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The effect of Telecommunication on the productivity of Staff in Higher Institution in Nigeria

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ABSTRACT

The role of universities as centre of research and diffusion of findings is becoming increasingly important in the 21st century. Higher institute is crucial to long running economic growth because it is the source of knowledge workers and an important source of inventive output. The focus of this paper is on the effect of Telecommunication on the productivity of staff in higher institution in Nigeria. The paper shows that Telecommunication aid in staff development of course material, delivery content, sharing content, communicating between learners, staff and the outside world, creating and delivery of presentations and lectures, academic research, administrative support, and student enrolment. The hypothesis confirms the significance role of Telecommunication in staff productivity in higher institute.

INTRODUCTION

The emerging changes world over has precipitated the alternative discoveries and use of technology in Higher education delivery. As a result there has been intensiveness in contact between people through the compression of space and time. Telecommunication have the capacity to facilitate teaching and learning in institution, and cannot be ignored by academic. Telecommunication in Higher Institution are used in for developing of course material, delivering content and sharing content, communication between learners, staff and the outside world, creation and delivery of presentations and lecturers, academic research, administrative support, student enrolment. This makes Telecommunication a major contributor to the staff productivity in terms of both effective knowledge delivery to student and collaborative among the staff [1], define telecommunication as; encompasses the electrical communication at a distance of voice, data, and image information, (e.g. TV, mobile phones, computers, facsimile e.t.c.).However, it is arguably true that, these technologies have increased instructional effectiveness through their greater flexibility to accommodate varying learning styles and instructional productivity in higher institutions. The challenge however is that harnessing of these new information and communication technologies for teaching and learning require considerable investment in hardware, software and staff development.

Significant contribution of telecommunication to staff communication and collaboration

Telecommunications are one of the major contemporary factors shaping the global economy and producing rapid changes in society. They have fundamentally changed the manner in which people learn, communicate, and do business. They transform the nature of education where and how learning takes place and the roles of student and teachers in the learning process [2].

Electronic Mail (e-mail)

E-mail is the simplest and most readily available form of online communication, because it corresponds closely to regular postal mail. Even people who have never used the internet before can learn email fundamentals and quickly become comfortable using. It is a cost effective way of bringing people with common interest together [6]. state that many people simply use the Internet for e-mail, partially due to the cost element. Working together online allows you to save money, share documents, information and relevant resource, share ideas, collaborate with many people,

build and strengthen your community of interest[3]. These two also confirm Jessen who says the universities were at the forefront of early internet developments in Africa, mostly with e-mail services[5].

The Telephone and mobile phone as a mean for effective communication

Telephone and mobile phone provide effective communication and collaboration among staff in higher institution in many ways such as;

- Announcements; talking one to one, conference talking is now easy and sending text for any emergency announcement becomes faster.
- Incident management; things go wrong sometimes, this is the live coverage of notification of current situation to people around.
- Staff roistering; staff can rely on mobile phone to send SMS alerts or call so that everyone knows the work schedule.
- The internet as means of collaborative among staff: with the use of the Internet, People can work together one line. Many would have use the internet for sending and receiving email and browsing, uploading or downloading and working collaboratively in researches. The internet power illustrates the potential of innovations in ICT and the convergence of telecommunication, computing and software technology. Internet facilitate in learning environment in many ways; Helping group articulate its goals, Creating a forum for discussion, Enabling broad participation, Promote constructive debate, When possible, moving shared ideas in to action and Working through specific activities (e.g. meeting, document development, information sharing, etc)[9]

Staff productivity and Job Satisfaction

Telecommunication technologies have the capacity to facilitate teaching and learning in institution [7]. It unarguable true that these technologies have increased instructional effective through their greater flexibility to accommodate varying learning styles and instructional productivity of staff in higher institution that ranges from developing course materials, delivering content, and sharing content, communication between learners, staff and the outside world, creation and delivery presentations and lectures, academic research, administrative support, student enrolment[4] furthermore, telecommunication provides staff with the following opportunity;

As a result of increased efficiency of automation and introduction of ICT in to their workplace staff are able to work less hours, this has therefore lead to increase in leisure time.

Staffs that are trained in ICT skills are well placed to take advantage of the new form employment,

- Highly skilled jobs can now be done unskilled staff using computer, this can result in a more standardized product because there is less risk of human error
- Many professional jobs can now be conducted with the use of computer example; photographic editing, video editing and sound editing
- Staff can also work from home, in many jobs computers can now accurately monitor the efficiency of staff, and these in turn help target resource.
- Communications equipment means staff can be available and able to work even when on holiday or weekends.
- Staff can have more job satisfaction because the jobs involving some aspect of ICT generally require higher skill levels and may therefore be less boring [8].

Computer application and network as contributor to the productivity of staff

Computer applications are software packages designed to allow creating, editing, presenting, and sharing of document. For instance, Microsoft Office is the most complete personal and business productivity solution that enables people to manage customers and create impressive marketing materials, manage e-mail and share information efficiently and surely, and streamline business processes all with familiar, integrated and easy to use software. Power point lets you create, present, and share powerful presentations. Excel contains powerful tools to help you analyze, manage, and share critical business data. Microsoft Word, the latest version of our bestselling word processor, delivers innovations that can help you easily create professional quality documents, control distribution of sensitive information, and collaborate with others (El Camino College). This application packages help staff in higher institution to develop course material, present lectures, create document. Another important contribution of Computer applications is in the area of database such as access, PHP, MySQL, RUBY, etc, which allow staff to manage student record.

