

## Information and Communications Technology Skills Needs of Administrative Officer in Colleges of Education in South Eastern, Nigeria

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**Key words:** Information and communication technology, administrative officers, computer networking, Microsoft word skills, internet and skill

**Abstract:** The study is focused on determining the information and communications technology skills needs of administrative officer in colleges of education in Enugu State. The study adopted a survey research design. The population for the study was 120 respondents comprising 80 administrative officers and 40 administrative assistants. Total population sampling was used. The instrument used for data collection was a structured questionnaire developed by the researcher. About 35 items multiple choice question with five options lettered was developed on administrative officer skills. The reliability index of 0.84 was established using Cronbach alpha for internal consistency of the administrative officer skills. The research assistance involved in administering the instruments was briefed by the researcher. Data collected was analyzed using mean and standard deviation and t test to test the 1 null hypothesis formulated to guide the study at 0.05 level of significance with the aid of Statistical Package for Social Science (SPSS) Version 22. Data analyzed revealed that administrative officer skills are needed by administrative officers in colleges of education. Furthermore, the findings on hypothesis tested revealed that there was no significance difference between the mean scores of administrative officer and administrative assistants it was therefore concluded that administrative officer skills are needed by administrative officer in colleges of education. It is recommended that the government should provide stable power supply to enable administrative officer to make use of the facilities. There should be adequate efforts by the government and its relevant agencies to provide framework that will ensure timely and constant in-service training to administrative officers in order to keep updating the required skills for instructional delivery.

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## INTRODUCTION

Information and Communication Technology (ICT) have become one of the basic building blocks of the present society. Many developing countries now regard the understanding of ICT and mastering the basic skills and concepts of ICT as part of the core of education. Education is the overall development of an individual in all ramifications and not limited to classroom jurisdiction<sup>[1]</sup>. Information and Communication Technologies (ICT) application in education has gained popularity over the past 20 years and this has led to changes in the way educational institutions carry out activities and processes not only in teaching and learning process or monitoring of student's progress but it has also had an impact in educational administrative processes and management of higher educational institutions.

Information and communication technologies is a technology for processing information, more especially, information that lends itself to algorithmic processes with low levels of human intervention. Osinem and Nwoji opines that Information and Communication Technology refers to the technology that is required for information processing especially the use of electronic computers and computer software to convert, store, protect, process, transmit and retrieve information from anywhere, anytime. Adebayo defines Information and Communication Technology (ICT) as technology that supports activities involving the creation, storage, manipulation and communication of information, the application and use of ICT has led to the emergence of different forms of microelectronic and telecommunications tools such as laptops and computers, computer networks, the Internet digital. Some of the examples of ICTs according to Akuegwu includes computer, video machines, multimedia projectors or Power Points, digital cameras, internet facilities, computer network, telephone (GSM and land phones), E-library, television programmes, database among others. Information and Communication Technology (ICT) plays a vital role in supporting powerful, efficient management and administration in education sector. It is specified that technology can be used right from student administration to various resource administration in an education institution. In the context of this study ICT refers to technologies that provide access to information through telecommunications. Introduction of information and communication technology have greatly expanded the roles of the administrative Officer in modern office.

Administrative officers are officers in the structure, responsible for the position in which they hold to keep the organisation structure running as to achieve the objectives of the organization<sup>[2]</sup>. Osuala and Okeke<sup>[2]</sup>, opined that

administrative officers are frequently responsible for systems, analysis and design including a specialized knowledge in work simplification, work measurement, work standards, records management, forms design, electronic data processing, job analysis, job evaluation, office layout, office equipment, cost control, performance appraisal and employee selection. The Administrative officers are more like supervisors that handles the routine procedure of work processes in the organization including colleges of education. Administrative officers help to ensure that institutions such as colleges of education run smoothly by managing administrative, financial and support systems.

