

ENHANCING SERVICE DELIVERY THROUGH MODERN INFORMATION TECHNOLOGY IN BAYERO UNIVERSITY KANO.

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ABSTRACT

This Paper has focused on enhancing Service Delivery through Modern Information Technology in Bayero University, Kano (BUK). Specifically, it examined the challenges that confronted BUK in her attempt to deliver public service before the creation of the Management Information System (MIS). The study further examined the extent to which the creation of MIS had enhanced the system of generating, dissemination, storage and analysis of information in BUK. The study also studied the factors impeding the implementation of the strategic plan of BUK on Information and Communication Technology (ICT). The study reviewed literature based on the research topic and related theory and adopted Adaptive Structuration Theory as the theoretical framework for the study. The study used both quantitative and qualitative methods for data collection and analysis. The total sample size for the work was two hundred and seventy, which comprised of two hundred and sixty respondents for the quantitative data and ten staff interviewed drawn from CIT, MIS, Automation and Computer Science Department. The study discovered Modern Information Technology as a critical tool for effective service delivery and that certain challenges confronted BUK before the creation of MIS unit that included poor storage of data, inefficient management of information and poor dissemination of information. The study among others recommended that, the management of the Bayero University Kano, should effectively train personnel on modern information technology to enhance the availability of man-power in CIT and MIS units as this will help to solve the problem of expertise on modern information technology of the institution.

Keywords: Information Technology, Service Delivery, Organization, Administration

INTRODUCTION

The world today is being transformed by continuously evolving technologies that are changing the way we do things at the most fundamental levels. This transformation is precipitated by a number of trends; a shift from manufacturing to a service economy; the usage of information as a resource, factor of production, and commodity; and the propulsion of the current economic growth through technical innovation and scientific discovery (Dickey *et al.*, 1999). In the 1960s a famous modern management theorist Peter Drucker stated that knowledge has become the basis of modern economy after the shift of society from the commodity economy to the knowledge economy (Gatautis, R. 2004). Nowadays it is also often stated (Custells, 2003) that people have developed into a society, where knowledge and organization are first and most important creators of welfare.

The human race is full of insatiable taste for goods and services. As these want and needs grow, so do the means of satisfying them. Therefore, every organization, be it government or otherwise, is set up to achieve these objectives. On an individual level, many aspects of our daily lives are subject to technological innovations. We have become dependent on the flexibility, access, and services that they provide us. Computers, fax machines, networks, cable television, fibre optics and Automated Teller Machine (ATM) have all played a pivotal role in the way we communicate,

work, play and do business. As the information age progresses we increasingly owe more of our economic and technological progress to the free flow of ideas and knowledge. Consequently, it becomes more important that we have access to superior and timely information.

In recent years, the concepts of government and administration have been transformed. Transformation were caused not only by growing requirements and expectations for ways of governing civil society to reflect modern method of efficiency and productivity, but also the attitude that public administration should be more open to democratic control and accountability (Adamu and Gwarzo, 2002). The above mentioned processes of change had a lot of impact on the activity of government. A lot of public institutions have included the Information and communication technology (ICT) dimension into their activities. Many authors like Vigoda, Dougherty and Fang state that e-Government ensures efficiency and democracy in a more economical way than it was forecasted before, and the application of ICT creates opportunities for government to modify the traditional compromise between these two objectives.

Public administration conceptually has to do with all the events and activities that government undertakes towards achieving its objectives. It also entails human resource development, governmental policies and

decision making to mention a few. It is the machinery through which government provides public goods to the citizens, thereby ensuring efficiency and effectiveness. However, effective service delivery in public organizations would better be enhanced through modern information technology. The management information system, information resource management, e-Government, office automation etc, are all means through which service delivery could be achieved in public organizations. Hence the core assumption of this research is that, 'with ICT there will be improvement in administration'. But the real problem is how could ICT bring about improvement in public organizations like B.U.K?

Every government conducts its activities through articulation of data, records and information. Both the bureaucrats and public office holders have great concern with generating, disseminating and storage of government data and records. It is on that note that this research is framed in order to see how effective system of data generation, dissemination and storage will improve public service or service delivery. A reliable policy cannot be formulated with insufficient data.

