INFORMATION TECHNOLOGY (IT) AN IMPERATIVE WORKING TOOL FOR STUDENTS AND LECTURERS IN NIGERIAN UNIVERSITIES: A CASE STUDY OF FEDERAL UNIVERSITY OF TECHNOLOGY MINNA.

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**ABSTRACT**

This research examines Information Technology as an imperative working tool for students and lecturers in Nigerian Universities; Federal University of Technology, Minna was used as the case study. The population of the study is 4,985 while the sample size 427 comprising 357 students and 85 lecturers. Survey research which is descriptive in nature was used for the study. A purposive sampling technique was adopted and questionnaire was used as instrument for data collection and the data were analysed using simple percentage and mean score. The results showed that Internet service is the fastest means of getting up-to-date information resources by students and lecturers in this 21st century. The result also showed a high use of Information Technology by the students and lecturers on daily basis. Finally, the study revealed that majority of the problems working against the full usage of Information Technology in the University can be solved if adequate funds are provided by the government.

Keywords: Information, Communication, Technology, ICT, University, Lecturers, Students,

 **INTRODUCTION**

In the modern society, there is a huge technological and social changes brought about by information revolution. This revolution is characterized by explosive developments in information technologies and by their integration into complex information systems that span the globe. The effect of this revolution has affected individuals, organisations, governments, businesses and higher institutions. This term is commonly used as a synonym for computers and its related networks, though it also encompasses other information distribution technologies such as; television and telephones.

Information technology (IT) has the potential to accelerate, enrich, and deepen skills, to motivate and engage students in learning, to help relate school experiences to work practices, to help create economic viability for future workers, contributes to radical changes in school, to strengthen teaching, and to provide opportunities for interconnection between the school and the world (Yusuf, 2005). Obanya (2009) stated that universities must strive to meet 21st century challenges of providing students with an education that is viewed by employers as relevant and valuable, and that education must be driven by information technology (IT). The university students and information seekers require some information skills to excel in their studies.

 Information technology (IT) is an inseparable part of the contemporary world. The field of education has certainly been affected by the penetrating influence of information technology worldwide and in particular, developed countries. IT has made an improvement on the quality and quantity of teaching, learning, and research in the education institutions. It enhances teaching and learning through its dynamic, interactive, flexible, and engaging content. It provides real opportunities for individualized instruction (Kwacha, 2007).

In research, IT provides opportunities for students and lecturers to communicate with one another through email, mailing lists, chat rooms or groups etc. It also provides quicker and easier access to more extensive and current information, and can be used to carry out complex mathematical and statistical calculations. It provides researchers with a steady avenue for the dissemination of research reports and findings, Yusuf and Onasanya in (Yusuf, 2005).

**STATEMENT OF THE PROBLEM**

The role of information technology as an indispensable working tool in universities and other institutions of higher learning as centres of learning and research in the 21st century especially in developing countries of Africa where access to quality information is still far behind cannot be over emphasised.

Information technology (IT) has the capacity to facilitate teaching and learning in institutions, this fact cannot be ignored by academics. IT in higher institutions is used in the developing of course ware, academic research, administrative support, student enrolment, delivering lectures, sharing content, communication between learners, staff and the outside world. All these responsibilities have posed a lot of challenges to our institutions of higher learning owing to the fact that some students in the higher institutions are not computer literate before gaining admission into the higher institutions. Furthermore, previous researches have shown that most lecturers are either computer illiterates or have phobia for technologies, and these have posed a lot of challenges to higher institutions across the globe, it is therefore very important to look into information technology as an imperative working tool to the students and lecturers in Nigerian universities and Federal University of Technology, Minna (FUT Minna) in particular.

**OBJECTIVES OF THE STUDY**

The objectives of this study are to:

1. Determine the types of IT facilities that are available to students and lecturers for use in Federal University of Technology Minna (FUT Minna)

2. Find out the extent to which students and lecturers in FUT Minna make use of IT facilities

3. Find out the reasons for use of IT facilities by students and lecturers of FUT Minna

4. Determine the impacts of using IT facilities on academic performance of students and research output of lecturers of FUT Minna

5. Identify the challenges facing students and lecturers of FUT Minna in using IT facilities for their academic and research work.

