual questions, behavioral questions, and attitudinal questions. Factual questions are used to identify demographic characteristics such as gender, major and class. Behavioral questions are employed to uncover the participants' use of and skills in ICT. Attitudinal questions are also used to elicit their perceived benefits of and barriers to integrating ICT into learning English Turner (2003).

### 3.2. Setting

The study was conducted in one of the leading universities, which is located in a capital city of a Jos, Plateau State in Nigeria was established in 1975. It is officially accredited and recognized by the Federal Ministry of Education and National Universities Commission. The population range of University of Jos students is about 1,000,000. Courses are held in a language lab equipped with multimedia facilities.

### 3.3. Target Population

The study targeted all the 100level, 200 level, 300 level and 400 levels student of English Language Students of the University of Jos Department, 82 teachers of English, 2,851 200 level and 300level students as well as one Information Technology officer (ITO) from ICT department. The 200level and 300level students were targeted because they were more experienced than 100 level since 200level and 300level students they had been in the institution a longer time a longer time. The 400 level students could not participate in the study because they were preparing for their final examinations by the time the researcher was collecting data, and were more focused on the impending national examinations therefore the accessible population was 2,934 respondents.

### 3.4. Sample Size and Sampling Procedure

Orodho (2004) defines a sample is a section of a target population which is representative of the characteristics of the entire population. The researcher sampled 285 students out of 2851 that is, 10.0 %. This was based on the Central Limit Theorem which states that, for any sample size,  $N \geq 30$ , sampling distribution of means is approximately a normal distribution irrespective of the parent population. Using the theorem, the 10 percent of the accessible students was within the range of normal distribution. Stratified sampling was used to create 4 different strata based on the number of classes. From each stratum 71 students were selected using a simple random sampling. Simple random sampling was suitable for this selection since this helped avoid the feeling of bias amongst the respondents. Due to small population of teachers, the researcher used the entire population of 82 teachers where purposeful sampling was used since the study targeted English language teachers and not other teachers. The researchers also used purposeful sampling to choose the SQASO who was only single in the department.

Respondents	Target Population	Sample Size	Percentage
Teachers of English	82	82	100.00
Students	2,851	285	10.00
ITO	1	1	1
Total	2,934	368	13%

Table 1

A total sample of 368 respondents who consisted of 285 students and 82 teachers were used for the study.

### 3.5. Research Instruments

In this study, questionnaires and interview schedules were used. The instruments were used to supplement each other and to give a deeper and wider exploration into research perspective which would give the research more quality. The use of questionnaire as a tool in this research was quite efficient because through them the researcher was able to obtain personal views from the respondents. In the questionnaire, structured or closed ended questions were used. Closed ended questions were used with the aim of helping the researcher to obtain the personal views of the respondents. The higher the score the more positive the opinion towards the subject, with the exception of questions which are negative and could show a lower score to indicate a more positive opinion. The questionnaires were administered to teachers of English and students.

An interview schedule is an oral administration of a questionnaire, which involves a face-to-face interaction. The interviews were administered to the SQASO. The interview schedule was semi-structured to enable the researcher obtain both qualitative and quantitative data for the study.

### 3.6. Validity of the Instruments

Validity is defined as the accuracy and meaningfulness of inferences, which are based on the research results Mugenda and Mugenda (1999). Validity is the degree to which results obtained from the analysis of the data actually represents the phenomena under the study.

Validity deals with the adequacy of the instruments. For example, the researcher needs to have adequate questions in the written task in order to collect the required data for analysis that can be used to draw conclusions. The content validity of research instruments was established before data collection by research experts in the Department of

Curriculum Studies of University of Nairobi to evaluate the items contained in various instruments. The suggestions and clarifications by the experts were used to improve the instruments designed.

### 3.7. Reliability of the Instruments

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trial. The researcher, sought help of the supervisors, to critically assess the consistency of the responses on the pilot questionnaires to make a judgment on their reliability. The researcher piloted the research instruments before the actual day of the study. It was conducted amongst university of Jos English language department students and teachers and students. The choice of the location for piloting of research instruments was due to an observation that the department of English Language of the University of Jos has the same challenges as envisaged by the purpose of the study. The purpose of conducting the pilot study was to assess the suitability and the clarity of the questions on the instruments designed, relevance of the information being sought and the language used and to test the reliability and validity of the research instruments. The respondents who participated in the pilot study were not included during the actual data collection.

The researcher examined the research instruments for appropriateness of items so as to identify any ambiguous and/or unclear items. Such items were restated to ensure that the respondents clearly understood them. From the results of the pilot study, reliability coefficient was determined using Pearson's Product Moment Correlation Method where a reliability coefficient value of 0.78 was established. According to Orodho (2008) a correlation co-efficient of about 0.8 is high enough to judge the instruments as reliable for the study and this applied in this study.

The researcher utilized Pearson's product moment formula.

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}}$$

$$\sqrt{[N\sum X^2 - (\sum X)^2][N\sum Y^2 - (\sum Y)^2]}$$

Where r- The Pearson's correlation coefficient

X- The result from the first test

Y- The result from the second test

N- The number of observations

### 3.8. Data Collection Procedures

Before data collection, the researcher sought for permission from the Dean of the Faculty of Arts and Social Sciences and the Head of Department (HOD) of English Language to enable her get a research permit from the National Council for Science, the researchers further sought for permission from the University Management to collect data from department of English Language. The researcher also sought for permission from the principal officers of selected department. This was done before the actual collection of data. The questionnaires were administered by the researcher to the respondents in an effort of minimizing biasness, and to assure confidentiality.

### 3.9. Data Analysis Techniques

Study data were organized, presented, analyzed and interpreted using descriptive statistical techniques. The descriptive statistics that were used to summarize data include percentages and frequencies while inferential statistics was used to establish relationship between dependent and independent variable.

Collected data were first coded, sorted and organized for analysis. Qualitative data were analyzed using content analysis. From the interviews, the researcher focused on statements, words and concepts used by the respondents when responding to interview questions posed by the researcher. For quantitative data, summary statistics like the mean and standard deviation were used to analyze the data. The mean, for instance, was used to find the average response of a respondent concerning a given item determining the effectiveness of the administration. Percentages were used to show the proportion of teachers that gave a particular response. Graphical presentations such as bar graphs and tables were used to describe the nature of the distribution of the data obtained from respondents. Bar graphs were used, for instance, to display how the demographic characteristics of the teachers responding to questionnaires. Tables complemented bar graphs in showing the demographic characteristics of the teachers responding to questionnaires. They were also used to show how teachers responded to various questions in the questionnaire. To analyze the influence of Information Communication Technology on teaching and learning of English, a regression analysis was conducted.

The regression method was used since there are data collected by use of the Likert Scale concerning the dependent variable and independent variables in this research which was use of ICT in teaching and learning of the writing, reading speaking and listening skills in English. Regression model shows the relationship between the independent and dependent variables in the study.

The regression model took the form below.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Y = Teaching and learning of English Language Proficiency

$\beta_0$  = Intercept term

$X_1$  = ICT and reading skills.

$X_2$  = ICT and writing skills.

$X_3$  = ICT and speaking skills.

$X_4$  = ICT and listening skills.

$\beta_1$  = Intervening Variables

The test the statistical significance of each of the regression variable  $\beta_0$  and the  $\beta_1$  the T-tests at 95% confidence level was used. The p value at 95% was used to test the statistical significance of the whole regression. The p value was set to <0.05 as recommended in social science (Odejide, 2003). The coefficient of determination of R<sup>2</sup> and the adjusted R were used to determine the strength at which the variation in the independent variables explains the variation in dependent variable.

