

PERCEIVED INFLUENCE OF INFORMATION AND COMMUNICATION TECHNOLOGY ON STUDENTS' ACADEMIC PERFORMANCE IN UNIVERSITY OF ILORIN, KWARA STATE

BY

Dr. Michael AJOKPANIOVO: Department of Counsellor Education, University of Ilorin, Ilorin; E-mail: ajokpaniovo.m@unilorin.edu.ng

&

Dr. Alfred O. AWOYEMI: Department of Counsellor Education, University of Ilorin, Ilorin; E-mail: awoyemi.ao@unilorin.edu.ng

Abstract

This study investigated the perceived influence of information and communication technology on students' academic performance in University of Ilorin, Kwara State. The study adopted the descriptive survey research design method. The target population for this study consisted of University of Ilorin undergraduate students in Kwara State. Simple random sampling technique was used to select two hundred respondents from the State. The questionnaire form titled "Perceived Influence of Information and Communication Technology on Students' Academic Performance Questionnaire" (PIICTSAPQ) was administered to the respondents. Both descriptive and inferential statistics were used for the data analysis. The findings revealed that there were no significant differences in the perceived influence of information and communication technology on students' academic performance in University of Ilorin, Kwara State based on gender and age. Findings revealed that the perceived influence of information and communication technology on students' academic performance in University of Ilorin is high. There is also no significant difference in perceived influence of information and communication technology on students' academic performance in University of Ilorin based on gender and age. To this end, it is recommended that government at all levels should support the educational sector by establishing infrastructures that will enhance adequate learning in the school system. Some of these infrastructures to be provided are: e-library, steady electricity supply, good internet signal, provision of computers, external storage devices among others.

Keywords: Perceived Influence; Undergraduates, Lecturers, ICT; Academic Performance

Introduction

Information and Communication Technology also known as ICT are technological tools and resources that are used to communicate, create, disseminate, store and manage information (Blurton, 2000). According to Oliver (2002) ICT is often used as an extended synonym for Information Technology (I.T), but is a more specific term that stressed the role of unified communications and the integration of telecommunications, computers as well as necessary enterprise software, storage and audio visual systems which enables users to access, store transmit and manipulate information. Jeffrey (2006) viewed ICT as technologies that provide access to information through telecommunication. Ajisegiri (2013) stated that ICT is an umbrella term that includes any communication device or application, encompassing radio, television, cellular phones, computer and network hardware and software, satellite systems and so on as well as the various services and applications associated with them such as video conferencing and distance learning. ICT is rapidly becoming an ever relevant concept in all facets of life especially

in the field of academic discipline, be it education, science, agriculture, accounting etc the way it is being used differs across various disciplines.

The field of education has been affected by ICT which have undoubtedly affected teaching, learning and research. ICT according to Yusuf (2005) have the potentials to enrich, deepen skills to motivate and engage students, to help relate school experiences to work practice, and helping teachers improve on their teaching methods. According to Ajisegiri (2013) ICT increases the flexibility of delivery of education so that learners can access knowledge anytime and from anywhere. It influences the way students are taught and how they learn which in turn better prepare the learners for lifelong learning as well as to improve the quality of learning. With the help of ICT, students are able to browse through e-books, sample examination papers, easy access to resource persons, mentors, experts, researchers, professionals and peers all over the world. This flexibility has heightened the availability of just in time learning and provided learning opportunities for many more learners who previously were constrained by other commitments (Young, 2002).

