

EFFECT OF USING INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) IN TEACHING AND LEARNING ENGLISH LANGUAGE IN TERTIARY INSTITUTIONS IN NIGERIA DURING COVID -19 PANDEMIC ERA

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Abstract

The paper sought to explore the effects of using ICT in teaching and learning English language in tertiary institutions in Nigeria during COVID -19 pandemic era. Since the disease was officially declared pandemic, tertiary institutions across Nigeria were shut down at one point and an appraisal of the use of ICT in teaching and learning of the English language in these institutions has not been done to know its effects and proffer ways of improvement if required. To encourage the use of ICT in teaching and learning of English Language in these institutions, the paper adopted a secondary research methodology in which relevant literature was analyzed. The findings of this paper show that there is no prove that students assimilate better in classroom teaching than e-learning, students can do very well using either or both mediums of teaching and learning because academic performance is irrespective of the media, institutions that did not integrate ICT into teaching and learning are now embracing this technology and ICT learning can fully replace classroom learning of the English language. It was recommended that more effort should be made to enhance the learning process generally and prepare for similar events like this pandemic in future.

Introduction

It is obvious that the COVID-19 pandemic has had great impact on the educational sector in Nigeria. As a result of the lockdown necessitated by the pandemic, some tertiary institutions had to expeditiously move from the face-to-face teaching and learning method to virtual learning through ICT tools. This was not an easy migration as students who did not have the relevant ICT tools (Phones, laptops or computers) to effect this migration had to lose some part of their academic curriculum. This created a problem as the educational institutions in the country and the students were not prepared for such migration. The situation made the relevant stakeholders in the Nigerian educational sector realize that ICT is relevant in education as against the use of only the traditional classroom teaching and learning. Since the disruptive emergence of the pandemic, an appraisal of the use of Information and Communications Technology (ICT) in teaching and learning of the English language in tertiary institutions in Nigeria has not been critically examined to know its effects and proffer ways of improvement if required.

The paper has the general objective to explore the effect of the use of information and communication technology (ICT) in tertiary education for teaching and learning. The paper has specific objectives of evaluating the difference in assimilation between face-to-face

(classroom) learning and using ICT platforms, determining which method of teaching and learning students perform better, classroom or ICT, improvement on the use of ICT in learning and teaching of English Language in tertiary institutions of learning, in Nigeria.

Method

This paper is exploratory in nature, taking into cognizance the experiences, perceptions and socially construed realities of the educational sector in Nigeria, before and during the corona virus pandemic. To guide the researcher in accomplishing the research objectives, the following research questions have been posed:

- i. Is there a difference in assimilation between face-to-face (classroom) learning and learning using ICT platforms?
- ii. Under which learning method do students perform better? Classroom or ICT?

To answer these questions, no data will be collected either through interviews, surveys, questionnaires or any other means, and no hypothesis will be tested. The paper will adopt a secondary research methodology in which the researchers' decision will be based entirely on the review of other peoples' work as it relates to the use of ICT in teaching and learning the English language in Nigerian tertiary institutions educational development. The paper will be reviewing over a dozen peer reviewed articles in relation to the present study bearing in mind that the pandemic is a new development. The first set of articles address ICT education, the second set discusses ICT in English language teaching and learning; while the third set deliberate on the use of ICT prior to the corona virus disease (COVID-19) pandemic and what is obtainable presently.

Result

ICT and Education before the COVID-19 Pandemic

Dabas (2018), in the article, "Role of Computer and Information Technology in Education System" highlights the importance of ICT in learning. As noted by Dabas, ICT can serve the following purposes in education:

- Traditionally used to teach and practice writing
- Enhance cognitive thinking by simulating real-world environments
- Leverage the internet and communication media to improve communication, and
- Used as word processors, databases, spreadsheets and other productivity tools

Dabas (2018) goes further to highlight the benefits of ICT in education. Some of these benefits include:

- ICT can enhance basic skill areas and learning in students
- ICT improves the learning process, thereby increasing knowledge retention
- ICT increases the efficiency and effectiveness of teaching

A presentation by Dabas (2018, pg. 571) also highlights the functional areas ICT can be applied in education, alongside computer aided learning, distance learning and examination

- **Distance learning:** Teleconferencing, online discussion forums, video conferencing and other virtual classrooms play very important role in this regard. In distance learning, ICT has been observed to reduce cost, enhance education quality, and impart knowledge in a large number of students, without regard to time and space.
- **Online Examination:** With the aid of computers, the internet and other ICT resources, it is possible for examinations to be administered to students via the internet. This method has been proven to save time and cost, improve security and promote impartiality and fairness.
- **Computer-Aided Learning:** The quality of teaching and learning has improved significantly from what it was decades back, thanks to the advent of computers. Students now find learning via computers to be engaging, less boring and less frustrating. Computers have also been noted to be compatible with the learning styles of many students.

Dabas (2018, pg 573) concludes by stating that Computer and information technology has added innumerate values to the educational system. Significant improvements have been recorded in the teaching and learning process, and boredom and frustrations associated with the traditional teaching methods are not experienced by students in a learning environment that incorporates ICT.

Bhakta and Dutta (2016) opine that novel and new technologies have replaced the traditional “classroom” method of learning and teaching. This position was put forward in the article “Impact of Information Technology on Teaching-Learning Process” published in the International Research Journal of Interdisciplinary & Multidisciplinary Studies (IRJIMS), Volume 2, Issue 11, December, 2016.

According to Bhakta and Dutta (2016), ICT benefits students in the following ways: promotes independent learning, provides easier access to information, makes education exciting, enables wider participation, equips students for the future and facilitates cooperative learning, among others.

- **Independent learning:** Unlike in classroom learning, learning through ICT makes it possible for students to learn without any form of guidance from parents or tutors. All that is required of them is to access learning resources via the internet. It is crucial for students to know how to use the computer and internet for this purpose; otherwise the aim will be defeated.
- **Easy Access to Information:** With the aid of ICT, students now have at their disposal a large amount of information, which has reduced significantly, reliance on books and classroom lectures.

- **Exciting learning:** Students have now become more interested in learning; this is because the videos, graphics and texts displayed in computers make learning more interesting and engaging.
- **Wider Audience:** Unlike the classroom that limits the number of students, an innumerate or countless number of students can take an online class at the same time, as there is a wider limit or bounds to the number of students that can be accommodated.
- **Preparation for the future:** Advanced degrees, such as M.Sc. and Ph.D require a lot of research (offline and online). Besides, most jobs these days require ICT, for instance in the field of Accounting, the use of manual means for computing data and preparing financial reports have become obsolete. ICT resources like Sage, Peachtree and Manager Accounting software are now used to prepare financial statements, with a click of the button. In the present day, Accountants, irrespective of their qualifications, do not stand a chance in the job market, if they are not proficient in at least one of these tools. Similar occurrence exists in other disciplines. By using learning through computers and other ICT tools, students are better prepared to perform future tasks involving the use of computers, either in their studies or profession.
- **Cooperative Learning:** Engaging with other students has been noted to be an integral part of learning. With the advent of the internet, this attribute has been enhanced. This is because students who are shy or introvert are more comfortable sharing and interacting with others behind their keyboards, than they do in classroom settings. To teachers, Bhakta and Dutta (2016) believe that ICT will:
 - Facilitate knowledge and resources sharing.
 - Enhance flexibility in imparting knowledge.
 - Promote enthusiasm, skills and confidence.
 - Improve lesson planning and preparation, and design of curriculum and other teaching materials.

In the views of Safdar (2008), information and communication technology has shaped every sphere of the human life particularly education, learning and training. As noted by Safdar (2008), distance education has been transformed by advancement in information and communication technology into an ingenious form of experience. ICT has strengthened the learning and teaching process by demystifying the process of discovering new things, communication, and exchange of information and ideas. With the aid of ICT, students and teachers cannot have access to up-to-date and accurate information. Information and communication technology (ICT) offers students the opportunity to learn without help and make optimal use of their time, resources and location, and ultimately make the best from their academic pursuits (Safdar, 2008).

