Prospects and Challenges of Office Automation System as Information Technology Inovation in Nigeria

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Abstract:
*Computer based technology known as office system automation is a modern technology which provides new ways to manage information. It increases productivity it enables work to be done efficiently and fast. This paper Titled **prospects and challenges of office Automation system as an ICT Innovation in Nigeria**. Examine concept of office automation it basic activities, and some facilities or equipment required to automate office. The paper also encompasses prospect and challenges ahead of adopting this **ICT** innovation and how well the automation of office in organization help managers, achieve their target goal of maximizing profit, effective service delivery and decision making. Some of the challenges identified include high cost of **ICT** facilities, gadget. Displacement of people, lack of technical know how on using and managing **ICT** gadgets and vulnerability to health hazards. Recommendation was proffered, that management should provide funds for purchase and updating **ICT** gadgets, workers should be train to adapt changes in technology, on the usage of modern office facilities, also maintenance culture should be adopted by organization to ensure long life span of **ICT** gadgets and other facilities in modern office.*

1. Introduction

Office automation is a process that started with the industrial revolution. The typewriter was introduced in the 1840S and was followed by stenotypes machines, duplicators, tabulating machines and other types. In Nigeria, digital computer made it first appearance in 1963. According to Federal office of statistics "Census of computer installation (1984). Office automation is not widespread in Nigeria, companies with only mainframes and minicomputers still rely on typewriter. Fax machines are only found in the most advanced offices, but the telex is more widespread. Electronic mail, internet service like surfing into websites and teleconferencing not common in government offices, though found in some advanced offices in private organization.

Office automation is a gradual evolutionary process of change. In many ways, the evolution of office automation parallel to data processing. Both evolved primarily in responses to the advancements in computer technology experienced in using the technology and changing business. In 1977 the total number of computer installation had grown to around 70% it was during this time governmental organization agencies and parastatals and banks began to show interest in computers peter (2009). office automation has been most widespread in the private organization in Nigeria. Mostly in the area of financial management including payroll, accounts ledger, sales and invoicing Kulie (1995). For example, Nigerian banks are under pressure to automate considerable financial outlay. NCUD (1988) list 142 banks that have automated their offices. Government departments are rapidly automating its office during this information age. Among other state governments also adapted the automated trend.

Office automation is the application of computer technology to processing and using information in office. It provides faster use of information. At present the office automation concepts of administration support, emerge along with the data processing, concept of management information system (MIS) the objective is to use computers to support administrative and management activities. The more advanced technology we become, the better prepared will be the world in quick adoption of machines in offices.

2. Brief History of Office Automation

Office system automation began in 1870 with the typewriter by Christopher Sholes in order to produce typed document and the copying machine which mechanized previously manual task. Today, office automation is increasingly understood as a term that refer not just to mechanization of task but to the conversion of information to electronic form. With the advent of computer and **ICT** Gadgets has revolutionized office automation, today popular operating system and user interface dominate office computer system. This revolution has been so complete and infiltrated in so many areas of business, that almost all business uses at least a computer application in the cause of daily activities. Internet is a broad **ICT** technology recently invented, it offers prolific benefits in office work, Electronic Mail (E-mail) is an application use in sending and receiving messages through the internet. Computer technology offers different software application design on day to day advancement that handle difference office function e.g. Database software

application such as MS Access, SQL, Oracle etc. keep tract of financial records management information, this application enables Query, Sorting, filter and manipulating of data for the management needs, to mention a few in this information age. Rosemary (2006).

3. The Concept of Office System Automation
Automation is an application of computers and **ICT** facilities to solve data processing problems with minimum human involvement. Office automation refers to as all tools or methods that are applied in office activities which make it possible to process written, visual a sound data in a computer aided manner Brien (2000). Wikipedia (2011) office Automation as varied computer machineries and softwares used to digitally create, collect, store, manipulate and relay office information needed for accomplishing basic task. www.bussinessdictionary.com (2015), Define office automation as the application of information technology to the typical secretarial task such as communication, correspondence, documenting and filling. According to www.ccm.net (2015) office automation refers to all tools and method that are applied to office activities which make it possible to process written visual and sound data in a computer aided manner.

