

OFFICE INFORMATION SYSTEMS SKILLS POSSESSED BY OFFICE AND MANAGEMENT EDUCATION LECTURERS IN TERTIARY INSTITUTIONS IN NORTH-EAST STATES OF NIGERIA

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Introduction

An office is that part of a business that handles information. It is the central point of activity, which deals with operation, accounting, payroll, billing, among others. An office may also be referred to as a location, usually a building or portion of a building, where an organisation conducts its business. It encompasses the official records, documents and the business papers of the organisation (Okeke & Osuala, 2006). Office work consists of activities such as word processing, document preparation, filing, and simple computations, checking of information, inter-office communication and external communication. Such processes within the office are usually stimulated by the arrival of a request for service such as an order, a bill, a complaint, a message to order more materials (Thomas, 2006). Office works have been affected by technological development since the days of industrial revolution. Offices are involved in some ways in the productivity of the organisation with the assistance of human capital and office information systems.

Office information system is a course in tertiary institutions that is specifically designed to prepare students to participate fully in a global developing technological society (NBTE, 1989). Office Information Systems (OISs) is defined as a “diverse set of technological tools and resources used to communicate, create, disseminate, store and manage information (Tesch, Murphy & Crable, 2006). Brain and Stacey (2010), referred to office information systems as office automation systems that combine various technologies to reduce the manual labour required in operating an efficient office environment and to increase productivity. Office Information Systems are technologies that include fax, voice mail, e-mail, scheduling software, word processing, desktop publishing, image processing, records management, and reprographics distribution, among others, which are useful at all levels in an organisation. Changes in technologies have had a major impact on the

office procedures and communication since the start of the twentieth century. The ability to use technology is an essential skill in the ever changing workforce of the twenty-first century. The modern office has changed dramatically since the 1990s. Offices in today's society are transmitting information through electronic mail, teleconferencing, as well as other electronic devices. Communication through technology is just as important as oral and written communication in the work environment. Technology continues to play a vital role in transforming the office environment. Technology links employees who work in teams in the business world. These technologies facilitate communication among people in organisations. Workers need to be technologically literate in order to compete in an ever changing world of work.

Office workers make use of office information systems components to carry out their office activities for faster and better output. Office workers in this study refers to employees who were employed to work in organisations, institutions, either as managers, secretaries, accountants, clerks, and teachers among others. These office workers are graduates of tertiary institutions that offer business education and they are groomed by office education lecturers. Office education lecturers in tertiary institutions are part of the business educators that specialize in office education and office functions. They are lecturers of business courses in tertiary institutions who participate in graduating students who may work as information managers, office managers, among others. Preparing students for employment and beyond in this technological age requires that the lectures should be current and conversant with new technologies in their field of study. The lecturers surveyed possessed the requisite degrees, knowledge, skills and experiences necessary to attend to issues that concern this research work and are currently teaching office information systems in tertiary institutions. The component of office information systems according to Brain and Stacey (2010) are grouped into electronic publishing systems (EPS), electronic communication system (ECS), electronic collaboration systems (ECS), and image processing systems (IPS). For the purpose of this research work only electronic communication system, electronic collaboration systems and image processing systems were handled.

Electronic communication systems are cross functional information systems that enhance communication among the office workers. O'Leary O'Leary (2011), stated that skills necessary in teaching electronic communication systems include videoconference, electronic mail (e-mail), voice mail, facsimile. Videoconferencing is a technology used to conduct real time, face to face meeting between officials in the same organisation at different organisational locations. Furthermore, videoconferencing combines

audio communication with live video, allowing team members to see each other, demonstrate product, and transmit other visual information. Bovee and Thill (2010), pointed out that videoconferencing can take place using personal computer based systems over the World Wide Web (WWW) or through dedicated network with specially built up rooms. Videoconferencing is one the electronic communication systems through which people in different location can have meeting and as such see and hear each other by using computers and communications gadgets without physical travelling. Both lecturers and students of office education require the skills in order to teach effectively and to be relevant in today's modern offices. In today's modern office also, e-mail has become the most commonly means of communication.

