Effects of Information Communication Technology in Achieving Entrepreneurship Objectives in Tertiary Institutions in Nigeria for Sustainable Development

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The study sought to find out the effects of Information Communication Technology (ICT) in achieving entrepreneurship objectives in Tertiary Institution in Nigeria. The role played by ICT in almost all spheres of human endeavour for greater productivity cannot be over-emphasized. There is the need to move Nigeria with the rest of the world further in thus information age when technology is advancing. The objective of the study among others was to determine the rate at which Entrepreneurship education skills acquisition could be enhanced among students taught with the use of ICT and those taught with the conventional method of teachings. Hypotheses were drawn from the objectives of the study. The area of the study was Emmanuel Alayande University of Education, Oyo. The instrument used for data collection was a multiple choice entrepreneurship test. The targeted population were the five thousand degree students in Emmanuel Alayande University of Education, Oyo. A stratified random sampling technique was adopted to draw two hundred entrepreneurship students. The hypothesis was tested, at 0.05 level of significance for acceptance or rejection. The results amongst others revealed that students taught with the use of ICT performed significantly better than those taught without ICT and also the result slows that the use of ICT in teaching entrepreneurship is not significantly affected by school location. This paper looked at the objectives of entrepreneurship education, challenges of the use of ICTs for its development and came up with some recommendations and conclusion.

Key Words: Entrepreneurship, Information Communication and Technology and Sustainable Development

Introduction

Background to the Study

The world of today is characterized by revolutionary advanced powered by Information and Communication Technology (ICT), it has been reduced to a global village through the use of Information and Communication Technology hence promoting national development and better relationship with other nations of the world, ICT refers to the electronic and communication devices associated with human interactive materials that enable users' to employ them for a whole range of teaching and learning process in addition to personal use. These ICT facilities are all encompassing in areas like technology, education. Etc. for global transformation.

Therefore, it becomes pertinent for teachers who serve as key implementers of the nations' education policy to be well-informed and adequately equipped with ICT facilities in order to function productively in this age of information explosion and technological advancement. According to Smith (2015), it is an interaction that exist between teachers and learners, whereby teachers are expected to educate learners on set objectives while the students on the other hand are expected to optimize the knowledge gained by conducting themselves within the acceptable standards of the society,.

In recent times, the expectations of a child as regards to his education has evolved drastically in the sense that educational system around the world, including Nigeria is now faced with formidable challenge such as integrating the curriculum with 21 century learning skills, utilization of time in a scarce resource, among others which tasks the conventional strategies employed in teaching (Ayo, 2011).

The era of the teacher being a reservoir of knowledge has past. The world is moving at a jet speed as a result of advances in technology. Importantly, technology entails information and communication which may be defined as the handling and processing of information (texts, images, graphs, instruction etc) for use by means of electronic and communication devices such as computer, cameras, telephones. The need for the utilization of ICT is beneficial for preparing staff and students to be fully involved and be productive members of a world that has been and will continue to transfer by technology (Gregorian, 2022). In addition, Gregorian maintains that almost every aspect of scholarship, from research activities to dissemination of ideas has been influenced by technology in the world of higher education. This implies that through ICT, it is possible to instantly access useful information that will enhance teaching/learning of entrepreneurship through internet. Lecture method is based on the assumption that a teacher is an embodiment of knowledge while the pupils are ignorant and receptive (Agwu, 2005). This method of teaching is highly discouraged at the primary school and junior secondary school levels. It can only be tolerated at the senior secondary and at the tertiary institutions where the teacher can use it to introduce new topics, clarify issues or terms used and to

summarize a large lesson by highlighting the vital points. It can also be used to arouse students' interest and give reviews.

ICTs is no longer considered as just a support tool for teaching but has become a necessary requirement within the educational setting. Hence, more teachers and other users from several educational institutions around the world carry out numerous activities using educational platforms in their classes. Technology has become necessary as countries and organizations around the world continue to devise means of gaining a competitive edge over the others. This advancement led to the availability of the internet which in turn gave rise to the use of electronic learning (EL), as a teaching and learning approach. The concept of electronic learning can be described as education that takes place basically over the internet. Broadly defined, electronic learning can be defined as an electronic administration and delivery of learning opportunities that is supported via computer network and web-based technologies (Zhang, 2013). It is also a learning system that is based on formalized teaching that is facilitated through the use of electronic learning platforms (Coleman, 2019).

