Needs Assessment of the University of Ibadan Students' Readiness for the Educational Technology Initiative Projects

Sponsored by

Partnership for Higher Education – Educational Technology Initiative (PHEA-ETI)

Edited by J. Gbenga Adewale

November 2012

Needs Assessment Study Management Team

Ayodeji Oluleye   PHEA –ETI Project Coordinator

Ayotola Aremu

J. Gbenga Adewale   Evaluation Team Leader

A. O. U. Onuka

M. N. Odinko

A. Ayeni

Instrument Development

J. Gbenga Adewale
A. O. U. Onuka
M. N. Odinko

Data Collection

J. Gbenga Adewale
A. O. U. Onuka
M. N. Odinko
A. Ayeni

Report Writing

J. Gbenga Adewale
A. O. U. Onuka
M. N. Odinko
A. Ayeni

List of Acronyms

ICT	Information and Communication Technology
PHEA – ETI	Partnership for Higher Education in Africa – Educational Technology Initiative
IT	Information Technology
UI	University of Ibadan
VSAT	Very Small Aperture Terminals
LAN	Local Area Network
ET	Educational Technology
UNESCO	United Nations Education Social and Cultural Organization
CD	Compaq Disk
EFQEL	European Foundation for Quality in E-learning
USB	Universal Serial Bus
PDA	Portable Device Adapter
CD-ROM	Compaq Disk – Read Only Memory

Contents

Executive Summary

1. In enhancing the University ICT policy environment, four on-going Educational Technology Initiative Projects: (i) Capacity building and Digital Content Development (ii) Open Courseware for Science and Technology (iii) Table Classroom Teaching in the General Studies Programme and (iv) Educational Radio and Mobile Phones for Tutorials in Distance Learning are supported by the Partnership for Higher Education – Educational Technology Initiative (PHEA-ETI). These initiatives will not be able to achieve its goals if such question as 'how prepared are the staff and students of the university in the deployment of ICT in teaching, learning and research in the university?' This study therefore became necessary to assess the needs of students in terms of their access to ICT, utilization of ICT, competence of students in soft and hardware, ICT readiness, students' self-efficacy in the use of ICT and students' attitude to ICT use.

2. An 'Evaluation Team' was set up to assess the needs of students and staff on the use of ICTs which will assist the implementation of the Educational Technology Initiative Projects. The Team designed three sets of questionnaires, one each for teaching staff, non-teaching staff and students. The questionnaires were subjected to criticism by the Team members and other colleagues in the University. Then the questionnaires were trial tested at the Obafemi Awolowo University (OAU) Ile-Ife, to ascertain its suitability to the students of UI. The responses from the students in OAU were used to purify the instruments (questionnaires). They were subjected to internal consistency test and Cronbach alphas (measure of internal consistency and construct validity) of 0.68, 0.97, 0.93, 0.75, 0.86 and 0.92 were established for competency in software skills, competency in hardware skills, self-efficacy, readiness and attitude towards the use of ICT facilities respectively. Some items in the instruments with negative or zero correlation with other members of the scale were deleted.

3. The corrected instruments were transformed to ICT survey platform by the ICT Unit of the university and sent to students to respond. The response rate was very low and the process was repeated two more times. At the end of the third attempt, it was agreed to produce manual copies of the instruments for administration. The Distance Learning Students in the Faculties of Arts, Education, Science and the Social Sciences were the first to respond to the instruments (the regular students were away for a two week vacation then). The regular students especially those in 100 Level were visited after their GSP examination and the questionnaires were administered to them by research assistants. The Statistical Package for Social Sciences Version 18 was used to perform frequency count, percentages, mean and standard deviation.

4. Some of findings of the study are:
   i. Students in the twelve Faculties participated in the study; there were more males than females in the study.

ii. 'Regular' undergraduate students were more, followed by the students in the Distance Learning Programme and PG students were the least.

iii. Majority of the respondents used in the survey were 100 Level students. They were likely to enjoy the ICT policy deployment before graduation.

iv. A significant proportion of students have laptops. Students who did not own a computer used cyber café, departmental computer and PG school computers.

v. Very few respondents could perform eight software tasks (26.7%) out of 30. Examples of tasks they can perform are creating e-mail attachments, opening e-mail attachments, etc.

vi. Twenty-two out of 30 software tasks posed greater challenge to majority of the students. They were not competent in such tasks as creating Power Point slides, creating animate scheme, printing PowerPoint slides and hand-out, etc.

vii. A significant proportion of the students (29.2%) believed that their lecturers lacked ICT knowledge.

viii. Majority of the students were very competent in only two hardware tasks like connecting laptop computer with TV and connecting projectors with laptop.

ix. Where Departments and Faculties have computers, a large proportion of students stated that the computers are not well maintained.

x. Electricity is identified as a major challenge facing the use of ICT by the students.

xi. A large and significant portion of students at this age of technology concluded that it is time consuming to learn to use ICTs in teaching and learning.

xii. A very large proportion of students opined that the use of ICTs in learning increases their achievement, makes classwork management much easier, increases communication skill among students, encourages students to participate in classroom activities, etc.

5. It was clear that high proportion of the students used in this survey were drawn from 100 Level, the reason being that these students were enjoying the four on-going Educational Technology Initiative Projects of the university already listed in Chapter one. It is therefore imperative to identify areas where they need help in order for them to optimally benefit from the educational technology initiative projects. The summary of findings indicates that students and lecturers need help in some software and hardware manipulations.

6. It was recommended that:

a. Since many students needed help in some software and hardware manipulation, General Studies Programme (GSP) should mount a course on the use of ICT which will address all the challenges identified by the students.

b. ICT unit should identify lecturers with deficiencies and organise a training session for them. A follow up training should also be given to those who participated in previous ones.

c. The University should procure more computers in readiness for the on-going educational technology initiative projects.

d. Although, the University has tried in the area of electricity generation, it is hoped that this would be improved upon.

CHAPTER ONE

INTRODUCTION

Background to the study

The University of Ibadan (UI) was founded in 1948. It is the oldest University in Nigeria and with a total staff complement of 5,800 out of which 1,300 are academic staff and 4,500 are non-academic staff of junior and senior categories. The university has about 26,000 students across 13 faculties, four institutes and four centres on its roll. About 30% of UI students are postgraduate students, and more than 30% of the students' population comprises distance learning students and the rest (almost 40% are regular undergraduate students).

The university is saddled majorly with the responsibility of teaching, researching and services to environment and world around her. The success of its teaching and learning activities is dependent on a lot of factors, among which are availability of necessary infrastructural facilities, power and energy, funding, conducive environment, cooperation between or among the staff, authorities and students alike. In terms of funding, prior to 1970s, University of Ibadan enjoys funding from various sources such as federal government, scholarship from individuals, international donors such as Rockefeller and so on.

From 1970, the university experienced a decline in state funding due to many factors such as: the simultaneous establishment of several federal universities in the mid to late 1970s; gradual withdrawal of support by international donors mainly because of the oil boom and military rule; political instability and inconsistency in government policy; failure to back pronouncement with funding and devaluation of the Nigerian currency.

University ICT Policy Environment

In her bid to implement her vision to be a world-class institution for academic excellence, geared towards meeting societal needs, she realized that information and communication technology (ICT) would played or has to play a major role. So, the Partnership for Higher Education in Africa – Educational Technology Initiative (PHEA – ETI) gave assistance or assisted in deploying modern ICT tools and methodologies in the development of teaching and learning materials; which can be used to enhance teaching and learning.