Bayero University, Kano is not an exception to these trends. It was that quest for data, record, and information management, and the need for effective service delivery, that necessitate the establishment of

Management information system (MIS) and Centre for information technology in the university. Most importantly therefore, the research will tend to review the strategic plan of B.U.K on ICT so as to see the level of development or otherwise in that aspect. To also see if it had improved service delivery in the university. An effective analysis of what is on ground will be made. What are the targets, and efforts towards achieving these targets. What has been achieved, if not what are the constraints?

Planning and implementation of information technology in an organization, (B.U.K inclusive) is an involved and complicated endeavour, and becomes more so with each new innovation. It is no longer a simple task to simply automate clerical tasks or transfer reams of data into a computer. Today's technologically driven organization must make use of integrated information systems which will not only allow them to process data and perform clerical tasks but also provide services in a more effective and super-friendly way. ICT based public service can offer better ways to provide for government administration and service deliveries but getting there is not an easy matter.

Precisely this research is aimed at examining the role of modern information technology in enhancing service delivery, with specific objectives of finding the factors that are impeding the implementation of ICT Plan in BUK, the

challenges confronting BUK before the implementation of ICT and to examine the extent to which MIS improve information dissemination, generation and storage.

STATEMENT OF THE RESEARCH PROBLEM

The effective management of our universities depends to a large extent, on how university managers have utilized available human and material resources. A lot of data on students, staff and finance abound in our universities. The organisation and processing of these volumes of data to generate valuable information for dissemination to all who might need it has become a very serious issue in our universities. Access to vital information which is available outside our own environments is even a nightmare in most of our universities. Information and Communications Technology (ICT) facilities are helping to provide means of solving these problems. But how have our universities embraced this rendition that is changing the way we perform our functions.

The initiative to enhance effective service delivery in the Nigerian universities started with the MIS (management Information System) project, which was sponsored by the National Universities Commission (NUC) about twenty years ago. Poor infrastructural facilities in our universities, is a major constraint in the realisation of the dream of that project. How could one single personal computer or very few computers

be used for entering the students' data in a university with a population of over 30,000 students? Creating and storing information on one system is to lock up the database with only one person having access to it at a time. This is far from the ideal in a university environment where administrators require timely and accurate information for planning purposes and academics require information for research and teaching.

However, in spite of the establishment of Centre for Information Technology CIT in 2004, as part of a comprehensive strategic plan of BUK on IT, and another strategic plan on ICT in 2002, BUK is far from actualising its dream of ensuring a better system of data generation, dissemination and storage. There is still poor IT infrastructure and lack of training for both staff and students. In fact the situation today in BUK with the Modern information technology is not far different from what was obtained prior to IT implementation. Processing of results, admission processes and issuance of transcripts takes much longer time even with the ICT than those years without ICT. It is pertinent to note that this research will try to find out the challenges that confronted BUK in her attempt to deliver public service before the creation of MIS Unit. It will also focus on how the creation of MIS could improve Data generation, dissemination and storage, there by looking at the factors impeding the strategic plan of BUK on ICT.

AIM AND OBJECTIVES OF THE STUDY

The general aim of this study is to examine the role of modern information technology in enhancing service delivery. The specific objectives are stated below;

1. To find out the challenges that confronted Bayero University, Kano in her attempt to deliver public service before the creation of the management information system (MIS) unit.
2. To examine the extent to which the creation of MIS could enhance the system of generating, disseminating, storing and analysis of information in Bayero University, Kano.
3. To study the factors impeding the implementation of the strategic plan of B.U.K on ICT.

Theoretical Framework

For the purpose of this research work, Adaptive structuration theory is applied. This theory provides a model that describes the interplay between advanced information technologies, social structures, and human interaction. Consistent with structuration theory, Adaptive structuration theory focuses on social structures, rules and resources provided by technologies and institutions as the basis for human activity (Zmud, 1994). Social structures serve as templates for planning and accomplishing tasks. Prior to development of an advanced technology, structures are found in institutions such as reporting, hierarchies, organizational knowledge, and standard

operating procedures. Designers incorporate some of these structures into the technology; the structures may be reproduced so as to mimic their non-technology counterparts, or they may be modified, enhanced or combined with manual procedures, thus creating new structures within the technology (Holmes and Desanctis, 1991).