Tretinjak, and Tretinjak, (2017) opined that the ICT platform has become a powerful tool for extension schools, for consulting companies who specialize in staffing and training as well as for other establishments or institutions seeking uninterrupted and continued education of staff or members. The impact of ICT platforms according to Tigowati et al (20107, was originally felt mostly outside of traditional education institutions, however the relevant roles it played are now felt which is dramatically changing how learning takes place in recent times for thus reason, the educational sector and indeed Higher Institutions should not be unrelated to these changes as it boosts the role of students as active participants in the teaching – learning process.

Olasanmi, Ayoola and Kareem – Ojo (2012) carried a study on the use of ICT among women entrepreneurs in the garment industry in Ibadan North Local Government Area of Oyo State in South – Western Nigeria. The findings revealed that women entrepreneurs underutilize ICT infrastructure and systems in the production and marketing of garments. The findings further showed that most of the women producers in the garment industry lack computer literacy, whereas this is a basic factor that is required to the application of advanced procedures in garment production Akande (2015) investigated the influence of Information Technology (IT) on entrepreneurial operation performance in 20 local council development area of Lagos State, Nigeria. The findings revealed that Information Technology has positive influence on entrepreneurial operation as IT helps in reducing the likely errors that would have been made in reporting business transactions: it also helps managers to monitor the work of their subordinates without them knowing.

The realization of the above policy statement lie basically in the capability of the key implementers of the nation's educational policy i.e. teachers to integrate ICT-Driven Instructional aids in their day to day classroom activities for effective pedagogy. This study, therefore is a response to this challenges and is faced with the problem of verifying the effects of ICT in students achievement

entrepreneurship. That is whether of ICT in students achievement in entrepreneurship will help to improve achievement of students.

Statement of the Problem

The essence of teaching entrepreneurship in Nigerian institutions of higher learning is to ensure that students become prepared and efficient in a technologically – driven society (AL-Ammary 2012). The pattern of teaching and learning process today is expected to shift from the conventional method to a more dynamic and flexible one, which is learner – centered (Ezekoka and Okoli, 2012). This learner - centered approach makes students to influence the content, activities, materials and pace of learning, which places them in the centre of the learning process and enhances independent learning. However, conventional method of teaching is more widespread in most tertiary institutions in Nigeria, and is often teacher – centered (Igogho, 2014). This method of teaching not only give room for root learning which lacks thoughtful understanding and leading to reduced academic achievement as a result of students inactive participation in the classroom but also cripple students' creative expressions to either make meaningful contributions to what was taught or connect with frameworks that would engage them to think critically and explore opportunities. As a consequence, this reduce their chances to become efficient, let alone become relevant in their field of study. Adomi (2010) who reported that many percent of entrepreneurship teachers in Nigerian higher institutions have little or no experience regarding ICT in education. This might be due to some observed limitations of the traditional "chalk and talk" system of teaching which is more of a teacher – centered approach than learners-centered as practiced in some schools today, thereby affecting students performance at various examinations. The information technological age offer ICT Instructional Strategies such as CAI designed to make teaching and learning faster, easier, immediate, effective, efficient, individualize and takes care of learners' individual differences regardless of their gender and location.

Objectives of the Study

The objectives of this study in specific terms are to:

1. examine the rate at which independent learning skill acquisition will be enhanced amongst entrepreneurship students taught with use of ICT and those taught without ICT.
2. analyze the effect of the use of ICT on gender mean performance scores of entrepreneurship students.

Hypotheses

The following hypotheses were formulated to guide the study:

Ho1: There will be no significant difference in the rate independent learning skill acquisition between entrepreneurship students taught entrepreneurship with the use of ICT and those taught without ICT.

Ho2: There will be no significant difference between gender and the mean performance scores of entrepreneurship students taught entrepreneurship with the use of Information Communication and Technology.

Methodology

The research design for this study is the two by two pre-test, post-test quasi experimental control group. The pre-test-post-test equivalent group design involving four (4) cluster groups of intact classes having co-educational students was used. The population of the study comprises of all students of Emmanuel Alayande University of Education Oyo in year two.