While admitting that information and communication technology (ICT) is crucial in our present world, Yusuf (2005) is of the view that Nigeria's present policy in respect of information and communication technology is grossly inadequate. Yusuf (2005) believes that

advancement in information technology has affected almost all areas of human endeavor, with the education sector feeling the least impact. The author applauds the governments for adopting the National policy in ICT in 2001, and encourages the nation to take decisive actions to bridge the gap between where Nigeria's education presently is in terms of information and communication technology, and where it ought to be. To close these gaps, Yusuf make the following recommendations:

- Important stakeholders in the educational sector should be involved in the implementation of the ICT policy, and future deliberations or reviews of the present policy.
- To maximize the potentials of ICT, quality ICT policies must be developed and implemented.
- The private and public sector must partner for proper implementation and monitoring of the ICT policy.
- The availability of trained ICT personnel should be increased.
- Attractive career opportunities should be provided in the field of ICT, and
- Government should develop the requisite ICT skills in its manpower

While Yusuf's study does not directly focus on Education, it makes some references as to the application of ICT in knowledge acquisition.

In a study titled "Impact of Information Technology on Learning, Teaching and Human Resource Management in Educational Sector," Pritam, Vineeta and Akhilesh (2011) strived to ascertain the influence improvement in technology has on education, specifically, learning, teaching and the management of the human elements in education. The study examined critical issues, such as the IT and the purpose of education, significance of IT in the educational sector, changes in educational delivery system due to information technology, IT and the potential of education, and the current influence of information technology on education.

As Pritam et al. (2011) notes, the traditional methods of training and learning have been enhanced with the use of ICT. Courtesy of ICT, new opportunities are open to teachers and students alike. The methods of delivering information and imparting knowledge have been improved. In addition to improving intellectual capacities, ICT makes teaching and learning flexible, and allows for multiple approaches to learning. The culture of learning has also experienced welcoming changes.

ICT facilitates education, and enables users to master their knowledge, allows greater flexibility of time and location. This is possible via the use of the internet which allows learning and teaching to take place at different locations. It is also possible for students to attend classes at the time most convenient to them. Unlike the traditional classroom, lecture videos are stored, and can be revisited by students as many times as possible, the same videos can be shared effortlessly to other students, via tools like Whatsapp, Facebook and Bluetooth (Pritam et al., 2011).

As noted by Ratheeswari (2018), ICT helps teachers and students to stay abreast with latest development. To effectively leverage ICT for learning purpose, Ratheeswari maintains that the following conditions must be satisfied:

- Students and teachers must have access to the internet, computers and other required ICT tools.
- Meaningful and high quality content such as lecture videos and text materials must be made available.
- Teachers and students must not only have access to ICT tools, but the skills to use them. Otherwise, effective learning will not take place.

Ratheeswari (2018) identifies four ICT mediums through which learning and teaching can take place, namely: Audio Conferencing, Video Conferencing, Web-based Conferencing, and Open and Distance Learning:

- **Audio Conferencing:** This medium involves live or real time exchange of audio or voice messages over a network. Examples of tools used are telephone and whatsapp platform. An advanced type of this medium allows for pictures or images to be sent and received over the network. This advanced medium is referred to as audio-graphic.
- **Video Conferencing:** In addition to voice messages, audio conferencing allows users to exchange videos or moving images. Zoom is a typical example of a video conferencing tool.
- **Web-based Conferencing:** Web-based conferencing differs from the previous two discussed, in that it allows audio messages, graphics and videos to be exchanged between two or more persons, via the internet. This will not be possible without a computer and browser, and there are basically two types of Web-based conferencing, viz: synchronous and asynchronous.
- **Open and Distance Learning:** This medium allows for greater interaction and participation among individuals during the learning and teaching process. Learning is also facilitated by performing tasks based on the tutor's instructions, solving problems and learning at one's own pace.