Another model of the Adaptive structuration theory is decision making model. This model is rooted in the positivist tradition and presumes that decision making is “the primordial organizational act” (Perrow, 1986); it emphasizes the cognitive process associated with rational decision making and adopts a psychological approach to the study of technology and change. Decision theorist espouses “system rationalism” (Rice, 1984), the view that technology should consist of structures (e.g. data and decision models) designed to overcome human weaknesses (e.g. “bounded rationality” and “process losses”). Once applied, the technology should bring productivity, efficiency, and satisfaction to individuals and organizations. Decision theorist tends toward an engineering view of organizational change, believing that failure to achieve desired change reflects a failure in the technology, its implementation, or its delivery to the organization.

By way of justifying this theory, Feldman and March, (1981) points that information

plays a distinctly social, and interpersonal role in organizations. Perhaps for this reason, development and evaluation of technologies to support the exchange of information among organizational members has become a research tradition within organization and information sciences (Goodman, 1986) Keen and Scott (1978) VandeVen and Delbecq (1974). The past decades has brought advanced information technologies, which include electronic messaging systems, executive information system, management information system, collaborative systems, group decision support system and other technologies that enable multiparty participation in organizational activities through sophisticated information management (Huber 1990; Huseman and Mills, 1988, Rice 1984). Developers and users of these systems hold high hopes for their potential to change traditional organizational design, intelligence and decision-making for the better.

According to Adaptive structuration theory, adoption of technology structures by organizational actors is a key factor in organizational change (Huber, 1990). Whereas, traditional computer systems support accomplishment of business transactions and discrete work tasks, such a billing, inventory management, financial analysis, and report preparation, advanced information technology support these activities and more; they support coordination among people and provide

procedures for accomplishing interpersonal exchange, group decision support systems for example provide electronic path for exchanging ideas among meeting participants and formula for integrating the work of multiple parties (Perrow, 1986).

This theory is capable of explaining the relationship between need for transformation in organisation and the attainment of effective service delivery. As the theory assumes that, use of technology in organisation will help to overcome human weaknesses. And once applied the technology should bring productivity, efficiency and satisfaction. This therefore will explain the need for organisation like BUK to employ modern information technology in their quest for effective service delivery. This is because some of the challenges that BUK faced in its quest for service delivery could be overcome through the use of ICT.

CONCEPTUALISATION:

Service Delivery

Service here implies tangible and intangible goods and services provided by the government in order to improve the well-being of the citizenry. Carlson et al. (2005) conceptualised service delivery as the relationship between policy makers, service providers and poor people. According to them, it encompasses services and their supporting systems that are typically regarded as a state responsibility. These

include social services (primary education and basic health services), infrastructure (water, sanitation, roads and bridges) and services that promote personal security (justice, police etc).

In Nigeria, government constitutes the major service provider through the Public Service. The Public Service refers to all organisations that exist as part of government machinery for implementing policy decisions and delivering services that are of value to the citizens. It is a mandatory institution of the state under the 1999 Constitution of Nigeria.

The Nigerian Public Service includes the Civil Service, often referred to as core service, consisting of line ministries and extra-ministerial agencies; the Public bureaucracy or the enlarged Public Service made up of service of the State and National Assembly, the Judiciary, the Armed Forces, the Police and other security agencies, paramilitary services (i.e. Customs, Immigration, Prisons Services, Civil-Defence Corps etc); parastatals and agencies i.e. regulatory agencies, educational institutions, research institutions, social services, commercially oriented agencies etc. it is also used to refer to Public Servant who are direct employees of those ministries, extra-ministerial agencies, parastatals, corporations and institutions. In Nigeria, there are many attempts by government to improve effective service delivery in the public

sector. One of the common service delivery improvement initiatives include *SERVICOM*.

