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E-Office Computer Application Competencies Required of Office Technology Education Graduates by Employers in Public Organizations in Edo and Delta States, Nigeria

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Abstract
Employers in public sector companies in Edo and Delta states in Nigeria requested this research to determine the e-office computer application competencies needed by graduates of office technology education programs. To find out what e-office computer applications are needed by public sector employers in Edo and Delta states, we conducted a survey. The study was led by a single research topic and a single null hypothesis that was evaluated at the 0.05 level of significance. This study was conducted using a survey methodology. In Edo and Delta States, the sample size was 262 employers in public organizations. The population was small enough that no sampling was necessary. A 16-item structured questionnaire was utilized to gather the data. Several specialists in business education and a test-and-measurement expert evaluated the instrument's validity. Test re-test approach was used to confirm the instrument's dependability, and Pearson Product Moment Correlation Coefficient was used to get the coefficient of reliability. It is safe to say that the coefficient of trustworthiness is at least 0.78. For data analysis, the mean and the t-test statistics were utilized, respectively, to test the null hypothesis. The findings of the study showed that the identified competencies such as understand computer and its related components, trouble shoot the computer where necessary, use the Microsoft office packages, connect the computer to printer, scanner etc. were deemed required by employers. As a result of the findings, it was suggested that the identified competencies be used to enhance the office technology education curriculum and that sufficient computer systems with internet facilities be made available for the teaching and learning of office technology education students in order for them to successfully transition from school into the workplace.
Keywords:competencies, office technology education, employers, office automation.
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Introduction

The business environment is such a flexible environment that is always responding to changes especially in meeting customers' satisfaction. Such changes currently are occasioned by factors such as globalization, rapid technological change, and intense competition among organizations, companies and countries. The rapid changes in modern technology has led to the emergence of different kinds of electronic, digital, automatic, intelligent and integrated office equipment which enable office workers to build and transmit information conveniently and efficiently. According to Chopra and Chopra (2006), the influx of electronic technologies in the office has transformed the work-habits of office managers as well as other office workers greatly in such a way that old habits and practices such as travelling, meetings, duplicating and reprographics are giving way to entirely new practices. Today most business transactions are now automated or done online. Office automation also known as electronic office (e-office), the modern office (Murray 2003, Agomuo 2014, Oliverio, Pasewark, and White 2007). E-office, in any form, is a term used to describe the growing use of computer systems to perform a variety of office tasks such as data processing, communication, accounting, and e-mail and document creation, storage and transmission. E-office has resulted in multi-tasking or integration of some major functions of the office activities. Office education, office technology education, or secretarial education is an aspect of business education training that prepares its graduates for office career as secretarial staff. The secretary or office technologist seats at the center of the office operation and undoubtedly as a result of the adoption of information and communication technology to business operation the functions of secretaries have extended beyond their primary role of taking dictation and transcribing, receiving visitors, telephone calls, to much more complex

functions of multi-tasking of office functions. Today knowledge of basic computer application is necessary for all with greater demand on the secretarial profession.

A person's ability to execute well in a certain activity is referred to as a competency. Competencies, according to Achilike and Okwuauso (2001), are the ability of knowledge, attitudes, and facts to exert power and authority needed to complete tasks. A person's competences are defined by Ojukuw & Ojukwu (2002) as the set of abilities and characteristics needed to do a certain activity. Competency is more than simply a collection of abilities and talents. Complexity management is the capacity to fulfill demands in a particular scenario by using psychological resources (such as knowledge and attitudes) that have been developed over time via training and practice.

Computer application competencies are the abilities and knowledge which allow one to use computers and related technology. Knowledge of how to use computers and their peripherals or infrastructure is required for the computer operations competency. When it comes to providing access to digital data, modifying it, or even creating new data as defined by Lewis (2008), computer infrastructure comprises everything from digital devices to media to routing to operating systems, networks and servers. In the electronic office, transmission media like telephone lines, cable television lines, satellites and antennas, as well as routers, aggregators, repeaters and other devices that control transmission paths, are all part of the infrastructure, according to Khan, Azhar, Parveen, Naeem and Sohail (2013). According to Agomuo (2014), the personal computer (PC) is the single most important infrastructure in the electronic office. The PC is significant and distinct from other office infrastructure due to its versatility and adaptability. While other infrastructure, such as adding machines, photocopiers, and fax machines, are important, they are specialized tools. According to Schneider (2010), computer infrastructure entails the interconnection of all basic facilities and services required for the electronic office to function properly. Electronic office personnel require skills that will enable them to conveniently use office infrastructure technologies in order to give them a competitive advantage in the world of work.