Prior to the eight or nine years (before 2002), the University of Ibadan could only boost of CD ROM in her library and majority of academic staff were not aware of what ICT was. But by 2003, the university had a partnership with the MacArthur Foundation, which resulted in more than US$1.5 million of investment in ICT infrastructure and initiatives. The objectives of the ICT interventions include: improving internal and external communication systems in the university; developing an efficient staff and student information management system; establishing a robust ICT architecture to serve as a structural backbone for current and future needs of the university and improving the level of IT literacy among staff and students.

In order to facilitate the implementation of these ICT initiatives, an ICT unit was established. The unit has, therefore, developed the infrastructure and overseen the use of ICT resources in a strategic partnership with functional units of the university to achieve organic growth in ICT resources deployment and use. The core ICT facility revolves around two very

small aperture terminals (VSATs) with a combined bandwidth of 2 Mbps / 9Mbps. The functional units of the university have their individual Local Area Networks (LANs) that are connected to the university network via the fibre optic and the wireless radio antennae. In the UI – MacArthur agreement, it was found that in the eight-year investment period, there was an increase in the number of computer systems from about 200 in 1999 to more than 3000 in 2009.[note 2003 to 2009 is six years].

In the University of Ibadan ICT policy environment document, it is targeted that: there will be on-line literature access; there will be access to university network; there will be ICT training amongst many others. There had also been a speedy progress in the university about procurement of infrastructure for ICT, increase in bandwidth, affordability of the cost of bandwidth, access to on-line resources and the use of ICT for administration and staff training.

The University in her ICT policy accepted the development and implementation of innovative teaching projects by using technology. This led to embrace of an Educational Technology (ET) Strategy which embeds the significance of use of ICT for productivity and efficiency within institutional strategy. Towards a better ICT environment, the university plans to upgrade existing ICT infrastructure and other facilities such as power, water, library and laboratories, amongst others. To ensure constant power supply, the university procured large generators to back up the erratic state of power supply and the use of solar power is also eased some of the power problems. The university water supply system is being upgraded while the library has been sourcing digital systems for efficient literature searches.

To enhance the university ICT policy environment favourably, there are four Educational Technology Initiative Projects that are on-going, and these are (i) Capacity building and Digital Content Development (ii) Open Courseware for Science and Technology (iii) Table Classroom Teaching in the General Studies Programme and (iv) Educational Radio and Mobile Phones for Tutorials in Distance Education.

Since the university is investing a huge amount of money, and human resources to achieve the goals of the ICT policy environment, the next question would be how prepared are the staff and students of the university in the deployment of ICT in teaching, learning and research. This study therefore became necessary to assess the needs of students in terms of their access to ICT, utilization of ICT, competence of students in soft and hardware, ICT readiness, students' self-efficacy in the use of ICT and students' attitude to ICT use.

Objective of the Study

The study was designed to assess the type of attitude and skills needed by the University of Ibadan students to indicate their readiness in the use of ICT for their learning and research. Specifically, the study examined

i.   Students' accessibility to ICT
ii. Competency in the soft and hardware skills
iii. Students' self-efficacy on the use of ICT
iv. Students' readiness in the use of ICT and
v.   Students' attitude to the use of ICT

9

Access to ICT

Information and Communication Technology has been recognized as an indispensable tool in the academic exercises of students in higher institutions. The use of ICTs in Nigeria and African countries generally is increasing and dramatically growing. While there is a great deal of knowledge about how ICTs are being used in developed countries, Belkes-Amics and Chiware (2006) indicated that there is not much information on how ICTs are being introduced into schools in developing countries were available. Tella, Tella, Toyobo, Adika and Adeyinka (2007) established that in the developing countries, there is generally limited access time in the use of ICTs by both teachers and students and even when there is an access time; less amount of time is spent with reliable internet access. It should therefore be noted that availability of ICTs vis-à-vis access in terms of ratio of teachers and students differs significantly. Access to internet and other ICTs makes learning at home, work place and even in the educational establishments easily possible. Further, access to Internet makes possible availability of data which is necessary for research purposes.

Access to internet makes it possible for teaching and learning to be convenient, while a lot of students can be reached at the same time. Though, Olakulehin (2007) realized that the infrastructures that are necessary for accessing and deploying an effective ICT platform is lacking in low-income countries like Nigeria in general and in the University of Ibadan in particular, access to effective ICT is still being faced with lots of problems such as energy and electricity. In faculties (such as Education) where there are the electronic boards, such boards have only been mounted, but are not effectively used because of lack of constant electricity supply to power the e-boards. Since the boards were not in use for a long time, the mounted projectors have been vandalized.

In the work of Tella et al at, it was reported that apart from other forms of ICTs, respondents did not have access to internet and e-mail facilities and when they had access, teachers use less of internet and the e-mail. However, they reported that in terms of frequency of access where ICT is available, a considerable number of teachers access ICT between 11 – 15 hours per week. It however shows that teachers' access to ICT is relatively high and this implies that the availability of ICT usually determines its access but this precludes e-mail and internet. So, if ICTs are available, this will motivate teachers to access them than when they are not available or available but not in sufficient quantity and quality.

Utilization of ICT

Access to ICTs is a determining factor of how it will be utilized. If there is unlimited access to ICTs, its utilization is likely to be greatly pronounced. There are scanty pieces of information on the use of ICT by teacher in developing countries. It is relieving however, to note that In Nigeria, Tella, et al (2007) affirmed that the use of ICTs by teachers in Nigeria is beginning to gain popularity. There is the realization of the advantages behind the use of ICTs by the teachers at all levels. So, teachers' use of ICT enable them to demonstrate the understanding of the opportunities and implications for both learning and teaching in the curriculum context; plan, implement and manage learning and teaching in open and flexible learning environment (UNESCO, 2004).

The utilization of information and communication technologies in the education process has been divided into two broad categories: ICTs for Education and ICTs in Education. Olakuleyin (2007) and Tella et al distinguished the first from the second, in that ICTs for education implies the development of information and communications technology specifically for teaching and learning purposes, while the ICTs in education involves the adoption of the general components of information and communication technologies in the process of teaching and learning.

UNESCO (2004) further categorized the use of computers and other communication technologies in education into three main categories of: Pedagogy, Training and Continuing Education. In terms of Pedagogical application of the ICTs, this is highly concerned with more effective learning and with the support of the various components of ICTs. It should be realized that almost all subjects, whether Science, Social Science, Arts, Technical and so on can be learnt with the help of the computers. In fact, the University of Ibadan is noted to have started developing students in all these spheres of academic endeavours, and the applications of computer to students learning will be of great advantage. Even in the areas of human medicine and veterinary medicine, use of computers in teaching and learning is highly relevant.

Emphatically, the pedagogical application of ICTs therefore leads to effective and efficient learning on the part of the students especially with the aid of computers and other information and communication technologies. The roles of these ICTs are therefore complementary because they supplement teachers' efforts at his lecture delivery. Computer can then be said to be an add-on instrument. Tella (2007) et al said that the pedagogical uses of the computer necessitate the development, among teachers as well as students, of skills and attitude that are related to effective use of information and communication technologies.

Cox, Preston and Cox (1999) as reported by Tella et al (2007) examined the factors that have contributed to the continuous utilization of ICT by experienced ICT teachers in their teaching. Their evidences were based on literature search, teacher questionnaires, teachers' reports and interviews. The factors that were found to be most important to these teachers in their teaching were (i) making the lessons more interesting and easier (ii) more fun for them and their pupils (iii) more diverse (iv) more motivating for the pupils (v) more enjoyable. There were other factors, but they are more of personal to the teachers. (vi) improving presentation of materials (vii) allowing greater access to computers for personal use, (viii) giving more power to the teacher in the school (ix) giving the teacher more prestige (x) making the teachers' administration more efficient and (xi) providing professional support through the internet.

