

**Information and Communications Technology Skills Need of Administrative Officers in
Colleges of Education in Enugu State, Nigeria**

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Abstract

The study sought to determine the information and communication technology skills need of administrative officers in colleges of education in Enugu State. The study adopted a survey research design. The population for the study is 213 respondents which comprised of 24 male administrative officers and 18 female administrative officers drawn from Enugu State College of Education Technical while 87 male administrative officers and 84 females were drawn from the Federal College of Education Eha-Amufu, Enugu State. Total population sampling was used for the study. The instrument for data collection is a 40-item structured questionnaire titled “Administrative Officers ICT Needs Questionnaire (AOINQ)”. The reliability index of 0.85 was established using Cronbach alpha to ascertain the internal consistency of the administrative officer skills. Data collected was analyzed using mean and standard deviation and t-test to test the null hypotheses 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 Information and Technology (ICT) skills such as networking skills and multimedia skills are needed by administrative officers for effective service delivery. Furthermore, the findings on hypotheses tested revealed that there was no significant difference between the mean ratings of the male administrative officers and female administrative officers on the ICT skills needs. It was recommended among others that Government through the Ministry of Education should organize seminars, conferences and workshops for training and retraining of administrative officers in colleges of education on the ICT skills.

Keywords: *Information and Communication Technology (ICT); Colleges of Education; Administrative Officers; Networking skills; Multimedia Skills*

Introduction

Information and communication technology (ICT) has become one of the basic building blocks of the present society. ICT 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 but also in administrative processes and management of higher educational institutions (Abu, 2016). The broad scope and use of

information technology in administration across the globe made a revolutionary change in service delivery and transparency, which also encouraged the quality of work and living patterns (Abdul, 2021). Kawade (2012) opined that the use of ICT tools would assist administrative officers in keeping records of the academic financial documents like payment slips, audit statements, balance sheets, non-remuneration grants, stock recordings as well as students’ appraisal

reports and cumulative documentations of students' future references. Alam (2016) indicated that ICT in administration of educational institutions plays a major role in the efficient utilization of existing resources and simplifies the administration tasks (e.g. in student administration, staff administration and general administration) by reducing the paper work and replacing the manual maintenance of record keeping to electronic maintenance of records which helps in easy retrieval of any information. It is an unavoidable reality that ICTs play a crucial role in the integration of educational purpose whereas administrators and leaders can assist in introducing the ICT based culture maintenance to regulate and carry out the task, which also depends and require adequate skills and IT expertise to meet the envisaged goal (Ukanwa & Chiemeka, 2021). ICT integration allows students to get the information and skills they need to be ICT competent (Salam et al., 2018).

ICT is a general term for information processing, manipulation, and communication (Mensah et al., 23). This phrase, which is often used to refer to ICT, describes the hardware, software, network, and media elements that make it possible to gather, transfer, and process information (Lawrence, 2018). ICT is a common abbreviation for Information Communications and Technology used for information processing, manipulation, and communication. Utilising these technologies entails using video-sharing websites like YouTube as well as social networking sites like Facebook and WhatsApp. Projectors, desktops, and printers are additionally used in communication in addition to computers (Lawrence, 2018). In the context of this study ICT refers to technologies that provide access to information through telecommunications. The use of ICT has enabled the administrative officers to record, store, process, retrieve, and transmit information in a very easy and faster manner. Thus, the Introduction of information and communication technology have greatly expanded the roles of the administrative Officer in modern office.

Administrative officers plan, organizes and successfully run a business, school or institution. Administrative Officers can be male or female staff administrative officers in the colleges of education that act like the

supervisors of all office activities and the regular procedure of work processes in the organization (Ordu, 2017. Osuala and Okeke (2016) 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. Administrative officers help to ensure that institutions such as colleges of education run smoothly by managing administrative, financial and support systems. Information and Communication Technology tools are largely been adopted for sustaining administration and management of colleges of education (Osuala & Okeke, 2016).