#### 4. Questionnaire Return Rate

The questionnaires were administered in person to the teachers and students. Out of the 367 questionnaires administered, 282 were successfully filled and returned. This gave the return rates as indicated in Table 2.

Respondents	Sample	No Returned	Percentage
Teachers	82	72	87.8
Students	285	210	73.6
Total	367	282	76.8

Table 2: Questionnaire Return Rate  
Fieldwork Survey: 2021

As indicated in Table 2, 87.8 percent of teachers returned their questionnaires and also 73.6 percent of students returned their questionnaires. The response rate achieved for the two sets of questionnaires was 76.8%. The response can be interpreted to show a willing participation from the sampled respondents. This was attributed to the fact that the researcher administered the questionnaires personally.

##### 4.1. Demographic Characteristics of the Respondents

The research instruments solicited background information on demographic details of the respondents which were the teachers and students.

These included gender, age and level of academic qualification, level of experience for teachers while student's class, gender and age. This background information of key respondents was imperative to confirm whether the research reached the targeted audience and whether or not the research captured the information it effectively sought. The presentation of the information was separated in two tables since the characteristics of the respondents differed and therefore it was not possible to merge the two tables.

Variable	Type	Frequency	Percentage
Gender	Male	43	60
	Female	29	40
	<b>Total</b>	<b>72</b>	<b>100</b>
Age	30-35 Years	20	28.3
	36-44 Years	20	28.3
	45-49 Years	17	23.3
	Above 50 Years	16	23.3
	<b>Total</b>	<b>72</b>	<b>100</b>
Experience	2-5 Years	31	43.4
	5-10 Years	41	56.6
	<b>Total</b>	<b>72</b>	<b>100</b>
Education	Bachelor	24	33.7
Level	PhD	27	37.3
	Total	72	100

Table 3: Demographic Background of Teachers  
Fieldwork Survey: 2021

In Table 3, 60% of the teachers were male while 40% were female. Most teachers belonged to the age bracket of between 30-35 years and the least were above 50 years of age. Minimum qualification of teachers in the study area B.A. (Ed.)

English (Graduate Assistant) accounting to 33.7 while the highest qualification was PhD accounting to 37.3%.

Variable	Type	Frequency	Percentage
Class	200 Level	113	54.00
	300 Level	97	46.00
	Total	210	100.00
Gender	Male	118	56.00
	Female	92	44.00
	Total	210	100.00
Age	Below 30 Years	77	36.7
	30-35 Years	133	63.3
	Total	210	100.0

*Table 4: Demographic Background of Students  
Fieldwork Survey: 2021*

Data revealed that most of the students accounting to 44.0% were 200 level students while the other 35.0% who were 300 level students. The age distribution of students also varied with 63.3% being between the ages of 19-25 years and the rest being in age of 26 years or below.

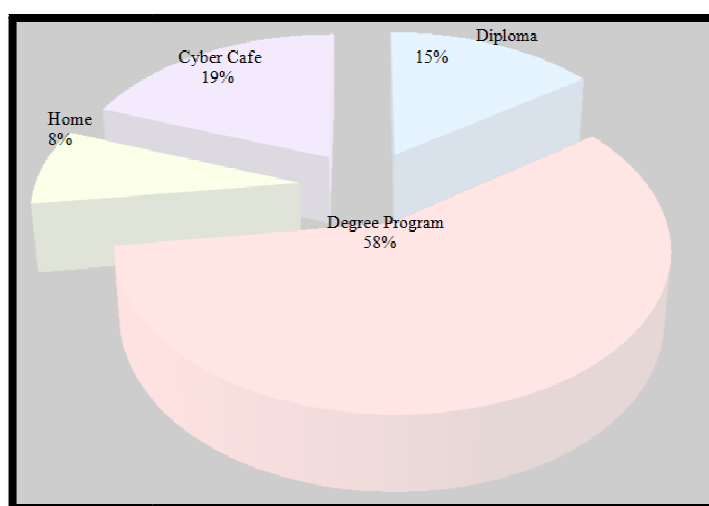
#### *4.2. Availability of ICT as a Learning Tool*

The study sought information on the availability of ICT as a learning tool in terms of hardware and software skills among teachers and students.

##### 4.2.1. Where the Students Started to Use Computers.

In order to establish the level of exposure of students to computer as ICT equipment the researcher's sought information of when the students started to use computer for the first time.

The findings are as indicated in Figure 3



*Figure 3: Where the Students Started to Use Computers*

From findings in Figure 3, most students accounting to 15% indicated there were introduced to computers when they were doing diploma program and improved upon it in the university accounting for the 58% while 8.0% had used computers at home. These findings can be deduced to mean that most students effectively started using computers when they joined the university. Despite the existence of many studies on impacts of use of ICT in the English Language Pedagogy process in general as a Second Language (ESL) classrooms is still not very encouraging.

##### 4.2.2. Number of Computers in Schools

The researcher wanted to identify the number of computers in order to establish the availability of ICT tools for use for English Language Pedagogy in university of Jos, English language department. The findings are as indicated in Table 5

ICT tools	Frequency	Percentage
Less than 5	21	10.0
6-15	84	40.0
16 and above	105	50.00
Total	210	100.00

*Table 5: Number of Computers in the School As Indicated by Students  
Fieldwork Survey: 2021*

It was evident that the department had over 16 computers, followed by 40% of students indicating they have 6-15 computers in the department and only 10.0% indicating they have less than 5 computers. This was deduced to mean that computers were available in the study area. Therefore, English teacher can maximize the impact of ICT in their classrooms by ensuring that they and their students use ICT as an integral part of lessons, present ideas dynamically and use a range of media.

#### 4.2.3. Number of Printers Available as Indicated by Students.

The researcher wanted to identify the number of printers available for use by students and teachers for pedagogy purposes which helped in the availability of ICT tools in the sampled department. The findings indicated in Table 6

Number of Computer	Frequency	Percentage
Lab	11	5.0
None	116	55.0
One	63	30.0
Two	21	10.0
3 and above		
Total	210	100

*Table 6: Number of Printers Available in the School as Indicated by Students  
Fieldwork Survey: 2021*

It was evident that majority of students said that the school had one printer for each level followed by the students who indicated they have two printers accounting to 30.0%, the rest students indicated they have more than 3 printers in the department. This was deduced to mean that there are few number of printers in the sampled schools. According to Turner (2003) 'ICT tools in education points to the need of the various varieties such as computers, printers, communication facilities and other support features that variously teaching, learning and other range of activities in education which can help maximize the processes.

#### 4.2.4. Number of LCD Projectors

The researchers sought to identify availability of LCD projectors as an ICT too used for presentation to aid on pedagogy in English department university of Jos. The findings are as indicated in Table 7.

Number of LCD Projectors	Frequency	Percentage
None	168	85.0
One	32	15.00
Total	210	100.00

*Table 7: Number of LCD Projectors in the Sampled Schools as Indicated by Students  
Fieldwork Survey: 2021*

Data revealed that some of the levels do not have LCD Projectors since majority 168 (85.5%) of the students indicated that their department do not have any LCD Projectors. Other 15% of students are the one who indicated that the departments have single LCD projectors. This finding was deduced to mean that there is inadequate provision of some ICT tools like LCD Projectors. According to Turner (2003), numerous studies suggest that computerized media like LCD projectors offer a multimedia environment and can be helpful for learning and speaking of English language vocabulary.