Electronic mail (e-mail) is one of the electronic communication systems components. Agomuo (2005) defined electronic mail as a form of information interchange in which messages are sent from one personal computer to another. Bansal (2008), stated that e-mail is the electronic equivalent of postal mail and it is one of the most widely used features of the internet. Its skill is essential in office for easy transfer or exchange of ideas. E-mail skills enable the office worker to list mail received, print or save a document as a file, automatically attach signatures at the end of letters, send replies with portions of the original message in reply, forward mail by simply re-addressing it, attach other files to mail and send a document to any number of persons at once (O'Brien & Marakas, 2011).

Voice mail is another computer based communication system that allows users and subscribers to exchange personal voice messages, to select and deliver voice information and to process transaction relating to individuals, organisations, products, services, using an ordinary telephone. In other words, voice mail is an electronic communication system in which spoken messages are recorded or digitalised for later playback to the intended recipient. Byenon (2009), asserted that voice mail skills allow people to receive and leave messages by executing the appropriate command in the e-mail system. Voice mail skills can be received without inconveniencing or frustrating the caller, saving previous time for both the caller and the called. The skills necessary in voice mail include recording, storing, playback, and print, among others.

Facsimile, which is also known as "fax" is the transmission of graphic communications from one location to another. A facsimile machine is both a scanner and a recorder. The image to be copied is scanned (read) at one location, converted to an electronic signal, and sent to a machine at another location where the signal is translated into an image and recorded. This is sometimes known as telecopy. These machines can be in the same building or

in different hemispheres of the world (Brain & Stacey 2007). Brain and Stacey (2010), emphasized that electronic communication systems make it easy for people to conduct virtual meeting that does not entail physical travelling.

Electronic Collaborative Systems are office information systems that enable office workers such as managers, secretaries, administrators among others, to communicate without necessarily coming together (Thill & Bovee 2007). Brain and Stacey (2007), stated that electronic collaborative system is a software that allows multiple individuals to edit and make comments on a document without destroying the original content. They also pointed out varieties of skills necessary in the utilization of electronic collaborative systems to include electronic meeting system, electronic work systems, teleconferencing, and telecommuting, among others. Brain and Stacey went further to state that electronic collaborative system unit makes it easier for individuals to communicate with their offices while at home, which is known as telecommuting. Telecommuting skills if acquired can be a cost saver for employers, for instance, cost for office space will be reduced.

Telecommuting is the most revolutionary effect of computers and the increased use of internet and intranets. Therefore, using computers linked to the company's network, employees working at home can transmit their work to the office and get back responses from their subordinates. Dymock and Hobson (2002), emphasized some benefits of telecommuting to include reducing traffic congestions, energy consumption, and air pollution. It increases productivity because telecommuters may experience fewer distractions at home than in the office, reduced absenteeism, improved teamwork and the labour pool expanded because hard-to-get employees do not have to uproot themselves from where they want to live, costs for office space, parking insurance and other overhead costs are also reduced.

Teleconference on the other hand, is a telephone meeting among two or more participants involving technologies more sophisticated than a simple two-way phone connection. It can be an audio conference with one or both ends of the conference sharing a speaker's phone. Teleconference allows the distant sites to interact with each other and the teaching end through phone, fax and e-mail. Ojukwu in Ugwuanyi (2007), emphasized that telecommunication skills include skill to manage mail services, skill to fax messages, skill to operate the technology facilities, skill to send and receive messages through computer networks, skill to send and receive correspondence by telex, mobile phone among others. For a business education student to be effective and eligible to the collaboration system skills the teachers should teach the students with current office technologies, teleconferencing emerges as an appropriate technology for reaching varied

clientele groups in diverse settings. With the advancement in communication technologies and reduction costs, various organisations are opting for this technology in their education and training programmes.

