

**Research Article**

## **Supervisors' Rating of Internet Application and Database Management Competencies Possessed By Secretaries for Effective Performance in Tertiary Institutions in Anambra State, Nigeria**

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**Received:** February 21, 2024

**Accepted:** March 13, 2024

**Published:** March 22, 2024

### **Abstract**

The study ascertained supervisors' rating of internet and database management possessed by secretaries for effective performance in public tertiary institutions in Anambra State, Nigeria. Two research questions guided the study and two null hypotheses were tested. Descriptive survey design was adopted for the study. The population of the study comprised 321 supervisors in tertiary institutions in Anambra State, Nigeria. The entire population was studied because the population size was manageable. A structured 19 items with five-point ratings scale questionnaire was used for data collection. The instrument was validated by three experts. Internal consistency method with Cronbach's alpha was used to determine the reliability of the instrument and obtained a reliability co-efficient value of 0.87 and 0.81 for clusters B1 and B2 respectively, with an overall co-efficient value of 0.84. Data collected were analyzed using mean and standard deviation to answer the research questions, while t-test was used to test the null hypotheses at 0.05 level of significance. The findings revealed that supervisors agreed that secretaries in public tertiary institutions in Anambra State, Nigeria possess internet applications and database management competencies for effective performance. Findings further found that ownership of institutions did not significantly influence supervisors' mean ratings of internet applications and database management competencies possessed by their secretaries for effective performance in public tertiary institutions in Anambra State, Nigeria. Based on the findings of the study, it was concluded that secretaries in public tertiary institutions in Anambra State, Nigeria possess internet application and database management competencies for effective performance. However, it was therefore recommended among others that employers and supervisors of secretaries in other organizations should always apply internet and database management application competencies as there are seen as relevant modern office which yielded a positive result as conducive environments and other necessary supports are adequately provided for their staff.

**Keywords:** Supervisors, Internet Application, Database Management Competencies, Secretaries and Tertiary Institutions.

### **Introduction**

The survival and success of all types of organizations including tertiary institutions are dependent on the performance of their workers especially secretaries who process information and manage the office records. According to Obi (2012), secretaries who wish to perform their duties effectively and serve their organization well should possess office application skill, communication skill, interpersonal skills and organizational skills among others. Secretaries in tertiary institutions have direct contact with staff and students who visit the office for one transaction or the other whose contact can affect them positively or negatively depending on the competencies the secretaries demonstrate. In the recent past, a trained secretary was known to be an efficient office worker equipped with knowledge of shorthand, typewriting, office practice and modern office application. Also, with the changing times and enhanced curriculum, secretaries are equipped with multifarious subjects and are quite versed in several office functions including processing of data using information and communication technology resources. The enhanced curriculum resulted from advocacies from various researchers in the past regarding the inadequacy of the past secretarial studies curriculum. Olibie *et al.*, (2014) opined that office work now requires increased

understanding of the way computers link people, office to office and business to business. In supporting, Olibie *et al.*, posited that secretaries may only be employed or retained on the job in contemporary offices if they are ICT friendly and competent.

According to Ezenwafor (2013), a secretary is a warm, tirelessly helpful and understanding individual whose sole aim is to alleviate, solve, prevent or soften problems, workload and up-sets for an executive. Furthermore, Ezenwafor revealed that secretary is the means by which the boss initiates, handles and completes projects. In the light of this, secretary is one who provides the human element in the fast growing and constant flow of information in today's office work. In this way, the secretary greatly assists the boss with relevant knowledge and expertise. Secretaries in the 21<sup>st</sup> century require the ability to perform effectively in the modern office work and willing to be lifelong learners, create ways to improve the methods by incorporating diversity and collaborating with others. This is because the task facing them at the modern office which is technology driven cannot be effectively handled if they lack competencies in relevant office applications such as word processing, internet application, spreadsheet, operating systems, webpage design application and data-base management among others. This study covers only internet application and database management competencies.