ICT in English Language Teaching and Learning

Alkamel and Chouthaiwale (2018) while acknowledging that language learning is a herculean task, notes that ICT can make the process much easier for students. As noted by the duo, all the four skills of the English language (Grammar, Writing, Speaking and Reading) can be taught and learnt by using any of the ICT tools (radio and television, films, blogs, skype, mobile phones and Youtube). According to Alkamel and Chouthaiwale (2018), ICT encourages students to learn English language, and enhances teachers' ability to impart in students.

In a related paper, Jiménez (2014) notes that ICT has had a significant impact on the teaching and learning of English language over the past few years, and that the use of ICT is

not fully embraced in teaching the language at tertiary institutions. Jiménez arrived at this conclusion after carrying out a study on 50 BA English language students at the University of Costa Rica. The major conclusions of the paper are as follows:

- Most English language students are familiar with ICT tools and love using them to learn.
- English language teachers and professors are not doing enough to teach students how to use ICT tools.
- ICT tools are very important, but cannot replace the teacher.
- Professors should encourage students to create their own ICT tools, and not just transmit knowledge via the tools

ICT and Education during the COVID-19 Pandemic

This section reviews literatures on ICT and Education published during the pandemic. According to Czerniewicz (2020), the outbreak of the covid-19 pandemic has necessitated the adoption of online education by universities across the world. Hodges et al (2020) refer to this temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstance as Emergency Remote Teaching (ERT).

Atayero (2020) observes that universities in Nigeria have adopted online teaching and learning as a response to covid-19 pandemic emergency; he further noted that this trend will continue post-covid-19, as it has opened universities to educational opportunities, which were not hitherto considered. These opportunities need to be properly harnessed, as Ali (2020) noted that the COVID-19 pandemic has revealed how vulnerable our educational system is, and that there is an imminent need for stakeholders to incorporate more resilient and flexible approaches into the educational system, so as not to suffer grievously, should a similar outbreak emerge in future.

Ali (2020) observed that while Nigerian and African universities are shut down indefinitely, universities in developed countries are leveraging technological tools, such as e-learning to continue with studies. The authors further note that motivation is equally as important as resource availability, staff readiness, student accessibility and confidence in integrating ICT into the teaching system.

As noted by Aborode et al. (2020), as a result of the corona virus disease (COVID-19) pandemic, life in the academia cannot go on as usual. Hence, various universities and higher institutions are beginning to embrace ICT with a view to minimizing the effect of the pandemic on its academic calendar. The author further corroborates the position of Ali (2020) that the pandemic has unveiled how unprepared higher citadels of learning, particularly those in Africa are for internet-based learning. Nearly 100% of all learning and teaching activities in Africa have been closed, with long period of learning lost by millions of students. To proper growth and development to be attained in the educational sector, adequate attention must be given to

e-learning. After the COVID-19 pandemic, countries that fail to embrace technology, specifically in education will have serious challenges surviving (Aborode et al., 2020).

According to Pietro et al. (2020), closure of schools during the pandemic will result in the following problems: stress symptom, less time spent in learning, lack of learning motivation and a change in student interaction:

- **Less time spent in learning:** Obviously there will be learning losses, as a result of students spending less time in learning, this will invariably affect the cognitive development of the affected student, irrespective of their level of education.
- **Lack of learning motivation:** Students using learning platforms other than the physical classroom learning methods are likely to lose motivation. Class activities and home works are more likely to be done when there is need for the student to physically submit to his tutor or lecturer. Another reason for which students will be less motivated is that they may not have access to the scores and grades of their class mates, which has been established to have direct influence in a student's motivation to study, in order to be abreast or even outperform other members of this class.
- **Stress symptoms:** Some students may experience anxiety and stress as they are forced to stay at home with their parents during the pandemic period. Those who are quarantined have been noted to experience even more severe symptoms, such as grief, adjustment disorder and acute stress disorders. These disorders are likely to have significant negative impact on the student's learning.
- **Change in student interaction:** The school environment allows students to meet and interact with their peers, which is a very important element of learning. Interacting with others has been proven to enhance learning in more ways than one. Students learn from one another than from the teacher. A student can develop interest in a particular topic or subject because of another student. Besides the academic requirements, classroom activities help students acquire social skills which will help them thrive in their future professional development and personal lives.