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) (Onifade & Onifade, 2011). According to Ibidapo-Obe (2007), college 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 (Ibidapo-Obe, 2007). Colleges of Education were established with the sole aim of training teachers. According to Ogah (2007), Colleges of Education aims at training and equipping teachers with relevant tools necessary for enhancing their knowledge and skills of teaching. Thus, the realization of these objectives depends partly on the efficient functioning of the administrative officers in these colleges of education. For administrative officers to function efficiently in the modern world of work, there is need to acquire ICT literacy skills which comprises a 21st century form of literacy, in which researching and communicating information via digital environments are as important as reading and writing were in earlier centuries.

ICT literacy skills are the set of skills and understandings required by people to

enable meaningful use of ICT appropriate to their needs. Education Testing Services Report (2022) opined that ICT literacy skill is the ability to use digital technologies, communication tools, and networks appropriately to solve information problems in order to fit into the society. This includes the ability to use technology as a tool to research, organize, evaluate and communication and the possession of the ethical and legal issues surrounding the access and use of information. Ugwuanyi (2011) posits that ICT literacy skills are very necessary as the new literacy is required for effectively using ICT to accomplish functions in an information age. The author further states that capacity of users and administrators alike exploit the internet depends on the level of literacy, education and mastery of the technologies concerned. Networking skill, multimedia skill, among others helps institutional administrators in processing relevant data and in the process, enhance efficient service delivery.

In spite of the advantages inherent in the acquisition of ICT skills for office functions, it has been observed that most administrative officers in colleges of education are not inclined in using ICT tools and resources in their day-to-day office operations. Ajie-Uche (2018) opined that administrative officers find it difficult to use ICT resources and tools to carry out their administrative functions. The author further stated that administrative officers lack interest in the use of most modern tools of the ICT especially female administrative officers which would have helped to fast-track work processes, especially in documentation. Male administrative officers seem to be more interested in trying to move in line with the 21st century skills. According to the study of Van Deursen and Van Dijk (2015), male officers perform much better than females in all the skill domains such as saving files, downloading programs and searching for information. Olatokun (2007) opined that there is a disparity in the use of ICT between male and female administrators. Interestingly, Ritzhaupt, Dawson, and Barron (2013) reported that female students perform better than their male counterparts in all technology literacy domains such as creating new files, locating and opening files, selecting the best device to complete a given assignment.

Hildreth, et al (2010) states that the ICT tools available to the offices seem not to be utilized by both male and female administrative officers because the span of their job needed requisite ICT skills to perform the task, and perhaps this accounts for the loss of data and files, delays in processing of students' files such as admission letters, results, statements, and certificates, among others.

Statement of the Problem

There is global technological advancement that has, most often, influenced all parts of the organizational administrative system. The management of the general records by administrative officers of an institution, such as academic records, admission records, financial records, operational records, enrolment and placement records, staff and student's records, managerial and administrative records are not left untouched during this modification and innovation. Administrative officers over the decades are responsible for records management in any organization. With the help of Information and Communication Technology, administrative officers perform duties such as: answering incoming calls; taking messages and re-directing calls as required; dealing with email enquiries; taking minutes; diary management and arranging appointments, booking meeting rooms and conference facilities; data entry and general office management with ease.

In most Nigerian Colleges of Education, administrative officers' deals with processing of documents, memo; dealing with telephone and email inquiries, creating and maintaining filing systems, keeping records, arranging meetings, among others. These are mostly carried out with little utilization of information and communication technologies. Studies have also reviewed the lack interest in the use of most modern office tools which would have helped to fast-track work processes, especially in documentation. 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.

Studies have also revealed that the administrative officers still find it difficult to use ICT resources and tools in the discharge of their duties effectively. Therefore, this study intends to find out the information and Communication Technology (ICT) skills need of Administrative Officers in Colleges of Education in Enugu State, Nigeria.

Purpose of the Study

The main purpose of this study is to determine the Information and Communication Technology skills needs of administrative officers in colleges of education in Enugu State. Specifically, the study sought to determine:

1. the networking skills need of administrative officers in Colleges of Education in Enugu State;
2. the multimedia skills need of administrative officers in Colleges of Education in Enugu State;

Research Questions

1. What are the networking skills need by the administrative officers in Colleges of Education in Enugu state?
2. What are the multimedia skills need by the administrative officers in Colleges of Education in Enugu state?