Internet application is fundamental skills needed to use internet effectively. It provides the users with the necessary knowledge and tools to go online to find information and use an e-mail account confidently. Internet exposes the users to key terms and considerations associated with using the internet. Internet application is a computer-based global information system (Ovbiagele, 2016). It is composed of many interconnected computer networks. Each network may link tens, hundreds or even thousands of computers, enabling them to share information. Chukwumezie (2012) defined the internet as one of the computer and multimedia tools that have revolutionized the business world, offices and classrooms in recent times. Secretaries can get virtually any type of information via the internet. Through the World Wide Web (www), the internet brings secretaries instructive information that they could not find in any other way. They can register their offices and work places on line to read journals, magazines, book reviews and business statistics among others on the internet. They can also download useful information into their own computers to enhance the performance of their office functions.

Ovbiagele (2016) reported that several internet application competencies needed by secretary for effective performance include ability to access internet application software or web browser, create an e-mail account, open and compose mail online, send and receive mail with attachment, control junk e-mail with attachment, communicate with colleagues and clients online among others. Chukwumezie (2012) asserted that internet skills help secretaries in carrying out their function effectively in tertiary institutions in South-Eastern States of Nigeria. They also send and receive e-mail from computer. Secretaries in modern offices need competency in the use of internet to be able to go on line and use an e-mail account confidently. Internet competencies expose secretaries to key terms and considerations associated with its use and enables them take responsibilities for their personal security and privacy. Internet use has made it possible for organizations and people all over the world to communicate with one another quickly and inexpensively and to have free access to useful database for their need. Other office applications competencies needs by secretaries are the database management.

Database management deals with introduction of users to languages, applications and programming used for the design and maintenance of business databases. One of the basic skills covered in database management courses is the use of Structured Query Languages (SQL) which is the most common database manipulation language. People learn to write programs with packages, debugging procedures, triggers and database structures using SQL. Database management courses may also cover Visual Basic programming language skills for program design. Other database management skills include the use of data and object modeling, relational algebra, relational data models and applications programming. The physical characteristics of databases, reliability and system performance are additional topics in database management. Alvan (2012) reported that several database administrators are responsible for managing database security as well to ensure confidentiality, integrity and availability. The influencing factors in the context of supervisors' ratings of internet application and database management competencies possessed by secretaries for effective performance in public tertiary institutions could be ownership of institutions. Ownership of institutions could influence supervisors' ratings of modern office application competencies possessed by secretaries for effective performance. Ownership of institutions here refers to a body that owns the tertiary institutions where secretaries carried on their duties. In this regard, Alita and Hawa (2014) noted that in public owned tertiary institutions secretaries use modern office application in daily activities which helps to improve their

output in offices and business organizations. Okoro (2013) revealed that there were no significant differences caused by respondents' based on ownership of institutions. Obi (2012) observed that there is significant difference among secretaries in public owned tertiary institutions on the application of internet and database management competencies for effective performance in their workplace than their counterparts. Therefore, the influence of this variable on the ratings of the respondents would be tested in the study.

### **Statement of the Problem**

For tertiary institutions to succeed in achieving efficiency and effectiveness in operations, particularly in the areas of communication and information generation, documentation, storage and retrieval, wide adoption and utilization ICT resources is inevitable. If this is not done, the tertiary institutions will be operating behind time and out of fashion without achieving cost effectiveness and ultimately fail to produce employable graduates. The personal observations by researchers show that they seem not being utilized effectively by the secretaries because records are still not properly managed. The situation is in line with Okolocha and Olannye (2015) who lamented that most tertiary institutions in Nigeria do not have a properly developed record management culture due to lack of knowledge, cost of acquisition of modern office equipment, and weak infrastructure. It is obvious that where employees do not possess the relevant competencies to utilize the ICT resources, the goals of their acquisition will be totally defeated. The problem of this study, therefore, is that many Anambra State tertiary educational institutions have been provided with ICT resources for effective performance but they do not seem to be optimally utilized especially by secretaries whose functions center on information processing. The researcher worried about this ugly situation since utilization of modern office equipment and applications is known to facilitate effective performance in different aspects of information processing carried out by secretaries. This could be as a result of secretaries in these institutions not adequately possessing internet application and database management competencies for utilizing the ICT resources effectively. This makes it necessary to conduct this study on supervisors' rating of internet application and database management competencies possessed by secretaries for effective performance in tertiary institutions in Anambra State, Nigeria where supervisors do not understand the level of internet application and database management competencies possessed by their subordinates, lots of conflicts will be created and performance efficiency will be lowered greatly.