Thankfully, Di Pietro et al. (2020) went a step further to recommend some actionable measures that can be put in place to reduce the effect of the pandemic on learning, some of these measures include:

- Students who are badly hit by the pandemic should be identified and extra attention given to them to close the learning gap.
- Tutorials should be organized for all students
- Special attention should be given to those transitioning from nursery to primary classes, and from primary to secondary schools.
- Students should continue to study online, throughout the pandemic period.

As noted by Duraku and Hoxha (2020), as a result of the pandemic, over 1.5 billion students around the world are forced to stay at home. The duo also identify the use of

technology to be the best, if not the only appropriate alternative to keep the school system running during the COVID-19 pandemic.

While noting that there have been some difficulties integrating ICT with education, Duraku and Hoxha acknowledges the several merits of information and communication technology in learning and teaching, particularly in this pandemic period. The authors went further to identify some factors impeding the quality of online learning. Notable among them include:

- Teachers perception on learning methodology
- Changes in education
- Resistance to change (On the part of the student and teacher)
- Level of acceptance or resistance to change in the educational system

Duraku and Hoxha (2020) identified ICT to have the following positive effects on the learning process:

- Learning has become more open
- Student can learn independently because teaching methodologies have become flexible

Teachers' motivation and readiness to hone their skills and knowledge, and determination to advance the quality of education will go a long way in bridging the gap between ICT and learning (Duraku & Hoxha, 2020).

According to a 2020 report by UNESCO, the impact of COVID-19 on education can be mitigated through distance learning. While some schools upload resources on their websites, others organize online classes. A third category has combined both approaches i.e. uploading contents and offering online classes. The report recognizes that this approach will not be effective if those concerned, like the school administrators, teachers and students are unfamiliar with ICT tools.

The United Nations, in a 2020 policy brief, admits that the world has never witnesses this magnitude of disruption in its educational system. According to the UN, "The COVID-19 pandemic has created the largest disruption of education systems in history, affecting nearly 1.6 billion learners in more than 190 countries and all continents" (p. 2).

Among other effects, the UN anticipates catastrophic impacts of the pandemic on education. Notable among them include:

- An exasperation of disparity in learning opportunities, and
- Increase in drop out.

To minimize these effects, the following suggestions were made:

- The government and private school owners should make available a broad variety of distance learning tools: Computers, internet and a platform for exchanging knowledge will be very useful in this regard.
- Efforts should be made to promote inclusive learning at all levels, especially among disabled and disadvantaged students.

- Adequate support should be given to teachers, especially in the area of training and development.

Merits of ICT in Teaching and Learning

As observed by Talebian et al. (2014), ICT can be disruptive to the educational system, notable points cited by the authors include Teachers' absence, Access to unsupportive information, limitation in students assessment and feedback, unsuitability for practical courses:

- Teachers' absence: Unlike in traditional face-to-face learning, e-learning does not provide an opportunity for teachers to be present. The academic progress of the student can be greatly affected by this. The authors noted that this problem is becoming less frequent, thanks to the recent advancement in information and communication technology.
- Access to unsupportive information: The internet and other ICT-related tools have been known to contain scientifically unproven information, which the student may not be able to confirm.
- Limitation in students' assessment and feedback: Unlike physical classroom, the internet does not make it easy for the student to be evaluated quickly and feedback on the impact of learning retrieved.
- Unsuitability for practical courses: Courses like agriculture, engineering and medicine require practicals, as a result they are not suitable for e-learning.