Colleges of education is one of the tripods of tertiary education in Nigeria that has the primary role of training teachers who will be awarded the minimum teaching qualification of Nigerian Certificate of Education (NCE). Graduates of these Colleges of Education are assigned to teach in the Nations Primary Schools to nurture and shape the children who are the leaders of tomorrow. Ibidapo-Obe<sup>[3]</sup> opines that colleges of education is an institution which aims at equipping teachers with desirable attitude, skills and knowledge, so as to make them effective and efficient in their work in accordance with the needs of the society at any point in time. Colleges of Education started springing up in Nigeria since 1895 when the Hope-Waddel Training Institute was established in Calabar, followed by St Andrew Colleges Oyo in 1896<sup>[3]</sup>. Ibidapo-Obe further states that Colleges of Education were established to help in the training of teachers. Cheong and Morrison<sup>[4]</sup> opines that Colleges of Education aims at training and equipping teacher with relevant tools necessary for enhancing his or her knowledge and skills of teaching. National Policy on Education, section 6B (57) a-e recommended that the purpose of teacher education should be: to produce highly motivated, conscientious and efficient classroom teachers for all level of educational system to encourage further the spirit of enquiry and creativity in teachers to provide teachers with intellectual and professional background not only in the life of their country but also in the wider world and to enhance teacher's commitment to the teaching profession. For the smooth running of the colleges of Education by the administrative officers in colleges of education, they need information and communication technology skills in some areas like computer networking, database management, Microsoft word skills, spreadsheet management and internet.

Computer networking is the collection of computers, printers and other equipment that are connected together, so that, they can communicate with each other<sup>[5]</sup>. Computer networking skills allows for the maintenance of files on a network server, monitor system performance,

assist others with network problems, maintain machines attached to the network and modify software based on user need. The administrative office should be exposed to these skills to be able to function properly in the modern office because information could be shared or transferred without necessarily standing from the workstation which makes work much easier.

Another aspect of the ICT which will help the administrative officer in their work is the database management system. Database management system is a collection of programs that enables you to store, modify and extract information from a database<sup>[6]</sup>. The skills in database management system are skills which are possessed to manipulate, retrieve and manage data in the database of a system. The administrative officer should be able to look at and analyze data, navigate database software, manage accounts and files among others<sup>[6]</sup>.

Microsoft word skills is another important functional aspect of the ICT. Microsoft word skills is the ability to use the word processing package to typeset, format, edit and performs minor designing<sup>[7]</sup>. It is particularly useful for typesetting and editing. Microsoft word skills allow the administrative officers to typeset the school document and also student documents like their results, student list etc with the help of some tools, the typed document can be well formatted and made ready for printing or sending via. E-mail, website or blog<sup>[7]</sup>.

Internet is also another ICT tool that is very important to the administrative officer function. The internet is viewed as the network of networks, web of webs, open sharing network and interconnectivity of millions of computers as single network and an electronic information superhighway<sup>[8]</sup>. With the internet, the administrative officer can develop skills of browsing the net, sending electronic mail, transfer files, access and use other computers through computer networking.

Through the use of the internet, the administrative officers in Colleges of Education with relevant skills in technology would use the internet to post information online, hold teleconferencing, publish vital information and send circular online, access both policy and personal files online, forward and retrieve information from the database, make presentations amongst others. However, the Colleges of Education in Enugu States are academic institutions of higher learning with administrative officers in virtually all offices of the institutions. They work with office software programs, including spreadsheet, databases, networking, word processing and graphic presentation software. They send E-mail and use the web for research and employer-specific applications.

At present, administrative officers lack interest in the use of most modern tools of the ICT which would have helped to fast-track work processes, especially in

documentation. The ICT tools available to the offices seem not to be utilized by the administrative officer because the span of their job needed requisite ICT skills to perform the task on the tools<sup>[9]</sup>. This study, therefore, intends to find out the information and communication technology skills needs of administrative officers to enable productivity in their work.

