A Comparative Analysis of University Students' Attitude towards the use of Information and Communication Technology (ICT)

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Abstract
This study investigated the comparative analysis of university students' attitude towards the use of Information and Communication Technology (ICT), using the descriptive design of ex-post facto type. The population of the study was 286 Architecture students and 213 Early childhood undergraduate students from the University of Uyo, Akwa Ibom State. Stratified and purposive sampling techniques were used to select 200 Architecture and Early Childhood education students. Two null hypotheses were tested. The instrument used in collecting data was a self-designed questionnaire titled "Information and Communication Technology Students Attitude Scale (r=0.80). The data collected were analyzed using descriptive statistical tools such as frequency counts, percentages, mean and standard deviation. The result showed that there was a significant difference in the attitude of Architecture and Early Childhood undergraduate students in the use of ICT in the University of Uyo. Based on the findings, it was recommended that ICT facilities in tertiary institutions should not only be made available to students but also accessible to them.

Keywords: Comparative analysis, Attitude, Use of ICT, E-learning University students

Introduction

E-learning is the use of Information and Communication Technology (ICT) which includes computer, networks, communication and mobile technologies to enhance and extend learning. Those technologies help deliver and make education and information accessible to whoever needs it. According to Naidu (2006) e-learning is commonly referred to as intentional use of networked information and communications technology in teaching and learning. It incorporates all educational activities that are carried out by individuals or groups working online or offline via networked or standalone computers and other electronic devices. Titolu (2018) observed that internet is a global system of interconnected protocol suit to serve billions of users worldwide. It is a network of networks that connects millions of public, private, academic, students, businesses and government network of local to global scope that are limited by a broad array of electronic wireless and optical networking technologies.

E-learning is referred to as use of Information and Communication Technology (ICT) in instruction. The opinion of Brown and Chesser (2016) e-learning is an instruction delivered via an electronic media which includes the internet, audio/video tapes, interactive TV and CD-ROM. It also includes tools for promoting virtual learning using ICT. E-learning has the potential of being designed for each learner's personal need as well as provide learners with personal information required. It can improve the effectiveness of learning in tertiary institutions through its flexibility that allows access to information resource in digital form. Ogundele (2017) stressed that e-learning can also lead to the enhancement of quality in tertiary education by leading to innovative pedagogical sharing of new practices among learners and teachers.

Competence is a combination of knowledge, skill, attitudes and values displayed in the context of task performance. It defines not only what a person must know and do, but also how a person does it (Smith, 2005). Consequently, e-learning competence means that e-learners know how to learn, take responsibility, make decisions, manage their own learning performance (Feng, 2010). They also possess information literacy; have skills to collect, analyze and organize information collected online. There is need for training and development in technology education which has been recognized worldwide as a means of developing human resources for better technological consumption, efficiency and increase productivity (Momoh, 2000).

E-learning programmes in tertiary institution ensure that teaching and learning are Information and Communication Technology (ICT) based, to enable students to have equal opportunity with their contemporaries in other parts of the world. The e-learning opportunities could be used to introduce an interesting variety of the inventory of instructional materials in the school system such as textbooks, diagrams, lecture notes and pictures. This initiative will expose students and teachers to basic skills in computer education for the purpose of accessing the internet and servicing for information for effective learning. E-learning to be comfortably entrenched in the global village.

There is no doubt that ICT provides productive teaching and learning in order to increase learner's creative and intellectual resources especially in today's information in our society (Olaoj,2018).

Moreso, ICT provides ample and exceptional opportunities to the learners to develop capacities for high quality learning and to increase their ability to innovate through the use of text, radio, graphics, multicolour, and motion (Badmus, 2019). Johnson and Roman (2015) observed that e-learning is preferred for a variety of reasons: it provides consistent and worldwide training, reduces delivery cycle time, increases learner's convenience, reduces information overload, improves tracking and lower expenses.

The effectiveness of our tertiary institutions to achieve their mission and vision is heavily dependent not only on the quality of teaching but also on the quality of learning. Hence, it has become imperative that e-learning should be anchored in every facet of education in Nigeria. Akinfewa (2014) stressed that e-learning has the potential of being designed for each learner's personal need as well as provide learners with personal information required. It can improve that effectiveness of learning in tertiary institutions through its flexibility that allows access to information resources in digital form. E-learning can also lead to the enhancement of quality in tertiary education by leading to innovative pedagogical sharing of new practices among learners and teachers.