The *SERVICOM* Initiative

This is an initiative similar to, the Citizen First initiative in the UK or the Batho Pele (People First) in South Africa. It is important to look at the dynamics that gave rise to the adoption and implementation of the *SERVICOM*. According to Ad'Obe Obe *SEVICOM* National coordinator, indicates that servicom is a reform initiative that is geared towards improving effective and efficient service delivery 'no reform by government would succeed unless it brings about improved service delivery in a specific aspect of life of the people. He went on to state, "Therefore, whatever reform you embark on, service delivery is both the subject and object of the reform. Without improving service, no reform would be said to have been successful. Therefore *SERVICOM* is the mother of all Reforms".

Information Technology

Information technology (IT) is the processing and maintenance of information, and the use of all forms of computer, communication, network and mobile technologies to mediate information. Information technologies include all media employed in transmitting audio, video, data or multimedia such as cable, satellite, fibre optics, wireless (radio, infra-red, Bluetooth, wifi).

Network technologies include personal area networks (PAN), campus area network (CAN), intranets, extranets, Local Area Network(LAN), Wide Area Network (WAN), and the internet. According to Kraemer *et al* (1993) computer and information systems are now present everywhere in American public and private organizations. Over the past five decades there had been many studies on how managers can and should use modern information technology to increase their personal effectiveness and that of their organizations. In fact, some have suggested that organizational effectiveness can be measured by the extent to which managers are able to acquire information that reduces the uncertainty and ambiguity they perceive in their organizational environments (Tushman and Nadler, 1978).

In Africa, governments and organizations are now faced with the challenge or transformation, a paradigm shift, necessitated by the age of network intelligence. Governments must undergo internal and external transformation in order to move in unison with the private sector and respond swiftly to information technology developments and its dictates (Kundishora, 2000). Internally, Governments are called to improve the efficiency and effectiveness of internal functions and processes within available to computer users through the global internet. It enables users to view a wide variety of information, including magazines, archives,

public and college library resources, and current world and business news.

Innovation as a tool for effective service delivery

The term innovation derives from the Latin "*innovatio*", the noun of action from *innovare*. The central meaning of innovation thus relate to renewal or improvement, with novelty being a consequence of this improvement (wikipedia.org). On a lower level, innovation can be seen as a change in the thought process for doing something, or the useful application of innovations or discoveries (McKeown, 2008).

According to Batali (2011), in theory and practice of the states the process of innovations in public administration is considered as "ongoing process" and "ongoing transformation." As an ongoing process, the public administration innovation includes the decentralization of public administration, simplifying of procedures, informatization of the service delivery, integrating ICT, and improving human resources developments. As rightly put by Albertiu and Sayed (2007) the innovation process includes mechanism that will ensure public sector transparency and accountability and mechanisms for attracting increased foreign direct investments. The innovation of public administration is a key instrument for the state building.

However, Alberti and Bertucci, (2006) aptly puts it that, innovation in public

administration is an effective and inventive solution of problems and obstacles. Furthermore, innovation is not a closed and complete solution, but an open solution, transformed by those who adopt it.

Also, Dougherty and Gibson (2008) argued that the public administration innovation should start with the simplification of the whole frameworks that regulate the functioning of government structures. Administrative legislation reforms and administrative system compatibility should be considered the basis for the public administration innovation.

PRESENTATION AND ANALYSIS OF DATA

This study has examined the role of modern information technology in enhancing service delivery in public organization with a specific concern on Bayero University, Kano. In the process of collecting data, which is presented below, staff and students were selected for interview and administration of questionnaire. The tables below will show the data collected and its interpretations.

Response on whether staff and students are aware of Strategic Plan on ICT in B.U.K

Strategic Plan	N	%
Yes	99	40.7
No	144	59.3
Total	243	100

Source: Field Survey, 2014

A study on the strategic plan of ICT in Bayero University, Kano shows that 40.7% claim that there are strategic plan on it in the institution while a relatively higher 59.3% did not concur with the claim. This implies that there may be some plan of ICT in the institution, and possibly because it has nothing to do with the students only few knew about it. An informant during the IDI whom was interviewed on whether he is fully aware of the strategic plan on ICT in BUK said:

Bayero University started its strategic ICT plan with a need for a computer centre that would provide computing services to the university...the university senate therefore set up a Computer Committee that was charged with the responsibility of establishing a computer Centre and advising Senate on all matters related to the use of computers in the University. With installation of a VAX 11/780 mini-computer in 1980, which was an expensive state of the art machine that only few American and European Universities could afford. It shows a great deal of commitment to IT by the university.