The Vian Public School Curriculum (1999) as cited by Agbamu (2007) includes the following competencies in their computer operation requirements: Initiate the start-up or shutdown of computer systems and peripherals, such as a printer or CD-ROM or scanner; recognize and utilize icons; use windows menus such as "point, click, double-click," "click and drag with mouse," and so on. resize a window and title stack windows, scroll up/down, left/right inside a window, and make a window active/inactive. Following this, the curriculum said that students should be able to run an application and generate a document as well as save and retrieve the document as well as rename, modify, and print it. Similarly, Agbamu (2007), citing Becta in conjunction with e-skills competencies framework, outlines the following computer (PC) operations competencies: ability to use a word processing package, ability to browse the web, understanding basic file management, ability to use simple peripherals, ability to use a scanner or digital camera, ability to burn a CD, ability to change page setup from portrait to landscape before printing, ability to perform a simple web search, ability to use spreadsheets and able to regenerate report forms from a database. These computer operation competencies reflect the most recent thinking on staff deployment to organizations, workforce reform, and ICT best practices. However, the secretary's position in the modern workplace has expanded beyond the conventional responsibilities of receiving dictation in shorthand and typing it. As a result of the emergence of information and communication technology, which has resulted in the upskilling of the secretarial profession from the use of antiquated and slow manual office equipment and machines, the secretary now possesses the office skills/competencies necessary to fit into the e-office.

In the management of modern organizations of which the office is at the center, information is a critical corporate resource. The sole product of the office, in whatever form it may take, is information. Data is delivered to the office via mail, phone, and the internet. If the office is to make good use of the volume of information, it must be organized. Electronic information processing, according to Davis and Olson (2000), is a system that collects, evaluates, transmits, and stores data into a meaningful and useful context and communicates it to a recipient who uses it to make decisions within an organization. According to Murray (2003), information processing skills will be required for jobs in the twenty-first century. As a result, developing digital information literacy becomes an unavoidable requirement for office workers especially the secretarial personnel.

Statement of the Problem

One of the aspirations of every student on graduation is to seek employment and be gainfully employed. This aspiration gives fulfillment and self-actualization, while on the other hand it could be frustrating and discouraging if after spending years in school and graduated, the goal is not attained. One of the goals of our institutions of higher learning's programs (business education inclusive) is to provide graduates with the necessary skills/competencies to engage in a life of work in offices as well as self-employment. On the other hand employers of labour have often complained of the present day graduates as not market ready. Okoye (2016) observed that one of the primary concerns of employers of labor in the information age is the recruitment of individuals with the necessary employability skills to fill the different job openings and positions within the firm.

It is noteworthy that some business graduates are unable to obtain work because they lack the employability skills essential for white-collar or self-employment opportunities. It was stated by (Tymon, 2011) that despite the importance of broader skills on the employability of recent graduates in the Nigerian labor market, it is regrettable that responses from employers of labor indicate that recent graduates are not yet prepared to enter and face the complexities and challenges of the modern workplace. This is due to the graduates' apparent lack of transferable skills/competencies, which are required in the workplace in the information technology era. According to Imeokparia and Ediagbonya (2012), who cited Austin Oniwon, Group Managing Director of the Nigerian National Petroleum Corporation (NNPC), eighty percent (80%) of job applicants failed the corporation's recruitment test (www.thenationonline.ng.net/2011/index). The report implied that, despite their academic credentials, those job seekers lacked the employability skills required by NNPC. While Phillips Consulting (2014) observed that the current education system somehow doesn't appear to be producing graduates with standardized and essential skills, hence the rate of youth unemployment continues to rise. Similarly, Ann-Marie (2015) averred that lack of competency-based skills is an integral factor hindering students from securing employment after graduation.

