ASSESSMENT OF THE EXTENT OF UTILIZATION OF AVAILABLE INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FOR COMMUNICATIVE AND COMPUTATIVE EFFECTIVENESS OF PRINCIPALS IN PUBLIC SECONDARY SCHOOLS IN IKOT EKPENE EDUCATION ZONE IN AKWA IBOM STATE.

By

AKANG, Ofonime Boniface
Department of Educational Management
Michael Okpara Universityof Agriculture Umudike

&

Prof. N. IBIAM
Department of Educational Management
College of Education
Michael Okpara University of Agriculture Umudike

ABSTRACT

The study assessed the extent of utilization of available information and communication Technology (ICT) for communicative and computative effectiveness of principals in public secondary schools in Ikot Ekpene Education Zone in Akwa Ibom State.Two purposes of the study, two research questions and two hypotheses were raised. Correlational research design was adopted. The population comprised 86 principals and 2008 teachers. A sample of 69 principals and 602 teachers participated in the study. Multistage sampling technique was used to draw the sample. Two instruments titled "ICT Availability and Utilization Questionnaire (ICTAUQ)" and "Principals' Administrative Effectiveness Questionnaire (PAEQ)" were used for data collection. The instruments were validated by three experts from College of Education, MOUAU. Reliabilities of the instruments were established using Cronbach Alpha reliability method, and ICTAUQ yielded a reliability coefficient of 0.85, while PAEQ) yielded a reliability coefficient of 0.81. Data from 69 completed copies of ICTAUQ and 602 completed copies of the PAEQ were used for analysis. Pearson Correlation analysis and regression analysis were used for data analaysis. From the data analysis the results showed that there are significant correlations between the utilization of ICT and principals' effectiveness in communication and computation of result. One of the recommendations was that the government should give in-service training to serving principals on effective utilization of ICT facilities to assist them on effective school administration.

Keywords: ICT, Utilization, communicative and computative effectiveness, principals, publicSecondary schools, Ikot Ekpene Education Zone, Akwa Ibom State.

INTRODUCTION

Change has been happening at an uneven pace in any growth – oriented industry, and the education sector is no exception. Rapid growth in the field of education has made governance in

academic sector a very complex task. The 21st century has witnessed tremendous advancements in technology which has led to far – reaching developments in the administrative system. Cost effective technology combined with the flexibility in learning and administrative activities is essential to enhance efficiency. The electronic spreadsheet-software, database management system (DBMS), Microsoft Access is very useful for administrators in recording and analyzing the financial data of education institutions (Uko, 2013). Computers can be used extensively for educational administration. The following are some of the areas where computers can be used for effective educational administration; General administration, Pay roll and financial accounting, Administration of student data. Inventory management, Personnel records maintenance, Library system (Ben-Zion, 1995).

Okorie, Agabi and Uche (2005), are of the view that the use of hi-tech information and communication technology (ICT) is a modern tool for management of complex organizations. It has become the norm particularly for the advanced world. Its adoption in most of the less advanced societies is yet to achieve the status of stability. However, the growing complexities of secondary schools especially in the era of Universal Basic Education (UBE) in Akwa Ibom State and the challenges it poses to school administration makes the application of information communication technology (ICT) indispensable for quality assurance. With the computer spreadsheet, school administration can easily have proper bookkeeping, good budget preparation, financial forecast and correct calculation of figures. The utilization of ICTs in education is inevitable (UNESCO, 2009).

In general, a good communication system should also be in place for the overall effectiveness of administration. ICT helps in providing a good communication system in education system (Magni 2009). ICT helps in providing timely information to all concerned. Communication could be for internal and external information acquisition and dissemination. It includes communication among the important stakeholders of the system such as sending e-circulars to students, departments and staff. Hence this study on the utilization of available information and communication technology (ICT) as a correlate of communicative and computative effectiveness of principals in public secondary schools in Ikot Ekpene Education Zone, Akwa Ibom State.

STATEMENT OF PROBLEM

Given the importance of ICT in educational administration, one would expect every school principal to ensure the availability and utilization of ICT in secondary schools to enhance effective administrative processes. Parents and other stakeholders in the secondary school education sector are expressing concern on the failure of principals to make use of ICT in communication and administrative data processing for administrative information flow between the school and the home. This study is therefore needed to find out the relationship between information and communication technology (ICT), availability and utilization as correlates of principals' administrative effectiveness in public secondary schools in Ikot Ekpene Education Zone, Akwa Ibom State.

PURPOSE OF THE STUDY

The purpose of this study is to assess the extent of utilization of available information and communication Technology (ICT) for communicative and computative effectiveness of principals in public secondary schools in Ikot Ekpene Education Zone in Akwa Ibom State. Specifically, the study seeks to:

1.   Find out the extent to which the utilization of the available ICT correlate with principals' communicative effectiveness in public secondary schools in Ikot Ekpene Education Zone, Akwa Ibom State.
2.   Determine the extent to which the utilization of the available ICT correlate with principals' effectiveness in computation of result in public secondary schools in Ikot Ekpene Education Zone, Akwa Ibom State.