### **Purpose of the Study**

The purpose of the study was to determine supervisors' rating of internet application and database management competencies possessed by secretaries for effective performance in public tertiary institutions in Anambra State, Nigeria. Specifically, the study determined supervisors rating of:

- 1) Internet application competencies possessed by their secretaries for effective performance.
- 2) Database management application competencies possessed by their secretaries for effective performance.

### **Research Questions**

The following research questions guided the study.

With the opinion of supervisors,

- 1) What is the level of internet application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance?
- 2) What is the level rating of database management application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance?

### **Hypotheses**

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

- 1) Supervisors do not differ significantly in their mean ratings on internet application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance based on ownership of institutions (federal or state).
- 2) Supervisors do not differ significantly in their mean ratings on database management application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance based on ownership of institutions (federal or state).

### **Method**

The study adopted a descriptive survey design. The population of this study comprised of 321 supervisors (Deans/Directors of Schools, Heads of Departments/Units and Coordinators of programmes entitled to have secretaries) from all the public tertiary institutions in Anambra State, Nigeria. Data collected was 19 items

structured questionnaire. The instrument was structured questionnaire validated by three experts-two in business education and one in measurement and evaluation all from Nnamdi Azikiwe University, Awka. Their comments enhanced the content validity of the instrument. To establish the internal consistency of the instrument, a trial-test was used. Data collected were analyzed using Cronbach’s alpha to determine the internal consistency and obtain reliability coefficients values of 0.87 and 0.81 for clusters B1 and B2 respectively with an overall coefficient value of 0.84.

Out of the 321 copies of the questionnaire distributed to the supervisors in their schools through direct approach which facilitated a response rate, 304 copies (representing 95 percent) were retrieved and used for data analysis. 11 copies were not properly filled and, thus discarded while another six copies were not retrieved representing (3 and 2 percent) respectively. Data collected regarding the research questions were analyzed using mean and standard deviation, while t-test was used to test the null hypotheses at 0.05 level of significance. In order to determine the ascertain supervisors’ rating of internet application and database management competencies possessed by secretaries for effective performance in public tertiary institutions in Anambra State, Nigeria, a decision rule based on mean ratings between 4.50-5.00 were regarded as strongly agree, items with mean ratings of 3.50-4.49 were considered as agree. Furthermore, items with mean ratings of 2.50-3.49, 1.50-2.49 and 1.00-1.49 were considered as undecided, disagree and strongly disagree. In testing the null hypotheses, where the calculated p-value was less than the 0.05 level of significance as it means that there was significant difference. Conversely, where the calculated p-value was greater than or equal to the 0.05 level of significance, it means that there was no significant difference and the hypothesis was not rejected.

**Results**

**Research Question 1**

- 1) What is the level of internet application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance?

Table 1 show that all the mean scores for all the listed 10 competencies in internet application competencies ranged from 3.89 to 4.80 with a cluster mean score of 4.17. This indicates that the supervisors agreed that secretaries in public tertiary institutions in Anambra State, Nigeria possessed internet application competencies for effective performance. The standard deviations for all the items fall within the same range 0.49 to 0.70. This shows that the supervisors were not wide apart in their mean ratings.