Skill seems to expose the user of equipment or gadgets to proficiency and makes the work achieve a great level of success. Skill also allows for showing and exhibiting high dexterity in showing such technique on task. Salas, etc., viewed skill as a goal-directed, well-organised behaviour that is acquired through practice and performed with the economy of effort. Because skills are acquired through practice, its beneficiary can be trained generally by means of extended practice. The administrative Officer in possessing relevant skills on ICTs can be trained and retrained by means of continuous practice on the ICT skills that they lack, especially in the Colleges of Education<sup>[9]</sup>.

At present, the administrative Officers find it difficult to dispatch files, files are delayed due to bureaucracy, other times lost in transit and the administrative Officers lack interest in the use of most modern tools of the ICT which would have helped to fast track work processes, especially in documentation<sup>[10]</sup>. The ICT tools available to the offices seem not to be utilized by the administrative Officers because the span of their job needed requisite ICT skills to perform the task on the tools<sup>[9]</sup>. It was also revealed that despite the good willing and the need for ICT skills and management of staff strength, it is unfortunate to notice that training and retraining in the ICT skills and management has taken 14 years such training has not been carried out, rendering the administrative Officers irrelevant in other ICT-skills development within the decade, thereby incapacitating the administrative officers (Office of the Registrar, FCE (T). The ICT shortcomings of the administrative officers and their level of expressed performance in the modern office, explain the reason administrative officers in the Colleges of Education in Enugu States need ICT skills. This study, therefore, intends to find out the information and communication technology skills needs of administrative officers to enable productivity in their work.

**Statement of problem:** Despite the popularity and enormous benefits derivable from the utilization of current Information and Communication Technology (ICT) by Administrative officer, studies has revealed that the administrative officers find it difficult to transfer files through the connected computers; the administrative officers seem not to know how to retrieve information from databases and manage the database due to lack of

interest and confidence to do it, since, they prefer the unduly heap of both treated and untreated files, thereby slowing down the file-movements and work processes.

Also, the administrative officers seem not to know how to explore E-mail, search engines, online collaboration, download files and make presentations online through the internet. The spreadsheet management features like keying in data and data verification, program codes, calculating data and creating analytical graphics are hardly exhibited by the administrative officers. It was also revealed that despite the good willing and the need for ICT skills and management of staff strength, it is unfortunate to notice that training and retraining in the ICT skills and management been carried out, rendering the administrative officers irrelevant in other ICT-skills development within the decade thereby incapacitating the administrative officers. Therefore, it is imperative to determine Information and Communication Technology (ICT) skills needs of administrative officer in colleges of Education in Enugu State, Nigeria.

**Purpose of the study:** The major purpose of this study was to find out the information and communications technology skills needs of administrative officer in Colleges of education in Enugu State. Specifically, the study tends to:

- Find out Microsoft world skills needs of administrative officers in Colleges of Education in Enugu State
- Determine the computer-networking skills needs of administrative officers in Colleges of Education in Enugu State
- Find out the internet skills needs of administrative officers in Colleges of Education in Enugu State

**Research questions:** The following questions guided the study:

- What are the Microsoft world skills needs of administrative officers in Colleges of Education in Enugu State?
- What are the computer-networking skills needs of administrative officers in Colleges of Education in Enugu State?
- What are the internet skills needs of administrative officers in Colleges of Education in Enugu State?

**Hypothesis:** The following null hypothesis formulated for the study will be tested at 0.05 level of significance:

- $H_{01}$ : there is no significant difference in the mean ratings of the responses of administrative officers and administrative assistants on Microsoft word skills performance needs of administrative officer in Colleges of education in Enugu State