Dymock and Hobson (2002), emphasized that the benefits of teleconferencing are many, just as they are with web conferencing which include: helping business organisations to save money on travelling expenses and at the same time increasing the productivity of business by providing companies with the ability to communicate via telecommunications methods, allowing business organisations to hold meetings over long distances, conducting business briefings, employee training sessions, workshops, seminars, lectures and many more among participant who might otherwise be difficult to gather together in one place at the same time. Information exchange is made easier and faster during business meetings between offices, employees or from one business location to another. It comes in many varieties so that one can choose the best that can meet the need of the users to communicate through instant messaging systems and privately designed chat rooms during discussions, meetings, planning of projects, and among others.

Electronic Image Processing Systems is also one the components of office information systems which involves processing or altering of an existing image in a desired manner. An image is an array of picture elements. Image can be defined as a two-dimensional signal that is analogue or digital that contain intensity or colour information arranged along an x and y spatial axis (Bovee and Thill 2010). Image processing system is a technique in which the data from an image are digitized and various mathematical operations applied to the data, generally with a digital computer. One can create an enhanced image that is more useful or pleasing to a human observer or to perform the interpretation tasks usually by human (Bovee & Thill 2010). This is much easier today than five years ago. The internet and other sources provide countless images in standard formats.

O'Brien (2003) stated that some of the image processing systems skills are as follows; using freehand drawing tools - pencil, straight and curved lines, using paintbrush, paint box/fill with colour, spray can/airbrush, and eraser, selecting objects with selection tool. Brain and Stacey (2010), explained that image processing systems skills enable the office workers especially those in image designing to capture and process images in different portraits. Dymock and Hobson (2002) also outlined some important skills needed in image processing systems unit as skill to delete selected objects, copies/duplicates graphic elements, and using line properties such as thickness/colour. Using flips, rotate objects etc are some image processing skills. On the other hand, multi-media system is the field concerned with the computer, controlled

integration of text, graphics, drawings, still and moving images (video), animation, audio and any other media where every type of information can be represented, stored, transmitted and processed digitally (Stevenson, 2000).

The fundamentals of image processing include transformations such as gray scale and negative conversion, filtering, enhancement, histogram equalization, histogram matching and thresh folding. These and additional operations can be performed in image lab, having in most cases a rich set of parameters for customization. The following image processing commands are provided: basic operations (resize, magnify, rotate, and translate), colour handling (gray scale, colour enhancement, colour reassignment, colour model), histogram techniques (image histogram, histogram equalisation, and histogram matching).

Image processing system skills enable office administrators, managers, secretaries among others to create a simple slide, show text images, insert slides, choose appropriate slide design and layout, add sounds, create a master slide template, understand that a presentation is clear, concise and logical, understand navigation buttons/hyperlink, recognise elements of a multi-media presentation, among others (Sage and Unser, 2003). To provide relevant job skills to office education students, it is necessary for educators to seek the valuable skills from business and industry so that their graduates will not be a burden to the nation due to lack of employment as a result of not acquiring relevant job skills. The teacher stands as a model for problem solving, therefore, teachers should be able to demonstrate the skills for students to learn. It is, therefore important to determine the office information systems skills possessed by business education lecturers because lecturers should possess high level of performance of the skills in electronic communication system, electronic collaboration systems and image processing systems to be able to teach office information systems in tertiary institutions effectively and produce competent workforce in this technological era.

The major purpose of this study, therefore, was to determine the office information systems skills possessed by office education lecturers in tertiary institutions in Northeast states of Nigeria. Specifically, this study sought to determine:

1. Electronic communication systems skills possessed by office and management education lecturers in tertiary institutions.
2. Electronic collaborative systems skills possessed by office and management education lecturers in tertiary institutions.
3. Electronic image processing systems skills possessed by office and management education lecturers in tertiary institutions.

The following research questions were answered in the study:

1. What are the electronic communication systems skills possessed by office and management education lecturers in tertiary institutions?
2. What are the electronic collaborative systems skills possessed by office and management education lecturers in tertiary institutions?
3. What are the electronic images processing systems skills possessed by office and management education lecturers in tertiary institutions?