Another informant said:

The university had no option but to comply to the changes

brought by new developments in ICT, even though it took Bayero University computer centre long time to adjust. It commences with procurement of microcomputers. In 1998 and 1999 about 70 computers and other accessories were procured...and hence a boost to its objectives on IT.

Also stated by another respondent:

The development recorded in 1980s and 1990s in BUK, made the university to come up with the following plans as its strategic objectives on ICT:-

- 1) To immediately network the entire building of computer centre
- 2) To utilize these procured computers for the needs of staff and students in carrying out researches and other academic purposes..
- 3) To also establish Centre for information technology with responsibility of making the university community fully computer literates and providing state of the art computing facilities for the use of students, researchers, lecturers and administrators.
- 4) The centre when established will also be charged with the following:
 - a) To provide computing facilities for every interested member of the university community.

- b) To provide special advice and guidance on the use of computers.
- c) To provide advance IT resources for special applications such as research projects.
- d) To provide training for members of the University community.
- e) To provide consultancy services
- f) To provide training for outsiders.

This however shows a comprehensive IT strategic plan in BUK, but possible due to confidentiality of information like this, few even among the personnel interviewed new about it. This however indicates that, dissemination of information is poor even among the implementers. As few personnel of Centre for Information Technology (CIT) and Management Information System (MIS) knew about strategic Plan on IT, it therefore indicates a wider gap between planners and implementers which ultimately affect service delivery.

Factors Impeding the Implementation of the Strategic Plan of B.U.K on ICT

The table below shows the summary of response from the respondents on the factors that are impeding the Implementation of strategic plan of BUK on IT. Although some respondent provided different answer such as corruption and lack of political will, but most of the response centred around the factors listed in the table.

Factors	N	%
Lack of clear policy objectives	38	15.6
Inadequate knowledge of the policy	89	36.7
Poor funding	27	11.1
Lack of training	14	5.7
All of the above	75	30.9
Total	243	100

Source: Field Survey, 2014

On the factors impeding the implementation of the strategic plan of Bayero University, Kano on information and communication technology, 16% claimed that Lack of clear policy objectives is the reason for poor implementation of ICT plan, 36.7% claimed inadequate knowledge of the policy itself, 11.1% attribute it to poor funding, 5.7% indicates lack of training. However about 31% of the respondents attributes it to lack of clear policy objectives, inadequate knowledge of the policy, poor funding, and lack of training.

An informant during the in depth interview (IDI) said:

Factors, such as expertise, lack of effective man-power training and lack of willingness from leaders will impede the implementation of the strategic plan of Bayero University, Kano on information and communication technology.

This means that a number of factors tend to impede the implementation of the strategic plan of the institution on ICT and this could affect the quality of service delivery in general. This also implies that a number of personnel in BUK were only aware of the policy on IT at the level of interview (ie when they were being interviewed about the policy during this research). Most likely that was the reason why significant number of the respondents consider lack of actual knowledge of the policy, as one of the most impeding problem of ICT implementation in BUK.

Opinion on the Factors Influencing the Development of Information Technology in Bayero University, Kano.

Factors	N	%
Globalisation	52	21.4
Need for efficiency	48	19.7
Quality services	23	9.5
Technological innovations	80	32.9
All of the above	40	16.5
Total	243	100

Source: Field Survey, 2014

Data in Table above indicates the opinion on the factors influencing the development of information technology in Bayero University, Kano. it shows that 21.4% claimed Globalisation, 19.7% need for efficiency, 9.5% claimed need for quality of services, 32.9% indicates technological innovations while some 16.5% shows all the

above factors plays role in influencing the development of Information technology in BUK.