## **MATERIALS AND METHODS**

The research design adopted for the study was descriptive survey. The study was carried out in Enugu State. The population for this study is made up of administrative officer from the two selected Colleges of education in Enugu State. Which are Federal college of Education Eha-Amufu and Enugu State college of Education Technical. Since, the population is large, purposive sampling technique was used for the study. The sample of this study is 120 administrative officers from one federal Federal College of Education Eha-Amufu and one state Enugu State college of Education Technical and in Enugu State. The 5 faculties were drawn out of the 10 faculties in the two colleges of Education using purposive sampling technique. About 8 administrative officers were drawn each from the 5 faculties in the study area, making it a total of 120 which formed the sample size for the study. Out of the 120 copies of the questionnaire distributed, 119 were completely filled and returned giving a return rate of 99%. A well-constructed and self-developed questionnaire titled "information and communications technology skills need of administrative officer in colleges of education in Enugu State" with 35 items was used to get the desired information from the administrative officers. The questionnaire was divided into two sections A and B. Section B was designated with four Likert scale responses of SA, A, D, SD. Section A was used to collect information on personal data of respondents while Section B consisted of questions that elicited responses from the respondents with response options: Strongly Agree (SA) = 4, Agree (A) = 3, Disagree (D) = 2 and Strongly Disagree (SD) = 1 points. The research instruments were subjected to face validation by 3 experts from the Department of Computer Education in Enugu State college of Education Technical and Cronbach alpha was used to determine the internal consistency of the instrument and reliability coefficient was . About 72 was obtained. The researcher collected the needed data through the use of questionnaire from the selected faculties. The instrument was administered directly to the respondents by the researcher and was collected later by the researcher after the respondents have given their various responses to the instrument administered to them. The data collected from the study was analyzed using mean and standard deviation to answer the research questions and t-test statistics will be

used to analyze the null hypothesis at 0.05 statistical level of significance and relevant degree of freedom. For the analysis of the data collected, any item that has the mean rating from 2.50 and above is considered accepted or agreed while any item below 2.50 is considered rejected or disagreed. The null hypothesis of no significant difference was tested using t-test at 0.05 level of significance. For hypothesis analysed if t-calculated is  $>0.05$  then the null hypothesis are considered accepted while if t-calculated is  $<0.05$  then the null hypothesis are considered rejected.

## RESULTS AND DISCUSSION

### Research question 1:

- What are the Microsoft world skills needs of administrative officers in Colleges of Education in Enugu State?

The data presented in Table 1 showed that the mean ratings of the response of the respondents on the 15 identified items relating to Microsoft world skill shad mean ranging from 3.58-4.09 which are all greater than the cut-off point of 3.00 on a 5-rating scale. The standard deviation values for the 15 items ranged from 0.59-0.83 which showed that the respondents were not far from one another in their responses and that their responses were not far from the mean. Hence, Microsoft world skills are needs of administrative officers in Colleges of Education in Enugu State.

### Research question 2:

- What are the computer-networking skills needs of administrative officers in Colleges of Education in Enugu State?

The data presented in Table 2 showed that the mean ratings of the response of the respondents on the 10

identified items relating to computer-networking skills had mean ranging from 3.34-4.16 which are all greater than the cut-off point of 3.00 on a 5-rating scale. The standard deviation values for the 10 items ranged from 0.51- 0.79 which showed that the respondents were not far from one another in their responses and that their responses were not far from the mean. Hence, computer-networking skills are needs of administrative officers in Colleges of Education in Enugu State.

### Research question 3:

- What are the internet skills needs of administrative officers in Colleges of Education in Enugu State?

The data presented in Table 3 showed that the mean ratings of the response of the respondents on the 10 identified items relating to internet skills had mean ranging from 3.33-3.83 which are all greater than the cut-off point of 3.00 on a 5-rating scale. The standard deviation values for the 10 items ranged from 0.50-0.70 which showed that the respondents were not far from one another in their responses and that their responses were not far from the mean. Hence, internet skills are needs of administrative officers in Colleges of Education in Enugu State.