Readiness

Information Communication Technology (ICT) is not new but it is now one of the new ways of improving teaching, learning, lesson delivery, students' academic performance and even teachers' productivity. Though, the orthodox student – lecturer method of lecture delivery is still in vogue, application of ICT to lecture delivery is very relevant. It is however, unfortunate to note that there exists a doubt that universities in the developing nations do not have the readiness to more forward (Colle, 2005) in using ICT for lecture delivery. The World Bank (2004) noted that the e Readiness of African Universities is clearly relevant to the global creation and

distribution of knowledge – which has been found to be a core challenges in the World's thrust towards the Millennium Development Goals.

There are five dimensions to the e Readiness in the context of the university. These are:

a) ICT facilities and network access
b) Personnel available to support the design and production of digital materials such as CDs, web pages, and distance learning (training) packages.
c) Academic programs including field experience opportunities that prepare students for applying ICT to communication and development.
d) University policies that encourages faculty participation in community outreach programmes; and
e) A faculty ICT posture – for example, a positive disposition towards the use and efficacy of ICT in education, teaching and learning (Colle, 2005).

Despite the aforementioned five dimensions above, the European Foundation for Quality in E-learning (EFQEL) affirmed that traditional universities have been more than slow in integrating ICT in their teaching and learning and there are varieties of reasons for such. Such reasons are linked to strategic and organizational change issues, technological and budgetary issue and pedagogical reasons. Though, ICT application to teaching and learning provides support for it and EFQUEL noted that quality e-learning requires institutional change, continuous introspection, innovation as well as critical awareness of the weakness that have to be overcome. So far the traditional universities are still stuck to their old paradigms, little or insufficient effort is made at application of ICT to teaching and learning. This is because the traditional universities have not realized that there are profits in fully embedding technology in the strategy. Some of the benefits are that it will enable the traditional universities to build an organization that centred on learning and the students relationship, so as to create a community experiences on the web and to organize research even in a way that is not difficult.

Colle (2005) reported that in one of the African Studies that was conducted, data were collected from faculty and research staff in five universities in Senegal. It was targeted at finding out their perceptions about the ICT – enabled outreaches activities that were supported by their educational institutions. The findings showed that about 60% of university people that are engaged in outreaches in Senegalese Universities reported that they have strong interest in applying ICT in their outreach work. This however showed their readiness to make use of ICT in the conduct of their outreach programme. On the other hand, 50% of the Senegalese sampled believed that using computers and Internet in outreach programmes would be difficult.

In a study conducted in Denmark on five-year medical students, by Dorup, the study showed that males were significantly (P<0.001) ready and interested in replacing traditional method of teaching with ICT-supported teaching and learning. So, an average of 46.6% of males as against 21.88% of females indicated that they would like to replace traditional teaching with the use of computer. As much as we have number of those that are ready to use ICT, from the study, there were few percentages of male (3.3%) and female (6.8%) that were not ready to use ICT in the course of their learning.

Ghana that is known to be one of the African nations that has made giant strides in ICT has experienced a doubt about their institutions readiness to move forward in the application of ICT in their teaching and learning process (Colle, 2005). More than 75% in a sample of

agricultural and technical universities and institutes do not use ICT, but majorities (90%) have expressed strong interest in using them.

With the use of ICT, teachers can write their lesson plans, prepare necessary materials for teaching record and also calculate students' grades, communicate with other colleagues. In fact, Becker, Ravitz and Wing (1999) noted that computers have become a routine tool for helping teachers to accomplish their professional work. Furthermore, if the ICT is properly used, it will stimulate the development of higher cognitive skills, deepen learning on the part of the students and also contribute to the acquisition of the skills that is needed for learning all life long and for making today's job market better (Tchombe, Maiga, Toure, Mbangwama, Diarra and Karsenti, 2008 and Boakye and Banini, 2008).

Attitude

Attitude has to do with the way we view the world and even organize our relationships. Droba (1933) described an attitude as a mental disposition of the human individual to act for or against a definite object. With respect to Information Communication Technology, the attitude of both the lecturer and the students varies. Dixon and Siragusa (n.d) in the paper titled "Attitudes Towards ICT – Based Interaction: A Bachelor of Education case study of 30 Teachers Education Students in Western Australian University, expressed pleasant behaviour while interacting with ICT. These were 59% of the samples that agreed that interacting with ICT is pleasant, while 77% said that interacting with ICT was helpful. Both pleasant and helpful were the consistent of attitudes according to Dixon and Siragusa (n.d). The attitudes of the samples in the study regarding the use of ICTs were comfortable.

In Scotland, there is an increasing awareness of the potential for the use of Information Communication Technologies in teaching and learning. In Malaysia, Jeffrey, Bahaman, Hayrol and Musa (2010) observed that there are varieties of benefits that accrue when ICTs are used. In Nigeria also, it is highly imperative that both teachers and students need to develop positive attitude towards the use of ICTs. Though, this attitude depends on the individual's degree of like and dislike towards something. Malaysian leaders had some factors that influenced their attitude positively towards the usage of ICT in their rural communities. The factors that related positively with their attitude to ICT usage are: self – efficacy, perceived usefulness, compatibility, perceived ease of use, job relevance and subjective norm. However, out of all the above mentioned six factors, it is the self – efficacy that contributed greatly to attitude towards ICT usage. So, in the Nigerian setting, lecturers should have positive self-efficacy of themselves which will make possible the usage of ICT for teaching and learning purposes. Comfort, Goje and Funmilola (2005) in their study in Nigeria realized that job relevance have significant and positive relationship with attitude towards ICT usage.

Dogoriti (n.d) while writing about Greece, noted that providing schools with computers and introducing programmes for the utilization of ICT in the educational process is one issue, ensuring their usage is another and in fact, a more difficult task. He, therefore, advocates that carrying out a needs assessment should be a logical starting point. English teachers in Greece (91.3%) have positive attitude towards ICT. For this, they stated that they like using computers for teaching purposes, feel confident using the internet and are willing to devote their time online. In fact, 96% of the teachers believed that learning of foreign languages can be more

13

entertaining if the internet is used for communication in class and 65% believe that e mail is a good way for teachers and students to communicate.

In another study in which about two thousands students from different universities in Europe participated, these samples reported good skills with different applications. Though, the highest abilities were with e mail and word processing with which over 80% students reported being able to use without help. University students in this sample were aware of the advantages of ICT in applying it to teaching and learning. Their attitude was also positive towards learning with traditional education methods and it was one that questioned the value of ICT in education. Obviously, with respect to explicit learning purposes, these samples expressed a stronger preference for traditional education methods than for ICT-based method because students specifically expressed doubts about the quality of the non-human interaction when there is no face-to-face contact.

In the light of the foregoing, it became imperative to examine the ICT needs of the students of the University of Ibadan, Nigeria, to facilitate the deploying of ICTs for teaching, research and possibly community services.

Research Questions

To addresses the objectives of the study frontally, the following were posed to effectively guide exercise:

To what extent do students have access to ICTs?
1. What is the level of students' competence in identified software skills?
2. What is the level of students' competence in identified hardware skills?
3. What is the pattern of students' self-efficacy in the use of ICT?
4. To what extent are the students and lecturers ready for ICT deployment?
5. What is the pattern of students' attitude towards using ICT

CHAPTER TWO

METHODOLOGY

This evaluation process employs the ex-post facto evaluation research procedure to collect data on the as the exercise only interested in the events that had already occurred.

