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**E-OFFICE INTERNET COMPETENCIES REQUIRED OF  
OFFICE TECHNOLOGY EDUCATION GRADUATES BY  
EMPLOYERS IN PUBLIC ORGANIZATIONS IN  
EDO AND DELTA STATES**

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**Abstract**

*This study focused on e-office internet competencies required of office technology education graduates by employers in public organizations in Edo and Delta States. One research question guided the study and one null hypothesis was formulated and tested at 0.05 level of significance. Survey research design was adopted to carry out this study. The population consisted of 262 respondents of employers in public organizations in Edo and Delta States. No sampling was done as the population was manageable. A structured questionnaire containing 15 items was used for data collection. The instrument was validated by two experts in Business Education and one in test and measurement. The reliability of the instrument was ensured using test re-test technique, while Pearson Product Moment Correlation Coefficient was employed to determine the reliability coefficient. The statistical technique used for data analysis was the mean; while t-test statistic was used in testing the null hypothesis. The findings of the study showed that identified competencies were deemed required by employers. Based on the findings it was recommended among others that the identified competencies be used to enrich the programme of office technology education and enough computer systems with internet facilities should be made available for the teaching and learning of office technology education students for successful transition from school to the world of work.*

**Key words:** *Competencies, internet, office technology education, employers, office automation.*

**Introduction**

The rapid changes in modern technology have 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 2001, 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 sits at the center of the office operation and 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 of which are internet competencies.

Competencies are skills or knowledge that helps one to perform better in a given task. Achilike and Okwuauso (2001) see competencies as those abilities of power and authority of knowledge, attitudes and facts necessary for accomplishing tasks. Ojukwu and Ojukwu (2002) stated that competencies are the knowledge, skills and attitudes that are necessary for accomplishing a given task. Competency is more than just a set of skills and knowledge. It entails the ability to meet complex demands by utilizing and mobilizing psychosocial resources (such as skills and attitudes) in a given situation which are acquired as result of training and practice.

Internet competencies are a collection of knowledge, skills, and attitudes about using the internet. The internet has become the engine room of every organization in terms of information gathering, storage and

dissemination that it becomes a necessity for every office workers to be abreast of and applied in terms of carrying out the daily office routine. A search for information globally has become much easier because of the internet. The Internet is a global network of interconnected computer networks that communicate using the Internet protocol suite (TCP/IP). It is a network of networks made up of private, public, academic, business, and government networks ranging from local to global in scope and connected by a diverse set of electronic, wireless, and optical networking technologies. The Internet provides a vast array of information resources and services, such as the World Wide Web's (WWW) inter-linked hypertext documents and applications, electronic mail, telephony, and file sharing.

The internet has shaped, redefined, or even bypassed most traditional communication media, including telephony, radio, television, paper mail and newspapers, giving birth to new services such as email, internet telephony, internet television, online music, digital newspapers and video streaming websites. Newspapers, books and other print publications are adapting to website technology or reshaping themselves into blogging, web feeds, and online news aggregators. Through instant messaging, internet forums and social networking services, the internet has enabled and accelerated new forms of personal interaction. For major retailers, small businesses, and entrepreneurs, online shopping has grown exponentially because it allows them to expand their "brick and mortar" presence to serve a larger market or even sell goods and services entirely online. According to Jonathan (2014), the internet has a single centralized governance in terms of either technological implementation or policies for access and usage; each constituent network sets its own policies.

Internet service cannot be provided in the absence of internet service providers. Internet service providers (ISPs) provide various levels of global connectivity between individual networks. Accessing the internet required common methods of internet access by users which include dial-up with a computer modem via telephone circuits

broadband over coaxial cable, fibre optics or copper wires, Wi-Fi, satellite and cellular telephone technology (e.g. 3G, 4G).

The internet enables computer users to easily access other computers and information stores from any location. Depending on the requirements, access may be granted using computer security technologies such as authentication and encryption. In many industries and organizations, this is encouraging new ways of working from home, collaboration, and sharing of information. An accountant sitting at home can audit the books of a company in another country using a server in a third country that is remotely maintained by IT specialists. These accounts could have been set up by bookkeepers working from home or in other remote locations using information emailed to them from offices all over the world. Office workers away from their desk, perhaps on the other side of the world on a business trip or vacation, can access their emails, access their data via cloud computing, or open a remote desktop session into his office PC via a secure virtual private network (VPN) connection over the Internet. While away from the office, this can provide the worker with complete access to all of their normal files and data, including email and other applications. It has been dubbed the "Virtual Private Nightmare" by system administrators since it extends the secure perimeter of a corporate network into remote locations and employees' homes.