Servers	Frequency	Percentage
None	105	50.0
One	84	40.0
Two	21	10.00
Total	210	100.00

*Table 8: Number of Servers in the Computer Laboratory in Schools as Indicated by Students  
Fieldwork Survey: 2021*

Data revealed that the half (50.0%) that is a section of the department servers connected with routers which is used to connect computers into a local area network. Other schools accounting to 40.0% have a single server in the school as indicated by students. This finding was deduced to mean that there is inadequate provision of some ICT tools like servers and so computers serve in a standalone environment. The most effective teaching and learning requires that teachers apply ICT in their respective disciplines to support and extend teaching and learning while collaboration and networking showcase the communicative potential of ICT to extend learning beyond the classroom and necessitate the development of new knowledge and skills. The real power of ICT comes from new ways of communicating beyond the four walls of classroom and by locating information from worldwide sources wherever these may be located.

#### 4.2.5. Number of Computers Connected to the Internet

The researcher wanted to identify the number of computers connected to the internet in order to establish their availability of internet for use for pedagogy of English Language.

ICT tools	Frequency	Percentage
Less than 5	168	80.00
6-15	21	10.00
Total	210	100.00

*Table 9: Number of Computers Connected to the Internet  
Fieldwork Survey: 2021*

Data revealed that the more than 80% of the departments have less than 5 computers with internet connection in the entire institution. Only 10% of schools have more than 5 computers. These findings could be explained by the fact that most department have not installed servers to interconnect the computers and therefore they use individual modem to access internet. The most crucial factor in integrating ICT into teaching and learning depends on the extent to which various guiding principles of the integration are formulated and applied.

#### 4.2.6. Places Where Computers Are Installed in the University

The researcher sought to find places where computers are installed for use on pedagogy in the university. The Findings are as indicated in Table 10

ICT Tools	Frequency	Percentage
Computer Lab	189	90
Classrooms	21	10
Total	210	100

*Table 10: Where Students Use Computers in the University  
Fieldwork Survey: 2021*

Data revealed 90% English Language students' use computer in the computer laboratories while only 10% indicating that they access computers in classrooms or any other places. Which is an indication of inadequacy of ICT tools like computers since in well automated university, the ICT tools are available in different department especially English Language Department.

#### 4.2.7. Types of Operating Systems Installed in the Computers

The researcher wanted to know which operating systems are installed in the computers that are available in the sampled department in order to establish their availability and relevance use for pedagogy purposes. The findings are as indicated in Table 11.

Operating System	Frequency	Percentage
Windows XP, Linux	105	50
Window Vista and Version 7.0, 10	105	50
Total	210	100.0

*Table 11: Students Responses on Type Operating System Installed in the Department  
Fieldwork Survey: 2021*

Data revealed that half of (50.0%) of the students in university of Jos English Language department are using windows XP version and Linus for the computers operating systems while another 50.0 are using newer version of windows 7 and above. This is an indication that the department is using very old almost obsolete operating system while another half are using newer and more stable operating systems and Windows 7.

#### 4.2.8. Students Exposure to Internet and Email

The researcher sought to find out whether students use internet and email services. This information was important to establish student's level of exposure to the internet and email technology.

The findings are as indicated in Figure 4

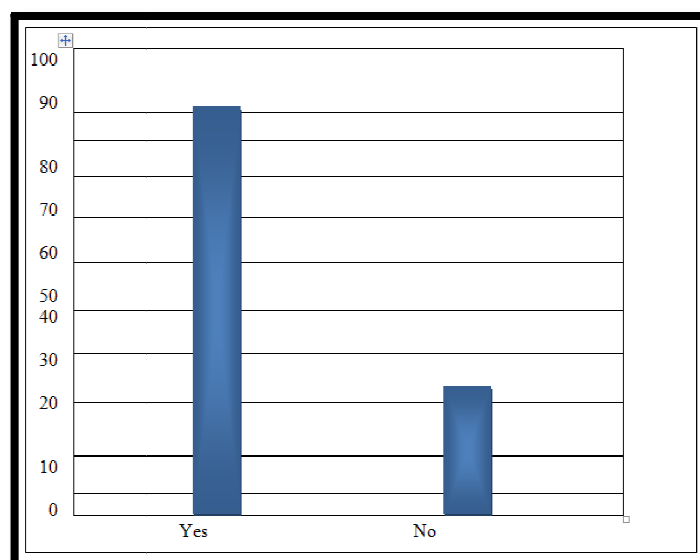


Figure 4: Whether Students Currently Use Internet and Email

The findings in Figure 4 indicates that most (80.0% of students in university of Jos English language department uses internet and email, whereby from qualitative comments from interview most indicated that they are use mobile phones in accessing social media application, Facebook, twitter and Yu-tube. Technologies augment this pedagogy processes in various ways. Human communication, or teacher-students interaction, is central to the process of learning. The use of Instant Messaging tools which include e-mail exchanges, audio and video conferencing could facilitate information exchange, giving feedback and provide opportunities for asking questions.

#### 4.2.9. Reasons for Accessing Internet Tools

The research sought information from students on the reasons why they access internet in order to assess their awareness of different features that are provided by the internet applications. The findings are as shown in Table 12.

Use of Internet technology by students	Frequency	Percentage
I use internet to interact with friends	42	20.0
I use internet to download music, videos and for other entertainment	67	32.0
Sending and receiving mails and letters	44	21.0
I use internet to keep updated with current Affairs, news and trend.	42	20.0
To learn more on different subject to Supplement class work.	15	7.0
Total	210	100.

Table 12: Reasons why Students Access Internet Tools  
Fieldwork Survey: 2021

The research established that in most cases students used various internet applications for personal for personal entertainment which includes downloading music and videos (32.0% while least 7.0% used internet for learning English language. From the findings it was deduced that most students used internet applications for social networking and communication more than for learning and seeking classroom information. The use of Instant Messaging tools which include e-mail exchanges, audio and video conferencing could facilitate information exchange, giving feedback and provide opportunity for asking questions.

#### 4.2.10. Students' Computer Application Skills

The research sought information on student's computer application skill order to ascertain their readiness to use ICT for learning English in university. This was done using Likert scale where the lowest (1) was lowest and highest (5) was excellent. The findings are as tabulated as shown in Table 13.

Computer areas	Poor	Fair	Good	Better	Excellent	Mean	SD
	1	2	3	4	5		
Word Processing	9.0	10.0	28.0	28.0	25.0	1.88	.683
Spread Sheets	10.0	15.0	22.0	28.0	25.0	1.65	.783
Database	8.0	20.0	20.0	25.0	27.0	1.47	.706
Power Point	5.0	16.0	15.0	34.0	30.0	1.69	.850
Internet	15.0	22.0	20.0	21.0	22.0	1.80	.393
Development of Web pages	8.0	10.0	27.0	27.0	28.0	1.06	.639
Basic Repair and Maintenance	32.0	25.0	25.0	10.0	8.0	1.20	.632

Table 13: Students' Responses on Computer Application Skills

Total = 210

Fieldwork Survey: 2021

From the above Table 13 it was established that most students possess 'fair computer application in word-processing, spread sheets and power points as well as internet (M=1.88; SD=.683). However, most learners are poor in basic computer repair and maintenance, development of web pages and even data base creation and management as indicated by (M=1.06; SD=.632) which was rated as 'poor'. This clearly indicates that there is need for students to be sensitized and trained on basic computer skills before they can apply them in learning of English Language. This also shows the extent of research problem in the area of study.