**Table 1.** Supervisors’ mean rating of internet application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance (N=304).

S/N	Internet competencies possessed by secretaries Ability to:	$\bar{x}$	SD	Remarks
1	Access internet application or web browser	3.90	0.70	Agree
2	Create an e-mail account	3.89	0.68	Agree
3	Compose and send mail	4.10	0.54	Agree
4	Send with attachment	4.10	0.54	Agree
5	Control junk mails	4.80	0.49	Strongly agree
6	Complete and send an application online	4.30	0.50	Agree
7	Use shared devices within a network	4.10	0.54	Agree
8	Refresh and save online documents	4.14	0.53	Agree
9	Download information from the internet	4.16	0.52	Agree
10	Upload information to the internet	4.20	0.51	Agree
Grand mean and standard deviation		4.17	0.51	Agree

**Research Question 2**

- 1) What is the level of database management application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance?

Table 2 shows that all the mean scores for all the listed 10 competencies in database management application competencies ranged from 3.60 to 4.60 with a cluster mean score of 3.98. This indicates that supervisors agreed that secretaries in public tertiary institutions in Anambra State, Nigeria possessed database management application competencies for effective performance. The standard deviations for all the items fall within the same range 0.46 to 0.67. This shows that the supervisors were not wide apart in their mean ratings.

**Table 2.** Supervisors’ mean rating of database management application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance (N=304).

S/N	Database management competencies possessed by secretaries Ability to:	$\bar{x}$	SD	Remarks
11	Create database	4.00	0.53	Agree
12	Add new files to the database	4.10	0.50	Agree
13	Update data in an existing file	4.10	0.50	Agree
14	Retrieve information from the database	3.90	0.55	Agree
15	Extract data from existing files	3.80	0.57	Agree
16	Control text in a database	4.12	0.48	Agree
17	Organize database view	4.60	0.46	Strongly agree
18	Change database format	3.64	0.64	Agree
19	Restrict access to files in the database	3.60	0.67	Agree
Grand mean and standard deviation		3.98	0.54	Agree

**Hypothesis 1**

Supervisors do not differ significantly in their mean ratings on internet application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance based on ownership of institutions (federal or state).

**Table 3.** Summary of t-test analysis on the supervisors’ mean ratings of internet application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance based on ownership of institutions.

Ownership of institutions	N	$\bar{x}$	SD	$\alpha$	df	P-value	Decision
Federal	185	4.20	0.18	0.05	302	0.70	Not significant
State	119	4.17	0.14				

Table 3 shows that mean score of federal government institutions ( $M=4.20, SD=.18$ ) is significantly greater than that of state government institutions ( $M=4.17, SD=.14$ ). Table 3 indicated that at degree of freedom of 302, the calculated p-value is .070 which is greater than the alpha level of 0.05. This means that the supervisors did not differ significantly in their ratings of internet application competencies possessed by their secretaries in Anambra State, Nigeria for effective performance based on ownership of institutions (federal or state). Therefore, the null hypothesis is not rejected.

**Hypothesis 2**

Supervisors do not differ significantly in their mean ratings on database management application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance based on ownership of institutions (federal or state).

**Table 4.** Summary of t-test analysis on the supervisors’ mean ratings of database management application competencies possessed by secretaries in public tertiary institutions in Anambra State, Nigeria for effective performance based on ownership of institutions.

Ownership of institutions	N	$\bar{x}$	SD	$\alpha$	df	P-value	Decision
Federal	185	4.14	0.12	0.05	302	0.20	Not significant
State	119	4.11	0.08				

Table 4 shows that mean score of federal government institutions ( $M=4.14, SD=.12$ ) is significantly greater than that of state government institutions ( $M=4.11, SD=.08$ ). Table 4 indicated that at degree of freedom of 302, the calculated p-value is .020 which is greater than the alpha level of 0.05. This means that the supervisors did not differ significantly in their ratings of database management application competencies possessed by their secretaries in Anambra State, Nigeria for effective performance based on ownership of institutions (federal or state). Therefore, the null hypothesis is not rejected.