It is on this note that this study was undertaken on the e-office computer application competencies required of office technology education graduates by employers of public organizations in Edo and Delta States.

Purpose of the Study

This study focused on e-office computer application competencies required of office technology education graduates by employers in public organizations in Edo and Delta States. The study specifically attempted to ascertain the perspectives of both less experienced and experienced employers in governmental (public) organizations in Edo and Delta States.

Research Question

1. What are the computer application competencies required for operating e-office by office technology education graduates in public organizations in Edo and Delta States?

Hypothesis

1. There is no significant difference in the mean responses of less experienced and experienced employers in public organizations in Edo and Delta States on computer application competencies required for operating e-office by office technology education graduates.

Significance of the Study

Results of this study on the electronic office computer application skills required by modern offices for office technology graduates would be significant because they would reveal the electronic office computer application skills required by employers for graduates to successfully transition from school into the working world.

The various stakeholders in the education industry such as: the National Universities Commission (NUC), the National Board for Technical Education (NBTE), and the National Commission for Colleges of Education (NCCE) would benefit greatly from the findings of this study, also the Association of Business Educators of Nigeria (ABEN), Tertiary Institutions Management, Business Educators, Employers, Researchers, and Students would not be left out of the benefits of the findings. Where necessary the findings of this study are used to enrich the programme of office technology education.

Scope of the Study

This study focused on e-office computer application competencies required of office technology education graduates by employers in public organizations in Edo and Delta States. The public organizations are the ministries, parastatals, agencies, local governments and public tertiary institutions.

Methodology

This study used a descriptive survey methodology. When a group of people or objects are researched, Nworgu (2015) defines descriptive survey research design as one that collects and analyzes data from just those individuals or items that are believed to be typical of the full group or population being studied, whereas Peretomode (2002) defines descriptive research design as a type of research that involves the systematic collection of data about a given population or area of interest in order to describe, compare, analyze, and interpret the existing data. The population for the study consisted of all the employers of public organizations in Edo and Delta States which include government Ministries, Parastatals/Agencies, Local Governments and Public Tertiary Institutions which are 262 employers. There was no need for a sample since the research had a manageable population. A 16-item questionnaire named "Electronic Office Competencies Required by Office Technology Education Graduates" (EOCROTEG) was used to gather data for this study. It was tested for face

validity by three specialists, two in vocational education (business - office technology education) and one in test and measurement, with the aid of the instrument. The instrument was also subjected to a reliability test to further evaluate the stability of the instrument items. The instrument was distributed to 20 Anambra State public-sector employers. Anambra State is used for the reliability test because Anambra State is outside the scope of this study and it has the same characteristics of a state as Edo and Delta States. It also shares boundaries with the two states. The Pearson Product Moment Correlation Coefficient was used to determine the instrument's reliability after the test, and a reliability coefficient of 0.78 was obtained. The questionnaire was distributed to public-sector employers in both States. The instrument was administered through personnel contact and with the assistance of six research assistants who had been trained in the administration and retrieval of the instrument. The filled instruments were also retrieved using the same method. The data collected was analyzed using percentages for the demographic data, mean score for the instrument items. To reject or accept the competencies required of office technology education graduates, a criterion mean of 2.50 was used. The T-test was used to test the hypothesis. The comparison of the chosen alpha level (0.05) and the probability value (p-value) or significant was used to make the decision. The null hypothesis was rejected if the sig was less than 0.05, but accepted if the sig was greater than 0.05.

Data Analysis

Administration and Retrieval of Questionnaire

Table 1:Percentage Analysis of Administration and Retrieval of Questionnaire

No of Questionnaire Administered	262
No Successfully Returned	240
Percentage of Successfully Returned	92%

Source: Fieldwork, 2021

The table 1 above shows the administration and retrieval of the questionnaire. A total of 262 copies were administered while 240 were successfully completed and returned representing 92% return rate. The 240 was then used for the data analysis for the study.