**LITERATURE REVIEW**

Carr and Smeltzer, in Choo and Shahryar (2013) defined information technology as the use of automated purchasing systems, supplier link through electronic data interchange, computer to computer links through key suppliers and finally, systems of information. In another study, Sarosa and Zowghi (2003) saw IT as all the technologies that are used by organisations to collect, process and disseminate information in all its form. This submission suggests that the components of IT will include, hardware which are: computers, scanners, printers and more. The software are: operating systems, application development languages, office application, and so on. This also agrees with the submission of Choo and Shahryar (2013) that information technology covers all systems of information, internet, information and communication technologies and related technologies and their infrastructure which will include computer software, networks and hardware which processes or transmits information to enhance the effectiveness of individuals and organisations, ‘’higher institutions are not left out’’ Information technologies have introduced new methods of teaching and conducting research and have been brought into education facilities for online learning, teaching and research collaboration. While some university communities in some countries enjoy free or inexpensive Internet access, students and lecturers in Nigeria seem to be lagging behind in this aspect. Internet accessibility in most universities in Nigeria is still at a developing stage while few have fully globalised their campuses (Nwezeh, 2010).

Nwezeh (2010) noted further that University administrators in many universities in Nigeria see information and communication technologies as necessary in the process of learning and teaching. Information technologies have given rise to new modes of organising the educational environment in schools and new concepts in the teaching process as well as the remodelling of the roles played by the participants in the educational process.

Information Technology has played a key role in ensuring that people, events and processes are done faster and more effectively. It has helped the world gather a better shape and focus in the way of doing things and more significantly in education, health care, finance, worship, and shopping, business management and so on. Processes have been made easier; one can shop, take a lesson, chat, work and get paid just at the comfort of a home computer. Information Technology has helped students and lecturers in universities in Nigeria to remove the stress of manual searching of information materials which can now be easily accessible even at the comfort of their homes. Information technology has changed the way people live, work, and learns. The use of information technology in education is one of the main challenges for education policy makers (Zalzadeh, 2006). Traditional methods of education are no longer able to meet the needs of today's learners. This new technologies provide opportunities including the ability to tailor learning to the individual (Aminpoor, 2007).

In his work Kwache (2007) identified the following as factors affecting the utilisation of information technology in Nigerian universities:

1. Lack of qualified IT personnel: Most institutions lack computer literate lecturers and IT experts that would support and manage the Internet connectivity and/or application of computing in the teaching learning process.

2. Cost of equipment: The cost of equipment in a country like Nigeria with a battered economy and seriously devalued currency is enormous. However, it should be noted that the problem might not be the funds nor the technology but rather the will on the part of government (Itegboje & Okubote, 2002).

3. Management’s attitudes: The attitudes of various managements in and outside institutions towards the development of IT related facilities such as the Internet and procurement of computers is rather slow in some instances, and in others there are no aids or support by the government at all (Albirini, 2006).

4. Electric power failure: The epileptic nature of power supply in Nigeria makes it difficult to fully utilise even the available IT facilities in most Nigerian universities. Incessant power failure has made most of the Universities in Nigeria to underutilise few IT facilities available to them.

In the same vein, Achimugu et al (2010) pointed out the following as factors affecting the use of IT by students and lecturers of Nigerian universities:

I. Inadequate Infrastructure

Tertiary institutions in Nigeria lack adequate IT infrastructure to effectively tap into the opportunities offered by the cyberspace. Personal Computers (PCs) are available in most Nigerian tertiary institutions, but they are not readily accessible to students and lecturers because the number of available personal computers are inadequate compared to the number of available students and lecturers in most universities in Nigeria. In most cases, the basic software needed for practical works are not available and where they are available, they are not accessible because of the low ratio of the available ones to the ratio of students that will use them. There is also lack of Computer Aided Interaction and other specialised software to support some areas of teaching, learning and research. Internet connectivity is available in most tertiary institutions in Nigeria, but in most cases the bandwidth which determines speed of access is too small to support any meaningful academic activities when mostly needed. Moreover, some institutions have CD-ROM collections on specialized fields, but the currency of the information on the CDs cannot be guaranteed as no effort is made to update them.

II. Inadequate Skilled Manpower

Inadequate IT technical personnel is a major problem in Nigerian tertiary institutions. The reason for this can be ascribed to the lucrative job opportunities available to IT professionals outside the academia. The situation has made institutions rely on private ventures to provide support for the few IT facilities available. The supports offered in most cases are commercial and lack academic content. As a way out of this challenge, some universities like Obafemi Awolowo University Ile-Ife, Lead City University Ibadan, Bowen University Iwo and National Open University of Nigeria are in partnership with private and international organisations for IT technical manpower development.