Advantages of ICT in Teaching and Learning

It is obvious that classroom learning requires students and teachers to be present in one location for learning to occur. This is one of the constraints of the traditional learning which makes use of the classroom environment. Learning over the internet or other ICT tools help to remove these limitations. As noted by Talebian et al. (2014), e-learning has the following advantages over the traditional approach:

- Time and place access: Students can attend lectures at their own pace and from anywhere.
- Equity: equal access to study materials is available to students. They also have the same access with others in respect of the teacher's competence.
- Enhanced Group Collaboration: Online or electronic learning has been proven to increase engagement and collaboration among students.
- Direct access to additional learning resources: Students can access additional materials easily.
- Enhanced international dimension to education: With ICT, students can relate with other students in the world and share knowledge with them
- Easy to determine progress rates in courses: Anxiety due to fear of failure is significantly minimized by the use of ICT.

According to Asoro and Osunade's survey research (2020), students of tertiary institutions in Nigeria had been engaged in e-learning before the covid-19 pandemic, not as a means of supporting classroom teaching and learning but for self-development. They further stated that the beneficial features of e-learning are the ability for students to learn at their own pace, obtain certificates of completion, and simplicity of the learning materials. Asoro and Osunade's survey (2020) discovered that 84% of randomly selected participants from different tertiary institution were of the opinion that they have benefited from online courses.

Discussion of findings

It is no doubt that the pandemic has had significant effect on education in Nigeria. It is also common knowledge that a lot of countries and institutions have embraced ICT, with the primary purpose of not aggravating the negative effect of the pandemic on students, or better still, to reduce the effect on students' educational progress. There is no gainsaying that countries where ICT have been integrated into the educational system will suffer less pandemic effect academically. This is because, they already have some preparedness. The students and lecturers do not only have the technological tools to carry on e-learning, but the wherewithal to use the various ICT tools.

As noted earlier in this paper, the ability to use the tools by the students and teachers is equally as important as having the tools. This is because the ICT tools will be practically useless to persons who do not know how to use it and this is one of the problems faced by students and teachers.

As regards the research questions posed, the journals reviewed so far have not authoritatively proven that students assimilate better in classrooms teaching than e-learning, though the survey carried out by Asoro and Osunade (2020) noted that a high percentage admitted to have gained from using ICT in learning. Our verdict is that there is no difference in assimilation between the two methods. The second question as to which of the methods do students do better, the conclusion is that students can do very well using either or both mediums this because academic performance is irrespective of the medium. Whether there had been differences in the use of ICT in education prior to and during the pandemic is acknowledged by the several sources reviewed and which indicate that institutions that did not integrate ICT into teaching and learning are now doing so. And finally, can ICT learning fully replace classroom learning of the English language? The answer is yes. For practical courses like engineering and agriculture, e-learning cannot take the place of classroom learning, but for non-practical courses like English language, which is the focus of this paper, e-learning can fully replace the traditional classroom learning method, especially in higher institutions of learning. But the question is "Is Nigeria ready for this and equipped for this"? The answer to this question cannot be preposterous. The government may not be able to afford this presently but with the right implementation of educational policies, a lot can be achieved.

Conclusion

Having critically evaluated the benefits and disadvantages of ICT in education, we come to the conclusion that the advantages far outweigh the disadvantages. For instance, at the peak of the pandemic, since classroom activities have been stopped, the only feasible alternative was to deliver learning via electronic means. If ICT were not there, then learning activities in Nigerian tertiary institutions will come to a complete halt, until perhaps, a cure or vaccine is discovered for the corona virus disease (COVID-19).

Recommendation

As a result of the accruing benefits of ICT to education, it is recommended that the application of ICT in teaching and learning should not stop after the pandemic. Instead more efforts should be put in, to enhance the learning process generally, and prepare for similar events like this in the future.

In teaching and learning of English language, which is a very important language, and one of the major languages in which other subjects are taught, the use of ICT should be fully embraced. This can be further enhanced with the use of audio devices, which sources have proven allows for ease of remembrance.

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