Population and Sample

The population consists of students from different Faculties/Institute and Centres of the University of Ibadan. The multi-stage sampling was used to select the subjects that participated in the PHEA-ETI/UI need assessment study. The university was clustered along faculties/academic institutes/centres and departments, types of study (undergraduate, DLS and PG students). Students in twelve faculties/institutes participated in the needs assessment study. Subjects were then chosen from each cluster using proportionate to size sampling technique.

Instrumentation

A five-section needs assessment instrument was developed and critiqued by the evaluation team. The sections are: Background Information, competency in hard and software skills, students' self-efficacy, Students and Lecturers' ICT readiness Students' attitude towards ICTs.

Section A – Background information has nine items, some of the items are name of faculty, department, sex of the respondent, category of programme, students' academic level and age. Others are types of computers owned by the students and how do those who do not have computer have access to it.

Section B – Computer Software and Hardware Skills has 42 items. The first 30 dealt with students' competency in software skills and the remaining 12 items deal with hardware skills. Examples of the software skills include: creating graphs in MS Excel, creating database in MS Excel, performing simple calculations in MS Excel, creating database in Access, using Photo Shop (iphoto), etc. while examples of the hardware skills include: use of projectors / laptop for presentation, cell phone, photocopier, digital camera, jump or flash drive (USB).

Section C – students' Self Efficacy in the use of ICT has 8 items. Some examples are: having insufficient knowledge of appropriate software, having wet palms and anxious when using ICT facilities.

Section D – Students and lectures' ICT readiness has 12 items. The scale describes some of the constraints in the deployment of ICT in the university, some of the items are: electricity problem affects regular use of ICT facilities, absence of computer laboratory does not help students learning of the use of ICT and t is time consuming to learn to use ICTs in teaching and learning.

Section E – Students Attitude to ICT use has 16 items which describe students' disposition to the use of ICT. Some of the items in the scale are: the use of ICTs in learning increases students'

achievement, it makes classroom management much easier, it increase communication skills among students, encourages students to participate in classroom activities and reduces the use of traditional teaching media (whiteboard etc.).

The questionnaires were subjected to criticism by the Team members and other colleagues in the University. Then the questionnaires were trial tested at the Obafemi Awolowo University (OAU) Ile-Ife, to ascertain its suitability for use by the students of UI. The responses from the students in OAU were used to purify the instruments (questionnaires). They were subjected to internal consistency test using Cronbach alpha (a measure of internal consistency and construct validity). The following values were obtained.

Section	Description	No of items	Cronbach α
A	Background Information (e.g. access to computer)	6	0.682
B I	Students' competency in software skills	30	0.969
B II	Students' competency in hardware skills	12	0.933
C	students' self-efficacy	8	0.749
D	Students and Lecturers' ICT readiness	12	0.855
E	Students' attitude towards ICTs	16	0.916

Some items in the instruments were corrected for lack correlation with other members of the scale. Items with less than correlation coefficient 0.3 with the rest of the items were deleted.

Data Collection Strategy

The corrected instruments were transformed to ICT survey platform by the ICT Unit of the university and sent to students to respond. The response rate was very low and the process was repeated two more times. At the end of the third attempt, it was agreed to produce manual copies of the instruments for administration. The Distance Learning Students in the Faculties of Arts, Education, Science and the Social Sciences were the first to respond to the instruments (the regular students were away for a two week vacation then). The regular students especially those in 100 Level were visited after their GSP examination and the questionnaires were administered to them by research assistants..

Data Analysis

The Statistical Package for Social Sciences Version 18 was used to perform frequency count, percentages, mean and standard deviation.

CHAPTER THREE

RESULTS AND DISCUSSION

Introduction

This chapter focuses on the discussion of results obtained from the survey. The chapter is divided sections as guided by the six research questions.

Background Information

Table 1 presents the frequency distribution of sampled students in each faculty. The number of students in each faculty as presented in the table was not disarticulated by type of programme and levels.

Table 1. Frequency Distribution of Sampled Students in each Faculty

Faculty	Frequency	Percent
Science	291	17.2
Education	347	20.5
Art	164	9.7
Institute of Education	12	0.7
Agriculture and Forestry	146	8.6
Law	88	5.2
Vet Medicine	101	6.0
Social science	292	17.3
Public Health	20	1.2
Basic Medical Science	87	5.1
Pharmacy	30	1.8
Technology	114	6.7
Total	1692	100.0

The result from the above table shows that twelve faculties participated in the PHEA-ETI need assessment survey, the Faculty of Education had the largest number of students (347) i.e. 20.5%, probably because the Faculty of Education had the largest segment of study sample from which the data was collected especially when the Distance Learning students were added to the list. This followed by the Social Sciences (292) giving 17.3% and Science (17.2%) while the Institute of Education had the smallest frequency (12) implying 0.7%. The Institute had the least segment of the study sample because it is basically a research base institute focuses only on post graduate students. In addition, it has only one academic department (International Centre for Educational Evaluation) under it. The information is represented graphically in Fig. 1
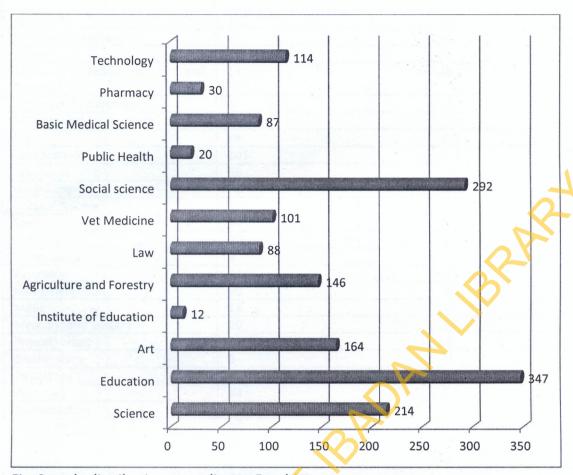
Fig. Sample distribution according to Faculties

The Departmental sampling did not account for all the departments in the university; a representative sample of departments was used in the study. Table 2 presents the number of students selected in each of the sampled departments.

Table 2 Frequency Distribution of Sampled Students by Departments

Department	Frequency	Percent
Statistics	129	7.6
Guidance and Counselling	67	4.0
Educational Management	34	2.0
Comm. & Language Art	117	6.9
English	24	1.4
Mathematics	1	.1
Teachers Education	117	6.9
LARIS	30	1.8
Institute of Education	12	.7
Special Education	22	1.3
Adult Education	45	2.7
Human Kinetics & Health Education	32	1.9

Agriculture	108	6.4
Wildlife and Ecosystem	13	.8
Forestry	7	.4
Forest Resources and Management	13	.8
Agricultural Economics	1	.1
Fisheries and Aquaculture	4	.2
Law	88	5.2
Vet Medicine	101	6.0
Economics	65	3.8
Geography	70	4.1
Political Science	17	1.0
Sociology	80	4.7
Linguistics	20	1.2
Archaeology	3	.2
Psychology	137	8.1
Human Nutrition	20	1.2
MBBS	14	.8
Medicine and Surgery	20	1.2
Physiotherapy	10	.6
Biochemistry	5	.3
Physiology	10	.6
Pharmacy	24	1.4
Pharmacology	6	.4
Computer Science	84	5.0
Dentistry	20	1.2
Zoology	8	.5
Food Technology	14	.8
Mechanical Engineering	21	1.2
Petroleum Engineering	19	1.1
Agricultural Engineering	16	.9
Civil Engineering	21	1.2
Electric Electronic	20	1.2
Wood Production	3	.2
Total	1692	100.0

Forty six departments were sampled in the study; the Department of Psychology had the highest respondents (8.1%), followed by Statistics Department (7.6%) probably because there are many students in these Departments than the rest of the departments. Department of Wood production Technology had the least number of respondents (0.2%).

