NEW TECHNOLOGIES IN TEACHING AND LEARNING OF OFFICE TECHNOLOGY AND MANAGEMENT

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Abstract
This paper discusses the new technologies in teaching and learning in Office Technology and Management (OTM). The paper shows that there is technological advancement taking place globally and this has made the operations in the office to be carried out with modern office technologies. Therefore, teaching and learning in OTM should be directed towards acquiring the necessary skills by OTM students for performing their duties in an e-office. In addition, the paper discusses the necessary skills required for an e-office, and also the new technologies needed for the teaching and learning of OTM concepts and principles. conclusion were drawn for the subject matter, and it was recommended amongst others that new technologies like video-conferencing, overhead projector slides, digital versatile disc and internet facilities should be provided and utilized during the teaching and learning of OTM courses. Furthermore, there should be training and re-training programmes for OTM lecturers in particular in order to ensure the effective delivery of OTM programme in Nigeria.

Keywords: New technologies, OTM, e-office, education, teaching, learning, ICT

Introduction
Change is the only constant factor in life and for decades now, fast changes have taken place in all facets of human life which is as a result of new technologies. Technology is the branch of knowledge that deals with the creation and the use of technical means and their interrelation with life, society, and environment. Technology according to Nwoji (2012) is defined as the application of the scientific method to solving problems in our daily life. Atueyi (2009) observed that technology is considered to be the process by which humans modify nature to meet their needs and wants. Raymond (2006) indicated that technology is a general term for the processes by which human beings fashion tools and machines to increase their control and understanding of the material environment. The technological changes taking over the world globally, has its effect also on the office environment. The technology has made the office to be referred to as an Electronic-office. An E-office is an office that is equipped with modern technologies like computer, projectors, printer, and scanner and so on. The continuous advancement in technology has affected office technology and management profession in terms of the quality, speed and accuracy on how office managers perform their responsibilities.
Education is a vital tool for piloting the affairs of any nation and it also helps to prepare citizens to take up responsible roles in the society. One form of education that equips its recipient adapt to the changing world of work is office technology and management profession. According to the National Board for Technical Education (NBTE) (2006), Office Technology and Management (OTM) programme was designed to equip students with secretarial/office skills for employment in various fields of endeavour. The continuous advancement in technology has affected office technology and management profession in terms of the quality, speed and accuracy on how office managers perform their responsibilities.

The researcher observed that most graduates of OTM are neither self-employed or could not secure paid employment because they were not taught with new technologies and therefore lack the necessary skills and competencies needed for today’s E-office (Okoro, 2008). Obi (2002) attested that 60 percent of office technology and management graduates from either polytechnic or university in Nigeria remained unemployed because of their deficiencies in modern technological demands. The office in the 21st century has turned to an E-office where different new technologies like computer, projector, e-board, scanner, video conferencing facilities and internet facilities and so on are used to perform the duties of the office manager, that were performed manually before now. The only new technology that some OTM students have little knowledge about is the computer because that is most times the only new technology that could be found most times in our tertiary institutions. Consequently, this is now calling for a system of education which will involve the teaching and learning of OTM courses with all the necessary new technologies that are in use in the E-offices so that OTM students would be able to fit into what is obtainable in the world of work. Therefore, it is necessary to examine the skills needed for today’s E-office and point out the relevance of using new technologies in teaching and learning OTM courses in order for OTM students to acquire these skills.

Concept of Office Technology and Management

Office Technology and Management (OTM) is a nomenclature that was used to replace secretarial studies as it was formally called. According to Okoro and Amagoh (2008), it is an efficient, effective, productive and functional education which leads itself to self-employment, self-reliance, paid employment and consequently self-actualization. It focuses on combining office information technical skills with adequate and relevant business knowledge in solving organization wide problems. Baba and Akaraha (2012), were of the view that it is aimed at acquisition of appropriate skills, abilities and competencies both mental and physical as equipment for individual to live and contribute to the development of the society. To NBTE, (2006) OTM programme was designed to equip students with secretarial/office skills for employment in various fields of
endeavour. The current OTM programme lays much emphasis on computer and computer related courses. These courses are divided into:

1. Special area which includes secretarial studies, technique in office management and control.
2. Information and communication technology application which includes ICTs, word processing, computer appreciation, web page design, desktop publishing, database management.
3. General education relating to contemporary problems usually called general studies (Ogiagah, 2009).

