

ASSESSMENT OF ICT APPLICATION COMPETENCIES POSSESSED BY OFFICE TECHNOLOGY AND MANAGEMENT STUDENTS FOR JOB PREPARATION IN DELTA STATE

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ABSTRACT

This study was carried out to assess ICT application competencies needed by office technology and management students for job preparation in Delta State. Three research questions were raised to guide the study while two null hypotheses were tested at 0.05 level of significance. The study adopted the description survey design. Data were collected for the study through the administration of validated questionnaire on the respondents. Pearson product moment correlation was used. The findings of the study revealed that office technology and management students in polytechnics in Delta State are equipped to a low extent in desktop publishing application while they are highly equipped in spreadsheet and word processing, for job preparation. The implications of the findings have been discussed, conclusion drawn, and recommendations were made.

INTRODUCTION

During the first half of the 20th century in Nigeria, office functions were performed by manually driven machines and work was successfully done because the volume of it was small. As time goes by, the need for secretarial and other qualitative record keeping tasks began to increase due to increased economic activities in the country. Consequent upon this, there arose the need for different types of machines to be used for effective performance of such functions. The office was and still remains designated as a place where clerical functions are performed, data processed and information managed. The growing importance of the office is to a large extent, due to the information explosion that is sweeping across the society.

The human ability alone became insufficient to cope with the performance of these activities. Today, the world is moving to an absolutely paperless office which requires that all information be created, transmitted and stored electronically and broad skills and ability to handle multiple tasks are of paramount importance. This advancement in technology has helped to enrich and widen the science of secretarial practice in terms of speed, accuracy and variety also known as automation of office task. Office automation means the use of the computer and other electronic devices to perform office functions. Dictating, reproduction and storage

machines, copiers and printers, microfilm, fax, electronic mail, voice mail, telecommunicating and teleconferencing machines make for effective performance of office functions possible.

The development of office technology and management by the National Board for Technical Education was a response to agitation by students who studied secretarial studies which was not in line with emerging challenges caused by ICT. Office Technology and Management (OTM) programme is designed to meet the demands of a dynamic and computerized workplace, with the aim of producing highly proficient breeds of administrative personnel capable of coordinating high office information system, and provide technical skills needed in modern offices.

According to NBTE (2004), the objective of the OTM programme, among others, is to equip students with effective work competence to fit properly into the office of any organization and perform professionally the functions of a secretary which among others include relating the functions of the office to the whole organization, attending meetings, providing information as may be required. Others include making accurate records of proceedings, filing and retrieving of information taking appropriate action independently when faced with challenging secretarial office problems, showing personal qualities and attributes conducive to tolerance and co-existence with the work group.

The curriculum focuses is on combining office information technical skills with adequate and relevant business knowledge in solving organizational problem. The target is to produce a hybrid of administrative professionals who will be capable of meeting the dynamic and intensely computerized work place.

What the above statement points to is that, office technology and management students are expected to be equipped with relevant skills and competencies in computer and other electronic gadgets needed to function effectively in the modern office. The commission on information and communication technology (2011) groups' information and communication technology competencies needed for effective training of office secretaries in the office in clusters of word processing and spreadsheet processing application. Others include PowerPoint presentation, database management and internet application.

Each of these areas of competencies consists of a body of knowledge skills and abilities which the secretary needs in order to be effective and efficient in office work. For instance, word processing competencies cover the ability to use a word, word processor, create files and folders, use input device to enter and edit texts accurately, manipulate information (opening, copying, culting, pasting, saving and deleting files) preview, point and save documents among others. Word processing skills are required for almost every office function of the secretary.

Ndukwe (2005), postulated that presentation done with PowerPoint can equally add audio and visual effects, making them look professional or trendy to meet the standard of presentations. This application is mainly used when presenting seminars, conferences, workshops, including training and development programmes. Electronic spreadsheet processing application is another aspect of information and communication technology application wduich secretaries use in modern offices.

Word processors and spreadsheet are different power houses in the sense that word processors allows people to create and edit their documents whereas spreadsheet allows them to organize and analyze data into lists and tables. With spreadsheet application such as

Microsoft Excel (MS-Excel), information is easily displayed and people can inset formulas to work with data.