Table 3 Frequency Distribution of Gender

Gender	Frequency	Percent
Male	887	52.4
Female	803	47.5
Total	1692	100.0

The compartmentalisation of the gender of the respondents show that male beneficiaries constituted 52.4% of the sample, while females in the sample were 47.5%. As at 2009/2010, the

gender distribution in the University of Ibadan was male 59.5% and female 40.5%. Although, there more male respondents than there were female students used in the study, the selection was in favour of females. The information is presented I Fig. 2
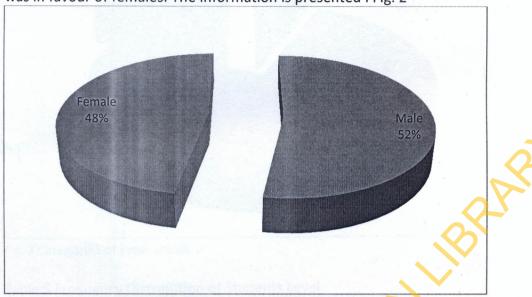

Fig. 2 Gender Distribution

Table 4 Frequency Distribution of Sampled Students in each Category of Programmes

Category of programme	Frequency	Percent
Post graduate	106	6.3
Undergraduate	1294	76.5
Distance Learning Programme	292	17.3
Total	1692	100.0

'Regular' undergraduate students formed the greater majority of those sampled representing 76.5%, followed by Distance Learning undergraduate [17.3%] while the post graduate student constituted only 6.3%. The implication is that the 'regular' undergraduate students were readily available for the survey. The information presented in Fig. 3.
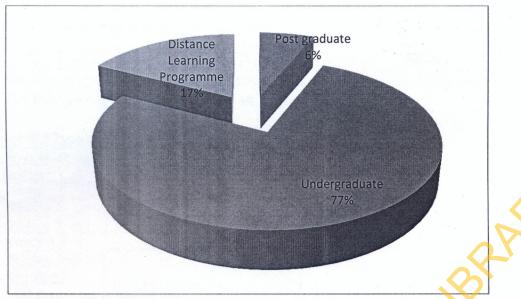
Fig. 3 Categories of Programme

Table 5 Frequency Distribution of Students Level

Level	Frequency	Percent
100	774	45.8
200	407	24.1
300	243	14.4
400	152	9.0
500	12	0.7
700	104	6.1
Total	1692	100.0

The subjects used in the study spread through one hundred level to seven hundred level, but the one hundred level student formed the bulk of the subjects used for the study (45.8%) because the impact of the evaluation would be felt by these cohort of respondents, while five hundred level students had the smallest number of participants of only 0.7% because they are in their final year.

Table 6 Frequency Distribution of Students' Age

Age	Frequency	Percent
Less than 16 years	6	.4
17 - 20 years	858	50.7
21 - 24 years	297	17.6
25 - 28 years	251	14.8
29 - 32 years	119	7.0
More than 32 years	159	9.4

A greater proportion of the subjects were between the ages of 17 and 20 years, followed by those in the age bracket of 21 – 24 years, while those whose ages were less than 16 years were just 0.4% of the respondents. This might be because one of the criteria for admission to the Nigerian University system is that students should not be less than 16 years of age.

21

Table 7 Ownership and Type of Computer

	No response	Yes	No	
7. Do you own a computer	112 (6.6)	1547 (91.4)	33 (2.0)	

Majority of the students [91.4%] claimed they own computers while only 2.0% of them agreed that they do not possess any one at all.

Table 7 Type of Computer Owned

If yes which type	Yes
Desktop	118 (7.0)*
Laptop	559 (33.0)
Desktop & Laptop	71 (4.2)
Desktop & iPod	3 (.2)
Laptop & iPod	31 (1.8)
Desktop, Laptop & iPod	8 (.5)
No response	902 (53.3)

* Figures in parenthesis are in percentages

Students own various types of computers ranging from Desktop computers, (7.0%), Laptop computers (33.0%) while others such combination of two types constituted some11%, a greater number of the student who have a computer systems own laptop computers than other types. This might be because of convenience, function-ability and least costly compare to i-pod machines. Also, the quest for laptop could also be attributed to accessibility and durability. A very high proportion of the respondents did not indicate which type of the computer they owned. This might mean that they did not actually own a computer, but it may be possible for them to have access to computer somehow?

Research Question One
To what extent do students have access to ICTs?

Table 8 Accessibility to Computer

How do you have access to ICT	Yes	No	M	SD
Have access to computer in the cyber café	908 (53.7)	784 (46.3)	.54	.499
Have access to computer in the department	66 (3.9)	1626 (96.1)	.04	.194
Have access to computer in the postgraduate school	74 (4.4)	1618 (95.6)	.04	.205
Have access to computer in the house	335 (19.8)	1357 (80.2)	.20	.399
Have access to computer in the ICT building	116 (6.9)	1576 (93.1)	.07	.253
Have access to computer in the library	75 (4.4)	1617 (95.6)	.04	.206

It is not compulsory that students should own a computer but should be able to have access to it any time s/he wants to make use of it. More than half (53.7%) of students have access to ICT

from a cyber café, while 46.3% make provision for themselves. It can thus be explained that students who did not have computer made use of computer in the cyber café and most of the students who have computer still spent more time in accessing the net outside their own computers probably because they do not have mobile internet modem. Only 3.9% have access to computers in their departments. Only 4.4% post graduate students had access and use ICT facilities in the post graduate school probably because there are few postgraduate students in the sample.

Almost one-fifth of the respondents (19.8%) claimed to have used ICT facilities in their homes; while the vast majority of them denied the use of ICT facilities at home. It is likely that the respondents felt that the use of ICT facilities in the home means the use of a stationary computer dedicated to a table in a computer room in their homes. Only 116 students [6.9%] use the computers in the ICT building, this might be as a result of distance of the building to some of the Faculties than perhaps Arts and Education. Only 4.4% of students use ICT facilities in the library, this could be due to network failure which often occur or that majority of the students were possibly not comfortable with library rules or because they use your personal computer to access the net through their personal modems or because the network functions better elsewhere than the library.

Research Question Two

What is the level of students' competence in identified software skills?

The degree of competency of participants with respect to the types of task they accomplish with the aid of a computer formed the unit of analysis. These tasks were divided into 30 items placed beside the level of competency. This was grouped into four and they include very competent, competent, not very competent and needs help. Frequency count and percentages were used in answering the research question.

Table 9 Students' Competence in identified Software Skills

S/N	Type of Task	Degree of Competence					Mean	STD
		No Response	Very competent	Competent	Not Very Competent	Needs Help		
1	Creating e-mail attachments	68 (4)	571 (33.7%)	545 (32.2)	293 (17.3)	215 (12.7)	2.79	1.156
2	Opening e-mail attachments	56 (3.3)	689 (40.7%)	567 (33.5)	212 (12.5)	168 (9.9)	2.98	1.108
3	Using web browsers	17 (1.0)	71 (4.2)	135 (8.0)	536 (31.7)	933 (55.1)	3.36	.873
4	Conducting Online searches	36(2.1)	794(46.9)	523(30.9)	191(11.3)	148(8.7)	3.12	1.054
5	Creating Power Point slides	58(3.4)	279(16.5)	326(19.3)	571(33.7)	458(27.1)	2.18	1.108
6	Creating animate scheme	53(3.1)	194(11.5)	261(15.4)	600(35.5)	584(34.5)	1.98	1.041
7	Creating design scheme	51(3.0)	191(11.3)	329(19.4)	515(30.4)	606(35.8)	2.00	1.061
8	Creating colour scheme	70(4.1)	214(12.6)	421(24.9)	468(27.7)	519(30.7)	2.11	1.102