4. The Basic Activities of Office Automation
According to Rosemary (2006) there are three basics activities of an office automation Namely:
➢ Data storage and manipulation.
➢ Data exchange.
➢ Data management.

4.1. Data Storage and Manipulation
This aspect involves office record and other official form and documents. Data application involves creation and editing of files, images or spreadsheet, word processing and other desktop presentation package that accommodate raw facts and graphical data. Spreadsheet is use for calculation and multiplication of text or figure on a computer. Word processing provides a user with sophisticated commands to format, edit, and print text documents within shortest period of time. Mistakes erroneously made can be effected, file or folder can be save for future use. Desktop publishing application possess tools for creating of new letter brochure, letter headed, it combines text and graphics, charts drawing and other graphic images. e.g. of desktop application is Corel draw.

4.2. Data Exchange
Exchange of information is a component of office automation that is used by computer users. Electronic transfer is a general application that involves the exchange of information between two or more users. Example Electronic mail (E-mail) voice mail and fax. System automation allow the user to share resource online through computer or audio exchange with video capture. the use of network system allows users from different geographical areas to communicate easily. Internet users can send or receive information within the shortest period of time through a common set of network communication standards.

4.3. Data Management
Office automation system are also often used to track both short-term and long-term data in the realms of financial plans, workforce allocation plans, marketing expenditures inventory purchases and other aspects of business task management or scheduling system monitor and control various projects and activities within the office. Electronic management systems monitor and control office activities and tasks through timelines, resource equations and electronic scheduling.

5. Office Suite Tools
The term "office suite" refers to all software program which make it possible to meet office needs in particular, an office suite therefore includes the following;
www.ccm.net (2015)
➢ word processing
➢ spreadsheet
➢ presentation tool
➢ database
➢ scheduler
➢ desktop publishing
➢ utility program

6. Some Office Equipment/ Facilities Required to Automate Office and Its Function

6.1. Mobile Phone
Global system for mobile communication (GSM) is a digital wireless technology that provides high quality voice circuit-switched data services in a wide spectrum bands. It enables user to communicate with another person within and outside the country within the fastest period of time.

6.2. Computer System
This is an electronic device that accepts data as input, processes it and sends out result as output, Ignatius (1999) it takes data as input and produce output under control set of commands called "program".

6.3. Scanner
This is a peripheral hardware that is vital in any modern office; the hardware is connected to a computer, where it performs the function of scanning documents and passports.

6.4. Printer
This is also a vital peripheral device that is used for printing a document created using computer system; the printers are of different types, depending on your demand.

6.5. Modern Photocopiers
It is used for producing replicas from original by means of micro-processing unit that controls and monitors the copies function. It produces documents handwritten or printed. These modern copiers are very fast because it can produce more copies within seconds. It can also produce replicas in a colour form just as the original copy.

6.6. Close Circuit Television
(CCTV) Also known as video surveillance is the use of video cameras to transmit signal to a specific place on a limited set of monitors. It is used to observe parts of a process from a central control room. It provides recording for many years, with a variety of quality and performance options and extra features such as motion detection and email alerts. It is very vital in modern office, for detecting security threats through monitoring.

6.7. Intercom Devices
(Intercommunication): Is a device talkback or door phone is a standalone voice communication system use within offices functioning independently of the public telephone network. They can be incorporated with connections for more functions e.g. public-address loudspeaker system, walkie talkies, telephones, some are incorporated with control devices such as signal light and door latches. Some can be connected to outside (4-6 pairs) while controlling electronic strike. The modern generations are even compatible with computers for communication using TCP/IP.

6.8. Backup Device
This involves storage devices for backing up files and documents in any eventualities for future use, some of this device includes; CD ROM, Flash device, external hard drives.