Hypotheses

The following null hypotheses guided the study and were tested at 0.05 level of significance

- H₀₁: There is no significant difference in the mean responses of male and female administrative officers on the Networking skills need of administrative officers in College of Education in Enugu State
- H₀₂: There is no significant difference in the mean responses of male and female administrative officers on the multimedia skills need of administrative officers in College of Education in Enugu State

Literature review

The Role of ICT in Educational Administration in colleges of education

ICT plays vital roles in supporting management and administration of offices by administrative officers in education sector. It is specified that technology can be used right from student administration to various

resource administration in an education institution (Maki, 2018). Clarke-Okah (2019) identified multiple uses of ICT application for the college of education administration as follows: ICT technology can process voluminous records quickly, meticulously and impeccably; technology can generate reliable and consistent records; records and data produced are searchable and quickly retrievable; digital records save space, a premium cost to institutions; technology saves human resources for data entry and servicing student admission and registration. With advanced scanning technology, completed application forms can be read into the databases in a matter of seconds (Maki, 2018). Using ICT in higher education administration is fundamentally about harnessing technology for better planning, setting standards, effecting change and monitoring results of the core functions of the college (Krishnaveni & Meenakumari, 2010).

Adesida (2014) outlined some ICT roles in enhancing the administrative efficiency and effectiveness such as quicker analyses of data and accuracy, effective and quick decision making, efficient management of education and institution, enhancement of effective communication and knowledge sharing, enhancement of planning, improvement of monitoring and management of instructions.

Quicker analyses of data and Accurately: Use of ICT will help in analyzing the available data quickly and accurately with the help of organized data. The institutional management systems arrange the data in the form of graphs, polygons, tables, means, and standard deviation etc. for analysis purpose.

Effective and Quick Decision Making: The information present in the educational institutions is in fragmented and fuzzy form, it is generally compiled in non-standard formats. Manual handling of huge data is very difficult by administrative officer and causes delayed information collection and compilation. This will affect in decision-making process for quality education, but with the use of ICT, well-organized and analyzed data is readily available to foster effective and quick decision-making (Krishnaveni & Meenakumari, 2010).

Efficient Management of Education and Institution: ICT improves management of

education through more efficient administrative process, including human resource management, monitoring, evaluation and resources sharing. With the readily available data for analysis the administrative officers can make quick decisions about the improvement in the institution.

Enhancement of Effective Communication and Knowledge Sharing: The integration of ICT for example internet, emails, chat and instant messaging programmes, discussion boards and news groups in institutional administration has opened new ventures for communicating. It is convenient; cheap and allows for administrative officers to share and exchange ideas instantly (Chinien, 2013). Due to the recent development in ICT, we now live in a world without borders since the world has become a global village, this allows administrative officers in college of education to use ICT for improved communication as a process of transforming thoughts, sharing and imparting of information among different schools, and knowledge experts locally and all over the world which in return enhances the administration of their schools as well as improvement in the functioning of institution. (Iwu & Ike, 2009).

Enhancement of Planning: Institutional information systems hold the information on student, staff, resources etc. This could be used by administrative officers to plan and make decisions on the basis of accurate and readily available facts. They budget the school expenditure and plans for replacement of both obsolete and repairs of broken-down equipment or institutional facilities (Iwu & Olke, 2014).

Improvement of Monitoring: Institutional administrative officers use computers in monitoring various areas in the institution, such as teacher's performance, monitoring student's progress and achievements.

Managed Instruction: Administrative officers use computer in scheduling courses, classrooms, inventory and personnel control, recording and reporting attendance, school accounting, storage and student's results management. This is capable of generating results, retrieving lecture timetable, enlisting of courses and registration online (Iwu & Olke, 2014)

ICT skills required of administrative officers in colleges of education

In this digital era, knowledge of the use of ICT facilities and resources to access, evaluate and retrieve information is not negotiable. Igun (2006) opines that one essential requirement to operate in the knowledge society of the 21st century is ICT skills which start from turning on a computer to create, store, retrieve and access information online. However, this study will focus on the networking and multimedia skill for effective administrative service delivery.