III. Resistance to Change

There is concern of faculty members not willing to take the “soft” approach to teaching and learning. Rather, they stick to the traditional hard “approach”. Report from Organization for Economic Co-Operation and Development (2005) for instance, gave reasons why faculties resist e –learning, the reasons include:

a. That e-learning development, with its standardisation aspects, might conflict to some extent with the professional culture of academics, based on autonomy and reward system often based on research.

b. Concern about intellectual property rights and shared rights between faculty, institutions and technologies.

IV. Funding

This is the major challenge confronting the acquisition and utilisation of IT in Nigerian tertiary education. Most institutions solely rely on their proprietor for funding and the bulk of such fund goes to servicing the overhead cost. Since no clear sustainable business model has yet emerged for commercial provision of e-learning, and failures have been more numerous than success (Organization for Economic Co-Operation and Development, 2005). Institutions are not willing to invest the little fund available to them on e-learning project.

**METHODOLOGY**

Survey research design which is descriptive in nature was adopted for this study. The population of this study is 4,985 comprising 85 lecturers and 4,900 students spread across 14 Departments in Federal University of Technology, Minna. Using the Krejcie and Morgan (1970) Table for determination of sample size, 70 lecturers and 357 students were randomly selected for this study. As a result, a total sample size 427 was used for this study. Subsequently, 427 copies of the structured Questionnaire were distributed but only 302 were returned. The results were presented using tables while data analysis was done using frequency count and simple percentage.

**Data Analysis.**

**Table 1: Response rate**

**Respondents Frequency percentage (%)**

Students 254 84.1

Staff 48 15.9

**Total 302 100**

Table 1 indicated that students respondents have 254 representing 84.1%, while staff respondents are 48representing 15.9% respectively.

**Table 2: Types of available IT facilities**

**IT facilities available Frequency Percentage (%)**

Internet 150 50

CD-ROM 10 3.3

Computer 90 29.8

Electronic library 30 9.9

 Projector Multimedia 22 7.2

**Total 302 100**

Table 2 shows that Internet services is the major type of IT facility available to students and staff of FUT Minna with 50%, computer has 29.8% which serves as the second highest type of IT facility in the school, followed by electronic library which has 9.9%, projector multimedia has 7.2% and the Table shows that CD-ROM has 3.3%which indicates that it is the least type of IT facility that is available to students and staff in FUT Minna. The results showed that Internet services is the common and most used type of IT facility and that both students and staff rarely make use of CD-ROM because they are not readily available in the university.

**Table 3: Extent of IT facilities usage**

**Extent of usage Frequency Percentage (%)**

Everyday 113 37.4

Once a week 29 9.6

Twice a week 16 5.2

Once a month 20 6.6

Occasionally 124 41.1

**Total 302 100**

From Table 3, it is revealed that a good number of the respondents make use of IT facilities on daily basis which amounts to 37.4%, and 9.6%of the respondents make use of IT facilities weekly, twice a week, 5.2%, once a month, the respondents showed 6.6% of IT usage, while 41.1% of the respondents makes use of the IT facilities occasionally. These results showed that most lecturers and students in FUT Minna cannot do without using available IT facilities to them each day.

**Table 4: Reasons why students make use of IT facilities**

**Reasons for IT usage by students Frequency Percentage (%)**

Class assignments 166 65.4

Chatting with friends 10 3.9

Prepare for Exam and tests 14 5.5

Sports 14 5.5

Supplement lecture note 50 19.7

**Total 254 100**

From Table 4, it is shown that 65.4% of the students indicated that class assignment is the main reason that make them use the available IT facilities, 3.9 % indicated that they make use of IT facilities for chatting with their friends,5.5% reported that they use IT facilities for preparation of examination and test, also, 5.5% of the students use the available IT facilities for sports update, while 19.7% of the students make use of the IT facilities to supplement their lecture notes. These results showed that more than halve of the respondents make use of the IT facilities mainly for doing various academic responsibilities given to them in their various departments, while very few of the respondents use IT facilities for leisure.