The goals and objectives of OTM according to the National Board for Technical Education (NBTE, 2004), is to:

1. Equip the students with the knowledge, competencies and specific skills that will enable them to successfully hold position as secretaries, managers and administrative assistant in both public and private sectors of the economy.
2. Expose student to industrial experience thereby affording them the opportunity to practicalize their skills.
3. Develop the student’s potentials for further academic and professional pursuit.
4. Develop in the students an occupational intelligence that will make them versatile and adaptable to the changing situation in the world of work.

Roles/Duties of an Office Manager

The functions and duties of an office manager is not different from what religious organizations or supermarket manager does. In an attempt to discuss what an office technology and management entails, Free Encyclopedia (2012) outlined the duties of an office technology manager to include:

1. Using a range of office software, including email, spreadsheets and databases.
2. Managing filing systems.
3. Depending on the organization, duties of the role may extend to the management of social media.
4. Developing and implementing new administrative systems, such as record management.
5. Recording office expenditure and managing the budget.
6. Organizing the office layout and maintaining supplies of stationery and equipment.
7. Maintaining the condition of the office and arranging for necessary repairs.
8. Organizing and chairing meetings with staff - in lower paid roles this may include typing the agenda and taking minutes, but senior managers usually have an administrative assistant to do this.
9. Overseeing the recruitment of new staff, sometimes including training and induction.
10. Ensuring adequate staff levels to cover for absences and peaks in workload, often by using temping agencies
11. Carrying out staff appraisals, managing performance and disciplining staff.
12. Delegating work to staff and managing their workload and output.
13. Promoting staff development and training.
15. Writing reports for senior management and delivering presentations.
16. Responding to customer enquiries and complaints.
17. Reviewing and updating health and safety policies and ensuring they are observed.
18. Arranging regular testing for electrical equipment and safety devices.
19. Attending conferences and training.

Considering the diversity of functions, office technology managers are expected to have many talents. Some of the competencies which he is expected to possess are problem solving, decision making abilities, integrity, assertiveness, flexibility, accuracy and the ability to cope with pressure. Ugwoke (2010) stated that office manager’s functions are greatly needed for the socio-economic development of the country because of the new forms of work processes and organization which are introduced by globalization and Information and Communication Technology (ICT).

**Teaching and learning of OTM through New Technologies**

According to Baba and Akaraha (2012), the review of secretarial studies in November, 2004 was necessitated by the fact that the skills, attitude and knowledge previously acquired in the course of the study were inadequate to arm today’s graduate office managers with the competencies needed to adjust to the rapidly changing needs of the E-office.

Duniya (2011) observed that due to the introduction of sophisticated technological (electronic) office equipment into today’s modern office and the role office managers need to play in ensuring accuracy and efficiency in their jobs, office managers need to meet the challenges by acquiring new skills and competencies for efficient operations in the electronic office and these new skills and competencies are basically from information and communication technology (ICT) perspective. The world is generally ICT-driven and in order to keep abreast of this change, teaching/learning in OTM must be geared towards ICT.

In realization of OTM objectives, OTM students should be trained to acquire the required skills, attitude and knowledge needed for modern office management. New technologies should be effectively utilized in training institutions to match graduates with the current
demands of modern organisations. Effective utilization of ICT is very important in all the component areas of office management (Ugwoke, 2011). Atakpa (2010) stated that secretarial functions everywhere in the world have undergone a lot of technical changes. As a result, modern office equipment which gives the secretary the opportunity to increase her efficiency abound. Many office functions and secretarial duties which were previously done manually have been mechanized. Thus, the diversities of these office technologies require the office manager to possess new skills and sub-skills to enable him/her to be relevant in the modern office and these skills and competencies can only be acquired during teaching and learning. Therefore it is pertinent that office technology and management lecturers should up-date themselves on how to apply these new technologies when teaching.