RESEARCH QUESTIONS

1   To what extent does the utilization of the available ICT correlate with principals' communicative effectiveness in public secondary schools in Ikot Ekpene Education Zone, Akwa Ibom State?
2   To what extent does the utilization of the available ICT correlate with principals' effectiveness in computation of result in public secondary schools in Ikot Ekpene.

HYPOTHESES

The following null hypotheses guided the study at 0.05 level of significance.

HO_1 The utilization of the available ICT does not significantly correlate with principals' communicative effectiveness in public secondary schools in Ikot Ekpene Education Zone, Akwa Ibom State.

HO_2 The utilization of the available ICT does not significantly correlate with principals' administrative effectiveness in computation of result in public secondary schools in Ikot Ekpene Education Zone, Akwa Ibom State.

SIGNIFICANCE OF THE STUDY

The result of this study will be meaningful and beneficial to the State Secondary Education Board, principals, teachers and students. The information would help the State Secondary Education Board to perform oversight functions on the school system and also work out ways to arrest most of the difficulties encountered by principals in the administration of secondary schools. The teachers and students will utilize the ICT avenue to get administrative information from the office of the principal by accessing their respective school domains in the internet.

REVIEW OF RELATED LITERATURE

Concept of Information and Communication Technology

Based on the opinion of Ololube (2007), information and communication technologies (ICT) are advances in technology that provide a rich global resource and collaborative environment for dissemination of ICT literacy materials, interactive discussions, research information and international exchange of ideas, which are critical for advancing meaningful educational initiation, training high skilled labour force and understanding issues related to economic development. In a study carried out by Chidobi (2015) to examine the extent of application of ICT facilities on record management in universities in Enugu State such as application of ICT facilities in the management of administrative records and student personnel records. The findings have a lot of implications to university education in the entire country. This is because if ICT facilities are not used to a great extent in record management, handling of records manually will not yield effective result. Records stand the chances of missing or being falsified.

Furthermore, Nwosu in Atsu (2014) noted that the use of ICT facilities for record keeping assisted the school administrator to meet the task of school management in the areas of curriculum and instruction, school community relationship and school business operation. But with the use of computer, which could store up to thousands of files in its memory, it only requires the utilization of ICT resources to boost administrative effectiveness. With diffusion of ICT innovations in educational institutions which has radically changed how work is done, ICTs have offered tremendous possibilities in improving and developing administrators' professional capability (Njoku, 2006). Adeyemi and Olaleye (2010) as well as Ekpe (2009) among other researchers have focused on information processing as a correlate of principal administrative effectiveness in schools.

ICT Utilization and Principals Communicative Effectiveness

Communicative effectiveness is the ability to co-ordinate planned programmes by the administrator for effective execution through communication so as to achieve the predetermined goals of the school (Besong, 2001). An effective administrator is an asset to an organization. He or she is the link between an organization' various departments and ensures the smooth flow of information from one part to the other. Thus without an effective administration an organization would not be run professionally and smoothly. Administration is the process of getting things done with and through people in order to achieve a definite purpose. It is a social process concerned with identifying, motivating, controlling and unifying formally and informally organized human and material resources within an integrated system designed specifically to accomplish pre-determined goals (Okorji and Unachukwu, 2014).

In this age of science and technology, Mbipom (2000) articulated that the computer would be a very handy tool in the hands of an effective school administrator. This means that any breakdown or barrier along the channels of communication could cause a serious set-back toward the achievement of organizational goals. Effective communication is an intrinsic component of effective work performance and efficient problem solving. The school principal must not only communicate downward but also upward in order to persuade, instruct, direct, request, inform, and stimulate subordinates for effective service delivery. Hence, the importance of upward flow of communication in an educational organization cannot be underestimated. It helps education administrators to get a feedback from the people that can be affected. These

people represent an important source of ideas for improvement (Merihue, 2000). The communication network therefore, is seen as being very significant to the life of the school. This is because it is an avenue through which the school personnel gets an opportunity to identify and appreciate what the school is doing, the atmosphere in which it operates, and what is expected from the school. On the bases of these, principals design programme that could make the schools system. Communication is thus important in school because it constitutes one of major means through which member of staff work together and also helps to hold the school together by making it possible for members to influence one another and to react to one another (John, 2004).

