THE IMPACT OF ICT ON THE ADMINISTRATION OF MAI IDRIS ALOOMA POLYTECHNIC, GEIDAM, YOBE STATE, NIGERIA

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ABSTRACT

The introduction of Information and Communication Technology facilities in organizational administration in Nigeria and world at large has far reaching effects in its activities. These applications of ICT facilities actually create new opportunities and take away the monotonous daily routine work performed manually before the invention and adoption of Computer Technology. Hence, this study analyses the impact of ICT on the Administration of Mai Idris Alooma polytechnic, Geidam, Yobe State Nigeria. Emphases are on the concept of Information Technology, Information Technology as an agent for change, and challenges of Information Technology. The findings of the study among others that majority of the respondents spend less time doing their work with computer due to speed, efficiency and effectiveness, that most respondents lack the basics of computer operation and indicated that their greatest computer threat is computer virus, software malfunctioning, lack of power supply and fear of system failure. The study further revealed the challenges of using ICT facilities in office in relation to administration as Finance, Technological Innovation and Knowledge Expertise.

Keywords: *Students, University library, conducive, environment*

INTRODUCTION

The introduction of Information and Communication Technology (ICT) in tertiary institutions has far reaching effects on school administration. Computer is gaining vast popularity in recent years. Its shows the extent to which information processing capabilities is influencing organizations of all types and sizes bringing about changes in institutional goals, relations and operations. A large percentage of the activities in any institution or organization comprise the processing of information and communication in the production of goods and services. Thus, computer is becoming part of everyday life activities because of the information it processes, generates and their speed of delivery. Administration is becoming number one differentiator in organization or industries such as insurance, healthcare, banking, to mention but a few and most importantly in tertiary institutions, because the application of Information and Communication Technology facilities actually create easiest services to the management, staff and students in the campus over monotonous daily routine work performed manually before the advent of Information and Communication Technology (ICT).

Nowadays, most Schools are trying to be connected to the internet for easy and efficient communication and administration. This is due to the fact that computer

transmission, processing of information and communication has increasingly become what schools especially tertiary institutions are relying on to provide fast, easiest, accurate, timely, efficient and more convenient services to their staff, students and community in general. Most tertiary institutions in Nigeria are partly computerized to provide "online services". Hence, most tertiary institutions in the global system have committed substantial sum of money in acquiring and maintaining modern Information and Communication Technology (ICT) facilities to make sure that the running of their school is efficient. In this regard, tertiary institutions in Nigeria are not left behind.

According to Foster (1990), Nigeria has made a good start in the adoption of Information Technology (IT) but the pace of computerization has been affected by the economic situation, especially the falling revenue derived from crude oil export. IT development in Nigeria has passed through three distinct phases, namely: the early phase from 1963 to about 1975, a period of rapid growth from 1977 to 1982, which was followed by a period of relative stagnation from 1982 to 1986. Currently, there is a new upsurge in the acquisition and use of computers. With the removal of import restrictions and foreign exchange controls, and given the pressure on the management of industrial and business concerns to adopt more efficient methods of production, the use of computers is expanding both quantitatively and qualitatively.

Keeping in line with the aim of the study, the objectives which the study seeks to achieve are: to identify and analyzed the impact of Information and Communication Technology (ICT) on the administration of Mai Idris Alooma Ppolytechnic, Geidam; to appraise the achievement and failure or weakness of ICT in the administration of both human and material resources in the school environment; to provide a simplified approach to the understanding of ICT in a computerized School environment.; and to expose readers to the capabilities of computerization in the school system. In order to successfully achieve these, it was assummed that computerisation of school services has not led to increase in speed, accuracy, and efficiency in administration of both human and material resoources as well as the entire progress of the polytechnic.

INFORMATION AND COMMUNICATION TECHNOLOGY

Information Technology according to Information Technology Association of America (ITAA, n.d) is "the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware." Encompassing the computer and information systems industries, information technology is the capability to electronically input, process, store, output, transmit, and receive data and information, including text, graphics, sound, and video, as well as the ability to control machines of all kinds electronically. Information Technology is comprised of computers, networks, satellite communications, robotics, videotext, cable television, electronic mail ("e-mail"), electronic games, and automated office equipment. The information industry consists of all computer, communications, and electronics-related organizations, including hardware, software, and services.