Analysis of Demographic Data

Table 2: Percentage Distribution of Respondents by Employers years of experience

S/N	Employers years of experience	Frequencies	Percentage (%)
1	Less Experienced	78	33
2	Experienced	162	67
3	**Total**	**240**	**100**

Source: Fieldwork, 2021

The data presented in table 2 shows that 78 (33 percent) of the respondents were less experienced and 162 (67 percent) were experienced employers. This implies that of the total respondents of the employers, experienced employers were more in number than their less experienced counterparts in the study.

Research Question

What are the computer application competencies required for operating e-office by office technology education graduates in the opinion of less experienced and experienced employers in public organizations in Edo and Delta States?

Table 3: Descriptive results on computer application competencies required for operating e-office by office technology education graduates in the opinion of less experienced and experienced employers

S/N	Computer application competencies required for operating e-office - Able to	Mean Scores			Decision
		LE	E	Total	
1	Understand computer and its related components	3.32	3.55	3.47	Accepted
2	Trouble shoot computer	3.12	3.11	3.11	Accepted
3	Make use of Microsoft word	3.69	3.53	3.58	Accepted
4	Make use of Spread sheets	3.27	3.34	3.32	Accepted
5	Make use of Power points	3.33	3.29	3.30	Accepted
6	Make use of Corel draw	3.15	2.91	2.99	Accepted
7	Use PDF files	3.36	3.09	3.21	Accepted
8	Connect computer to printer	3.46	3.38	3.40	Accepted
9	Connect computer to scanner	3.53	3.31	3.38	Accepted
10	Connect computer to mobile telephones and tablets	3.38	3.14	3.22	Accepted
11	Use storage devices such as flash drive, external disc CD and DVD	3.38	3.35	3.36	Accepted
12	Create database using Microsoft packages	3.06	3.05	3.05	Accepted
13	Configure and update antivirus in computers	3.00	3.08	3.05	Accepted
14	Apply basic computer security procedures	3.09	3.02	3.04	Accepted
15	Apply basic computer maintenance techniques	2.82	2.91	2.88	Accepted
16	Apply basic computer programming procedures	2.69	2.73	2.72	Accepted
	Grand Mean	**3.23**	**3.17**	**3.19**	**Accepted**

Cut-off mean = 2.50; Less experienced = 78; Experienced = 162 and Total = 240

The data represented in Table 3 reveals that, the opinions of less experienced employers on all the items were greater than the cut-off mean score of 2.50 with mean scores of 3.32, 3.12, 3.69, 3.27, 3.33, 3.15, 3.46, 3.46, 3.53, 3.38, 3.38, 3.06, 3.00, 3,09, 2.82 and 2.69 respectively. This implies that all items were accepted by the less experienced employers. Similarly, the experienced employers opinions for all items were also higher than the cut-off mean score of 2.50 with mean scores of 3.55, 3.11, 3.53, 3.34, 3.29, 2.91, 3.09, 3.38, 3.31, 3.14, 3.35, 3.05, 3.08, 3.02, 2.91 and 2.73 respectively. This implies that all items were accepted. Table 3 still indicates that, on the whole the combined opinions give all items mean scores above the cut-off mean score of 2.50 with mean scores of 3.47, 3.11, 3.58, 3.32, 3.30, 2.99, 3.21, 3.40, 3.38, 3.22, 3.36, 3.05, 3.05, 3.04, 2.88 and 2.72 respectively. This implies that all items were accepted. The grand mean score of the less experienced employers (3.23) was greater than that of the experienced employers opinion (3.17) with a combined grand mean score of (3.19) being greater than the cut-off mean score of 2.50. This simply means that, less experienced employers' opinion on computer application competencies required for operating e-office by office technology education graduates is better than the experienced employers in public organization. Consequent upon the observed difference in opinion, the t-test analysis was carried out in order to ascertain if the difference is significant or not (see Table 4).

Hypothesis

There is no significant difference in the mean responses of less experienced and experienced employers in public organizations in Edo and Delta States on computer application competencies required for operating e-office by office technology education graduates.