In the opinion of Peters and Reign (2016) observed that with the outburst of students population in the universities, e-learning is a handy option. This is because if e-learning opportunities are utilized in students learning, assignment and assessment, the ever increasing class sizes will not be a serious problem. Balogun (2017) stressed that examination could be administered and marked in the twilight of seconds. This is so even if the number runs in thousands. E-learning formatted assessment would have removed the human factor in student assessment and examination. Victimization for sundry reasons would be removed. Moreso, undue favouritism would also be taken care of through e-learning packages. There is the advantage of the elimination of human error, usage of accurate assessment methods and the guide availability of results.

Through e-learning, students can control their own learning as it is entirely up to the students own preference which links on the World Wide Web (www), he/she decides to pursue (Mark and Tommy, 2017). E-learning has all the characteristics of conventional learning and the interaction of traditional classroom exist except for physical interaction which is mediated by computer software instead of instruction-student interaction. E-learning has the special feature of enhancing classroom arrangements. Akinfenwa (2014) was of the opinion that one does not need to go an extra mile to understand that the student teacher interaction in a normal (analog) physical classroom arrangement is minimal if not non-existent in today's ever-bloating student population. This is because the unavailability of the teachers makes it impossible for them to sit together and iron out issues of interest to the students. Most e-learning packages offer the opportunity of forum blogging. This in no doubt is one of the enchanting features of every e-learning package, thus enhances learning.

In the opinion of Olaojo (2018) the traditional method of lesson delivery and educational services can no longer meet with the global needs in order to avoid a situation where teachers will be giving yesterday to tomorrow's citizens. This implies that the use of ICT for educational research by university students will enhance better academic performance and will in turn transfer knowledge from one generation to another. Badmus (2019) observed that e-learning enable students to study at their own pace and yet complete their studies. Thousands of students who are workers usually find it difficult to combine their job and studies effectively using the campus classroom base mode. With e-learning they can study at their own time and speed without disrupting their work schedules. E-learning offers convenience to learners by allowing them to choose suitable time for their studies. They can also stay any place of their choice for learning activities and progress at their own pace. Electronic learning provides more effective learning to the students. E-learning tools such as CD-ROM, e-mails streaming audio and video enable the learner to have lecturers with him always and he can listen or watch the content as many times as he wishes. This is quite different from the face to face interaction which can be forgotten soon after.

Statement of the Problem

The traditional method of lesson delivery and educational services can no longer meet with the global needs and it has been observed that there is apathy to the use of ICT among the University students. Students of tertiary institutions have been finding education and researches difficult. In order to enhance the quality and mark stability of higher education products in the national and international markets, learning, research and teaching through optimal use of e-learning becomes imperative. Therefore, there is the need for a feeler of attitude of University students towards the use of ICT. Hence the study examined the comparative analysis of university students' attitude towards the use of Information and Communication Technology (ICT).

Research Hypothesis

HO_1: There is no significant difference between the attitude of students of the department of Architecture and Early Childhood students of University of Uyo, Akwa Ibom State towards the use of ICT.

HO_2: There is no significant difference between the attitude of students of Architecture and Early Childhood Education (Male and Female) students towards the use of ICT in University of Uyo, Akwa Ibom State.

Methodology

The study adopted the descriptive design of ex-post facto type. This is because the attitude under investigation were already existent and were not manipulated in the course of the study. The population of the study was two hundred and eighty six (286) Architecture students and two hundred and thirteen (213) Early Childhood students from University of Uyo, Akwa Ibom State. Startified and purposive sampling techniques was used to select the sample size of two hundred (200) Architecture and Early Childhood students of University of Uyo. The instrument used in collecting data for this research was a self-designed questionnaire titled "Information and Communication Technology Students' Attitude Scale (ICTSAS)". The instrument was designed by the researchers to measure the attitude of students to the use of ICT. The subjects response to the items was measured with Likert-type scale and items in ICTSAS was subjected to face and contend validity. The reliability of the items was computed using Cronbach Alpha. The value obtained is 0.80. The data collected was analyzed using descriptive statistical tools such as frequency counts, percentages, mean and standard deviation. The two Null Hypothesis generated was tested at 0.05 alpha level.

Results

Hypothesis 1

There is no significant difference between the attitude of Architecture and Early Childhood students of University of Uyo, Akwa Ibom State toward the use of ICT.

Table 1: t-test comparison of attitude of Architecture and Early Childhood students of University of Uyo, Akwa Ibom State.

Attitude of Students	N	Mean	Std. Dev.	Crit-t	Cal-t	df	p
Architecture Students	100	49.2950	20.7983	1.96	2.68	199	.495
Early Childhood Students	100	48.3000	20.9527				

The above table showed that there is significant difference in the attitude of Architecture and Early Childhood students in the use of ICT in the University of Uyo (crit-t=1.96, cal-t=2.68,df=199, P>.05 level of significance). The hypothesis was rejected.