**Table 5: Reasons why Lecturers make use of IT facilities**

**Reasons for IT usage by lecturers Frequency Percentage (%)**

Prepare lecture notes 15 31.3

Leisure 2 4.1

Research 20 41.7

News 6 12.5

Lecture delivery 5 10.4

**Total 48 100**

Table 5 revealed that 31.3% of them use the available IT facilities to prepare lecture notes, only 4.1% respondents use IT facilities for leisure purposes, 41.7% of the respondents make use of the IT facilities for research purposes and 12.5% of the respondents indicated that they make use of the available IT facilities to get current news, while 10.4% showed that they use the IT facilities to deliver lectures. These results showed the importance of IT facilities to lecturers in carrying out research activities in the Universities.

**Table 6: Impacts of IT facilities on students’ academic performance**

**Impact of IT on academic performance Frequency Percentage%**

Excellent 68 26.77

Good 110 43.31

Average 52 20.47

Poor 8 3.15

Very Poor 16 6.30

**Total 254 100**

In Table 6, when respondents were asked to rate or score the impacts of IT facilities on their academic performance, the following results were received; excellent 26.77%, good 43.31, average 20.47%, poor 3.15%, and very poor 6.30%. These results showed that majority of the respondents indicated that availability of IT facilities in the university has helped them tremendously in their academic pursuit. This was demonstrated when 43.31% of the respondents indicated that the impact of IT on their performances is good ,followed by excellent as the second highest rated impact. However, in spite of the high impacts of the IT facilities available to the students, some respondents still rated it low with 3.15% that stated poor and 6.30% stated very poor.

**Table 7: Impacts of IT facilities on lecturers’ research out-put**

**Rating of the impact of IT on research out-put. Frequency Percentage%**

Excellent 8 16.67

Good 32 66.67

Average 6 12.50

Poor 2 4.17

Very Poor --- ---

**Total 48 100**

Table 7 shows that 16.67% of the lecturers rated the impacts of IT facilities to their research out as excellent, 66.67% indicated good, 12.50% said average, while only 4.17% of the respondents rated IT facilities as poor and none rated IT facilities as very poor. These results showed that more than halve of the respondents rated the impact of IT facilities to their research out- put as good, which is an overwhelming score, also excellent was given the second highest rating and only 2 respondents indicated that the impact is poor.

**Table 8: Major problems encountered by students**

**Major problem facing the use of IT facilities Frequency Percentage%**

**By students**

 Poor funding 30 11.81

Electricity interruption 35 13.77

Inadequate facilities 130 51.2

Over population of Students 44 17.32

Inadequate IT skills by the Students 15 5.90

**Total 254 100**

The reports in Table 8 revealed that 11.81% of the students indicated that poor funding is the major problem facing the use of IT facilities in the university, 13.77% went for Electricity interruption, 51.2% largely reported inadequate facilities, 17.32% went for over population of students and lastly, only 5.90% said inadequate IT skills by the students. These results showed that inadequate facilities is the major problem encountered by the respondents, followed by electricity interruption which is the second highest problem facing the respondents, and finally, inadequate IT skills by the students was considered least problem facing the respondents with about 5.90%.

**Table 9: major problems encountered by lecturers**

**Major problems facing the use of IT facilities Frequency Percentage%**

**By lecturers**

 Poor funding 5 10.41

Electricity interruption 7 14.6

Inadequate facilities 28 58.33

Over population of lecturers 0 00

Inadequate IT skills by the Lecturers 8 16.66

**Total 48 100**

From Table 9, a good number of the respondents, 58.33% indicated that the major problem encountered by lecturers in the use of IT facilities is inadequate facilities, 16.66 indicated inadequate IT skills by the lecturers, 14.6 electricity interruption, 10.41 went for poor funding while none went for over population of lecturers. The result showed that inadequate IT facilities were considered as major problem.

**Table 10: Possible solutions for efficient use of IT facilities as indicated by the students**

**Possible solutions Frequency Percentage%**

 Increase funding 45 17.71

Increase the IT facilities 131 51.6

Increase the number of generator 42 16.53

More training to Students on the use of IT facilities 35 13.6

**Total 254 100**

Table 10 revealed that to solve the problems facing the use of IT facilities in FUT Minna, 17.65% of the students stated the need to increase fund for the purchase of It facilities, 52. 25% indicated increase in IT facilities, 16.26% disclosed the need to increase the number of the generators and 13.84% of them reported the need to train students on the use of IT facilities. These results shows that majority of the respondents suggested that increasing the IT facilities could serve as the possible solution to the problem of using IT facilities by the students. Also, increasing funding, number of generators and training of students would go a long way in improving the use of IT facilities by students of FUT Minna.