A sample size of two hundred (200) students from four schools was divided into four (4) groups A, B,C and D i.e.; two experimental groups (A and C) and two (2) control groups (B and D). Entrepreneurship Achievement Test (EAT) was a teacher-made test on two selected units in entrepreneurship served as pre-test and post-test instrument. Entrepreneurship Achievement Test which contains fifty questions in all consists of forty multiple choice items and ten items of fill in the blank short answers. The data collected for this study were analysed using descriptive and inferential statistical such as', two-sample t-test and covariance. All the hypotheses were tested at 0.05 level of significance for acceptance or rejection.

Method of Data Analysis

Data gathered on demographic information was analyzed using descriptive statistics such as frequency counts, and simple percentages while the hypotheses was tested using t-test at 0.05 level of significance.

Findings and Discussion

Demographic Data of Respondents

Table 1: Distribution of Respondents by Gender

		Frequency	**Percentage**	**Valid Percentage**	**Cumulative Percentage**
Valid	Male	87	43.5	43.5	43.5
	Female	113	56.5	56.5	100.00
	Total	**200**	**100.00**	**100.00**	

According to the respondents' gender distribution in the table 1, male respondents were 87 representing 43.5%, while their female counterpart were 113 representing 56.5%. Therefore, the inference drawn from this depicts that female respondents were more than male respondents.

Table 2: Two sample t-test on the rate of independent learning skill mean scores of year two entrepreneurship students in experimental and control groups.

Status	N	X	SD	DF	t.cal	t.value
Control	100	60.8	14.57	198	2.08	1.96
Experimental	100	56.1	13.15			

P<0.05

The result of the findings revealed that the students who were taught with ICT have lower mean score (56.1) of independent learning skills acquisition than students who were taught the subject with the conventional method whose score was 60.8.

The calculated t-value (2.08) is greater than the critical t (1.96) and 198 degree of freedom. Hence, Hypothesis was rejected since there was a significant difference in the performance of students towards the use of ICT.

Table 3: Two Sample t – test on the rate of independent learning skill mean scores of year two entrepreneurship students who were exposed to Information Communication Technology

Status	N	X	SD	DF	t.cal	t.value
Control	123	29.8	10.98	198	2.57	1.96
Experimental	77	26.3	9.80			

P<0.05

The calculated t-value (2.57) is greater than the critical table value (1.96) at 0.05 level of significance and 198 degree of freedom. Hence, the null hypothesis status that there is no significance difference between gender and the mean performance scores of entrepreneurship students taught with the use of ICT is rejected and the alternative hypothesis accepted. The implication is that the effect of ICT is enhancing performances of students in entrepreneurship.

Discussions

Hypothesis I tested for significant difference in the rate of independent learning skills acquisition between the students taught entrepreneurship with the Information Communication Technology in the experiment and those in the control who were taught the subject using the conventional method. The result of the t-test for the test revealed that students who were exposed to the use of ICT method were significantly better through the independent learning skills acquired than those in the control group. The null hypothesis was therefore rejected. In a similar investigation, Egoezeetal, 2018) reported that the application of ICT based learning provides students easy access to learning materials including doing their course work online.

Conclusions

All over the world, including Nigeria, developments in ICT have changed and impacted higher education in several ways such as increasing access to learning material, improving and ensuring that education resources are available, enabling meaningful discussions and communications among the learned and the learners, out-dating the traditional educational system and ensuring that students are better prepared for the contemporary society, and or hasten the national development. The general response on the prospect of ICT in tertiary education indicated that tertiary education can be more dynamic and efficient in providing robust collaborative learning.

Recommendations

The following recommendations are made on the basis of the outcome of this study

i. Staff and students in tertiary institutions should be encouraged to acquire the necessary skills to operate and use ICT facilities and equipment in carrying out e-learning.
ii. Teachers should ensure that male and female students are equally encouraged in the use of ICT-driven instructional facilities for learning and there should not be any form discrimination especially for those who feels computer system seems to be difficult to manipulate.
iii. ICTs should be applied in business transaction of payment this will enhance individual and industrial purchases of goods and services.
iv. Government should provide libraries to create information centers whereby users can retrieve information as required.
v. Government should sensitize the Nigerian IT industry and companies such as mobile phone operators-MTN, Global com, Airtel etc can be encouraged and sensitized to invest in education of the future Nigerian students just as Cadbury Nigeria plc is doing. ICT education and application in schools would be improved.

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