Table 4: t-test analysis of the difference in the mean responses of less experienced and experienced employers in public organizations in Edo and Delta States on computer application competencies required for operating e-office

Variables	N	Mean	SD	Df	t-cal.	t-crit.	Sig	Decision at P< 0.05
Less experienced	78	51.75	6.954	238	1.055	1.960	0.293	NS
Experienced	162	50.79	6.630					

NS = Significant at 0.05 alpha level; N = 240

The data presented in Table 4 reveals that, the t-test analysis is not significant at 0.05 alpha level because the calculated t-test value of 1.055 is less than the critical Table t-test value of 1.960 at 0.05 alpha level with 238 degrees of freedom. Hence the null hypothesis which states that, there is no significant difference in the mean responses of less experienced and experienced employers in public organizations in Edo and Delta States on computer application competencies required for operating e-office by office technology education graduates cannot be rejected.

Discussion of findings

The result in Table 4 shows that, there is no significant difference in the mean responses of less experienced and experienced employers in public organizations in Edo and Delta States on computer application competencies required for operating e-office by office technology education graduates. From Table 3 it reveals that, the opinion of the less experienced was higher with a total mean of 3.23 than that of the experienced employers of 3.17. This implies that the opinions of the respondents - experienced and less experienced employers agreed on the computer application competencies required by office technology education graduates to operate in the modern office (e-office) given the cut off mean of 2.50. The identified competencies such as understand the computer and its related components, use Microsoft word, spreadsheet, power point, coral draw, connect the computer to printer, to scanner, to mobile phones and tablets, able to use storage devices such as flash drive, external disc, CD, DVD and able to update antivirus in computers among other competencies for the study were all accepted as required competencies. These results align with those of Ezeonwurie (2017), a study of information and communication technology (ICT) abilities needed for secretaries – office tech graduates in North West Nigerian schools of education. According to the survey, secretaries at Nigerian institutes of education need computer skills in order to be successful in their jobs Also in line with Chukwuelu and Ile's (2018) research on contemporary office abilities needed of business education graduates in Imo State, this conclusion is consistent. According to the findings, graduates of business schools need to be proficient in electronic publishing and electronic collaboration skills. In addition, Okoye (2016) and Okpokwasili (2018) found that secretaries in contemporary automated offices in Anambra State and secretaries working in public parastatals in Rivers State both need specific professional skills and knowledge in the use of information technology. Okoye and Okpokwasili's studies found that contemporary automated workplaces demand secretaries to have manipulating skills, whereas Okpokwasili's research found that Microsoft suits are a must. These competencies need to be incorporated into the curriculum of business education especially office technology education option to ensure the graduates of the programme meets the expectations of the employers on graduation.

Conclusion

The study focused on e-office computer application competencies required of office technology education graduates by employers in public organizations in Edo and Delta States. The study interest was as a result of emergence of information and communication technology (ICT) which has permeated almost every sector of the economy the world over. Almost all businesses and organizations have now deployed information and communication technology (ICT) to their operational activities. The office being the hub of every organization is highly affected by the advances in information and communication technology. Some years back office activities were manually and mechanically carried out. The office skills then were limited to the level of facilities available. However, with the deployment of information and communication technology to office activities it is obvious that the skills/competencies needed in this era will certainly change to reflect the state of the art technology currently in use in businesses and organizations the world over. Sitting behind the ICT facilities for document creation, recording, transmission, storage, and retrieval in the office are the secretarial personnel also known in modern terms as office education technologist.

Recommendations

The study recommends based on the findings amongst that:

1. The identified competencies such as understand computer and its related components, trouble shoot the computer where necessary, use the Microsoft office packages, connect the computer to printer, scanner etc., required of office technology education graduates in this study should be used to enrich/improve the activities of office technology education programme in our higher institutions by the various stakeholders when the findings are made public.
2. Management of the institutions should ensure that enough computer systems with internet facilities are made available for the teaching and learning of office technology education students so that when they graduate, they will be able to fit into the workplace environment.
3. In addition to providing enough computer systems with internet facilities, regular maintenance of the computers should be carried out by experts in order not to inhibit the teaching and learning process.
4. One major challenge facing the application of ICT in training institutions is electricity supply. Efforts should be made by training institutions to ensure constant supply of electricity in the laboratories to enhance students more practice from time to time.
5. Association of Business Educators Nigeria (ABEN) should see the identified competencies as bases for further conferences for more synergy on how to equip the students with such saleable competencies required in the world of work.

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