**Table 11: Possible solutions for efficient use of IT facilities as indicated by the lecturers**

**Possible solution Frequency Percentage%**

 Increase funding 24 50

Increase the IT facilities 14 29.7

Increase the number of generator 4 8.3

More training to Lecturers on the use of IT facilities 6 12

**Total 48 100**

Table 11 shows the possible solutions to the problem facing the use of IT in FUT Minna, 50% of the respondents indicated increase funding, 29.7 stated increase the IT facilities, 8.3% said increase the no of the generator, and 12% reported more training for lecturers on the use of IT facilities. These results showed that most of the respondents stated that increasing funding would solve the problem facing the use of IT facilities in FUT Minna, 50% of the respondents stated that increasing the IT facilities would go a long way in solving the problem facing the university community in the use of IT. Moreover, some respondents indicated that training of lecturers in the use of IT facilities will serves as a solution to this problem and finally respondents stated that by increasing the number of the available generators will help to solve the problem encountered the use of IT facilities in the University.

**DISCUSSION OF FINDINGS**

Internet seems to be the fastest means of getting up-to-date information resources by students and lecturers in this 21th century. Information Technology has helped students and lecturers in universities in Nigeria to remove the stress of manual searching of information materials which can now be easily accessible even at the comfort of their homes. The results also show a high usage of Information Technology by the students and lecturers on daily basis.

It was also deduced from the findings that both the students and lecturers of FUT Minna make use of the available IT facilities for their assignments and research works respectively. This is necessary because this should be one of the best ways of enriching their assignments as in the case of the students as well as generally improving their knowledge on the daily happenings.

Findings show that Information technology (IT) is an indispensable part of the contemporary world. The field of education has certainly been affected by the penetrating influence of information technology worldwide and in particular developed countries. IT has made an improvement on the quality and quantity of teaching, learning, and research. This is however in support of the submission of Hamiti *et al* (2014) that the integration of technologies and computers in the educational process is increasingly becoming an integral part of the education systems.

Despite the perceived benefits in the use of IT in the University, the finding shows that there are lots of factors inhibiting full utilisation of IT in the University and these are inadequate provision of IT facilities, poor funding of the education sector, power interruption, over-population and inadequate skills by students and lecturers to operate and make use of the available IT facilities. This however suggests that lecturers need to be prepared by staying up to date with information technology, and this can mean more than just reading about the latest gadgets. Using technology, teachers can prepare their students for a future flooded with gadgets including tablets, mobile phones, computers, and so much more (FNR Solutions Inc., 2016)

Finally, these findings show that majority of the problems working against the full usage of Information Technology in the University can be solved if adequate funds are provided by the government. It was observed that this fund will go a long way in buying adequate IT facilities, maintaining these facilities and training the students and lecturers in the use of IT facilities.

**CONCLUSION**

The following conclusion could be drawn based on the findings of the study. With the result stated above, it can be concluded that students and lecturers find the internet services useful and accessible in FUT Minna. It is also an indication that IT has come to stay in all higher institutions in Nigeria. It can be concluded that class assignments is the sole reason why majority of FUT Minna students make use of the available IT facilities and lecturers make use of the IT facilities because of their research works and preparation of lecture notes. It can also be concluded that IT facilities in FUT Minna are not adequate for both students and lecturers, and that poor funding of the education sector and the incessant power outage still contribute to the problem.

Finally it can be concluded that, increasing IT facilities and also increasing funding of the university system especially IT sector in Nigeria could solve these problems.

**RECOMMENDATIONS**

In view of the findings of the study, the following recommendations are made

1. It is recommended that, the university management should encourage the high level of IT usage among students through continuous education and promotion of the benefits attached to IT resources. This may involve the use of seminars and training programmes and encourage students and lecturers to embrace IT and its resources.
2. Students and lecturers in Nigeria are also encouraged to make full use of the enormous potentials of the Internet Services in their academic works.
3. The government should increase funding for the entire education with emphasis on IT as this will help to improve the level of IT facilities in Nigerian universities.
4. Because of the importance of IT facilities in the university education, it is strongly recommended to policy makers and stake holders in the university education system to endeavour as a matter of urgency to enhance the use of IT facilities in all Nigerian universities.

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