According to Tyner (1999) for teaching and learning to be productive in teaching English Language adequate IT skills, are needed in order to manage hardware and software so that various tasks are completed and problems are resolved. Tyner (1999) believes that by integrating basic IT skills in the language speaking classroom, we are developing language skills and equipping learners with technology skills. The application of these technology skills goes beyond the language learning. Similarly, according to Lawton, (1975) 'ICT plays a part in fostering intercultural competence' which is a part of learning English language? ICT provides a variety of different approaches as well as learning styles that reinforce the material delivered in other formats.

#### 4.2.11. Teachers Computers Application Skills

The researchers sought information on teachers' computer application skills in order to ascertain their readiness to use ICT for teaching students. The findings were tabulated as shown in Table 14

Computer Areas	No Expertise	Fair	Good	Very	Excellent		Percent Mean	SD
	1	2	3	4	5			
Ms word	9.0	10.0	28.0	28.0	25.0	100.0	3.85	.683
Excel Spreadsheet	10.0	15.0	22.0	28.0	25.0	100.0	3.10	.738
Publisher)	8.0	20.0	20.0	25.0	27.0	100.0	3.33	.706
(Access) Database	5.0	16.0	15.0	34.0	30.0	100.0	3.28	.584
Power Point	15.0	22.0	20.0	21.0	22.0	100.0	2.66	.584
Internet	8.0	10.0	27.0	27.0	28.0	100.0	3.30	.545
Development Of Web pages	32.0	25.0	25.0	10.0	8.0	100.0	2.13	.547
Basic Repair and Maintenance	37.0	33.0	18.0	6.0	6.0	100.0	1.89	.619

Table 14: Teachers' Responses on Computer Application Skills

Total = 72

Fieldwork Survey: 2021

From the Table 14, teachers were on average found to be good in basic computer skills including word processing, spreadsheet, PowerPoint and internet (M=3.40; SD=.6000), with the lowest skills being in development of web pages (M=2.01; SD=.547) and basic repair and maintenance of computers.

This shows that the teachers possess basic skills to deliver ICT aided teaching and learning among students in University of Jos English Language department. Gallardo del Puerto et al, discuss that the implementation of ICTs into a language classroom as well the extent of the implementation is quite related to the knowledge or training or attitude teachers have towards their use; so adequate IT skills are needed in order to manage hardware and software so that various tasks are completed and problems are resolved.

#### 4.2.12. Rating of Teachers on Use of ICT Tools for Teaching and Learning of English Subjects

The research sought to rate the teachers on how ICT tools can be used for teaching English subjects in Secondary schools. The findings were tabulated as shown in Table 15

Statement	SA	A	U	D	SD	Mean	SD
Computer assisted Lessons are dull	0	0	6	18	58	1.37	.688
Computer assisted Lessons are difficult	0	0	0	34	48	1.41	.618
Computer assisted Lessons are interesting	42	28	10	2	0	4.34	.793
Students like the Computer assisted Lessons	32	38	8	4	0	4.20	.488
The quality of Student work has Improved	36	29	15	2	0	4.26	.558
Students understand Better when they use a computer to learn.	28	22	32	0	0	3.95	.737

*Table 15: Teachers' Ratings on Use of Computers on Pedagogy of English Language*

*Total = 72*

*Fieldwork Survey: 2021*

The findings in Table 15 indicated that quality of their work improve through use of computers in learning as shown by (M=4.26; SD=0.793), most students like the computer assisted lessons this is also shown by a mean of (M=4.20; SD=.488).

This shows that given the infrastructure and skill-empowerment, teachers expect student performance to improve significantly. Hence teachers disagree that computer lessons are dull and difficult for both learners and teachers. Computers are meant to make learning and teaching easier for students and teachers respectively. ICT integration in teaching and learning is a key way of improving teaching and learning. The standard deviation measures how concentrated the data are around the mean; the more concentrated, the smaller the standard deviation, the more it close to zero or close to 1. Standard deviation is a 'measure of dispersive tendency'. It is how wide a range the values span. A smaller standard deviation means variation of opinion of respondents was small. A large standard deviation means the variation is large. ICT also enables a representation to language as a symbolic system. Furthermore, the use of well-designed ICT environments can help students grasp abstract concepts such as imagery, literary relations, and morphology (Interactive education, 2016). Teachers can use arrange of teaching tools such as discussion boards, forums, video as tools for delivery of class program. This opens reciprocal dialogue between member of the clad community and may be attended to the school community at large through activities such as blogs

#### 4.3. Students and Teachers' Perception towards Use of ICT on Pedagogy of English Language.

How students feel towards use of ICT in the reading, writing, listening and speaking skills in English language in University of Jos English Language Department university of Jos.

##### 4.3.1. Students and Teachers' Perception towards Use of ICT in English Language Pedagogy

The study sought from students and teachers on how they felt towards use of ICT in teaching and learning of reading skills in English language. 5 level Likert scale was used to assess how the 'feeling' or the perception where the highest level is 5 strongly agree (SA), 4=agree (A), 3=UNDECIDED (U), 2=DISAGREE; (D) and the LOWEST LEVEL STRONGLY DISAGREE (SD) towards use of ICT in teaching and learning of reading skills in English language. In the study percentage frequency and the mean has the same trend in the interpretation; however standard deviation is a 'measure of dispersive tendency'. It is how wide a range the values span.

A standard deviation far from absolute 1, means that the variations of opinion of respondents was huge, where as standard deviation near absolute 1, means that the variation is large. A large means or a small mean is not necessarily accompanied may hold an opinion, there is also a chance of other dispersed opinions on the same subject or high agreement in the rejection of the statement provided. The standard deviation measures how concentrated the data are around the mean; the more concentrated, the smaller the standard deviation, the more it close to zero or close to 1. Standard deviation is a 'measure of dispersive tendency'. As Murithi, (2005) suggests, the combination of several online tools can be much more powerful to match the strengths and features of each with requirements of the activity at hand. So, the use of one of them does not mean that you have to abandon other useful tools.

**4.3.2. Standard and Teacher's Perception towards Use of ICT on Pedagogy of Reading Skills in English Language.**

The study sought from students how they felt towards use of ICT on pedagogy of reading skills in English language. The findings are as shown in Table 16.

<b>Statements Reading Skills</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>%</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>
Computer Assisted Lessons Material are easy to read	33.0	45.0	12.0	5.0	100.0	5.0	4.33	.811
Computer Assisted Lessons are interesting and interactive	42.0	40.0	10.0	4.0	100.0	4.0	4.46	.614
Computer motivates me to read and also has an assistant who assists in improving reading skills	54.0	30.0	10.0	3.0	100.0	3.0	4.60	.673
Computer assisted lessons have no handwriting Challenges hence easy to read	45.0	40.0	10.0	2.5	100.0	2.5	4.72	.685

*Table 16: Students Perception towards Use of ICT on Pedagogy of Reading Skills in English Language*

*Total = 210*

*Fieldwork Survey: 2021*

Findings in Table 16 shows that most students agreed that computer assisted lessons are easy to read ( $M=4.33$ ,  $SD=.811$ ), the students similarly agreed that computer assisted are interesting and interactive which also enhances reading skills this is also shown by a mean of a ( $M=4.46$  and a  $SD=.614$ ), Most students agreed indicated that ICT motivates the individual students to read and that it also has an assistant who assists in improving reading skills as shown by a ( $M=4.60$  and a  $SD=.673$ ) Most students agreed indicated that ICT motivates the individual students to read and that it also has an assistant who assists in improving reading skills as shown by a ( $M=4.60$  and a  $SD=.673$ ) and also that computer assisted lessons have no handwriting challenges hence easy to read as shown by ( $M=4.72$  and a  $SD=.685$ ).