An informant during the IDI said:

Donor supports; for example in December 2003 the building of Centre for Information Technology (CIT) was completed fully funded by McArthur Foundation. Other agencies like Nigerian Deposit insurance corporation (NDIC) equipped some of the Labs with computers...these positively influenced the development of ICT in BUK.

Another informant during the IDI said: ...the factors affecting ICT development in BUK includes:

- a) Lack of comprehensive ICT policies.
- b) Government supports.
- c) External pressure and donor support.
- d) Technological change, modernization and globalization.

This shows that, the development of ICT in BUK was more or less a natural change which has been influenced by globalisation and rapid technological transformation taking place in the world. Also some factors like need for effective service delivery could have been another issue, since public organisations at all level are gradually

moving toward utilisation of modern technology to improve quality of service, it could also be a factor to influence ICT development in Bayero University.

Research Findings

Using the raw data obtained from the field survey as complimented by other reports, and qualitative data, the research discovered the following:

There are many challenges that bedevilled Bayero University prior to the creation of Management Information System (MIS). These challenges include inability to properly articulate, generate and manage data or information. Both the management and personnel have great difficulties with generating, disseminating and storage of data and records which ultimately affected planning and policy formulation. The record keeping before MIS, in BUK and in particular some departments and units have grown very large and becoming too unwieldy for the traditional manual methods. In some of the departments and units the filing system is not well organised with the results that sometimes records are difficult to locate and retrieve. Some of the departments or units have space problem with respect to keeping of files.

Conceptually it is accepted by this research that Service Delivery through modern information technology is the effective

utilisation of ICT for research and other academic purposes. It is found that effective service delivery in any tertiary institution and in particular Bayero University, could imply provision of top quality services in teaching, learning and research. For the university being a world ranked tertiary institution of learning, by it having a well-established faculties, by the university being well recognised within Nigeria and the community within which it resides, by the institution providing quality education, by it providing degrees that are recognised and respected, by the institution having well recognised and highly skilled academics and efficient administrative staff, by the university providing a safe learning environment with well-equipped lecture venues and laboratories.

This invariably requires good planning, organisation and management, which is only possible through proper management and utilisation of data. In essence therefore the goal and objectives of any institution will not be achieved without proper system of data generation, dissemination and analysis. As such therefore, modern information technology is an important instrument of data generation, dissemination and storage. This has coincided with the assumptions of Structuration Adaptive Theory which the research employs as its theoretical guide.

The theory assumes the use of technology in organisations to overcome human weaknesses, and once the technology is applied it should bring productivity, efficiency and satisfaction to individuals and organisation.

Therefore, for BUK to effectively deliver public service it first need to address these problems like poor storage of data, inefficient management of information, poor access of data and poor dissemination of information, as claimed by a significant number of respondents. Therefore, the creation of the management information unit of the institution has led to effective access and storage of information as well as facilitating the process of data analysis in policy formulation. Many of the respondents stated that the creation of MIS has increased electronic sharing and dissemination of information between and among units and departments. But this does not mean BUK is sufficient in term of achieving effective service delivery through the utilisation of MIS.

The extent to which the creation of MIS influenced the system of generating, disseminating, storing and analysis of data in Bayero University, Kano has been commendable. Though, the process has been marred by range of problems and challenges. Poor IT infrastructure as

pointed above, shortage of power, lack of internet coverage, lack of training, inadequate resources, unskilled personnel to anticipate the changes that accompany an ICT structure and new roles, the decision of Bayero University Management to delineate MIS Unit under the Directorate of Examination, Admission and Records (DEAR), were among the problems observed by most of the respondents. It is also found that CIT in BUK has not been performing its expected function. They were created to provide IT infrastructure and maintain these infrastructures within BUK. Such kinds of infrastructures include *internet services*, without which MIS could not carry some of its functions, but they only provide these services to some few selected areas around VC's office and CIT building. Even around these areas, the access is very limited, and the strength of the network is very poor.