INFORMATION TECHNOLOGY AS AN AGENT OF CHANGE

With the availability and familiarity link that Information Technology has created between man and itself the way we think and respond to the surrounding environment will always change. Specific instances of Information Technology inspired paradigm shifts in higher education include: role of the Higher Institution. Once the Ivory Tower is where students came to learn from the Masters, Information Technology is transforming Universities into Knowledge Centres and central repositories of expertise and guidance. The Internet has globalized information and increased accessibility. Learners, both formal and informal are searching for and grasping this information whenever and wherever they can. No longer are learners bound by the geographical, bureaucratic and political confines of formalized higher education in their quest for information, and higher institutions are challenged to develop and implement distance and distributed education models to meet learner needs. The assimilation and understanding of information takes the form of knowledge, and Universities play a vital role in the development of knowledge as opposed to the simple acquisition of information.

In order to fulfill this knowledge quest, some would argue that higher institution must recognize study, critically evaluate and embrace Information Technologies and the effect they have on society, and then adopt current policies, procedures and philosophies in order to protect and defend their long-standing role and responsibility as Knowledge Centres (Duderstadt, 1998).

Curriculum: The need for program and course offerings, which reflect the current state-of-the art, is obvious. Computer skills and knowledge, once a specialty within a major, are now baseline survival skills for virtually every profession. Higher institution must address this need by offering not only appropriate specific courses and programs, but also by mainstreaming the necessary skills across the curriculum and the disciplines (Heinrich, 1997).

Role of the Faculty: With the ready abundance of information on basically every subject available through some type of information technology, there are those who would say that the role of the faculty is transforming from that of "a sage on the stage" to a "guide on the side". Faculty is no longer looked to as the ultimate and definitive source of information, but are seen in a value added and redefined role of guiding and mentoring the student learning experience (Ashley, 1998).

Pedagogy: How people think and learn is changing. Students today are exposed to a much more sensory environment than ever before. The spoken word is not enough. Visual and audible elements are necessary to add depth and understanding to concepts. Learners are no longer expected to, or content with, memorizing and regurgitating facts. An emphasis is placed on critical thinking and assimilation of information. These new demands from society and the learners themselves require higher education administrators, faculty and staff to consider the need to review, evaluate and revamp the teaching and learning strategies and methods that are being used. The centuries old practice of didactic discourse, once the standard pedagogy employed, is now

only one of many learning methods and strategies being used. Faculty may choose to incorporate collaborative learning, guided discovery and experiential learning in designing a course experience that will not only convey the vital information of the discipline, but also develop critical thinking, communication and research skills (Gillespie, 1999).

Learning Skills: With the vast amount of information readily available, Tertiary Institution must empower their students to critically review, evaluate, organize and synthesize information into valid theories, hypothesis and products. In the past, the ability to conduct library research was considered to be a basic learning skill. Today, basic learning skills must not only include library and internet research, but also the ability to validate research findings, and organize and draw conclusions from them (Stahlke & Nyce, n.d).

Research: Library collections and the structures in which they are housed have traditionally been a cornerstone and defining element of the University. Often the largest, most noteworthy structure on a University Campus, the library served as the physical and spiritual centres of the Institution. The collection itself often reflected the profile of the University and in many cases contributed in large part to the Institution's position and standing in the Academic Community.

The proliferation of globalization and accessibility of information resources through the explosion of Information Technology has in many ways decentralized the research function from within the physical walls of the traditional library. A University library collection, previously a single dimensional entity confined by a physical space, has transformed into a virtual collection comprised of resources, information and materials from diverse sources around the world. With this virtual collection comes a variety of challenges in developing, managing and maintaining the collection and in empowering users in the access and appropriate usage of information that is credible. In meeting these challenges, the University Library preserves its place and role as a cornerstone of the Institution by providing a means by which global information can be accessed and evaluated in a logical and organized manner (Kotlas, 1994).