This shows that learners appreciate that ICT help them to improve on reading skills. Mean of level 4 in the Likert scale and a standard deviation of close to absolute 1, including the variation of opinion of respondents were small. Murithi, (2005) mentions that interactive site found in the internet improves interaction of students and ensures and ensures that students are highly motivated by these activities and provide stimulus to undertake tasks that students may otherwise avoid. Computer assisted lessons materials may be easy to read because ICT is interactive and dynamic in nature and can meet the needs of individual students. Most teachers similarly agree with students on all the statements on disagreeing standard deviation indicating trend of lack of uniformity in the opinion of teachers.

<b>Statements Reading Skills</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>%</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>
Computer Assisted Lessons materials are easy to read	30.0	48.0	9.0	9.0	100.0	5.0	4.00	.400
Computer assisted Lessons are interesting and interactive	35.0	40.0	17.0	3.0	100.0	5.0	4.00	.400
Computer motivates me to read and also has assistant who assists in improving reading skills	49.0	36.0	7.0	6.0	100.0	3.0	4.14	.314
Computer Assisted Lessons have no Handwriting Challenges hence Easy to read	40.0	45.0	15.0	0	100.0	0	4.80	.385

*Table 17: Teachers Perception towards Use of ICT on Pedagogy of Reading Skills in English Language*

*Total = 72*

*Fieldwork Survey: 2021*

From the findings it was deduced that teachers and students have the same 'feeling' or perception that use of ICT enhances pedagogy of reading skills in English language, however whereas most students were unanimous on the benefits some teachers differed with the opinion as was indicated by the standard deviation. The standard deviation measures how concentrated the data are around the mean; the more concentrated, the smaller the standard deviation, the more it close to zero or close to 1.

As Murithi (2005) suggests the combination of several online tools can be much more powerful to match the strengths and features of each with the requirements of the activity at hand. So, the use of one of them does not mean that you have to abandon other useful tools. According to this idea, we think that every tool that has been developed fulfills with the requirements for which it has been designed.

#### 4.3.3. Students and Teachers' Perception towards Use ICT on Pedagogy of Writing Skills in English Language

The study sought from students and teachers on how they felt towards use of ICT on pedagogy reading skills in English language. The findings are shown in Table 18.

Statement on Writing Skills	SA	A	U	D	SD	%	Mean	SD
Computer assisted lessons are Easy to write	30.0	48.0	10.0	6.0	6.0	100.0	4.65	.612
The quality of my Work has improved Via computer use	32.0	25.0	30.0	10.0	3.0	100.0	3.73	.613

Table 18: Students Perception towards Use of ICT on Pedagogy of Writing Skills in English Language.

Total=210

Fieldwork Survey: 2021

Findings in Table 18 shows that most students agreed that computer assisted lessons are easy to write as shown by (M=4.65, SD=.612), that the quality of their class work have improved as a result of computer use (Mean=3.73, SD=0.613) However most student could not agree or disagree with statement that their handwriting has improved due to imitation of computer assisted lessons (Mean=of 3.38, SD=.648). This shows that with ICT learners can understand better, be attentive and embrace clear communication due to computer aid. The speaking skills are also expected to improve if only computers can be availed together with the skill empowered teachers who are able to transfer the computer knowledge to the learners. As suggested by Murithi (2005).

Statement on Writing Skills	SA	A	U	D	SD	Percent	Mean	SD
Computer Assisted Are easy to write	2.0	3.0	20.0	30.0	45.0	100.0	1.56	.310
The quality of my work has Improved via Computer use	2.0	3.0	20.0	30.0	45.0	100.0	1.74	.313

Table 19: Teachers Perception towards Use of ICT on Pedagogy of Writing Skills in English Language

Total = 72

Fieldwork Survey: 2021

However, concerning the ICT and writing skills most teachers disagreed with various statement which include that quality of student work has improved via computer use comparing to previous times shown by (Mean=1.56 and SD=.310), Quality of student work has improved since students commenced using ICT tools as shown by (Mean 1.74 and SD=.413) which also strongly differed students the opinion. The findings can be deduced to mean that many teachers still prefer the traditional approach in writing unlike the students who seems to favour the computer enabled writing techniques.

#### 4.3.4. Students and Teachers' Perception towards Use of ICT on Pedagogy of Listening Skills in English Language

The study sought from students on how they felt towards use of ICT in teaching and learning of listening skills in English language. The findings are as shown in Table 20.

Statement on								
Listening Skills	SD	A	U	D	SD	%	Mean	SD
I understand better If use a computer to Learn	10.0	10.0	55.0	15.0	10.0	100.0	3.43	.510
I remain attentive When learning via Computer	36.0	28.0	20.0	10.0	6.0	100.0	4.48	.701
Computer assisted lessons have voice systems which enable in translation of English from computer assisted lessons are clear and easy to understand.	30.0	46.0	10.0	7.0	7.0	100.0	4.42	.882

*Table 20: Students Perception towards Use of ICT on Pedagogy of Listening Skills in English Language  
Total = 210*

*Fieldwork Survey: 2021*

Findings in Table 20 shows that most strongly agree with the statement that when using ICT they remain attentive as indicated by a mean of (M=4.48 and SD.701) while being in agreement that the English from computer assisted lessons is clear and easy to understand (M=3.59; SD=.756), computer assisted lessons are friendly (M=4.62; SD=.909), Computer assisted lessons have voice systems enable in translation and clear communication which enables them to listen well and being attentive (M=3.59; SD=.756) but could neither agree nor disagree that with ICT they understand better the learning (M=ICT they understand better the learning (M=3.53; SD=.510). However, the findings were different with teachers disagreeing with all statement apart from agreeing that computer assisted lesson have voice systems which enable in translation and clear communication which enables students to listen attentive (M=4.00; SD=.510).

ICT also enables a representation to language as symbolic system. Furthermore, the use of well-designed ICT environments can help students grasp abstract concept such as imagery, literary relations, and morphology (Interactive education, 2016). Teachers can use arrange of teaching tools such as discussion board, forums, video as tools for delivery of class program. This opens reciprocal dialogue between members of members of the clad community and may be attended to the school community at large through activities such as blogs.

Statement on Listening Skills	SD	A	U	D	SD	%	Mean	SD
I understand better if I use a Computer to learn	10.0	15.0	50.0	12.0	13.0	100.0	3.45	.310
I remain attentive when Learning via computer	30.0	25.0	25.0	10.0	10.0	100.0	3.25	.400
Computer assisted lessons have voice systems which enable in translation	40.0	30.0	10.0	5.0	5.0	100.0	4.00	.310
English from computer Assisted lessons is clear and easy to understand.	30.0	46.0	10.0	7.0	7.0	100.0	4.42	.882

*Table 21: Students Perception towards Use of ICT on Pedagogy of Listening Skills in English Language  
Total = 72*

*Fieldwork Survey: 2021*

From the findings teachers and students deferred on the variation of agreement and on uniformity of the opinion as shown by differing means and standard deviation. The standard deviation measure how concentrated the data are around the mean; the more concentrated, the smaller the standard deviation, the more it close to zero or close to 1. Standard deviation is a 'measure of dispersive tendency'. It is how wide a range the values span. A smaller standard deviation means the variation of opinion of respondents was small. A large standard deviation means the variation is large.