Hypothesis 2
There is no significant difference between the attitude of Architecture and Early Childhood (male and female) students towards the use of ICT in University of Uyo, Akwa Ibom State.

Table 2: t-test comparison of attitude of Architecture and Early Childhood (male and female) students towards the use of ICT in University of Uyo, Akwa Ibom State.

Attitude of Students	N	Mean	Std. Dev.	Crit-t	Cal-t	df	p
Male	70	60.4857	25.6401	1.96	5.946	198	.000
Female	130	43.6308	14.8325				

The above table showed that there was significant difference in the attitude of students (male and female) in the use of ICT in University of Uyo (crit-t=1.96, cal-t=5.946, df=198, P<.05 level of significance). (Architecture or Early Childhood) students. The hypothesis was rejected.

Discussion of Findings

The study examined students' attitude towards the use of ICT. The findings of this study in table one revealed that there was significant difference between the attitude of Architecture students and Early Childhood Education students of University of Uyo (crit-t=1.96, cal-t=2.68, P>.05 level of significance). It showed that Architecture students under study display greater positive attitude to the use of ICT than Early Childhood Education students. The result is in line with the report of Bayowa (2017) who observed that the necessary skills of planning, communicating, analyzing learning and development needs, providing meaningful learning activities, assessment of learners, students assignment and evaluation of programmes, will be recognizable to all those involved in education and training. Linch (2015) stressed the following skills that the students needed to possess for effective e-learning in tertiary institution, the skills are understanding skills, awareness skills, availability skills, affective, confidentiality and individualization skills. E-learning has the potential of being designed each learners' personal need as well as provide learners with personal information required. It improve the effectiveness of learning in tertiary institutions through its flexibility that allows access to information resources in digital form. Batista (2016) was of the opinion that the effectiveness of our tertiary institutions to achieve their mission and vision is heavily dependent on the quality of learning by students. In the opinion of Olaojo (2017) computer-mediated communication (CMC) has the potential to shift focus from teacher-centered to student-centered education. Computer-mediated communication uses collaborative software tools like listervs, e-mailboad, usernet, bullet in board, cell phone for collaboration and communication in the student-teacher and student-student interaction which improves the academic performance of students.

On account of gender difference in attitudinal disposition to the use of ICT, records revealed that there was significant difference between the attitude of male and female. Male students under study signified greater positive attitude to the use of ICT. The finding is in consonance with the findings of Balogun, Akinyode and Fijab (2018) in their studies posit that the general frequency at which male students use e-learning resources in their studies is high that their female counterpart. They stressed further that gender has significant influence on the academic performance of students in tertiary institutions. Olaojo (2017) opined that tertiary institution students should develop a sense of rapport with computer and appreciate its potentials for solving learning challenges and to entrench computer culture that permeates all activities in institutions of learning. Students must be prepared to effectively apply the new computer technology in their learning. ICT offers students an opportunity for better learning. E-learning is beneficial to education; corporations and to all types of learners. Ogundele (2014) observed that e-learning can be useful in improving the quality of education of both male and female students in Nigerian schools. E-learning can be used to correct the imbalance of the old system of education and helps in developing new teaching and learning techniques.

Conclusion

The outcome of this research have clearly shown that Early Childhood students of University of Uyo, Akwa Ibom State have negative attitude to the use of ICT in their study. Also, the female students of Architecture and Early Childhood Education have negative attitude to the use of ICT. However, negative attitude to the use of ICT might be due to many factors like high cost of using commercial cyber café, lack of regular electricity supply and inadequate skills to access internet services. Other reasons might be due to lack of time spent from the other extracurricular activities undertaken by the students within and outside the University environment. ICT would rather have been an advantage by reducing the time spent on the numerous assignment. ICT has taken a new turn in the present decade as educational institutions now witnessed a movement from single unit computer user to

the creation of local area networks, wide area network and now the internet. It should be noted that many students are yet to take advantage of availability of internet facilities to access information on the internet for their academic growth.

Recommendations

Based on the conclusion drawn, the following recommendations were made:

1. ICT facilities in tertiary institutions should not only be made available to students but also accessible to them. Professional and technical support should be established to assist students in resolving some technical challenges in their application and utilization of e-learning.
2. There must be proper and adequate funding and financing of ICT in Universities.
3. Universities authority needs to create an enabling environment for the students to freely participate meaningfully in the internet utilization like their counterparts in developed countries.
4. Male and female students should be exposed to training in information and Communication Technology without discrimination, since the evidence I that the use of the strategy uniformly improves their learning. E-learning provides wide learning experiences anywhere, whenever and anyhow, without gender discrimination; which unifies knowledge in the manner to develop the individual in tertiary institutions of learning.
5. Lecturers should not give students all the materials they need, but allow them to explore and search for information on the net.

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