### Hypothesis:

- $H_{01}$ : there is no significant difference in the mean ratings of the responses of administrative officers and administrative assistants on Microsoft word skills performance needs of administrative officer in Colleges of education in Enugu State

Table 4 shows that F-calculated value for the groups are 2.74 with a significance of F at 0.07 which is greater than 0.05. Hence, the null hypothesis was therefore, accepted at 0.05 level of significance. With this result There is no significant difference in the mean ratings of

Table 1: Mean and standard deviation of items on Microsoft world skills needs of administrative officers in Colleges of Education in Enugu State

Items	$\bar{X}$	SD	Decision
		N = 120	
1. Access the internet	3.96	0.74	Needed
2. Use navigational buttons: back, home, go, refresh, history	3.66	0.63	Needed
3. Interpret URLs	3.68	0.70	Needed
4. Conduct a basic technology-based reference interview related to software and/or internet access	3.87	0.66	Needed
5. Knowledge of common email providers	3.48	0.72	Needed
6. Understand basic email etiquette	3.88	0.69	Needed
7. Attach a file and open an attachment	3.91	0.83	Needed
8. Store and retrieve email messages	4.09	0.59	Needed
9. Compose, send, open, read, reply to and forward messages	3.34	0.69	Needed
10. Know email address and password	4.10	0.68	Needed
11. Print all or part of a web page	3.34	0.69	Needed
12. Scroll in web page	4.10	0.68	Needed
13. Perform basic Internet search	3.34	0.69	Needed
14. Enter URL by typing or pasting	4.10	0.68	Needed
15. Navigate using links	3.34	0.69	Needed

X = Mean; SD = Standard Deviation; N = Number of the respondents

Table 2: Mean and standard deviation of items on computer-networking skills needs of administrative officers in Colleges of Education in Enugu State

Items	$\bar{X}$	SD	Decision
		N = 120	
1. Creating, naming and saving a document	4.16	0.79	Needed
2. Formatting (bold, italics, font sizes, aligning text)	3.66	0.55	Needed
3. Creating lists (bullet vs. numbered)	3.82	0.65	Needed
4. Line spacing	3.50	0.67	Needed
5. Creating columns	3.45	0.59	Needed
6. Inserting a bookmark	3.94	0.76	Needed
7. Inserting an image	3.61	0.77	Needed
8. Hyperlinking	3.63	0.51	Needed
9. Find and Replace	3.71	0.51	Needed
10. Grammar and Spell Check	4.02	0.70	Needed

X = Mean; SD = Standard Deviation; N = Number of the respondents

Table 3: Mean and standard deviation of items on internet skills needs of administrative officers in Colleges of Education in Enugu State

Items	$\bar{X}$	SD	Decision
		N = 120	
1. Analytical skills	3.70	0.58	Needed
2. Computer skills	3.83	0.68	Needed
3. Communication skills	3.33	0.50	Needed
4. Problem-solving skills	3.67	0.61	Needed
5. Multitasking	3.61	0.64	Needed
6. Research skills	3.73	0.70	Needed
7. Organizational skills	3.68	0.70	Needed
8. Interpersonal skills	3.51	0.53	Needed
9. Analytical skills	3.73	0.57	Needed
10. Computer skills	3.66	0.65	Needed

X = Mean; SD = Standard Deviation; N = Number of the respondents

Table 4: t-test analysis of significance on Microsoft word skills performance needs of administrative officer in Colleges of education in Enugu State

Respondents	N	X	SD	df	Sig value	f-values	Decision
AO	80	3.94	0.62	118	0.07	2.74	N/S
AA	40	3.65	0.67				

SD; Standard Deviation; DF = Degree of Freedom; X = Mean; AO = Administrative Assistants; AA = Administrative Assistants

the responses of Administrative Officers and Administrative Assistants on Microsoft word skills performance needs of administrative officer in Colleges of education in Enugu State.

**Discussion of findings:** The finding of the study is organized and discussed according to the research questions answered and hypothesis tested.

Microsoft word skills performance needs of administrative officer in Colleges of education in Enugu State.