Desktop publishing is another area of ICT applications for job preparation of office technology and management students. Desktop publishing is a skill that can be used for the creation of documents using page layout software to combine text and graphics to produce documents such as newsletters, brochures, posters, books and so on (Azuka, 2010). It has made a substantial revolution in the quality and ease of publications by saving the resources needed to produce a document and reduce the turnaround time in traditional publishing process. Okoro (2009) posited that desktop publishing skills include the skill to open a desktop publishing environment, the skill to know and use documents, produce a simple publication, set up page size/orientation and margins of a filter, produce good and attractive text frame/area etc.

Nweke (2013) assert that ICT facilities and applications for training of OTM students in many polytechnic in the South Eastern Nigeria is highly inadequate for OTM graduates to face the challenging demands of the new face of technology that keep unfolding endlessly. This implies that there may be relationship between job activities. As offices globally are undergoing drastic changes on frequent basis due to the emergence of ICT and related technology, no organization, public or private working with these technologists would want to offer appointment to graduate of OTM with only manual typing skills.

The need to use ICT application for job preparation for OTM students is not only a challenge to the various institutions of higher learning, but a task that needs to be accomplished at all levels mainly ND, HND and Degree levels. Ezenwafor (2012) argued that creating a document means keying-in text to produce a manuscript or produce a document with suitable format and error free. Yet, the extent of use of information and communication technology application for job preparation of office technology and management programme students has remained uncertain, a situation which this study seeks to assess.

Statement of the Problem

The information of Office Technology and Management (OTM) programme with emphasis on Information and Communication Technology (ICT) applications for instruction was intended to prepare competent OTM graduates who would function effectively in information technology based organizations and institutions. The innovations demand greater responsibilities and improved performance on the part of OTM graduates in view of their vital roles in processing office information. This implies that today's office workers who are unable to cope with the demands of office technology will become irrelevant, low priced or even unemployed as the case may be. To be employable or efficient in an automated office, Ihiemekpen (2009) suggested that an OTM graduate must be well equipped in various computer applications and skillful in the use of other modern office gadgets.

The researchers is worried that if the current situation of OTM students in polytechnics in Delta State relative to use of computer applications is not empirically determined, graduates of the programme may not be able to cope with the technological demands in modern offices which may invariably affect their appointment in the world of work. If this happens, unemployment explosion will become the order of the day among OTM graduates. It is with this backdrop that this study on assessment of use of ICT applications for job preparation of office technology and management students in polytechnics in Delta State is undertaken.

Purpose of the Study

Purpose of this study was to determine the Information and Communication Technology (ICT) applications competencies possessed by office technology and management students for job preparation in Delta State.

Specifically, the study sought to:

1. Determine how OTM students are well equipped for job preparation with word processing application in polytechnics in Delta State.
2. Determine how OTM students are well equipped for job preparation with spreadsheet application in polytechnic in Delta State.
3. Determine to what extent OTM students are equipped for job preparation with desktop publishing application in polytechnics in Delta State.

Research Questions

1. To what extent are OTM students equipped for work preparation with word processing application in polytechnics in Delta State.
2. To what extent are OTM students equipped for work preparation with spreadsheet application in polytechnics in Delta State.
3. To what extent OTM students are equipped for job preparation with desktop publishing application in polytechnics in Delta State.

Research Hypothesis

The following null hypotheses were tested at 0.05 level of significance.

1. There is no significant different between the mean rating of male and female students on the use of information and communication technology applications for job preparation of office technology and management students in polytechnics in Delta State.
2. There is no significant difference between the mean rating of ND and HND OTM students on the use of information and communication technology applications for job preparation of office technology and management students in polytechnics in Delta State.

REVIEW OF RELATED LITERATURE

Theoretical Framework – Constructivist Theory of Learning Constructivism is basically a theory based on observations and scientific study about how students learn. Constructivism is a type of learning theory that explains human learning as an active attempt to construct meaning in the world around us. It is a learning theory that indicates that learning is an active process in which the learner builds knowledge and understanding from individual experiences.

Competency Theory

Azemikha (2005) defined competency as “The innate quality which needs to be upgraded by the learners both conceptually and physically”. Conceptually, it needs to be developed in the minds of the learner based on the constituents of competence (understandings and attributes), and physically developed and perfected by performance (based on performance criteria) leading to a balanced hands and minds equilibrium.

Azemikhah (2005) posited that the competency, development process in the model is including the mental reflection process and the physical action process. These dual process transform the learners by using skills as the interplay elements and this transformation relies on

individual construction of meaning so that experience and knowledge are in equilibrium (Stevenson, 2000).