New Technological Skills required by office managers.

According to Nwaosa, Egbule and Olannye (2013), the following skills are required by office managers:

1. **Telecommunication Skills**: These are skills that are needed for effective transmission of information by electromagnetic means which include;
   - Knowledge to manage audio conferencing
   - Ability to operate video conferencing equipment during net meeting.
   - Skills in understanding and managing telecommunication facilities.

2. **Message handling system skills**: Office technology managers are expected to possess skills in the following message handling system.
   - Skills in Fax: Skills in using computer technology and communication links to send quality graphics, charts and handwriting in the fax machine at one end, where it is digitalised.
   - Skills in Telex: skills in transmitting and receiving messages over the telephone line
   - Skills in electronic mail: Skills in sending and receiving mails from one computer to another computer system.
   - Skills in voice mail: Ability to store voice messages at the receiving location digitally.
   - Skills in teletext: Ability to receive data such as news, airline and training schedules; through existing television network.

3. **Document management system skills**: this include
   i. **Word processing skills**: Word processing is the use of advanced hardware to manipulate words, sentences and paragraphs. The word processor is a type of electric typewriter with storage and processing components. One of the major features of the word processor is that as the words are typed, they are displayed simultaneously at the VDU which enables the secretary...
to effect corrections like deleting or inserting words, sentences and paragraphs before printing the documents (Agomuo, 2005).

Office technology managers should have the following word processing skills

- Skills in coping, cutting and pasting text in a document
- Skills in retrieving of files
- Skills in editing existing document.
- Skills in typing a text document and spelling command
- Skilling in pagination of typed materials
- Skills in naming, renaming saving of files.

ii. Reprographic skills: Reprographic is the process of reproducing multiple copies of a document, and the following skills are required in performing this task.

- Skills in operating electronic filing, indexing and cataloguing.
- Skills to capture images, files creations, file updating, report writing and file inquire.

iii. Data processing skills: Data processing application is a computer package that is limited exclusively to structural manipulation of data done through programs. The following skills are needed by office technology managers in performing this task

- Skills in interpreting computer printout to management.
- Skills to maintain and update stored data.

iv. Desktop publishing skills: Desktop publishing application is computer software that enables one to produce well designed pages that combine charts and graphic with text and headlines in a variety of typefaces. The following skills are required in desktop publishing.

- Skills in using mouse, scanner, leaser. or link jet printer, for mixing text
- Skills in the use of graphic to produce high quality output for commercial printing.

New technologies for teaching and learning of OTM

To effectively bridge the gap between what is being taught in various institutions and what is used in the world of work; different modern office technology facilities should be used to teach OTM students. For our education systems to deliver on their mandates, the quality of the training given to individuals passing through a course or the other should be such that can give adequate skills and information needed in the real world sense (Utoware & Kren-Ikidi, 2013). Hennessy, Onguko, Harrison, Ang’ondi, Namalefe, Naseem & Wamakote, (2010), listed ICT facilities as radio set, television set, audio tape player/ cassette and video players, projectors, satellites connection, sensor and other hardware and software, essential in delivery of instruction. Therefore the modern
office technology used in teaching and learning of OTM courses includes ICT hardware like radio set, television, telephone, computer, overhead projectors, electronic whiteboard, video tape recorder, filmstrip, CD-ROM, photocopier, scanner, printer. On the other hand ICT software includes Microsoft word, Microsoft power point, coral draw, database (Microsoft Access), Microsoft Excel, Web Page, chartroom, e-mail, internet.

**Computer:** According to Owa (2005), computer is any device capable of automatically accepting data, applying a sequence of process to the data and supplying the result of these processes. Effective use of these facilities in teaching enhances the quality of education in several ways; increasing learner motivation and engagement by facilitating the acquisition of basic skills. Learning with computer facilities helps in developing office manager’s literacy in use of keyboard, mouse and use of productivity tools such as word processing, spread sheet, database, and graphic programme.

**Telecommunication Facilities**

**Radio and Television:** These are audio and audio visual technology widely used in education as educational tools. Radio and television as instructional technology is aimed at improving the quality of classroom teaching.