Telecommunication networks has improved staff productivity in Higher institution as can be seen with the case of ATBU, prior to the launch of the E-portal, networking and computerization of all the offices in the school, registration of student often span in to weeks which is always characterized with long queues in the registration centres and untold fatigue in the part of the staff, but with the E-portal student are able to pay and register themselves at their comfort, where ever internet access is available.

It has facilitate faster decision making in the management, messages sent by hand, which has no guarantee of being delivered on time and no security of content could now be easily sent by e-mail, on line chat and even intercom. Thus allowing management to make decision on issues faster and pass the copies to each department through their e-mail.

Telecommunication has also helped in the productivity of staff in processing student results and transcript. The issues of missing result, miss matched names and grades were eliminated by automation of the records. With identification code assigned to each student and staff, computer process information accurately. This has lead to the development of database to keep file electronically which in turn makes it easier for the staff to manage the database and ensure the consistency of its data.

It increase productivity in that transcript that take days to weeks to be processed in the school, can now be prepared in m matter of minutes because student data is already intact in the database and easily be called up and a hardcopy is produced.

ANALYSIS AND RESULT

1. The research is a based on descriptive design on population study of 250 where 60 sample sizes is considered and Random sampling techniques was used. Both primary and secondary data were collected using questionnaire. Likert scale of four (4) length was used, making categories of strongly-agree, Agree, Disagree and Strongly-disagree.[10]

Standard Normal Distribution was used to test the hypothesis on ten (10) different questions regarding effect of ICT on the productivity of Staff in tertiary Institution in Nigeria.

The Standard normal Distribution Z is given by;

$$Z = \frac{P_1 - P_2}{\sqrt{\frac{P_1 q}{n}}}$$

Where P_1 is the Proportion of Agree response

P_2 is the proportion of Disagree response

q = 1 - P_1

n = Total number of Sample size

[11]

α is 0.05 level of significance

The Critical value of 1.96 at 0.05 was taken to test the following hypothesis;

Q1 H_0 is Higher Institution does not need ICT involvement
H_1; Higher Institution need ICT involvement

Q2 H_0 is ICT does not focused on all area of the Unioversity Operation and therefore, University Productivity does not increase.
H_1; ICT focused on all area of the University Operation and therefore, University productivity increase

Q3 H_0; ICT awareness is not adequate in the University
H_1; ICT awareness is adequate in the University

Q4 H_0; Telecommunication does not have Potential to address some pertinent needs of the University
H_1; Telecommunication have potential to address some pertinent needs of the University

Q5 H_0; ICT does not bridges the communication gab that exist in the University
H_1; ICT bridges the communication gab that exist in the University

Q6 H_0; ICT production does not gain offset, ICT production loss
H_1; ICT production gain offset

Q7 H_0; ICT does not create Synergy in all different operation carried out in the University
H_1; ICT create Synergy in all different operation carried out in the University

Q8 H_0; Telecommunication does not aid's in the University decision making process
H_1; Telecommunication aid's in the University decision making process

Q9 H_0; ICT resources does not improves literacy in the University
H_1; ICT resources improves literacy in the University

Q10 H_0; ICT does not increases the Speed with which activities are carried out
H_1; ICT increases the Speed with which activities are carried out

Accept Null Hypothesis H_0 if Z test equal to the critical value at 5% significant level and reject alternative hypothesis H_1. Accept alternative hypothesis H_1 if Z test value not equal to the critical value at 5% significant level and reject Null hypothesis.

Questions (Q_i)	P_1	P_2	Standard Normal Distribution (Z)	Critical Value	Decision
Q_1	0.921	0.079	22.15	1.96	Accept
Q_2	0.925	0.075	22.97	1.96	Accept
Q_3	0.956	0.044	31.45	1.96	Accept
*Q_4	1	0		1.96	Accept
Q_5	0.933	0.067	24.74	1.96	Accept
*Q_6	1	0		1.96	Accept
Q_7	0.932	0.068	24.00	1.96	Accept
Q_8	0.923	0.077	22.26	1.96	Accept
Q_9	0.392	0.608	-3.130	1.96	Accept
Q_{10}	0.904	0.096	19.24	1.96	Accept

*Q is the questions that have absolute, 100% acceptance. Based on the result observed, for the entire hypothesis in the table, the Test statistic is not the same with the critical value hence, we have no enough reason to reject them. This means that Higher Institution needs ICT involvement in order to increase productivity in the University. Adequate ICT awareness in the University bridges the communication gap that exist in the University thereby, creating synergy in all different operations carried out in the University and increase the speed with which activities are carried out .

CONCLUSION

Base on this paper Telecommunication Technologies have become common place entities in all aspect of work activities and is an important tool for achieving productivity increase in the Universities. It has successfully changed the practices and procedure of nearly all forms of endeavour with in Higher Institution. Finally Telecommunication Technology has changed the staff carries out their daily routine from the traditional manual way to automated, which has in no smaller measures improved their productivity, job satisfaction, leading to efficiency and effectiveness and thus increasing their productivity.

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