Networking skills

Networking skills are the competencies needed to connect computers, printers and other equipment together so that they can communicate with each other (Bakardijeva, 2014). networking skills according to Ajie-Uche (2015) allow 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 needs. Nwana (2008) opined that Networking is the interconnectivity of millions of computers as single network and an electronic information superhighway. This can also be referred to as internet. The administrative office should be exposed to these skills to be able to deliver their duties properly in the modern office, because information could be shared or transferred without necessarily standing from the workstation, which makes work much easier. Through the use of the Network, the administrative officers in colleges of education would be able to post and update 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 (Afolabi, 2009).

Management and administrative staff adopt various kinds of ICT tools including networking their gadgets to keep interactions and connections run smoothly, operate financial works, save records, process files and documents, share and collect data (Singh et al., 2012). Therefore, organizational and institutional administrators and managers have to give immense concentration and awareness

to the knowledge of Networking and data access on ICT educational tools.

Multimedia skill

Multimedia skill is another important functional aspect of the ICT that help the administrative officers immensely in carrying out their duties using different media tools. Multimedia according to Singh (2007) refers to the uses of computer technology to create, store and experience multimedia content. Multimedia is often to deliver information which is more powerful than printed learning resources such as printed text book. It also allows users to interact with the information quickly and accurately. Multimedia technology has some characteristics such as integration, diversity, and interaction that enable people to communicate information or ideas with digital and print elements. Multimedia is any combination of text, sound, animation, and video delivered by computer or other electronic or digitally manipulated means (Vaughan (2008).

Various aspects of human endeavours, especially the educational sector, are being transformed by the advent of Information and Communication Technology (ICT). Multimedia technology is an important aspect of ICT that deals with how information can be represented and presented digitally, using different media such as text, audio, video, among others (Guan et al., 2018). Multimedia encourages interactive communication between administrative officers, students, and teachers

(Abdulrahman, Oloyede, Surajudeen-Bakinde, Mejabi, . Imam-Fulani, Fahm, & Azeez' 2020). It also improved problem solving, increased positive emotions and access to a vast variety of information which will help the administrative officer in effective service delivery (Abdulraham, et al., 2020)

Methodology

Study Design

The study utilized a survey research design. This procedure helped the researcher in getting the opinion of administrative officers on information and communication technology skill needs of administrative officers of Colleges of Education in Enugu State Nigeria

Study Setting

This study was conducted in Enugu State of Nigeria. The state comprised of 17 local

government areas. Furthermore, the state has one (1) public and four (4) private colleges of educations with numerous staffs working as administrative officers. The research focused on the public colleges of education which comprises Federal College of Education, Eha-Amufu and Enugu State Colleges of Education, Technical.

Population and Sampling

The population for the study is 213 respondents which comprised of 42 administrative officers (24 male 18 female) drawn from Enugu State Colleges of Education, Technical and 171 administrative officers (87 male and 84 female) drawn from the Federal College of Education Eha-Amufu, both in Enugu State. The choice for the population of the study was considerable since all the participants are involved in administrative work and work together in the same office and also to reduce cost. The entire population were studied because the number is manageable. Therefore, total sampling was used.

Data Collection Tool

The instrument used for data collection was 20-item structured questionnaire titled "Administrative Officers ICT Needs Questionnaire (AOINQ)". The instrument is divided into two sections: A and B. Section A was structured to obtain background information about the respondents. Section B contained four clusters of ICT skills needs of administrative officers. Cluster 1 elicited information on networking skills needed for administrative officers and made up of 10 items. Cluster 2 elicited information on Multimedia skills needed for administrative officers and made up of 10 items. The questionnaire carried a 5-point rating scale such as Highly needed (HN) - 5, Moderately needed (MN) - 4, Little Needed (LN) - 3, Not needed (NN) - 2, Undecided (U) - 1.