Administrative and Student Services: Higher Education is a people business - students, faculty, administrators, staff, alumni and supporting friends comprise the community, which is the University. Each group not only uses, but also generates information or data that must be processed, stored and retrieved, often in specific ways. Higher Education has wisely adopted and adapted information technology tools and systems found in the corporate world to address these information challenges. Tasks such as application, registration, fee payment, record and grade transcripts, transfer and graduation evaluation, payroll, employment history, purchasing and other related operational and record keeping tasks, previously done manually, are now organized and maintained through information technology. These technology based solutions not only increase and speed access to authorized users, but also generate relational information for reports and strategic planning that would have been virtually impossible to compile using manual methods.

THE CHALLENGES OF INFORMATION TECHNOLOGY

When enumerating the benefits of information technology it is also necessary to recognize and address the challenges that have arisen and will continue to arise. Universities must address the rapid rate of technological innovation and the exponential increase in information. Financial implications resulting from ever changing standards and systems and the need to constantly upgrade and refresh hardware, software and knowledge expertise provide several administrative areas of concern. However, an even larger challenge looms in managing and implementing technological change. Institutions must strive to ensure that assumptions made in decision-making and expectations placed upon the University Community do not create a "have/have not" scenario in terms of information technology resources. This challenge must be addressed not only by Institutions individually, but also by the global community of Higher Education (West, 1995). With the increased access to information and the redefinition of information as a commodity, the potential for misuse of information is a real threat. Universities must protect the privacy of students, faculty, staff and the associated community through the security of personal information and records. Policies, processes and systems must be developed, implemented, maintained and updated to ensure that information is not acquired and/or used in an inappropriate or illegal manner.

The strength of the World Wide Web as an easily accessible means, by which information can be self-published is an open forum, while admirable, presents a major challenge. Previously information, when disseminated through print or electronic means, was done so by a formalized structure that, for the most part, critically reviewed and validated the work. As there is no "gate-keeper" of the *www*, information can be posted that is factually incorrect, misleading, in poor taste, and in some instances, libelous and slanderous. The *www* is very much a "users beware" environment. Tertiary Institutions must strive to train students to critically review and validate information through sound research practices. Secondly, as the *www* offers a plethora of easily accessible information and resources in digital form and these resources can be easily re-purposed, modified and incorporated into derivative works, copyright laws and intellectual property policies currently in practice must be revised to reflect the advances in the distribution and access to information, while still protecting the creative and scholarly works of authors and artists (Strauss, 1998).

METHODOLOGY

The survey method was used in this study. The population of the study comprises all the staff (academic and non-academic) of Mai Idris Alooma Polytechnic but the study sampled only the administrative staff through purposive sampling technique. The representative sample consists of selected staff in the office of the Rector, the Registry, the Bursary, the Library and Works & Maintenance. In all, 100 respondents were selected for the study. The data for the study were gathered using a self developed questionnaire and analyzed using sample percentage. Out of one hundred (100) questionnaires administered to the respondents, only ninety five (95) were filled and returned.

RESULTS AND DISCUSSION

Table 1: Impact of ICT on administration (N=95)

Item	Responses	Total	%
Are you computer literate?	Yes	26	27.37
	No	23	24.21
	Partially	46	48.48
How long does it take you to do your work before the adoption of computer?	1-3 hours	5	5.26
	3-6 hours	12	12.63
	6-9 hours	17	17.90
	A day	22	23.16
	above 1day	39	41.05
How long does it take you to do your work with computer?	< an hour	20	21.05
	2-3 hours	46	48.42
	4-7 hours	10	10.53
	A day	10	10.53
	above 1day	9	9.47
Can you say using computer has improved the quality & quantity of your work efficiently and effectively?	Yes	91	95.79
	No	4	4.21

Source: Survey 2010

Table one above reveals that though some of the respondents are computer literate, yet some spend more time and even days doing their works. However, it was generally agreed by the respondents that computer has significantly improved the quality and quantity of their work efficiently and effectively.