9	Inserting new slides	64(3.8)	279(16.5)	432(25.5)	415(24.5)	502(29.7)	2.21	1.148
10	Inserting table	63(3.7)	341(20.2)	453(26.8)	373(22.05)	462(27.3)	2.32	1.180
11	Inserting pictures	62(3.7)	399(23.6)	521(30.8)	301(17.8)	409(24.2)	2.46	1.194
12	Inserting sound	51(3.0)	314(18.6)	507(30.0)	372(22.0)	448(26.5)	2.35	1.144
13	Printing Power Point slides	55(3.3)	266(15.7)	380(22.5)	432(25.5)	559(33.0)	2.14	1.138
14	Printing Power Point hand-out	62(3.7)	218(12.9)	300(17.7)	524(31.0)	588(34.8)	2.01	1.090
15	Creating graphs in MS Excel	49(2.9)	234(13.8)	338(20.0)	464(27.4)	607(35.9)	2.06	1.107
16	Creating database in MS Excel	49(2.9)	225(.13.3)	328(19.8)	473(28.0)	617(36.5)	2.04	1.098
17	Creating database in MS Excel	68(4.0)	200(11.8)	295(17.4)	519(30.7)	610(36.1)	1.97	1.081
18	Performing simple calc. in MS Excel	60 (3.5)	253(15.0)	371(21.9)	469(27.7)	539(31.9)	3.13	1.123
19	Creating database in Access	67 (4.0)	146(8.6)	226(13.4)	447(26.4)	806(47.6)	1.75	1.026
20	Using Photo Shop (i photo)	51(3.0)	135(8.0)	321(19.2)	460(27.2)	725(42.8)	1.86	1.019
21	Using MS Movie Maker (I movie)	80 (4.7)	107(6.3)	223(13.2)	493(29.1)	789(46.6)	1.70	.974
22	Using Art Studio	83 (4.9)	55(3.3)	233(13.3)	527(31.1)	794(46.9)	1.64	.895
23	Using MS Office Publisher	70 (4.1)	177(10.5)	305(18.0)	449(26.5)	691(40.8)	1.90	1.078
24	Installing or removing software	101(6.0)	356(21.0)	363(21.5)	307(18.1)	565(33.4)	2.18	1.264
25	Transferring digital information from device to device e.g downloading pictures	55 (3.3)	494(29.2)	384(22.7)	280(16.5)	479(28.3)	2.46	1.263
26	Creating teaching e-portfolios	81 (4.8)	147(8.7)	277(16.4)	462(27.3)	725(42.8)	1.81	1.047
27	Hypertext linking	86 (5.1)	181(10.7)	237(14.9)	237(14.9)	660(39.0)	1.85	1.103
28	Using search engines (Google, etc)	35 (2.1)	654(38.7)	386(22.8)	195(11.5)	319(18.9)	2.82	1.227
29	Using favourites and bookmarks	61 (3.6)	583(34.5)	380(22.5)	237(14.0)	328(19.4)	2.69	1.262
30	Using acrobat reader to read files	66 (3.3)	391 (23.1)	272 (16.1)	360 (21.3)	500 (29.6)	2.27	1.252

*The number of people who responded to each item are as indicated while percentages are written in parenthesis.

As revealed in Table 9, the respondent indicated that they are competent or very competent in performing only 8 tasks. The tasks are revealed in 'item 1' (creating e-mail attachments)', 'item 2' (opening e-mail attachments), 'item 4' (conducting Online searches), 'item 11' (inserting pictures) 'tem 12' (inserting sound), 'item 25' (transferring digital information from device to device e.g. downloading pictures), 'item 28' (using search engines (Google, etc) and 'item 29' (using favourites and bookmark).

A greater percentage of the respondents indicated they are not competent or needed help in 22 items. As can be seen from Table 9, a large proportion of the respondents indicated that they are not competent or tended to need help when 'using web browsers' (item 3), 'creating Power Point slides' (item 5), 'creating animate scheme' (item 6), 'creating design scheme' (item 7), 'creating colour scheme' (item 8), 'Printing Power Point slides' (item 13), 'Printing Power Point hand-out' (item 14), 'Creating graphs in MS Excel' (item 15), 'Creating database in MS Excel' (item 16) and 'Creating database in MS Excel' (item 17). Others include 'item 18' (Performing simple calculation in MS Excel), 'item 19' (Creating database in Access), 'item 20' (Using Photo Shop (i photo), 'item 21' (Using MS Movie Maker (I movie), 'item 22' (Using Art Studio), 'item 23' (Using MS Office Publisher), 'item 26' (Creating teaching e-portfolios) and 'item 27' (Hypertext linking).

However, about half (50 – 54%) of the respondents indicated that they are not very competent or need help in 4 items namely 'Inserting new slides' (item 9), 'Installing or removing software' (item 24), 'Hypertext linking' (item 27) and 'Using acrobat reader to read files' (item 30) whereas the other half indicated that they are competent or very competent in performing these tasks.

Research Question Three

What is competency of students in identified hardware skills?

The degree of competency of participants with respect to the types of task they accomplish with the aid of a computer formed the unit of analysis. These tasks were divided into 16 items placed beside the level of competency. This was grouped into four and they include very competent, competent, not very competent and needs helps. Frequency count and percentages were used in answering the research question.

Table 10 respondents' competence in identified hardware skills

Hardware proficiency	Degree of competence					Mean	STD
	No Response	Very Competent	Competent	Not Very Competent	Needs help		
27. Using printer(s)	65 (3.8)	465 (27.5)	242 (14.3)	347 (20.5)	470 (27.8)	2.65	1.168
28. Connecting desktop computer	66 (3.9)	283 (16.7)	245 (14.5)	457 (27.0)	538 (31.8)	2.70	1.221

29. Connecting Laptop computer with Television	59 (3.5)	447 (26.4)	423 (25.0)	352 (20.8)	308 (18.2)	2.25	1.168
30. DVD and CD drives Television	65 (3.8)	266 (15.7)	319 (18.9)	452 (26.7)	487 (28.8)	2.65	1.193
31. Projectors/laptop presentation systems	89 (5.3)	439 (25.9)	402 (23.8)	318 (18.8)	341(20.2)	2.24	1.225
32. Cell phone	40 (2.4)	171 (10.1)	140 (8.3)	427 (25.2)	811(47.9)	3.13	1.113
33. Photocopier	59 (3.5)	248 (14.7)	313 (18.5)	428 (25.3)	541(32.0)	2.72	1.191
34. Digital camera	40 (2.4)	259 (15.3)	302 (17.8)	403 (23.8)	585(34.6)	2.78	1.178
35. Jump or flash drive (USB)	39 (2.3)	267(15.8)	238 (14.1)	420(24.8)	625 (36.9)	2.83	1.187
36. Digital scanner	70 (4.1)	369 (21.8)	387 (22.9)	375 (22.2)	395 (23.3)	2.41	1.210
37. Portable E-devices (PDA, Blackberry)	54 (3.2)	325 (19.2)	317 (18.7)	424 (25.1)	492 (29.1)	2.60	1.206
38. Portable music devices	53 (3.1)	250 (14.8)	225 (13.3)	433 (25.6)	651 (38.5)	2.86	1.200
39. Radio	48 (2.8)	165 (9.8)	193 (11.4)	442 (26.1)	764 (45.2)	3.06	1.126
40. CD-ROM	68 (4.0)	192 (11.3)	261 (15.4)	421 (24.9)	670 (39.6)	2.89	1.193
41. Audio cassette	45 (2.7)	195 (11.5)	198 (11.7)	428 (25.3)	746 (44.1)	3.01	1.149
42. Camcorder	51 (3.0)	337 (19.9)	346 (20.4)	410 (24.2)	468 (27.7)	2.56	1.198

*the number of people who responded to each item was indicated while percentages were written in parenthesis.