E-office internet competencies anticipated of office technology education graduates in the information and communication technology age will include, but are not limited to: connecting the computer to the internet facilities such as modem, phones and server, creating password to your internet services to avoid other unauthorized persons to have access, using search engines, save images and graphics from the net, ability to use teleconferencing media such as zoom, webinar, webex, creating, maintaining, updating official website becomes vital competencies for the e-office personnel. Van Deursen and Van Dijk (2009, 2010) proposed a set of internet skills that would integrate several digital skill conceptualizations. Their definition takes into

account technical or media aspects (media-related skills) as well as substantive or content aspects (content-related skills). Operational skills, such as basic command of an Internet browser, and formal skills, such as the ability to navigate and orient oneself within the Internet's hypermedia structure, comprise medium-related Internet skills. The foregoing listed e-office internet competencies reflect the most recent thinking on the deployment of staff to organizations, workforce reform and good practice in ICT while the benefits are enormous.

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) noted that one of the major concerns of employers of labour in this information age is the recruitment of employees with requisite employability competence to fit into the various organization job vacancies and positions. It is of note that some graduates of business education are unable to find something doing because they lack the necessary employability skills required for white collar jobs or self-employment ventures. This view was expressed by Tymon, (2011) that despite the importance of broader skills on the employability of fresh graduates in Nigerian labour market, it is unfortunate that responses of employers of labour reveal that recent graduates are not yet ready to enter and face the complexities and challenges of the world of work in the era of modern technology. 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](http://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 internet competencies required of office technology education graduates by employers of public organizations in Edo and Delta States.

### Research Question

One research question was raised and answered.

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

### Hypothesis

One hypothesis was formulated and tested at 0.05 level of significance.

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

### Research Method

Descriptive survey research design was adopted for this study. According to Nworgu (2015), descriptive survey research design is one in which a group of people or items are studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group or population. 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. Given the study's manageable population size, the population became the sample size structured questionnaire titled Electronic Office Competencies Required by Office Technology Education Graduates (EOCROTEG) which consisted of 15 items constitute the research instrument for data collection. The instrument was subjected to face validity testing with the assistance of three experts, two in vocational education (business-office technology education) and one expert in test and measurement. 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 it 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 0.75 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 were 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.

### Analysis of Demographic Data

**Table 1:** 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	<b>Total</b>	<b>240</b>	<b>100</b>

Source: Fieldwork, 2021

The data presented in Table 1 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 internet 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 2:** Descriptive Results on Internet Competencies Required for Operating e-office by Office Technology Education Graduates in the Opinion of less Experienced and Experienced Employers

S/N	Internet competencies required for operating e-office – Able to:	Mean Scores			Remarks
		LE	E	Total	
1	Connect the computer to the internet facilities such as modem, phones and server.	3.42	3.31	3.35	Accepted
2	Password the internet services of the office.	3.45	3.18	3.27	Accepted
3	Use search engines such as yahoo, google.	3.38	3.22	3.27	Accepted
4	Save images and graphics from the net	3.19	3.19	3.19	Accepted
5	Use online databases	2.60	3.09	2.91	Accepted
6	Use teleconferencing devices such as zoom, webinar, webex etc.	3.00	3.23	3.15	Accepted
7	Use hyper link transfer protocol	2.60	2.54	2.56	Accepted
8	Install IP Address	2.45	2.59	2.55	Accepted
9	Download resources from websites	3.14	3.06	3.09	Accepted
10	Create official website	2.32	2.83	2.66	Accepted
11	Update official website with information	2.26	2.75	2.59	Accepted
12	Maintain official website	2.13	2.67	2.50	Accepted
13	Book mark and recall useful address from the net	2.38	2.73	2.62	Accepted
14	Respond to frequently asked questions from the official website.	2.32	2.71	2.58	Accepted
15	Link website to social media such as face book, WhatsApp, etc	2.08	2.60	2.43	Rejected
	<b>Grand Mean</b>	<b>2.71</b>	<b>2.91</b>	<b>2.84</b>	<b>Accepted</b>