Method

This study adopted a descriptive survey research design. The study covers the six states in North-East States of Nigeria. The population for the study was 136 lecturers in fourteen public universities, polytechnics and colleges of education in North-East States of Nigeria that offer Business Education programmes. North – East was calm when this study was conducted. There was no sample for the study since the population was manageable. The instrument for data collection was a structured questionnaire titled Office Information Systems Skills Questionnaire (OISSQ) on a five point scale with 35 items developed by the researchers. The rating scale of Highly possessed (HP=5), Possessed (P=4), Averagely Possessed (Ap=3), Possessed a Little (Pl=2) and Not Possessed (NP1) were used. The instrument was divided into two parts A and B. Part A sought information on demographic information of the respondents, while Part B had three sections A – C. Section A sought information on electronic communication systems, section B sought information on electronic collaboration skills, while section C sought information on electronic image processing systems skills possessed by office and management education lecturers in tertiary institutions. The instrument was validated by three experts from the Department of Business Education, University of Nigeria, Nsukka. Reliability coefficient of 0.89 was obtained using Cronbach Alpha formula. The instrument was administered to the respondents by the researchers and with the help of three research assistants who were earlier briefed on how to do the distribution and collection of the copies of the questionnaire. Mean and standard deviation were used to answer the research questions

Results

Table 1
Mean Ratings and Standard Deviation of Respondents on Electronic Communication Systems Skills Possessed by Office and Management Education Lecturers

S/N	Statements	\bar{X}	SD	Decision
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1	send message using e-mail	2.65	0.79	AP
2	communicate using teleconference facilities	2.56	0.88	AP
3	forward the voice conversation message using e- mail	3.31	0.87	AP
4	record voice conversation	2.55	0.85	AP
5	exchange electronic message across computer	2.46	0.80	PL
6	download messages to the user's personal computer	3.86	0.63	P
7	attach files	3.58	0.83	P
8	chat and discuss in group via internet	3.71	0.77	P
9	click on window start button to display applications	4.45	0.94	P
10	hibernate for faster opening of the window	4.14	0.80	P
Grand mean and standard deviation		3.33	0.73	AP

The results revealed that nine out of ten listed skills had their Means ranged from 2.55 to 4.45 which fall within the acceptance level. Thus, this indicated that the listed skills were possessed by the office and management education lecturers. The standard deviation also revealed that respondents were not apart in their responses.

Table 2
Mean Ratings and Standard Deviation of Respondents on Electronic Collaborative Systems Skills Possessed by Office and Management Education Lecturers

S/N	Statements	X	SD	Decision
1	proof read messages	4.07	0.82	P
2	use various printer designs, copy rates and print densities	3.94	0.79	P
3	access virtual briefcase	1.35	0.70	NP
4	use thesaurus to search for words	2.80	0.65	AP
5	surf the internet	3.82	0.97	P
6	store information in files	3.64	0.74	P
7	use projector scheduling	4.00	0.63	P
8	edit an existing statement	3.66	0.74	P
Grand mean and Standard Deviation		3.41	0.48	AP

The result presented in Table 2 shows that the majority of the skills listed on electronic collaborative systems ranged from 2.80 to 4.07. The result further indicated that the skills were possessed by the office and management education lecturers except item three on accessing virtual briefcase. The standard deviation also revealed that the respondents were very close in their responses.

Table 3
Mean Ratings and Standard Deviation of Respondents on Electronic Images Processing Systems Skills Possessed by Office and Management Education Lecturers

S/N	Statements	X	SD	Decision
1	Crop images	1.30	0.59	NP
2	pick the picture from net and display on the clipboard	1.37	0.69	NP
3	create visual presentations	1.33	0.62	NP
4	click on the diagram to text	1.26	0.56	NP
5	compress an image to reduce the file size	1.59	1.00	NP
6	use overhead transparencies	2.50	0.77	NP
7	use slide show	2.15	0.61	PL
8.	use charts, text and draw objects	1.21	0.44	NP
9.	format images	1.04	0.21	NP
10	share documents between two plat forms	1.02	0.19	NP
11.	use reference software	1.07	0.28	NP
12	draw using key command	1.47	0.54	NP
13	locate the insertion point	1.26	0.44	NP
14	use multimedia to capture images	1.22	0.41	NP
15	change background	1.38	0.49	NP
16	present animation	1.55	0.51	PL
17	modify textbox	1.89	2.88	PL
Grand mean and standard deviation		1.45	0.18	NP