As revealed in Table 10 the respondents indicated that they are competent or very competent in performing only 2 tasks. The tasks are revealed in 'items 33' (connecting laptop computer with Television) and 'item 35' (projectors/laptop presentation systems).

A greater percentage of the respondents indicated they are not competent or needed help in 14 items. As can be seen from table 10, a large proportion of the respondents indicated that they are not competent or tended to need help when 'using printer(s)' (items 31), 'connecting desktop computer' (item 32), 'DVD and CD drives Television' (item 34), 'cell phone' (item 36), 'photocopier' (item 37), 'digital camera' (item 38), 'jump or flash drive (USB)' (item 39), 'digital scanner' (item 40), 'portable E-devices (PDA, Blackberry)' (item 41), 'portable music devices' (item 42), 'radio' (item 43), 'CD-ROM' (item 44), 'audio cassette' (item 45) and 'camcorder' (item 46).

However, about half (50 – 54%) of the respondents indicated that they are not very competent or need help in 1 item 'using digital scanner' (item 40) whereas the other half indicated that they are competent in performing the tasks.

Research Question Four
What is the pattern of students' self-efficacy in the use of ICT?

This research question was answered by considering how students saw themselves with respect to the use of ICT. Frequency and percentages of students' responses on how they saw their abilities in the use of ICT are presented in Table 11.

Table 11 Pattern of Students' Self-Efficacy in the Use of ICT

		No Response	No	Yes	M	SD
1	I have insufficient knowledge of appropriate software	147 (8.7)	674 (39.8)	791(46.7)	1.40	.650
2	I have insufficient knowledge of how to use ICT equipment	142(8.4)	744 (44.0)	721(42.6)	1.37	.654
3	I lack confidence in using ICT	192(11.3)	980 (57.9)	440(26.0)	1.15	.607
4	I have wet palms and anxious when I'm to use ICT	210(12.4)	1107(65.4)	295(17.4)	1.05	.557
5	I can use power point for teaching in my class	156(9.2)	913(54.0)	543(32.1)	1.24	.613
6	I can use e-mail to communicate with my lecturers	72(4.3)	492(29.1)	1048(61.9)	1.61	.573
7	I have no fear in operating the computer	60(3.5)	452(26.7)	1100(65.0)	1.65	.551
8	I am confident that the ICT will be useful for my lecture download	117(6.9)	420(24.8)	1075(63.5)	1.59	.622

Although a significant proportion (8.7%) of the students did not respond to the first item, less than half of the respondents (46.7%) had sufficient knowledge of appropriate software for different tasks. The mean value of 1.4 also confirms that students need help in the choice of appropriate software because any value below 1.5 (which is the mid-point between 1 and 2 which was used to represent no and yes respectively) tends towards no substantially than yes. The information presented for this item is consistent with the findings on students' competency in the use of some software where majority of them tend to need help.

It is astonishing to note that a high proportion of the students indicated that they had confidence and are not anxious in using ICT facilities and that they had no fear in operating computer, yet, less than half of them (44.0%) had sufficient knowledge of how to use ICT equipment. In addition, a significant proportion of the students (54.0%) cannot use PowerPoint for teaching (seminar presentation) their class. This has a serious implication for the use ICT policy. It can then be argued that most of the students who went through admission process were helped either at cyber café to check their result and carry out other admission processes.

Research Question Five
To what extent are the students and lecturers ready for ICT deployment?

This research question was answered by considering how students saw themselves and their lecturers' readiness in the deployment of ICT. Frequency and percentages of students'

responses on how they saw their readiness and that of their lecturers in the use of ICT are presented in Table 12.

Table 12 Pattern of Students and Lecturers' Readiness for ICT Deployment

		No Response	No	Yes	M	SD
1.	Lecturers lack ICT knowledge	247 (14.6)	895 (52.9)	470 (27.8)	1.14	.653
2.	Computer facilities are not adequate in my department	145 (8.6)	338 (20.0)	1129 (66.7)	1.61	.647
3.	There is high cost of computer accessories, so replacement is not easy	126 (7.4)	520 (30.7)	966 (57.1)	1.52	.637
4.	The computers are not maintained as expected	193 (11.4)	506 (29.9)	986 (58.3)	1.47	.692
5.	I do not have access to internet in the department	138 (8.2)	484 (28.6)	1070 (63.2)	1.55	.641
6.	I do not have access to internet at home	182 (10.8)	807 (47.7)	703 (41.5)	1.31	.655
7.	I usually access the internet in the cyber café	145 (8.6)	521 (30.8)	1026 (60.6)	1.52	.649
8.	Electricity problem affects regular use of ICT facilities	159 (9.4)	428 (25.3)	1105 (65.3)	1.56	.659
9.	The absence of computer laboratory does not help students learning of the use of ICT	157 (9.3)	417 (24.6)	1118 (66.1)	1.57	.657
10.	It is time consuming to learn to use ICTs in teaching and learning	232 (13.7)	765 (45.2)	695 (41.1)	1.27	.688
11.	The ICT equipment are not readily available	159 (9.4)	484 (28.6)	1049 (62.0)	1.53	.661
12.	ICT equipment are hardly upgraded where available	159 (9.4)	512 (30.3)	1021 (60.3)	1.51	.662

ICT readiness can be measured using multi-factorial approaches. One of such approaches is the lecturers' knowledge of ICT. A larger proportion of the students indicated that their lecturers had knowledge of ICT, however, considering the efforts of the university in training lecturers on the use of ICT, one can say that a significant proportion of the students (29.2%) believed that their lecturers lacked ICT knowledge. It is possible that such students just stated that to spite their lecturers, it is also possible that the students are right. If they are right, then this has a serious implication for the electronic learning policy of the university since those who are to interpret and implement the policy need help.

Other measures of ICT readiness are the adequacy of computer in the department, maintenance of computer, availability of electricity, availability of computer laboratory and ICT equipment. A two-third (66.6%) of the students indicated that computer facilities are not adequate in their department, if computers are to be used in teaching in the department, then, it means that Departments have to procure more computers in readiness for the on-going educational technology initiative projects. For Departments and faculties that have computers, 53.3% of the students stated that the computers are not well maintained. This implies that the computer could stop working in the midst of a serious work, thereby data stored in the system could be lost and students or lecturers have to re-input the data again. The problem of

electricity is not particular to the University, it is a national problem. It was so bad at a time in April 2012 that the University had to allow students go on a two week vacation in order to rectify the power situation. To ensure constant power supply, the university procured large generators to back up the erratic state of power supply. Presence of computer laboratory will help students learn how to use ICT, however, in many Departments or Faculties, there is absence of computer laboratory. It is ridiculous to see that a large and significant portion of students (41.1%), at this age of technology, concluded that it is time consuming to learn to use ICTs in teaching and learning.

Research Question Six

Research Question Six
What is the pattern of students' attitude towards using ICT

This research question was answered by considering how students saw themselves with respect to the use of ICT. Frequency and percentages of students' responses on how they saw their abilities in the use of ICT are presented in table 13.