6.9. Internet
This is the connection of millions of computers worldwide. This is one of the vital facilities required for multitasks; with internet, you can surf different websites in the world locate any information required for your usage. You can send and receive messages through electronic mail (email) on the internet; you can advertise your products or services through your websites, you can use voice mail, text chart, Skype communication, social media such as twitter, Instagram, Facebook etc.

6.10. Overhead Projector
This is a device that projects, amplify an image or written text on a transparency. It performs the function of presenting activity plan or objectives. In a seminar, workshop or conference, it can also be used for video conference meeting. www.cemcq.ac.net (2005)

7. Prospect of Office Automation
Office Automation is the process that requires understanding technology, business people at work. It combines a large number of technologies including data processing, word processing, graphic image processing and communications Brien (2000). An automation office offers the following benefits;
- ➤ Brings tools and techniques into office and assist people as they process information.
- ➤ Alters the quality of work life which focuses on opportunities to workers job satisfaction by providing meaningful job as supportive environment.
- ➤ It increases productivity; it enables work to be done quickly and easily.
- ➤ Makes information readily available to all who need it.
- ➤ It enables an organization to restructure operation in new ways.
   It can be used to gain strategic advantage.
- ➤ It makes work less without fatigue.
- ➤ Data redundancy is reduced.
- ➤ Data independence is achieved, that is programs are not affected as a result of changes in physical storage structure.
- ➤ Data sharing is enhanced.
- ➤ It creates centralized control of entire organization data.
- ➤ It enhances multiple tasks at a time.

➢ It creates new tasks, required to support the system or related to new products or services. Existing job may be redesigned to incorporate this task on new jobs. Brett (1995).

8. Factors Militating against Automating Office in Organisation
(1) High cost of modern technological gadgets and facilities.
(2) Lack of trained personnel on the usage of these modern gadgets.
(3) Lack of fund to purchase the gadgets and facilities required to automate office.
(4) High cost of maintenance of this gadget and facilities. And
(5) Vulnerability to health hazard.

9. Challenges of Office Automation
Office automation offers new opportunities for improving organization performance, improved products and services, to take full advantage of the opportunities and avoid pitfalls, decision makers should carefully integrate technology with business operations and goals. Capitalizing the new opportunities requires foresight, careful planning. Chika (2003) poorly planned application of office automation may produce some of the following undesirable results:
➢ Displacement of people.
➢ Excessive monitoring of works.
➢ Stressful work environments.
➢ Factory of assembly line approach of office work.
➢ Poorly designed work areas, resulting in discomfort or health hazards.
➢ Law job satisfaction results, absenteeism and turnover.

The above mentioned undesirable consequences of office automation results, when office managers ignore the potential impact of newly designed systems on individual workers and organization. Negative consequences also may result for inexperience with the technology, inadequate planning and lack of foresight, excessive focus on short-term benefits or management practices insensitive to employee's welfare. In long term ignoring these issues not only lowers the quantity of work but productivity as well.

10. Conclusion
The growing economic importance of information in the modern society has led to characterize our society as information age. With the world becoming a global village. The best approach to achieve effective, faster and reliable mode of data processing for effective service delivery in any organization is to adopt office automation. Office automation is no longer a luxury, this costly resource can improve productivity, though hitches in turning office fully automated is inevitable, the prospects is enormous. Office automation enables the user to perform duty effectively and efficiently with great ease.

11. Recommendation
To achieve maximum benefits from office system automation organization should take the following measures.
(1) Old workforce should be frequently trained to use the new technology and to adopt change in occupation and work environments. This should be a learning process that enables individual to assimilate the new technologies.
(2) To cope with national and international competition, electronic information system should be link globally, enabling to move and share information.
(3) Organization should adopt a good maintenance culture to ensure long life span of this modern office gadget.
(4) Adequate fund should be provided by the management, for routine upgrade and replacement of modern office gadgets whenever the need arises.
(5) Office automation manager should assume an active role as a change agent collaborate effectively with various staff groups, coordinate the skills of the office automation team and understand the business requirement.

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