Table 2: Problem of using ICT facilities (N=95)

Item	Response	%
Do you use computer without problem?		
Yes	3	3.16
No	92	96.84
If no specify?		
Hardware Prob.	18	18.9
Software problem	30	31.58
Lack of know how	47	49.47
What are your threats in using computer?		
Computer virus	47	47.47
Software malfunctioning	23	24.21
Lack of power supply	13	13.70
Fear of system failure	9	9.47
Others	3	3.15
Do you secure your system from unauthorized user?		
Yes	55	57.89
No	40	42.11

Source: Survey 2010

From the data on the above table, many of the respondents were faced with the problem of lack of know-how while others indicated their major threat using computer as computer virus. Others attributed their problems to software malfunctioning, irregularity in power supply, low voltage among others. Interestingly,

a good number of the respondents secured their computer systems from unauthorized user via security codes.

Table 3: Consequences of using ICT facilities

Item	Response		%
Has computer any positive effect on the following: curriculum, pedagogy, learning skills, research, administration and students' services in the campus?	Yes	75	78.95
	No	20	21.05
What are the challenges of using IT facilities in office in relation to administration?			
Finance to upgrade hard/software		30	31.59
Technological Innovation		24	25.26
Exponential increase in Information		12	12.63
Knowledge (expertise)		22	23.16
Others		7	7.36

Source: Survey 2010

As revealed by the above table, the respondents agreed that computer has positive effect on curriculum, pedagogy, learning skills, research, administration and students' services highlighted the challenges of using IT facilities in office administration as: Finance to upgrade hard/software, Technological Innovation, Exponential increase in Information, knowledge expertise and others.

The Binomial distribution of probability was used to depict the situation, the result being a clearer analysis and better presentation of data.

$$Z = \frac{\hat{P} - \hat{q}}{\sqrt{\frac{\hat{P} * \hat{q}}{N}}}$$

Where = proportion of positive outcome

P = probability of either of the outcomes

N = number of sample population

$\hat{q}$ = (1-p) proportion of negative outcome

HO_1: Computerization of school services has not led to increase in speed, accuracy, and efficiency in administration of both human and material resources and the entire progress of the polytechnic.

Table 4: Tabular presentation of respondents view on the above stated hypothesis

Items	Reponses	Total	%
Do you think computerization of school services has led to increase in speed, accuracy and efficiency in administration?	Yes	83	87.37
	No	12	12.63
		95	100

Source: Survey 2010

Based on the result of the Z-test the alternate the null hypothesis is therefore rejected. This means that computerization of school services has led to increase in speed, accuracy, and efficiency in administration of both human and material resources and also the entire progress of the polytechnic.

CONCLUDING REMARK

As revealed by the result of the study, it can be concluded that most of the administrative staff of the polytechnic are not computer literate; thus spend more time doing their work manually. Using computer has improved the quality and quantity of their work efficiently and effectively but most of them have problem of software and know how. Information Technology (IT) has positive effect on curriculum, pedagogy, learning skills, research, administration and students' service in the campus. The greatest threat of using computer are computer virus, software malfunctioning and lack of power supply. Consequently, the challenges of using IT facilities in office administration are Finance to upgrade hardware/software, Knowledge expertise and Technological innovation.

Finally, computerization of school services has led to increase in speed, accuracy, and efficiency in administration of both human and material resources and also the entire progress of the Mai Idris Alooma polytechnic, Geidam. In response to the above, lectures, workshops as well as seminars should be organised regularly for the polytechnic staff so as to advance their knowledge on the use of ICT facilities in their various academic engagements.

$$\frac{\left(\frac{83}{95}\right)-0.5}{\sqrt{\frac{\left(\frac{83}{95}\right)*1-85/95}{95}}} = \frac{\{(0.87368421)*(0.12631579)\}}{95}$$

$$= \frac{0.37368421}{0.332204923}$$

$$= 1.124860543$$

$$= 1.12$$

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