**Discussion of the Findings**

The findings of the study indicated that supervisors in public tertiary institutions in Anambra State, Nigeria agreed that their secretaries possess relevant competencies in internet application for effective performance. This is in line with Ovbiagele (2016) who reported that several internet application

competencies needed by secretary for effective performance include ability to access internet application software or web browser, create an e-mail account, open and compose mail online, send and receive mail with attachment, control junk e-mail with attachment, communicate with colleagues and clients online among others. The finding is in agreement with Chukwumezie (2012) who asserted that internet skills help secretaries in carrying out their function effectively in tertiary institutions in South-Eastern States of Nigeria. The findings also revealed that supervisors did not differ significantly in their mean ratings on the internet application competencies possessed by secretaries in public tertiary institution in Anambra State, Nigeria for effective performance based on ownership of institutions. The findings of the study disagrees with Obi (2012) who observed that there is significant difference among secretaries in public owned tertiary institutions on the application of internet and webpage design competencies for effective performance in their workplace than their counterparts.

The findings of the study indicated that supervisors in public tertiary institutions in Anambra State, Nigeria agreed that their secretaries possess relevant competencies in database management application for effective performance. These database management application competencies possessed include ability to maintain files, add new files to the database, update data in an exist file, retrieve information from the database, extract data from existing files, work and organize database view, control text in database, change database format among others. This is in line with Alvan (2012) who reported that several database administrators are responsible for managing database security as well to ensure confidentiality, integrity and availability.

The findings also revealed that supervisors did not differ significantly in their mean ratings on the webpage design application competencies possessed by secretaries in public tertiary institution in Anambra State, Nigeria for effective performance based on ownership of institutions. This finding agrees with Okoro (2013) who reported that there were no significant differences caused by respondents' based on ownership of institutions. The reason for the differences in test of hypotheses on ownership of institution is as a result of causative factors which could be non-functionality of the hardware ICT resources, absence of power supply or lack of technical support and consumable materials needed in their use.

### **Conclusion**

Based on the findings of the study, it was concluded that secretaries in public tertiary institutions in Anambra State, Nigeria possess internet application and database management competencies for effective performance. Thus, it was revealed that secretarial training programmes adequately expose and inculcate their requisites to the products.

### **Recommendations**

Based on the findings and conclusion of the study, the following recommendations are made:

- 1) Employers and supervisors of secretaries in other organizations should always apply internet and database management application competencies as there are seen as relevant modern office which yielded a positive result as conducive environments and other necessary supports are adequately provided for their staff.
- 2) Government should establish secretarial staff training schools and adequately furnish them with hardware and software ICT resources and trainers for the retraining of the executive secretaries for tertiary institutions and other establishments.

### **Declarations**

**Acknowledgements:** The authors would like to thank the supervisors in public tertiary institutions in Anambra State, Nigeria who participated in this study and provided invaluable contributions.

**Author Contributions:** Both the authors contributed to the conception and design of the work, drafted the manuscript, revised it critically for important intellectual content, gave final approval of the version to be published and agreed to be accountable for all aspects of the work.

**Conflict of Interest:** The authors declare no conflict of interest.

**Consent to Publish:** The authors agree to publish the paper in International Journal of Recent Innovations in Academic Research.

**Data Availability Statement:** The datasets used or analyzed during the current study are available from the corresponding author on reasonable request.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Research Content:** The research content of manuscript is original and has not been published elsewhere.

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**Citation:** Igbinoghodua, M.O. and Obinegbu, C.T. 2024. Supervisors' Rating of Internet Application and Database Management Competencies Possessed By Secretaries for Effective Performance in Tertiary Institutions in Anambra State, Nigeria. *International Journal of Recent Innovations in Academic Research*, 8(3): 60-66.

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