But in spite of all these challenges, MIS unit of Bayero University has helped to improve the admission and registration process from manual to electronic. It is cheaper and easier. It has also improved the manual filling system to an electronic one. Data analysis, data query and modelling can easily be made, which makes policy formulation easier. As also portrayed, MIS has ensured the creation of general data bank for all BUK students, information on

registration exercise, enrolment of all faculties and departments, issuance of transcripts and keeping of electronic records of all out-going students. It also provides data for other units such as student's affairs, senate and academic office. It has ensured effective storage of information, accessing and simplifies analysis of data. It also ensures the process of inspecting, cleaning, transforming and modelling data with the goal of discovering useful information, suggesting conclusion and supporting decision making.

Although it has done a lot in data generating, storage and analysis, MIS has failed in ensuring electronic dissemination of data and information. Although, this could look as somehow contradictory with earlier statements above, but it is not. This is because there is difference in data generation, data storage, data analysis and "electronic dissemination" of data. MIS has achieved success in electronically generating data, electronically storing data, but it has not achieved any reasonable success in disseminating this data within the university electronically. This is exactly due to absolute reliance on Centre for Information Technology (CIT) to provide internet services for doing that. In fact there is over reliance on internet services by MIS unit to connect computers and share information and resources. This has led to spending huge

sum of money to subscribe with service providers which is not always certain. As such the use of *intranet* could have effectively solved that problem.

There are number of factors that impede the implementation of the strategic plan of Bayero University on ICT. These include poor network service, inadequate trained personnel and poor funding among others. Thus, nearly 58% of the respondents claimed that there are factors impeding the implementation of the strategic plan of B.U.K. Many of the respondents interviewed said that the factors range from inadequate expertise to ineffective man-power training. This means that despite the concerted efforts made by management, certain factors still impede the implementation of the strategic plan of Bayero University, Kano on information and communication technology. Therefore, to achieve the effective implementation of the strategic plan of Bayero University, Kano on Information and Communication Technology, the above factors must be effectively tackled.

Recommendations

Based on the findings of the study the following recommendations are offered:

For BUK to effectively deliver public service it first needs to improve its system of data storage, management of information,

access to data and dissemination of information. As public organizations cannot do without data or information for policy formulation and implementation this urgently need to be improved.

For MIS to achieve it set objectives there must be adequate IT infrastructure, efficient power supply, good and reliable internet access, trained staff, adequate funding, skilled personnel to anticipate the changes that accompany an ICT structure and new roles, among others

The management of the Bayero University, Kano should effectively trained personnel on modern information technology to enhance the availability of man-power in CIT and MIS units. This will help to solve the problem of expertise on modern information technology of the institution.

The use of intranet is recommended. Intranet is used to describe a situation where electronic mail, data and other information is sent via a LAN/WAN operation. The system operates very much like the internet but is contained and accessed solely within a single organization. An intranet operation may comprised a number of databases located on numerous file servers where access may be restricted to personnel from a specific subject matter area or to personnel within specific echelons within the organization. However, the general sending and receiving of electronic mail is usually unrestricted.

There is urgent need for MIS to given back it independent directorate status. The decision of Bayero University Management to delineate MIS Unit under the Directorate of Examination, Admission and Records (DEAR) will hampers the function of the unit, which could overall affects the University.

There should also be more Donor Push; for example in December 2003 the building of CIT was completed which was fully funded by McAthur Foundation. Other agencies like Nigerian Deposit Insurance Corporation (NDIC) equipped some of the Labs with computers and other accessories. This explains that with more push for donor support some of the challenges could be tackled.

There is also need for restructing ICT goals and objectives, appointing of a board for coordinating ICT implementation and to encourage public-private partnership to create sustainable ICT programs which could perhaps go a long way in actualising the strategic plans of BUK on ICT.

Conclusion

Based on the data generated, the modern information technology is a key tool for enhancing service delivery in Public Organizations, like Bayero University, Kano. It is an effective tool for accessing and storing of information as well as facilitating effective teaching and learning of both teachers and students. It influences

how information is being kept and retrieved to enhance teaching and learning. Therefore, for BUK to effectively deliver service it first need to address these problems like poor storage of data, inefficient management of information, poor access of data and poor dissemination of information.

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