Source: Fieldwork, 2021

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

The data represented in Table 2 indicates that the opinions of less experienced employers on items 1, 2, 3, 4, 5, 6, 7, and 9 were greater than the cut-off mean score of 2.50 with mean scores of 3.42, 3.45, 3.38, 3.19, 2.60, 3.00, 2.60 and 3.14, but items 8, 10, 11, 12, 13, 14 and 15 were less than the cut-off mean score of 2.50 with mean scores of 2.45, 2.32, 2.26,

2.13, 2.38, 2.32 and 2.08 respectively. This implies 8 items were accepted and 7 were rejected by the less experienced employers. On the other hand, the experienced employers opinions for all items were higher than the cut-off mean score of 2.50 with mean scores of 3.31, 3.18, 3.22, 3.19, 3.06, 3.23, 2.54, 2.59, 3.06, 2.83, 2.75, 2.67, 2.73, 2.71 and 2.60 respectively. This implies that all items were accepted by the experienced employers. Table

3, also reveals that, on the whole the combined opinions give all items mean scores greater than the cut-off mean score of 2.50 except item 41 with mean scores of 3.35, 3.27, 3.27, 3.19, 2.91, 3.15, 2.56, 2.55, 3.09, 2.66, 2.59, 2.50, 2.62, 2.58 and 2.43 respectively. This implies that all items were accepted except item 41. The grand mean score of the less experienced employers (2.71) was less than that of the experienced employers' opinions (2.91) with a combined grand mean score of (2.84) being greater than the cut-off mean score of 2.50. This further means that, experienced employers opinions on internet competencies required for operating e-office by office

technology education graduates is better than the less experienced employers in public organizations. Consequent upon the observed difference in opinion, the t-test analysis was carried out in order to confirm if the difference is significant or not (see Table 3).

### 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 internet competencies required for operating an e-office by graduates of office technology education.

**Table 3:** 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 Internet Competencies required for Operating e-office

Variables	N	Mean	SD	Df	t-cal.	t-crit.	Sig	Decision at P< 0.05
Less experienced	78	40.73	8.396	238	2.603	1.960	0.010	*
Experienced	162	43.68	8.134					

\* = Significant at 0.05 alpha level; N = 240

Table 3 shows that the t-test analysis is significant at the 0.05 alpha level because the calculated absolute t-test value of 2.603 is greater than the critical Table t-test value of 1.960 with 238 degrees of freedom at the 0.05 alpha level. As a result, the null hypothesis cannot be accepted, 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 internet competencies required for operating e-office by office technology education graduates. Therefore, the alternative hypothesis which states that, there is a significant difference in the mean responses of less experienced and experienced employers in public organizations in Edo and Delta States on internet competencies required for operating e-office by office technology education graduates is upheld.

### Discussion of Findings

According to the findings in Table 3, there is a significant difference in the mean responses of less experienced and experienced

employers in public organizations in Edo and Delta States on internet competencies required for operating e-office by office technology education graduates. From Table 2, it shows that, the opinion of experienced employers was higher with a total mean of 2.91 than those of the less experienced employers with a total mean of 2.71. This implies that the opinion of the employers – experienced and less experienced agreed on the e-office internet competencies required by office technology education graduates to operate in the modern office (e-office). The identified competencies such as connect the computer to internet facilities, use search engines, save images from the net, use online database, use of teleconferencing media such zoom, webinar, download resources from the net where necessary and book mark and recall useful address from the net among other competencies for the study were all accepted as required competencies except one. The finding of this study is in agreement with Turcsanyi-Szabo (2012) as cited by Ugbebor (2019) who stated that technological skills of internet,



application packages, social media, file and folder management among others are important skills which will assist lecturers to transit from on-ground to online teaching and learning. This was also supported by Schulte (2010) when he stated that technology, social networking sites, cloud computing and wikis presented new opportunities for higher education institutions of learning. Olayinka and Joshua (2017) also supported the finding of this study on e-office internet competencies when they opined among others that, technical, internet; keyboarding, soft skills and communication skills are all germane to successful online teaching and learning. According to Olayinka and Joshua, this will ensure that graduates of our institutions possessed the required competencies on graduation for easy transition to the world of work.

### Conclusion

The study focused on e-office internet competencies required of office technology education graduates by employers in public organizations in Edo and Delta States. The study was by emergence of Information and Communication Technology (ICT) which has pervaded 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

Based on the findings of the study, the following recommendations had been put forward:

1. The identified competencies required of office technology education graduates should be used to enrich/improve the activities of office technology education programme in higher institutions by the various stakeholders.
2. Management of 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.
4. 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.

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