The data presented in Table 1 provided answer to research question 1. The findings revealed that the mean score for Microsoft word skills is >3.00 which means that it's needed by administrative officers. Analysis of variance was used to test the first hypothesis; Table 4 shows that F-value (2.75) with a significance of F at (0.07) and confidence level of 0.05 thus indicating that there was a no significance difference between the response of administrative officer and administrative assistant the implication of this finding is that Microsoft word skills is needed by administrative officers. The finding is similar to the view by Hildreth and Kimble<sup>[11]</sup> which said that in administrative work today, people have

a lot of activities to do such as working and learning from other part of the world. In order to solve the problems, they can use technologies such as video conferencing to create a tele-presence that they can communicate administrative work anywhere and anytime. They also said that administrative work is very essential in the enterprise; it plays a vital role in all stages of design production, organization and management. Various professionals in the industry must communicate effectively for any given project to be successful. Effective communication system leads to motivated workforce, speed in job in production. There is need for professionals within an organization to appropriately communicate with each other for the successful delivery of performance goals within the organization. According to Mehra<sup>[12]</sup>, administrative communication will always involve more than one person. As a project unfolds, communication can occur in various directions. There is upward communication to management from one organization and the customer's organization. Lateral communication takes place with customers and within project teams. Ineffective communication will have adverse effects on the goals of an organization.

Computer networking skills performance needs of administrative officer in Colleges of education in Enugu State. The data presented in Table 2 provided answer to research question 2. The findings revealed that the mean score for computer networking skills is  $>3.00$  which mean that it's needed by administrative officer. The finding is similar to the view by Boden which said that computer networking skills is very important in administrative work, it brings unique ideas when sharing information with staff, there is also needs to generate ideas that will attract staff and It involves not only a cognitive dimension (the generation of new ideas) but also motivation and emotion, and is closely linked to cultural context and personality factors. The researcher also said that creative industries offer services which may be inputs to innovative activities of other enterprises and organizations within and outside the creative industries. Computer networking are intensive users of technology and often demand adaptations and new developments of technology, providing innovation impulses to technology producers. The degree of an enterprise's creativeness positively influences the contribution to innovation in other firms in the early stages of the innovation process including the product design stage. Computer networking that use networking within the administration are more likely to support industrial innovation. Internet skills performance needs of administrative officer in Colleges of education in Enugu State.

The data presented in Table 3 provided answer to research question 3. The findings revealed that the mean score for internet skills is  $>3.00$  which mean that it's needed by administrative officer. The finding is similar to the view by Kazilan *et al.*<sup>[13]</sup> which said that internet skills helps administrative identify community problem, plan intervention and conduct evaluation and internet skills also allow an organization to solve complex problems by making decisions in the most effective way. That is when internet became one of the crucial skills in the workplace with a vital role in every type of administrative field.

### CONCLUSION

Administrative officer's skills include computer networking skills, Microsoft word skills and internet skills. With digital empowerment, learners will gain new abilities and ways to participate and express themselves in a networked information technology driven society. Being digitally empowered is likely to influence administrative' future pathways since it is generally considered to be an essential requirement for access to the desirable organization. It is imperative to state that administrative officer in Nigeria University and Enugu State in particular are not well grounded on administrative officer's skills.

Therefore, the study outlined the administrative officer's skills needed by administrative officer's in colleges of education. The study found out that the administrative officer and administrative assistant agreed that administrative officer's skills are needed by administrative officer. Based on these findings the study concluded that administrative officer's skills should be integrated into the university system in Enugu State Nigeria, so that, when all the administrative officers will learn and make use of it.

### RECOMMENDATIONS

Based on the findings and the conclusion drawn from this study, the following recommendations were made: The ministry of Education may use the findings of this research to organize seminars, conferences and workshops for retraining of administrative officer's on the skills needs. Stakeholder's in-charge of educational reform and development in the country should be strengthened by reviewing their computer skills and enabling them to up skill and provided with appropriate funds for research and development of new programmes to in order to continuously meet societal needs.

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