Lim and Chai (2004) stated that with ICT, communication barriers such as space and time can be removed. ICT also allows for the creation of digital resources like digital libraries where the students, teachers and professionals can access research materials and course materials from any place and at any given time (Bhattacharya & Sharma, 2007). ICT helps to deepen students' content knowledge, engagement in knowledge construction and supporting the developments of complex thinking skills (Kulik, 2003; Kozma, 2005). Ajisegiri (2013) observed that ICT have the potential for increasing access to and improving the relevance and quality of education. The use of ICT in educational settings by itself acts as a catalyst for change in this domain. Merritt (2008) opined that some of the importance of ICT in education among others is as follows: providing educational information (which includes open & distance learning); enables the conduct of research and sharing of useful information via the internet; bridging distances using emails, phones, video conferencing; creation of employment opportunities especially for graduates; enhancing peer interaction on educational issues; and making learning more interesting especially abstract concepts. Students in tertiary institutions make use of ICT on a daily basis to support their studies. With regards to students' daily use of computers to support studies, more effective and efficient learning occurs in blended learning environment and the success level of students is raised. This gives students a wide range of material to get information to help them study (Anishe, 2013). To this ends, the study is aim at investigating the perceived influence of information and communication technology on students' academic performance in University of Ilorin.

Statement of the Problem

The fact that Information and Communication Technology (ICT) has a great influence on the teaching and learning process is undisputable. In spite of the relevance of ICT in all facets of academic disciplines, it is bedeviled with some problems that may impede the proper implementation and functioning of these tools for effective teaching and learning among students in many institutions. Some of these problems include: poor electricity, poor internet services, insufficient funds for procurement of interactive boards, projectors and other ICT related gadgets. Researches on ICT in tertiary institutions and secondary school education have been carried out

in the past. Some of which are Fabunmi (2012) who carried out a study titled undergraduate students' perception of the effectiveness of ICT used in improving teaching and learning in Ekiti State University, Ado Ekiti, Nigeria. Fabunmi found out that ICT usage in Nigerian Universities need to be more developed upon in order to improve the teaching and learning among students. Yusuf (2005) who carried out a study on teachers' self-efficacy in implementing of computer education in Nigerian secondary schools. It was revealed that most teachers do not have the needed experience and competence required in the use of ICT either for educational or industrial purpose. Christiana and Kate (2001) carried out a study on factors that prevent teachers from using ICT in their classroom work in Nigeria. They found out that lack of support by the school; lack of funds and adequate facilities; lack of knowledge among other factors prevent teachers from the effective use of ICT in their classroom work. However, to the best of the researchers' knowledge, none of the previous studies have specifically examined perceived influence of information and communication technology on students' academic performance in University of Ilorin, Kwara State. This is a researchable gap which this study tried to fill. Hence the need for the study.

Purpose of the Study

The purpose of this study was to investigate the perceived influence of information and communication technology on students' academic performance in University of Ilorin, Kwara State. The study also investigated the perceived influence of information and communication technology on students' academic performance in University of Ilorin in relation to some moderating variables which are gender and age.

Research Questions

The following research questions were raised to guide the study:

1. What is the perceived influence of information and communication technology on students' academic performance in University of Ilorin?

Research Hypotheses

The following hypotheses were generated to guide the study:

1. There is no significant difference in the perceived influence of information and communication technology on students' academic performance in University of Ilorin based on gender.
2. There is no significant difference in the perceived influence of information and communication technology on students' academic performance in University of Ilorin based on age.

Methodology

The research design adopted for the study is the descriptive survey. The choice of descriptive survey according to Daramola (2006) is a systematic attempt to describe the characteristics of a given population or area of interest factually. Descriptive survey also has the advantage of covering a wide scope, since a great deal of information can be obtained from a large population. In a descriptive survey, the characteristic of the defined population can also be inferred from the sample drawn from such population. Since this study investigated the perceived influence of information and communication technology on students' academic performance in University of Ilorin, Kwara State, the descriptive survey was considered most appropriate research design for the study. The population for this study comprised all undergraduates of University of Ilorin,

while the target population consisted of all undergraduates of Faculty of Education, University of Ilorin. Respondents were drawn from 300 level and 400 level students in four selected departments within the Faculty of Education, University of Ilorin. Lucky-dip sampling technique was used to select four departments. Simple random was used to select 25 students who are in 300 level and 25 students who are in 400 level from each of the departments. A total of 50 students were sampled from each of the departments thus making a total of 200 undergraduates of University of Ilorin was selected for the study.