Reliability of the Instrument

Twenty-Five respondents, 15 male administrative officers and 10 female administrative officers respectively were randomly selected from Nwafor Orizo College of Education, Anambra State to establish the reliability of the instrument. The reliability of the result was tested using Cronbach Alpha reliability by applying the Statistical Package for Social Sciences (SPSS) version 20. The Cronbach alpha reliability coefficient obtained

for networking skills was 0.85 the coefficient of Multimedia skills was 0.84. The overall reliability coefficient of the instrument is 0.84. This value is high showing that the instrument is reliable for collecting data for the study

Method of Data Collection

The research instruments were administered by the researcher with the help of two research assistants who were familiar with the study area. The research assistants were briefed before proceeding to the field.

Method of Data Analysis

Data collected was analyzed using mean statistic to answer the research questions and standard deviation to ascertain the closeness of the responses to the mean while t-test statistics were used in testing the null hypotheses at 0.05 level of significance. The analysis was done using SPSS (Statistical Package for Social Sciences) version 20. Based on the five-point scale of the AOINQ, 3.0 was used as the criterion value. The mean score of each item

was then compared with the criterion value to establish agreement or disagreement with the item. Mean score of 3.0 and above shall indicate needed, while below 3.0 shall indicate not needed. This decision was also applied to the clustered mean. More so, 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 is considered accepted while if t-calculated < 0.05 the null hypothesis is considered rejected.

Results

Research Question 1

What are the computer networking skill needs of administrative officers in colleges of education in Enugu State?

Administrative officers in Colleges of Education were required to respond to this question. The responses obtained are presented in Table I

Table I: Mean and standard deviation ratings on the computer networking skill needed of administrative officers in colleges of education in Enugu state.

S/N	Item	\bar{x}	SD	Decision
1.	Ability to use Digital video editing and production systems for video production	3.62	1.16	Needed
2.	Ability to use multimedia Database systems for storing of records and data.	3.19	1.36	Needed
3.	Ability to create video files for administrative purpose	3.17	1.20	Needed
4.	Ability to create graphic files for administrative purpose	3.59	1.26	Needed
5.	Ability to use Camcod to record video, store and transfer to computer system	3.95	1.20	Needed
6.	Ability to use multimedia applications like world wide web, video conferencing etc.	4.08	1.34	Needed
7.	Ability to setup multimedia for presentation	4.09	1.12	Needed
8.	Ability to use suitable font and colour for easy read of the text	3.59	1.26	Needed
9.	Ability to edit and modify the recorded films to prepare multimedia learning materials	3.41	1.28	Needed
10.	Ability to use interactive white board to add comment, highlight test, and show website content.	3.68	1.39	Needed
	Cluster mean	3.64	1.25	Needed

Key: \bar{x} = mean, SD = Standard Deviation

The data presented in Table 1 showed that the mean ratings of the respondents on the 10 items on the networking skill needs ranged from 3.37-4.35 which are all greater than the cut-off point of 3.00 on a 5-rating scale. This shows that the networking skills are much needed by administrative officers in Colleges of Education in Enugu State. The cluster mean value of 3.79 which is above 3.0 also indicates

that the networking skills are needed by the administrative officers in colleges of Education in Enugu State. The standard deviation values for the 10 items ranged from 0.96-1.39 which showed that the respondents were not far from one another in their responses and that their responses were not far from the mean.

Research Question 2

What are the Multimedia skills needs of administrative officers in colleges of education.

Administrative officers in Colleges of Education were required to respond to this question. The responses obtained are presented in Table 2.