#### 4.3.5. Students and Teachers' Perception towards Use of ICT on Pedagogy of Speaking Skills in English Language

The study sought from students on how they felt towards use ICT on pedagogy of speaking skills in English language. The findings are as shown in Table 19.

<b>Speaking Skills</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>	<b>%</b>	<b>Mean</b>	<b>SD</b>
Computer assisted lessons Have improved my spoken English	22.0	45.0	20.0	7.0	6.0	100.0	3.55	.613
Computer assisted lessons are friendly	35.0	45.0	6.0	8.0	6.0	100.0	4.34	.895
Computer assisted lessons Are clear and visible	40.0	40.0	10.0	5.0	5.0	100.0	4.62	.909
Computer with their speaking Aids help in improving Speaking in students spoken English	34.0	35.0	10.0	10.0	10.0	100.0	3.89	.631

*Table 22: How Students Perceive Use of ICT On Pedagogy of English Language and Speaking Skills  
Total=210*

*Fieldwork Survey: 2021*

Finding in Table 22 shows that most strongly agree with the statement that the computer assisted lessons are clear and visible (M=4.62; SD=.909) and that computer assisted lessons are friendly (M=4.62; SD=.909), they as well agree with the statement that assisted lessons have improved students spoken English as shown by (M=3.55; SD=.613). The standard deviation of .500 in all statement was relatively in proximity to absolute 1 indicating the variation of opinion among respondents was small. This was deduced to mean that the speaking skills are expected to improve if only computers and other ICT tools can be availed together with the ski

Findings in Table 22 shows that most strongly agree with the state that the computer assisted lessons are clear and visible (M=4.62; SD=.909) and that computer assisted lessons are friendly (M=4.62; SD=.909), they as well agree with the statement that computer assisted lessons have improved students spoken English as shown by (M=3.55; and SD=.613) and computers with their speaking aids help in improving students spoken language (M=3.89; SD=.631). The standard deviation of .500 in all statement was relatively in proximity to absolute 1 indicating the variation of opinion among respondents was small. This was deduced to mean that the speaking skills are expected to improve if only computers and other ICT tools can be availed together with the skill empowered teachers who are able to transfer the computer knowledge to the learners.

<b>Speaking Skills</b>	<b>SA</b>	<b>A</b>	<b>U</b>	<b>D</b>	<b>SD</b>	<b>%</b>	<b>Mean</b>	<b>SD</b>
Computer assisted Lessons have improved My spoken English.	22.0	40.0	25.0	5.0	7.0	100.0	3.45	.400
Computer assisted Lessons are friendly	5.0	5.0	10.0	40.0	40.0	100.0	2.34	.600
Computer assisted Lessons are clear and visible	40.0	30.0	20.0	5.0	5.0	100.0	4.00	.413
ICT aids help in improving spoken skills	10.0	15.0	10.0	35.0	40.0	100.0	2.00	.400

*Table 23: How Teachers Perceive Use of ICT on Pedagogy of English Language  
Total =72*

*Fieldwork Survey: 2021*

The respondents from teachers varied from students in that most teachers could neither agree nor disagree with statement that computer assisted lessons have improved students spoken English (M=3.45; SD=.400), they disagreed also with other statements, only being in agreement that computer assisted lessons are clear and visible and that computers speaking aids help in improving students spoken English spoken skills. The standard deviation measures how concentrated the data are around the mean; the more concentrated, the smaller the standard deviation, the more it close to zero or close to 1. Standard deviation is a 'measure of disperse tendency'. It is how wide a range the value span. A smaller standard means the variation of opinion of respondents was small. A large standard deviation means the variation is large.

#### *4.4. The Impacts of Information Communication Technology on Pedagogy of English*

The main objective of the research was to establish the extent to use of ICT in schools in teaching and learning English influences reading, writing, speaking and listening skills in English Language Department University of Jos in the study area. Therefore, ICT use on pedagogy of English language was the independent variable used to predict the development of various skills in English language amongst students. This was done by finding the relationship between the dependent and the independent variables using multiple regression analysis. Multiple regressions were used to analyses the hypothesized relations of the dependent and independent variable in 3 stages.

The first step involved determination of coefficient of relationship (Adjusted R), which measured the size of effect of independent to dependent variable. Adjusted R is the most reliable coefficient for determination rather than using R or R squared since the size of error is minimal (Kotheri, 2004). The closer the R is too absolute 1 the higher the effect of independent variable to the dependent variable (Kotheri, 2004). The second stage was to indicate the significance of the joint effect (ANOVA) of dependent variable on the independent variables. The third step indicated the standardized score of each the coefficient (Beta) indicating how use of ICT on pedagogy of English Language in sampled schools in study area could have contributed in development of each of the four skills namely reading, writing, speaking and listening individually.

#### 4.4.1. Size of Effect of Use of ICT on Pedagogy of English on Skills Development

The research sought to determine the extent to which development of skills in English language could be attributed to the use of ICT tools on pedagogy of English language in selected department study area. This was determined by use of coefficient of determination which measured the size of effect of independent to dependent variable.

Model Summary Adjusted R				
Model 1	R.	R.Square	Square	Std Error of the Estimate
1	.881	.747	.698	.71250
a. Dependent: (Constant), English Language Skills: Listening, Speaking, Reading Skills, Writing Skills in English				
b. Predictors Variable: Use of ICT on pedagogy of English Skills				

Table 24: Regression Model Summary  
Fieldwork Survey: 2021

From findings in Table 24 the regression summary show that coefficient of determination (adjusted R) was 0.698 which implies that use of Information Communication Technology on pedagogy of English language in department of English language in university of Jos can be attributed to influence 69.8% of the development of teaching and learning skills such as writing, reading, listening and speaking. This finding was found to be in agreement with Elia (2015) who indicated that ICT plays a part in fostering inter-linking skills and competence, which is a part of learning English language.

#### 4.4.2. Significance of the Regression Effect

In order to indicate than the findings of the regression are accurate and are not due to chance but because of absolute relationship between independent and dependent variables. The findings are as shown in Table 25.

ANOVA <sup>b</sup>					
Sum of Model	Squares	df	Mean Square	F	Sig.
1 Regression	17.306	4	4.327	8.523	.020
Residual	34.013	67	.508		
Total	51.319				
a. Dependent: (Constant), English Language Skills: Listening, Speaking, Reading Skills, Writing Skills in English					
b. Predictors Variable: Impact of Use of ICT on pedagogy of English skills.					

Table 25: Significance of Model  
Fieldwork Survey: 2021

Table 25 indicate that the variation of the model was statistically significant at  $p < 0.05$ , The relationship between dependent and independent variable was not due to chance and so the findings can be applied in other settings. With this findings English teacher can maximize their impact if ICT in their classrooms by ensuring that they and their students use ICT as an integral part of lessons, present ideas dynamically, and use a range of media

#### 4.4.3 Coefficient of Regression of Effect of Impact of Use of ICT on Pedagogy of English on Individual Skills Development

The purpose of the study was to establish the influence of Information Communication Technology on pedagogy of English. The standardized regression coefficient indicated the influence of ICT in the development of each of the four skills namely reading skills, writing skills, speaking and listening skills in English as shown in Table 22.

Unstandardized Coefficients	Coefficients*		t	Sig.	Beta Model
	B	Standardized Coefficients Std. Error			
1 (Constant)	3.161	.567		.574	.234
Reading Skills in English	.716	.147		.690	.010
Writing Skills in English	.656	.228		.546	.035
Speaking Skills in English	.606	.082		.592	.040
Listening Skills in English	.644	.302		.623	.020
a. Dependent: (Constant), English Language Skills: Listening, Speaking, Reading Skills, Writing Skills in English					
b. Predictors Variable: Impact of ICT pedagogy of English Language.					