The main instrument that was used to collect data for this study is a self-designed questionnaire titled “Perceived Influence of Information and Communication Technology on Students’ Academic Performance Questionnaire” (PIICTSAPQ). The questionnaire is a 15 item structured instrument with two sections; A and B. Section A contains the demographic data of the respondents, while section B and C contains items on perceived influence of information and communication technology on students’ academic performance. The instrument was patterned in a four point Likert- Type rating scale format with 4 points as the highest score and 1 as the lowest score. The average mean score for taking decision on the value of each item is 2.50 (that is $4+3+2+1= 10/4$). Hence, any item that has a mean score from 2.50 and above was considered having a high perceived influence of information and communication technology on students’ academic performance, while items with mean score less than 2.50 were considered having a low perceived influence of information and communication technology on students’ academic performance. The content validity of the instrument was ascertained by five Lecturers in the Department of Counsellor Education, University of Ilorin. The reliability of the instruments was established using the test re-test reliability method. The instrument was administered on twenty (20) students who did not form part of the respondents for the study and after an interval of four weeks; the same instrument was re-administered to the same group of people. The two sets of scores were correlated using the Pearson Product Moment Correlation formula and a coefficient of 0.81 was found at 0.05 alpha level of significance.

Results

The information gathered was statistically presented through the use of percentage, mean, rank order and t-test. The t-test was used to test the generated hypotheses. The respondents’ personal data were analyzed with the use of the percentage as indicated in the tables that follow:

Research Question One: *What is the perceived influence of information and communication technology on students’ academic performance in University of Ilorin?*

Table 1: Means and Rank Order of Respondents Response on the Perceived Influence of ICT on Students’ Academic Performance in University of Ilorin

Item No.	ICT influences students’ academic performance by:	Mean	Rank
8	being able to carry out and present assignments logically	3.47	1 st
7	being able to receive synchronous teaching from lecturers	3.41	2 nd
5	facilitating effective communication with the lecturers	3.38	3 rd
9	being skilled in attempting Computer Based Test (CBT)	3.24	4 th
1	being able to download courseware and read ahead of the class	3.15	5 th
10	assisting students to be more educative	3.07	6 th
4	enhancing collaborative learning	2.95	7 th

6	improving their ICT knowledge and literacy skills	2.81	8 th
2	facilitating acquisition of basic skills through drill and practice	2.73	9 th
3	allowing students explore rather than mere listening	2.56	10 th
12	encouraging and facilitating students independent learning	2.49	11 th
13	helping to motivate active learning among students	2.43	12 th
15	being able to analyze data and give qualitative interpretation	2.32	13 th
14	improving on their writing and spelling skills	2.31	14 th
11	facilitating sharing of resources with other students	2.28	15 th

Table 1 shows that items 8, 7 and 5 with mean scores of 3.47, 3.41 and 3.38 ranked 1st, 2nd and 3rd and they state that *ICT influences students' academic performance by being able to carry out and present assignments logically; being able to receive synchronous teaching from lecturers; and facilitating effective communication with the lecturers*. While items 15, 14 and 11 with mean scores of 2.32, 2.31 and 2.28 ranked 13th, 14th and 15th and they state that *ICT influences students' academic performance by being able to analyze data and give qualitative interpretation; improving on their writing and spelling skills; and facilitating sharing of resources with other students* respectively. Ten out of the fifteen items had mean scores that were above the mid-mean score of 2.50. These, therefore, implies that the respondents attested to many of the stated items and thus, the perceived influence of ICT on students' academic performance in University of Ilorin is high. Some of the items attested to by the respondents include: being able to carry out and present assignments logically; being able to receive synchronous teaching from lecturers; facilitating effective communication with the lecturers; being skilled in attempting Computer Based Test (CBT); being able to download courseware and read ahead of the class; assisting students to be more educative; enhancing collaborative learning among others.

Hypotheses Testing

Two null hypotheses were generated and tested in this study using the t-test statistical method at 0.05 level of significance.