Table 2: Mean and standard deviation ratings on the multimedia skill needs of administrative officers in colleges of education in Enugu state

S/N	Item	Mean	SD	Decision
1	Ability to use team viewers to access files remotely	3.66	1.32	Needed
2	Ability to connect to the scanner, printer and others devices in the network	4.04	1.12	Needed
3	Ability to use router for sharing internet access	4.35	1.15	Needed
4	Ability to install virtual private network to establish a protected network connection in public domain	3.45	1.15	Needed
5	Ability to Resolve network virus problem Encountered using antivirus	3.59	1.26	Needed
6	Ability to analyzed data network documentation and assisted in communicating to management regarding the current operational status of networks.	3.72	1.10	Needed
7	Ability to installed, sustained, operated and repaired network infrastructure, cryptographic equipment, and systems.	3.37	1.15	Needed
8	Ability to Installed, configured, and maintained network switches and routers.	3.84	1.06	Needed
9	Ability to Incorporated Internet protection methods by installing screen door Servers at several schools.	3.86	0.96	Needed
10	Ability to Perform installations, upgrades, troubleshooting, and repair wireless internet service provider subscribers and infrastructure using Ubiquity Networks equipment.	3.98	1.14	Needed

The data presented in Table 3 showed that the mean ratings of the respondents on the 10 items on the multimedia skill needs ranged from 3.17- 4.09 which are all greater than the cut-off point of 3.00 on a 5-rating scale. This shows that the multimedia skills are very much needed by administrative officers in Colleges of Education in Enugu State. The clustered mean value of 3.64 which is above 3.0 also indicates that the multimedia skills are needed by the administrative officers in colleges of Education in Enugu State The standard deviation values for the 10 items

ranged from 1.20-1.36 which showed that the respondents were not far from one another in their responses and that their responses were not far from the mean.

Hypothesis testing

H₀₁: There is no significant difference in the mean responses of male and female administrative officers on the Networking skills skill needs of administrative officers in College of Education in Enugu State

Table 3: The t-test analysis of the mean responses of the male administrative officers and female administrative officers on the networking skill needs of administrative officers in colleges of education in Enugu state.

Respondents	N	\bar{X}	SD	df	t	Level of sig.	Decision
Male	111	3.87	1.18	211	1.17	0.05	NS
Female	100	3.7	1.06				

Key: SD=Standard Deviation; df = Degree of Freedom; X = Mean; NS = Not significant

From the data presented on the t-test statistic in Table 5, it was revealed that the t-calculated (t-cal) value of 1.17 at 211 degree of freedom (d) is greater than 0.05 level of significant. This finding

showed that, there is no significant difference between the mean ratings of the responses of male administrative officers and female administrative officers on networking skills needs of administrative officers in Colleges of Education in Enugu State. Therefore, the null hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents for hypothesis one is accepted.

H₀₂ There is no significant difference in the mean responses of male and female administrative officers on the multimedia skills needs of administrative officers in College of Education in Enugu State

Table 4: The t-test analysis of the mean responses of the male administrative officers and female administrative officers on the Multimedia skills needs of Administrative Officers in colleges of education

Respondents	N	\bar{X}	SD	df	t	Level of sig.	Decision
Male	111	3.67	1.26	211	0.35	0.05	NS
Female	100	3.60	1.17				

Key: SD=Standard Deviation; df = Degree of Freedom; X = Mean; NS = Not significant

From the data presented on the t-test statistics in table 7, it was revealed that the t-calculated (t-cal) value of 0.35 at 211 degree of freedom (d) is greater than 0.05 level of significance. This finding showed that, there is no significant difference between the mean ratings of the responses of male administrative officers and female administrative officers on multimedia skills needs of administrative officers in Colleges of Education in Enugu State. Therefore, the null hypothesis of no significant difference in the mean ratings of the responses of the two groups of respondents for hypothesis three is accepted.

Discussion of findings

The findings of this study on the networking skills needs of administrative officers revealed that the use of team viewers to access files remotely; connection of scanner; printer and others devices in the network; use of router for sharing internet access, installation of virtual private network to establish a protected network connection in public

domain, resolving of network virus problem encountered using antivirus in the office; analyzing data network document in communicating to management regarding the current operational status of networks, installation, sustainability; operation and repairing of network infrastructure, cryptographic equipment, and systems, installation maintenance of network switches and routers; installation of screendoor servers at several schools as incorporated internet protection methods; installation, upgrading, troubleshooting, and repairing of wireless internet service provider subscribers and infrastructure using ubiquity networks equipment are very much needed by administrative officers.