Table 26: Coefficient of Reading, Writing, Listening and Speaking Skills  
Fieldwork Survey: 2021

From the findings in Table 26 first the regression model output generated by SPSS version 20.0 indicated that use of ICT in selected department for pedagogy of English language contributed significantly to development of each of the four skills namely reading, writing, speaking and listening skills which was indicated by P value of <0.05. However, the use of ICT predicted more the development of reading skills in English with the highest standardized coefficient ( $\beta = 0.623$  (62%). Thirdly it was followed by development of speaking skills in English with a  $\beta=0.592$  (59.2% and finally development of writing skills in English with a  $\beta=0.546$  (54.6%)

The fact that use of ICT on pedagogy of English language was found to have greatest effect in development of reading skills in English could be attributed to the fact that highest effect of Language activities involved in reading include asking questions after reading a story, keeping a reading log on the kind of material read and how often they are read. Because of its interactive and dynamic nature of learning, ICT has the potential to meet the needs of individual students by providing opportunities to direct their learning and to pursue information or complete task, in ways which meet their own interest and needs computer-based technologies in English.

#### 4.5. Analysis of Interview Schedule for UICTO

The researcher sought to find out the general analysis of the University ICT unit status on usage of computers in teaching and learning of English language through government policy interventions, resource empowerment, research and development, training of human resource base in the university. The Information and Communication Technology Officer was therefore interviewed and the findings are summarized below.

A number of teachers in the university are computer proficient with the TETFUND intervention training 50 of teachers are trained quarterly on basic computer and internet usage. The National Universities Commission (NUC), advocated for integrated learning of English via use of Technology to access learning materials pedagogy of languages and sciences. The universities acting on the directives of the government ensures that teachers are trained to be ICT proficient. Through TETFUND intervention the English department is working acidulously to execute NUC prescription of ensuring that Personal Computer (PC) ownership of one to every four students, one PC to every two lecturers below the grade of Lecturer 1, one PC per Senior Lecturer and one notebook per Professor/Reader.

### 5. Summary of the Findings

The study found that most schools did not have the trained teachers to implement ICT integration in learning and teaching. The schools didn't have the necessary ICT infrastructure and equipment. Most teachers need training before implementation of ICT integration in learning of other subjects, English language. In this study, the researcher established that ICT enhances the pedagogy of these skills and in turn lead to proficiency in English language in skills like listening, writing, speaking and reading skills therefore there is a need of acceleration of use of ICT in department of English languages.

#### 5.1. Summary of the Study

The purpose of the study was to establish the impacts of Information Communication Technology in pedagogy of English language in English Language department in university of Jos, Plateau State Nigeria. The study was carried out to achieve the following research objectives; to determine negative and positive impacts of use of ICT on English Language Pedagogy in English Language Department, University of Jos, Plateau State in Nigeria, to establish the extent to which use of ICT impacts on the four skills (Listening, Speaking, Reading and Writing) of English Language Pedagogy in English Language Department, University of Jos, Plateau State in Nigeria; to establish the extent to which use of ICT affects

Teachers of English Language in English Language Pedagogy in English Language Department, University of Jos, Plateau State in Nigeria; to establish the extent to which use of ICT impacts on Students of English Language in English Language Pedagogy in English Language Department, University of Jos, Plateau State in Nigeria.

This study adopted a mixed methodology by use of both questionnaires as quantitative tools and interview guide as qualitative tool. Most of respondents returned the research tools which were interpreted to show a willing participation from the sampled respondents.

The study indicated that in university of Jos, some ICT tools are available in adequate quantities while others ICT tools are not available at the time of the study. Only computers were found to be readily available in this department. Others tools such as printers, LCD projectors, computer servers and internet enabled and interconnected computers in the sampled department were in small quantities. Data also revealed that computers in the department are only accessed in laboratories, and only few access computers in classrooms and none indicated that they access computers in any other places.

There was an indication that the department have inadequate operating systems since they are using very old almost obsolete operating system like window XP and Linux while another half are using newer and more stable operating software for example Window7 and 10. Majority of the teachers and students have good skills in basic computer like word processing, databases, spreadsheets, presentation and internet and email but lack advanced skills including hardware and web designing there was indication that most learners do not use the online platform for learning but for entertainment and communication. It was evident that amongst the students with knowledge of ICT, can use it positively in tackling assignments, sharing knowledge with teachers sharing work with other classmates or to their teachers.

This shows that there is need to avail the ICT infrastructure, human resource and platform for the students to be equipped with skills and knowledge before applying it in learning. The students generally agreed that computer assisted lessons are easy to read, interesting and interactive, motivates one to read and have no handwriting challenges.

This is an indication of a positive perception even if most departments do not have qualitative access to computers. The students also agree that computer assisted lessons are easy to write, improves quality, teach new writing techniques via calligraphy and promotes variety. Smithson, (2015) mentions that interactive site found in the internet improves interaction of students and ensures that students are highly motivated by these activities and provide stimulus to undertake tasks that students may otherwise avoid. Most teachers similarly strongly agreed with students that ICT enhance students' skills development in reading although there were some dissenting opinions on the same. Similarly, most teachers agreed that computer assisted lessons are easy for students as well as that ICT based lessons are interesting and interactive.

Most students strongly agreed that computer assisted lessons are easy to write and that quality of their class work have improved as a result of computer use. This shows that with ICT learners can understand better, be attentive and embrace clear communication due to computer aid. The speaking skills are also expected to improve if only computers can be availed together with the skill empowered teachers who are able to transfer the computer knowledge to the learners. Writing is a language skill in which students communicate in written language. Using ICT changes the nature of composing and allows the writing process to become more fluid students creating both traditional and multimodal tests using ICT will often attend to the visual and spatial qualities of test creation early in the design process as in selecting fonts, templates or choosing images (Interactive Education, 2016).

Also, most students agreed that English from computer assisted lessons is clear and easy to understand. According to Nikolova (2013) in (Scheinin, 2014) numerous studies suggest that computerized media and a multimedia environment can be helpful for learning and speaking English language vocabulary. However, the materials in the studies have mainly been commercial or teacher-produced. Student authoring in computer-based material designed for foreign language learning has been shown to enhance vocabulary learning. It has been asserted that on-line debate is an excellent medium for generating social construction of knowledge (Fujike, 2014).

Similarly, students agreed that computers with their speaking aids help in improving student's spoken language. The speaking skills are also expected to improve if only computers can be availed together with the skill empowered teachers who are able to transfer the computer knowledge to the learners. ICT also enables a representation to language as a symbolic system. Furthermore, the use of well- designed ICT environments can help students grasp abstract concepts such as imagery, literary relations, and morphology (Interactive education, 2016). From findings, coefficient of determination (adjusted R) was 0.698 which implies that use of Information Communication Technology in teaching and learning of English in public secondary schools can be attributed to influence 69.8% of the development of teaching and learning skills such as writing, reading, listening and speaking. This finding was found to be in agreement with Elia, (2015) who indicated that ICT plays a part in fostering inter-linking skills and competence which is a part of learning English language.

## 5.2. Conclusions

Most teachers did not have a formal training on computer usage with 62 out of 82 teachers within the sample frame being without training. This indicates a majority of the teachers need training before implementation of ICT integration in learning of among other subjects, English language. The learners were found to enjoy computer assisted lessons and this was found to foster learning and performance therefore. It points out the there is a significant influence of ICT on teaching and learning of English Language in tertiary institution.