Concept of Office Technology and Management (OTM) Office technology and management is information systems management and information system profession, which relate the function of information system to organizational structure. According to Lawrence (2010), a computer is a machine that assists mankind to solve different types of problems because it takes in data and instructions processes them as instructed and produces definite results.

ICT as the Key Office Equipment Today

The commission on information and communication technology (2011), grouped basic ICT applications needed for effective work performance in the office in clusters of word processing, spreadsheet application, PowerPoint presentation, database management, desktop publishing application and internet application.

METHODOLOGY

Three research assistance were used in the administration of the questionnaire. Descriptive and inferential statistics of mean and standard deviation were used to answer the three research questions, t-test statistics were used to analyze the hypotheses at 0.05 level of significance.

Research Question 1

To what extent are OTM students equipped for work preparation with word processing application in polytechnics in Delta State?

To answer research question 1, the mean and standard deviation were calculated from the frequency distributions of the respondents. The result is shown in table 1.

Table 1: Respondents' Rating of Word Processing Competencies

S/N	Word Processing Competencies	X	SD	Remark
1	Accessing the application programme	3.20	0.81	High extent
2	Adjusting document margins	2.90	0.58	High extent
3	Creating and organizing computer files and folders	2.80	0.88	High extent
4	Using storage devices (hard disk, diskette, CD, flash etc.) to store and share files	3.80	0.99	High extent
5	Correctly using programme facilities to edit documents	3.40	0.82	High extent
6	Inserting pictures and symbols into a document with correct margin and layouts	3.60	0.89	High extent
7	Changing font type, style and size in a document	3.60	0.94	High extent
8	Creating and formatting a table in a document	3.00	0.96	High extent
9	Using word art to create and shape text in a document	3.80	0.86	High extent
10	Correctly naming and renaming files	2.70	0.82	High extent
11	Using suitable commands to save files	3.60	0.99	High extent
12	Previewing and printing whole or part of documents	3.60	0.78	High extent
13	Suitably using bullets and numbers for itemization in a document	3.00	0.88	High extent
	Grand Mean	3.00	0.90	High extent

Source: Field Survey (2019)

The data in table 4 revealed how OTM students are equipped with word processing application competencies for job preparation in polytechnics in Delta State. As can be seen on the table, all the items have mean ratings greater than 2.50. This implies that the respondents considered themselves equipped to high extent with all the items on word processing application competencies for job preparation. The range of standard deviation (0.81 – 1.02) shows that the respondents were not far apart in their responses.

Research Question 2

To what extent are OTM students equipped for work preparation with spreadsheet application in polytechnics in Delta State

To answer research question 2, the mean and standard deviation were calculated from the frequency distributions of the respondents. The result of the computation is shown in table 2

Table 2: Respondents' Rating of Electronic Spreadsheet Competencies

S/N	Spreadsheet Competencies	X	SD	Remark
14	Opening a spreadsheet application software	3.70	0.88	High extent
15	Adjusting column's width and row's height	3.80	0.96	High extent
16	Entering and sorting data in worksheet	3.20	0.89	High extent
17	Performing calculations in a worksheet	3.20	1.01	High extent
18	Naming/renaming a worksheet	3.00	1.00	High extent
19	Merging and centering data in a worksheet	3.60	0.98	High extent
20	Inserting borders in a worksheet	3.90	1.02	High extent
21	Deleting borders in a worksheet	3.80	0.89	High extent
22	Charting a worksheet	2.50	0.94	High extent
23	Previewing and printing whole or part of a worksheet	3.20	0.86	High extent
24	Saving a workbook	2.86	0.77	High extent
25	Working with multiple worksheets	3.10	0.89	High extent
26	Inserting page numbers in a worksheet	2.88	0.66	High extent
27	Using the fill handle to speedily enter data in a worksheet	2.20	0.68	High extent
	Grand Mean	3.09	0.94	High extent

Source: Field Survey (2019)

Table 2 shows that spreadsheet application competencies for job preparation of office technology and management students in polytechnics in Delta State. The data shows that the respondents considered themselves equipped to high extent with all the competency items on spreadsheet for job preparation in Delta State except using fill handle to speedily enter data in a worksheet which was rated low extent. The grand mean of 3.09 further confirmed that the students were of the opinion that they were equipped to high extent with spreadsheet application competencies for job preparation in Delta State. The close range of their standard deviation indicates that both ND and HND students were homogeneous in their responses.