The Means of the skills listed on electronic image processing ranged from 1.02 to 2.50. The result indicated that the lecturers did not possess the skills listed on the electronic image processing systems. This was further strengthened by the result of the standard deviation which indicated that the responses of the respondents were not apart.

Discussion

The result presented revealed that five out the ten listed skills on electronic communication skills were rated possessed, four were rated averagely possessed while one was rated possessed a little. The extent of possession of these skills showed that lecturers of office and management education still require some form of training in office electronic communication systems. This finding is in line with the view of O' Brein and Marakas (2010), which showed that electronic communication systems across functional information systems that enhance communication systems among office workers. The finding also agreed with the view of O'Leary O'Leary (2011) which showed that skills necessary in teaching electronic communication systems include videoconference, electronic mail, voice mail and facsimile. Again, Bovee and Thill (2010) found that videoconferencing is one of the electronic communication systems through which people in different locations can have meeting and as such see and hear each other by using computers and communication gadgets without physical travelling. Lecturers' skills possessions will enable them impart needed electronic communication systems skills to their students. Osuala (2004) is of the view that vocational education will be effective if teachers had had successful experience in the manipulative skills.

Furthermore, the analysis of the data on electronic collaboration systems skills possessed by office and management education lecturers in tertiary institutions. The results showed that six skills were rated possessed. One item on accessing virtual briefcase was rated not possessed and item 4 on the use of thesaurus was rated averagely possessed. A grand mean of 3.41 indicated that the skills were averagely possessed by the lecturers. Furthermore the result revealed that lecturers have not highly possessed the skills. Therefore, there is still need for retraining of office and management education lecturers to help them update their skills on electronic collaboration systems. This finding is in line with views of Brain and Stacey (2010) who explained that electronic collaboration systems skills enable office workers to work through a document to delete, insert, search and replace text and other activities such as creating, formatting, printing and saving of document without much stress. The finding of Brain and Stacey (2010) further showed that electronic collaborative system unit makes it easier for individuals to communicate with their offices while at home, which is known as telecommuting. The finding is also in line with the view of Dymock and Hobson which showed that telecommuting increases productivity as telecommuters may experience fewer distractions at home than in the office,

reduced absenteeism, improved teamwork, reduced costs for office space and other overhead costs

More so, the result indicated that 14 out of seventeen listed skills on electronic images processing were not possessed by the respondents. Three skills were rated as possessed a little. The result indicated that office education lecturers lack skills in electronic images processing. The reason may be attributed partly to lack of funds for provision of modern technologies by the institutions, non-organisation of in-service training and lack of interest on the part of some lecturers. Ugwuanyi (2007), opined that office education lecturers should be retrained in office information systems especially in image processing system to enable them fit into the technological changing world.

Conclusions

This study was carried out to determine the office information skills possessed by office and management education lecturers in tertiary institutions in North-East States of Nigeria. It was found that electronic communications systems skills and electronic collaboration systems skills were averagely possessed by the lecturers. Whereas in electronic images processing, the respondents do not possess any of the listed skills. The findings revealed that skills gap existed in office information systems skills required by the lecturers of this study for effective teaching. Based on the findings of this study, it was concluded that office and management education lecturers need improvement in office information systems for effective teaching of office information systems components. This is necessary in order to teach students of office and management education who will be office technologist, office managers, office assistant, office education lecturers among others.

Recommendations

Based on the findings of this study and the conclusions drawn, the following recommendations were made, namely:

1. Tertiary institutions should be equipped with modern information systems to help the lecturers acquire skills that will enable them remain relevant.
2. Retraining of office and management education lecturers in office information systems for effective teaching in tertiary institutions.

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