**Faxmile (Fax) Transmission:** It involves machine designed to transmit graphical information via normal telephone lines. After a special fax number is dialled and the phone connection established, document are fed through the machines which takes approximately one to six minutes to scan and convert the information into electrical impulse. The impulse are carried across phone lines and a receiving machines changes the impulse back to text or graphic, making a copy of facsimile of the document in the sending machines. Fax communication has become a popular alternative to express mail because it is faster and generally less expensive.

**Mobile phone:** It is one of the most prized possessions among users today. Mobile phones can be used by teacher for class assignment through text messages. Mobile phone is being used in imparting information fast and cost effective. It provides e-mail facility also.

**Teleconferencing:** It can also aid educational activities through telephone. Teleconferencing refers to interactive electronic communication among people located at two or more different places. It also refers to telephone calls where more than two people can discuss at the same time.

**Telex:** It is a switched network of teleprints similar to a telephone network, for the purpose of sending text based messages.

Teachers can group OTM students to perform certain educational activities during holidays. The group can discuss and carry out the assignment through teleconferencing. Teacher can teach students with the help of teleconferencing, when he/she is not disposed to enter the classroom. Radio and Television can aid in the teaching of shorthand and aid illustration of concepts in office practice, communication skills and modern office.
Multimedia Facilities

Multimedia are those ICT facilities that combine basic types of media into learning environment e.g. video, sound, graphic and animation, thus providing a powerful teaching and learning environment. Multimedia in teaching provides students with the technical steps needed to produce multimedia document, encourage deep reflective thinking and empower student to create and design rather than absorbing representations created. Examples of multimedia facilities are; video conferencing, interactive whiteboard, DVD, slide, multimedia projector etc. Multimedia projector is designed to project video signals and computer video to a screen. Such projector is a complex electronic device, however it is quite easy to control. With multimedia projector, the students no longer have to crowd around a computer monitor to view presentations, websites or training programmes. It directly engages students and makes impact to each lesson. Popular reference material, encyclopaedias, textbook, projects work can be recorded in DVD and used for teaching and learning. Information such as seminars, conference, project defence, new OTM textbooks, and journals can be placed on the electronic notice board.

Internet Facilities

The internet provides accessibility to wide areas of information on various subject matters. Chukwumezie (2002), maintained that Office Manager should be taught in computer and communication skills, in order to manage information effectively via the net. OTM students should be taught on how to surf the net properly. Assignment can be given to students to be submitted on line. OTM students can surf the net to get current information about their course and other important information also academic project can be supervise using the internet. When these new technologies are used in teaching prospective office managers during the teaching and learning, it will make OTM students to become acquainted with these facilities and enable them to be able to fit into the world of work either as an employee or an entrepreneurial.

Conclusion

Change is the only thing that is vital in life and Office technology and Management profession is facing new technological changes since the office environment has turned into the e-office, so it is vital for office managers to have the necessary skills that will make them relevant in the world of work and contribute their quota to the development of the country. They can only do this by acquiring the necessary skills needed for today’s e-office before graduation. It is therefore concluded that modern office technology should be used in teaching and learning of OTM courses. Also you cannot give what you do not have, OTM lecturers need to adapt to a changing environment by upgrading themselves on how to use these new technologies during teaching and learning of OTM courses, and
in that way they become productive and also lessen the pains the students are subjected to.

Recommendations
The following recommendations are outlined:

- Since technology is changing rapidly facilities used in teaching OTM students should reflect what is being obtained in the world of work in order for them to possess the required skills and competencies for efficient office productivity.
- There should be frequency of training and retraining programmes in ICT (Database Management, Microsoft Excel, Webpage design, PowerPoint, Multimedia Projector, Videoconferencing, Fax machines, Telex machines, YouTube,) for OTM lecturers, in order to ensure effective utilization of these facilities in teaching OTM students.
- NBTE should set utilization standard of these ICT facilities in teaching in order to check mate the competency level of OTM lecturers in teaching with these facilities.
- The provision of alternative power supply such as solar panels to support the utilization of modern office technologies.

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