The finding is supported by Ajie-Uche (2015) who found that administrative officers need computer networking skills to evaluate performance and measurement, coordinate network control, develop advanced network architecture, resolve network problem encountered and so on. In addition, the finding is also similar to the view by Boden (2010) which opined

that computer networking skills is very significant in administrative work in the sense that it brings unique ideas when sharing information with staff and also generates idea 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.

With respect to multimedia skills need, the findings revealed that the use of digital video editing and production; use of multimedia database systems for storing of records; creating of video files; creating of graphic files; use of Camcod to record video, store and transfer to computer system; use of multimedia applications like world wide web, video conferencing; setting up multimedia for presentation; use of suitable font and colour for easy read of the text and editing and modifying of the recorded films to prepare multimedia learning materials are needed by administrative officer in their various offices.

This finding is similar to view of Guan and Song (2018) which opined that multimedia is an important aspect of ICT that deals with how information can be represented and presented digitally, using different media such as text, audio, video, among others. Kawado and Kukaru (2012) also opined that use of multimedia in administration can be considered as an effective enabler to create access, store, transmit and manipulate different information in audio and visual form.

Implications of the Study

The success service delivery of the administrative staff in this modern era greatly depends on the ability to utilize ICT tool for office use. Therefore, the

findings of this study have positive implications for administrative officers in colleges of education. The findings of the study will help the Administrative Officers in Colleges of Education and other sectors of work to run offices with ease. As a motivator, the multimedia, and networking skills will enhance more productivity and ICT skills improvements. The findings of the study will benefit all levels of management in the Colleges of Education in Nigeria as administrative officers will work with less stress by using networking system to run a virtual office.

Students of Colleges of Education and other institutions of learning on the other hand will benefit immensely from this study because when ICT is fully introduced, information will be made available at first-hand. Announcements, notices of lecture, time-table, examination, and their venues, academic calendar, resumption and closing dates, amount of fees to be paid, courses to offered, and results of examination will be posted directly to the e-mail account and database of the students.

The findings of this study will be of immense benefit, to the general public because information and communication technology is part of the society and the awareness of the skills required for effective ICT utilization will influence successful work performance among administrative officers. Thus, when the administrative officers are well equipped with ICT skills especially on how to upload information on the website or through social media with the help of networking tools, the public can easily get information about what is going in that institution.

Conclusion

This study was conducted to determine the Information and Communication Technology needs of administrative officers in colleges of education in Enugu State, Nigeria. This was necessitated by the need to reverse the present high rate of inadequate IT skills possessed by administrative officers. Based on the findings, the researcher found that networking skills, and multimedia skills among others are very significant for the efficient job performance by administrative workers. With digital empowerment, learners will gain new abilities and ways to participate and express themselves in the knowledge-based economy driven by information and communication technology. Being digitally empowered is likely to influence administrative future pathways since it is generally considered to be an essential requirement for access to the much-desired organization.

Meanwhile, the research revealed that administrative officer in Nigerian colleges of education and Enugu State in particular are not well grounded on the administrative officers' ICT skills hence there is need for the ICT skills improvement. Based on these findings, the study concluded that administrative officers' neediness of ICT skills should be addressed by equipping them with these skills for easy and effective administrative job delivery.

Recommendations

Based on the findings and the conclusion drawn from this study, the following recommendations were made:

- The Ministry of Education should organize seminars, conferences and workshops for retraining of administrative officers in colleges of education on the ICT skills as well as ensure adequate provision of the required ICT facilities colleges of education in Enugu state.
- Stakeholder's in-charge of educational reform and development in the country such as Government Ministries and Agencies; Policy Makers and Teachers 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.

Limitations

One limitation of this study is that among 5 colleges of education in Enugu State, only two were involve in the study and this might affect the generalizability of the results. Another limitation considered important is that the study did not take in account other aspects of ICT skills such as database management skill, analytical skill, computer maintenance skill among others. Therefore, we recommend that future studies should consider widening the scope so as to collect robust data on ICT skills needs of administrative officers in colleges of education in Enugu state. Future studies as regards to this topic can also involve administrative assistant.

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