Research Question 3

To what extent are OTM students equipped for work preparation with desktop publishing application in polytechnics in Delta State?

To answer research question 3, the mean and standard deviations were calculated from the frequency distributions of the respondents. The result of the computation is shown in table 3.

Table 3: Respondents' Rating of Desktop Publishing Competencies

S/N	Desktop Publishing Competencies	X	SD	Remark
28	Opening a desktop publishing application	2.80	0.99	Low extent
29	Creating quality and attractive text areas and setting up column widths	2.30	0.94	Low extent
30	Acquiring text and images from different sources and placing them in a publication	1.60	0.87	Low extent
31	Applying alignment and justification	2.20	0.78	Low extent
32	Resizing image, fitting headline text to page width and balancing columns	2.00	0.83	Low extent
33	Changing title text and text background color	1.80	0.86	Low extent
34	Applying appropriate font and size to text	2.20	1.03	Low extent
35	Creating a logo in a publication document	2.00	1.00	Low extent
36	Applying and adjusting color in a text or image	1.60	0.89	Low extent
37	Saving and printing a publication documents	1.80	0.78	Low extent
	Grand Mean	2.24	0.90	Low extent

Source: Field Survey (2019)

The data in table 3 relates to desktop publishing competencies for job preparation of office technology and management students in polytechnics in Delta State. Nine out of ten competency items on desktop publishing were considered high extent with mean rating above 2.50 while the remaining one item was rated high with a mean rating of 2.80. the grand mean shows that student of OTM were not well equipped with desktop publishing application competencies for job preparation in Delta State. The standard deviation ranging from 0.78 – 1.03 shows that the respondents were not scattered in their responses on various items.

Discussion of Findings

Discussion of results for this study is based on the three research questions raised and two hypotheses formulated for this study.

The analysis of question 1 as shown in table indicates that OTM students considered themselves equipped to high extent with word processing application competencies for job preparation in delta state. Word processing application competencies include loading word

processing application, creating files and folders, saving, previewing and printing, using graphic designs, applying leader and footer to document etc. for effective work preparation in modern office.

On the study relating to research question 2 as shown in table reveals that, OTM students rated themselves equipped to high extent with electronic spreadsheet competencies for job preparation. The result of analysis of research question 3 relates to desktop publishing competencies for job preparation of office technology and management students in polytechnics in Delta State. Nine out of ten competency items on desktop publishing were considered low extent with mean rating below 2.50, while the remaining one item was rated high extent with a mean rating of 2.80. The grand mean shows that students of OTM were not well equipped with desktop publishing application competencies for job preparation in Delta State.

Summary of Findings

This study was conducted to assess ICT application competencies possessed by office technology and management students for job preparation in polytechnics in Delta State. Specially, this study was carried out to ascertain word processing, spreadsheet and desktop publishing.

The major findings from the analysis of data collected from the study are as follows:

1. Office technology and management students were equipped to high extent with word processing application for job preparation in polytechnics in Delta State.
2. Office technology and management students were equipped to high extent with spreadsheet application for job preparation in polytechnics in Delta State.
3. Office technology and management students were equipped to low extent with desktop publishing application for job preparation in polytechnics in Delta State.

CONCLUSION

Based on the findings of this study, it is therefore concluded that office technology and management students in polytechnics in Delta State are equipped to high extent with information and communication technology in the areas of word processing and spreadsheet application. However, office technology and management students are equipped to a low extent in desktop publishing application for job preparation. The implication of this is that employers of labour may not consider office technology and management graduates appropriate when the job under consideration requires the use of desktop publishing skills and competencies.

RECOMMENDATIONS

Based on the findings of this study, discussion and conclusion drawn from it, the following recommendations are made:

- Nigerian polytechnics should provide necessary instructional facilities such as the ones used in the automated offices and trained personnel for the proper training of skilled manpower to meet the standards set by the employers of secretaries in automated office.
- Desktop publishing application and other ICT packages in the OTM curriculum should be emphasized in order to equip students with all the competencies that will ensure effective work performance on graduation.

- Office laboratories in OTM departments should be equipped with modern office equipment needed for effective teaching and learning desktop publishing technology. This is to ensure that knowledge acquired in school by OTM graduates would be relevant in the business offices where they are expected to work.
- The youth should be encouraged to take up OTM courses as this programme endows learner with creativeness to survive in today's highly competitive business environment.

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