Hypothesis One: *There is no significant difference in the perceived influence of information and communication technology on students' academic performance in University of Ilorin based on gender*

Table 2: t-test Result Showing the Perceived Influence of ICT on Students' Academic Performance in University of Ilorin Based on Gender

Gender	N	Mean	SD	df	Cal. t-value	Crit. t-value	p-value
Male	102	45.57	6.53	198	0.76	1.96	0.09
Female	98	44.84	6.74				

Table 2 shows a calculated t-value of 0.76, a critical t-value of 1.96 and p-value of 0.09. Since the calculated t-value of 0.76 is less than 1.96 and the p-value of 0.09 is greater than the alpha value at 0.05, the hypothesis is accepted. Hence, there is no significant difference in the perceived influence of ICT on students' academic performance in University of Ilorin based on gender.

Hypothesis Two: *There is no significant difference in the perceived influence of information and communication technology on students' academic performance in University of Ilorin based on age*

Table 3: t-test Result Showing the Perceived Influence of ICT on Students' Academic Performance in University of Ilorin Based on Age

Age	N	Mean	SD	df	Cal. t-value	Crit. t-value	p-value
20 years and below	141	43.74	6.38	198	1.35	1.96	0.07
21 years and above	59	41.55	5.89				

Table 3 shows a calculated t-value of 1.35, a critical t-value of 1.96 and p-value of 0.07. Since the calculated t-value of 1.35 is less than 1.96 and the p-value of 0.07 is greater than the alpha value at 0.05, the hypothesis is accepted. Hence, there is no significant difference in the perceived influence of ICT on students' academic performance in University of Ilorin based on age.

Discussion of Findings

Hypothesis one which stated that there is no significant difference in the perceived influence of information and communication technology on students' academic performance in University of Ilorin based on gender was accepted. Hence there is no significant difference in the perceived influence of information and communication technology on students' academic performance in University of Ilorin based on gender. This finding did not corroborate Anishe (2013) who observed that the male students usually make use of ICT gadgets in improving their academics more compared to their female counterpart. The finding also supports Dissessa (2001) who submitted that as new technological devices emerge, proficiency in its knowledge and utilization is essential for each and every student.

Hypothesis two which stated that there is no significant difference in the perceived influence of information and communication technology on students' academic performance in University of Ilorin based on age was accepted. Hence there is no significant difference in the perceived influence of information and communication technology on students' academic performance in University of Ilorin based on age. This finding corroborated Beavis (2006) who saw ICT as a great influence that has greatly impacted on the teaching process and smooth learning among students regardless of their age range. Anishe (2013) noted that although all students use ICT for learning, students who are above 20 years of age make use ICT gadgets more than those 20 years and below in improving their academics. Hernes, Hestiman and Haeland (2000) who in a study on knowledge and competence in ICT among teachers in Norway observed that the higher an individual grows in age. The more he/she craves for proper knowledge and utilization of ICT for effective functioning and goal achievements.

Conclusion

Based on the findings of the study it was concluded that in spite of the negativity which comes with the use of ICT among students in the school systems, many of the students irrespective of their gender still make good use of ICT in the course of their learning and it does have a high influence on their academic performance. Some of the influence it has includes: allowing students explore on their own rather than mere listening to the lecturers; being able to carry out and present assignments logically; being able to receive synchronous teaching from lecturers; facilitating effective communication with the lecturers. The researchers also concluded that there

is no difference in the technological usage of ICT and its related devices among students of all age groups. This implies that they all use it in registering for their courses; downloading courseware; reading ahead of their classes; enhancing collaborative learning among students; and facilitating acquisition of basic skills through drill and practice.

Recommendation

In view of the findings, it was recommended that:

1. Government at all levels should support the educational sector by establishing infrastructures that will enhance adequate learning in the school system.
2. Some of these infrastructures to be provided are: e-library, steady electricity supply, good internet signal, provision of computers, external storage devices among others.
3. Synchronous teaching methods which entail the lecturer making use of ICT tools to carry out teaching by interacting with the students, performing tasks and providing feedbacks online should be widely encouraged as this will build up the students' competence in the use of ICT gadgets and thus increase the students' academic performance.

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