Table 13 pattern of students' attitude towards the use of ICT

	The use of ICTs in learning				M	SD
		No Resp.	Yes	No		
1	is interesting	207 (13.0%)	1118 (70.4%)	264 (16.6%)	1.57	.711
2	increases my achievement	212 (13.3%)	1147 (72.2%)	230 (14.5%)	1.59	.714
3	makes classroom management much easier	198 (12.5%)	1101 (69.3%)	290 (18.3%)	1.57	.703
4	increase communication skills among students	201 (12.6%)	1088 (69.3%)	300 (18.9%)	1.56	.707
5	is valuable equipment which we should benefit from	194 (12.2%)	1128 (71.0%)	267 (16.8%)	1.59	.698
6	makes transferring information to students easier	199 (12.5%)	1116 (70.2%)	274 (17.2%)	1.58	.703
7	encourages students to participate in classroom activities	203 (12.8%)	1027 (64.6%)	359 (22.6%)	1.52	.711
8	reduces the use of traditional teaching media (whiteboard etc.)	193 (12.2%)	1059 (66.7%)	335 (21.1%)	1.55	.701
9	causes stress for teachers who have poor ICT skills	240 (15.1%)	822 (51.7%)	527 (33.2%)	1.37	.731
10	makes the lesson more difficult	310 (19.5%)	341 (21.5%)	938 (51.7%)	1.02	.640
11	makes preparing the lesson more difficult	295 (18.6%)	323 (20.3%)	971 (61.1%)	1.02	.624
12	makes the lesson to be disrupted	284 (17.9%)	363 (22.8%)	942 (59.3%)	1.05	.636
13	makes teaching expensive	222 (14.0%)	750 (47.2%)	617 (38.8%)	1.33	.708
14	makes lesson more interesting	183 (11.5%)	1044 (65.7%)	362 (22.8%)	1.54	.692

29

15	adds more fun to the teaching and learning	179 (11.3%)	1106 (69.6%)	304 (19.1%)	1.58	.685
16	makes lesson more diverse	190 (12.0%)	967 (60.9%)	432. (27.2%)	1.49	.700

*the number of people who responded to each item are as indicated while percentages are written in parenthesis.

The pattern of response by the respondents with respect to their attitude toward ICT formed the unit of analysis. Sixteen items made-up this section placed beside the opinion of respondents. This was grouped into three and they include no response, yes and no. as revealed in table 14, the respondent indicated that majority agree to 14 items. The items are revealed in their response to 'item 1' (is interesting), 'item 2' (increase my achievement), 'item three' (makes classwork management much easier), 'item 4' (increase communication skill among students), 'item 5' (is valuable equipment which we should benefit from), 'item 6' (makes transferring information to students easier), 'item 7' (encourage students to participate in classroom activities), 'item 8' (reduce the use of traditional teaching media (whiteboard etc.)), 'item 9' (causes stress for teachers who have poor ICT skills), 'item 14' (makes lesson more interesting), 'item 15' (adds more fun to the teaching and learning) and 'item 16' (make lesson more diverse).

A greater percentage of the respondents' opinion indicated no in 13 items. As can be seen from table 14, a large proportion of the respondents indicated no to 'item 10' (makes the lesson more difficult), 'item 11' (makes preparing the lesson more difficult) and 'item 12' (makes the lesson to be disrupted).

However, about half (47- 50%) of the respondents indicated yes to 'item 13' (makes teaching expensive) whereas the other half indicated no to the item.

CHAPTER FOUR

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary of Findings

Some of findings of the study are:

i.   Students in twelve Faculties participated in the study.

ii.   There are more males than females

iii.   'Regular' undergraduate students formed three quarters of the sample size, followed by the students in the Distance Learning Programme which constitute one-fifth of students sample while the post graduate students were in the minority.

iv.   Majority of the respondents used in the survey are 100 Level students. They are likely to enjoy the ICT policy deployment before graduation.

v.   A significant proportion of students have laptops. Students who did not own a computer used cyber café, departmental computer and PG school computers.

vi.   Very few respondents could perform eight software tasks (26.7%) out of 30. Examples of tasks they can perform are creating e-mail attachments, opening e-mail attachments, transferring digital information from device to device e.g. downloading pictures, etc.

vii.   Twenty two out of 30 software tasks posed greater challenge to majority of the students. They were not competent in such tasks as using web browsers, creating Power Point slides, creating animate scheme, creating design scheme, creating colour scheme, printing PowerPoint slides and hand-out, etc.

viii.   About half (50 – 54%) of the respondents indicated that they are not very competent or need help in four software tasks like inserting new slides, installing or removing software, using acrobat reader to read files.

ix.   A significant proportion of the students (29.2%) believed that their lecturers lacked ICT knowledge.

x.   Majority of the students were very competent in only two hardware tasks. The tasks are connecting laptop computer with Television and connecting projectors with laptop for presentation.

xi.   Apart from the two tasks in (x), students have challenges in performing the remaining tasks, hence they need help.

xii.   It is astonishing to note that a high proportion of the students indicated that they had confidence and are not anxious in using ICT facilities and that they had no fear in operating computer, yet, less than half of them (44.0%) had sufficient knowledge of how to use ICT equipment.

xiii.   Where Departments and Faculties have computers, a large proportion of students stated that the computers are not well maintained.

xiv.   Electricity is identified as a major challenge facing the use of ICT by the students.

xv.   A large and significant portion of students at this age of technology concluded that it is time consuming to learn to use ICTs in teaching and learning.

xvi.   A very large proportion of students opined that The use of ICTs in learning increases their achievement, makes classwork management much easier, increases communication skill among students, encourages students to participate in classroom activities, etc.

Conclusion

It is clear that high proportion of the students used in this survey were drawn from 100 Level, the reason being that these students are likely to enjoy the four on-going Educational Technology Initiative Projects of the university already listed in Chapter one. It is therefore imperative to identify areas where they need help so that they can optimally benefit from the educational technology initiative projects. The summary of findings indicates that students and lecturers need help in some areas of software and hardware manipulations.

Recommendations

1. Many students need help in some software and hardware manipulation, General Studies Programme (GSP) should mount a course on the use of ICT which will address all the challenges identified by the students.
2. More than a quarter of the students indicated that their lecturers did not have ICT knowledge, ICT unit should identify lecturers with some deficiencies and organise a training session for them. A follow up training should also be given to those who participated in previous ones.
3. Students complained that computers in the departments are not enough; Departments should procure more computers in readiness for the on-going educational technology initiative projects.
4. Although the University has tried in the area of electricity generation, it is hoped that this could be improved upon.

References

Beukes-Amiss, C.M & Chiware, E.R.T. 2006. The impact of diffusion of ICTs into educational practices, how good or how bad? A review of the Namibia. Available at http//www.dspace.unam.na:8443.dspacebitstream.1995/244impact.diffusionICTedupdf (Accessed 10 February 2007)

Comfort, K.L., Goje and K. Funmilola, 2005. Relevance and priorities of ICT for women in rural communities: A case Study from Nigeria. Bulletin for the American Society for Information Science and Technology, 29: 24-25.

Cox, M. J., Preston, C. & Cox K. 1999. What motivate teachers to use ICT? Paper presented at the British Educational Research Association Conference. Brighton, September.

Droba, D.D. 1974. The nature of attitude. *Journal of Social Psychology*, 4, 444-463.

Olakulehin, F. K. 2007. Information communication technologies in teachers training professional development in Nigeria. Turkish Journal of Distance Education TODJE 8(1) 133-142.

Tella, A; Tella, Adedeji, Toyobo, O. M.; Adika, L. O.; Adeyinka, A. A. 2007. An Assessment Of Secondary School Teachers Uses Of Ict's: Implications For Further Development Of ICT's Use In Nigerian Secondary Schools. **6521.** The Turkish Online Journal of Educational Technology – TOJET 6 (3),5-17

World Bank, 2004a. Millennium Development Goals. Accessed February 20, 2005 at: http://www.developmentgoals.org/