There is a positive outcome because of use of ICT in teaching and learning of the writing, reading, speaking, and listening skills in English language. The key challenges highlighted to have hindered ICT usage were inadequacy of trained

staff among the schools, lack of ICT tools and equipment and the necessary infrastructure and lack of good will from university management, government and sponsors.

In this study the researcher established that ICT enhances the pedagogy of these skills and in turn lead to proficiency in English language skills like listening, writing, speaking and reading skills therefore there is a need of acceleration of use of ICT in University of Jos English Language department. Teachers indicated that the best approach is not to abandon the traditional teaching and learning processes but rather using the ICT for complementing each other.

### 5.3. Recommendations

- Procurement of more varieties of ICT facilities to fill the gap that is existing and in particular acquisition of ICT facilities that can assist in sharing resources widely example servers. In a network environment ICT resource can be shared across departments like printers.
- Development of electronic content that can be used for training English subject to make ICT lessons easy to understand and therefore if integrated to learning can foster students' academic performance. This was based on the findings that there is inadequate content for training English subject.
- Since the study came into conclusion that there is a significant impact of ICT on pedagogy of English in universities and specifically university of Jos and that there is a positive outcome because of use of ICT in teaching and learning of the writing reading speaking and listening skills in English language, the government should enhance and enable TETFUND towards assisting more schools access ICT infrastructure since it is the major challenges in tertiary institutions education.
- In this study the researcher established that ICT enhances the learning and teaching of these skills and in turn lead to proficiency in English language in skills like listening, writing, speaking and reading skills therefore there is a need of acceleration of use of ICT in university. Teachers indicated that the best approach is not to abandon the traditional teaching and learning processes but rather using the ICT for complementing it.

### 5.4. Suggestions for Further Research

The following areas were suggested for study;

- The role of ICT in improving academic performance among students in Tertiary Institution.
- Challenges facing ICT integration among Students of Tertiary Institution.
- ICT and improvement of English Language and vocabulary.

## 6. Acknowledgment

The support of English Language Department, University of Jos is sincerely appreciated.

## 7. Conflict of Interests

The authors declare that there is no conflict of interests.

## 8. References

- Aborisade, P.A. (1977). 'The Role of Needs Analysis in Course Design for the EAP Classroom: A Case Study'. *English Language Teaching Today* Vol. 1/1, 19 – 36.
- Akinbode, J.O. (2006). 'Repositioning English Language Education in Nigeria'. *International Journal of Research in Education, Development Universal Consortia* Vol. 3 No.1, June pp. 10-15.
- Alimi, M.&Kutu, V. (1997). 'Team Teaching and Teacher Development'. *English Language Teaching Today*, Vol. 1/1; 60 – 64.
- Best, J.N & Khan, V.J. (1989). *Research in Education*, Delhi, prentice of India Ltd.
- Cohen, L., Manion, L. & Morrison, K. (2007). *Research methods in education*. New York: Routledge.
- Cook, S. (1990). 'Computers and Rumours of Revolution'. *The Journal of Computing and Society*. 1, 29 – 40.
- Einstein, E. (1979). *The Printing Press as an Agent of Change*. Cambridge, UK; Cambridge University Press.
- Creswell, J. (2003). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. New Jersey: Pearson: Merrill Prentice Hall. Davi U.K. & Dan .L. (1992). *School Development Planning*. Essex: Longman Group.
- Fakeye.O.D. (2010). Assessment of English Language Teachers knowledge and use of Information and Communication Technology in Ibadan Southwest local Government of Oyo state. *American-Eurasian Journal of Scientific Research*.
- Gay, L., Mills, G., & Airasian, P. (2006). *Educational research: Competencies for analysis and applications*. New Jersey: Pearson Education, Inc.
- Gergel, T. and Masbit, E.I. (1986). 'Psychological and Pedagogical Problems of Effective Computer use in Education Process', *Society Education*, Vol. XXVIII, Nos 10- 11, New York M.E. Sharpe Incorporation pp. 218 – 219.
- Glister, P. (1997). 'Digital Literacy', New York. Wiley Computer Publishing pp. 5 – 16.
- Hartoyo (2008). Individual Differences in Computer-Assisted Language Learning. Semarang: Pelita Insani
- Semarang Hayes, D. (2007). ICT and learning: lessons from Australian classrooms. *Computers & Education* 385-395
- Herwisher, G. (1991). 'Research and Recommendations for Computers and Composition Studies'. Urban National Council of Teachers of English and Computers and Composition. Pp. 1-4.

- xiv. Higgins, S. & Moseley, D.(2001). Teachers thinking about information and communications technology and learning; beliefs and outcomes *British Journal of Education Technology*,191-210
- xv. Johnson, B. & Christensen, L. (2004).*Educational research: Quantitative, qualitative, and mixed approaches*. Boston: Pearson Education, Inc.
- xvi. Kabaka E. O &Akinbode, J.O. (2006). *Influence of Information Communication Technology On Teaching And Learning Of English In Public Secondary Schools Marani Sub-County, Kisii County, Kenya*
- xvii. Kothari C.R. (2004). *Research Methodology: Methods and Techniques*. Daryaganj, New Delhi- 110002: New Age International (P) Limited Publishers.
- xviii. Lawton, P.J. (1975). 'Computer Assisted Learning in Technology' Ville Great Britain. The Pitman Both pp. 181-186.
- xix. Mugenda O.M. &Mugenda, A.G. (1999).*Research Methods – Quantitative And Qualitative approaches*, Acts Press, Nairobi.
- xx. Murithi, P. (2005). *A framework for integrating ICT in the teaching and learning process in Secondary schools in Kenya*. Unpublished Mcc. Thesis submitted at the University OF Nairobi, school of computing and information.
- xxi. Murray, D.E. (2000). 'Changing Technologies, Changing Literacy Communities'. *Language Learning and Technology*. Vol. 4, No. 2, September, 43 – 58.
- xxii. Odejide, A. (2003). EAP in Nigerian universities of Technology: What Methodologies? *Keynote paper at the 1st English Language Teachers Today Conference, 2002*. ELTT Journal Vol. 2, No. 1, June 1-6.
- xxiii. Orodho, J. (2008). *Techniques of writing Research proposals and Reports in Education and Social Sciences* Maseno: KeneziaHp Enterprises.
- xxiv. Osei Tutu Agyeman, (June 2007), *ICT for Education in Nigeria*Survey of ICT and Education In Africa: Nigeria Country Report, *World Fact Book*1. An illustrative Report.
- xxv. Pedro, F. (2006). The new millennium learners: challenging our views on ICT and ICT and learning.
- xxvi. Ramsden, P. (1992). *Learning to teach in higher education*. London and New York: Routledge.
- xxvii. Redecker, C. (2008).*Review of learning practices* Retrieved 03/03/2012 from <http://ftp.jrc.es/EURdoc/JRC49108.pdf>.
- xxviii. Rodgers, T. (2000).*Methodology in the New Millennium Forum*.Vol.36, No. 2, April 1- 14.
- xxix. San Francisco: Jossey-Bas Victoria L. Tinio, (1999). *Modificatingteaching through ICT. The American journal*. 12, 56-63.
- xxx. Turner,V.(2003). *ICT in Education: UNDP Asia Pacific Development Information Programme*. Manila: UNDP-APDIP.
- xxxi. Tyner, K. (1998). 'Literacy in a digital world: Teaching and Learning in the Age of Information'. Mahwah, N.J. Lawrence Greenbaum Associates. Pp. 5-25.