ICT utilization and Principals Effectiveness in Computation of Results

Nwogbo (2014) noted that the Nigerian secondary school administrators endeavour to utilize ICT to enhance their effectiveness in computation of school examination results. The computation of results using ICT facilities has been one of the ways of ensuring accurate processing, effective storage and easy retrieval students' examination records. According to Oboegulem and Ogbonnaya (2008), when students' academic results are computed and computerized using computers and the internet, parents and students get easy access to the information. However, the success of the principal in computing and computerizing students' results using computers and the internet, hinged on proper utilization of ICT facilities. Without effective and efficient use of ICT in computation of results, the aims and objectives of utilizing the ICT facilities cannot be achieved. As ICT is sweeping through the globe, there is need for principals to keep abreast of principles and application of ICT for effective job performance. The school principals must be up to date in the provision of ICT facilities in the school to enhance effective utilization in computation and dissemination of information relating to teaching and learning activities (Federal Republic of Nigeria - FRN, 2004).

Mumandi (2012) is of the opinion that school principals should have basic skills in using ICT in school daily administrative and management job. The principal who can apply power point presentation to give an instruction and in-house training would be able to educate and direct the teachers on effective ways of using the ICT computing examination results (Cheng, 2012).

METHODS

Research Design

The research design used for this study was correlational research design.

Area of the Study

The area for the study was Ikot Ekpene Education Zone, Akwa Ibom State which is comprised of Nine Local Government Areas namely: Oruk Anam, Ikot Ekpene, Obot Akara, Ukanafun, Ikono, Etim Ekpo, Essien Udim, Ini and Abak.

Population of the Study

Two population groups (principals and teachers) were used in this study. The population comprised all the 86 principals and 2008 teachers in public secondary schools in Ikot Ekpene Education Zone, Akwa Ibom State, Nigeria.

Sample and Sampling Technique

A sample of 69 principals and 602 teachers serving in public secondary schools in Ikot Ekpene Education Zone, Akwa Ibom State was selected with multi-stage sampling technique

Instrumentation

Two instruments were developed and used by the researcher for data collection in this study. They are ICT Availability and Utilization Questionnaire (ICTAUQ) for principals and Principals' Administrative Effectiveness Questionnaire (PAEQ) for teachers. Each of the questionnaires were developed in 3 and 2 sections respectively, to meet the variables under study.

Validation of the Research Instrument

The instrument (ICTAUQ and PAEQ) used for the research was made to pass through face and content validation using experts in test, measurement and evaluation.

Reliability of the Research Instrument

The reliabilities of the instruments were established using Cronbach Alpha reliability method. Cronbach Alpha Reliability method is a statistical measure of internal consistency of an instrument. To do this, the researcher conducted a pilot study using 20 principals and 20 teachers in secondary schools which were not used for the study. The analysis produced 0.78 coefficient value.

Procedure for Data Collection

The researcher with three briefed research assistants administered copies of the questionnaires (ICTAUQ and PAEQ) to all the sampled secondary school principals' and teachers respectively in the study area.

Method of Data Analysis

Pearson was used to answer the research questions, while Linear regression analysis was used to test hypothesis at 0.05 level of significance.

RESULT AND DISCUSSION OF FINDINGS

Results

Research Question 1: To what extent does the utilization of the available ICT correlate with principals' communicative effectiveness in Public secondary schools in Ikot Ekpene Education Zone of Akwa-Ibom state?

Table 1: **Relationship between the Utilization of the Available ICT and Principals' Communicative Effectiveness**

R	R-square	Adjusted R-square	Std Error of Estimate
.609[a]	.571	.569	.909

Data in table 1 show that the calculated r - square is 0.57 which indicates a highly positive relationship. This implies that the utilization of the available ICT predicted 57% of the principal's communicative effectiveness.

Hypothesis One

The utilization of the available ICT does not significantly correlate with principals' communicative effectiveness in public secondary schools in Ikot Ekpene Education Zone, Akwa Ibom State.

Table 2: **Regression Analysis on the Relationship between the Utilization of the Available ICT and Principals' Communicative Effectiveness**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	80.855	1	80.855	97.819	.000[b]
	Residual	533.263	669	.827		
	Total	634.118	670			

The result in the table 2 shows the F-value of 97.82 and a significant value of 0.00. Since the significant value of 0.00 is less than the alpha value of 0.05, the null hypothesis stated was rejected. Therefore, the utilization of the available ICT significantly correlates with the principals' communicative effectiveness.

Research Question 2: To what extent does the utilization of the available ICT correlate with principals' effectiveness in computation of results in Public secondary schools in Ikot Ekpene Education Zone of Akwa-Ibom state?

Table 3: **Relationship between the Utilization of the Available ICT and Principals' Effectiveness in Computation of Results.**

R	R-square	Adjusted R-square	Std Error of Estimate
.728	.530	.528	.772

Data in the table 3 reveal the calculated r – square value of 0.53 which indicates a highly positive relationship. This implies the utilization of the available ICT predicted 53% of principal's effectiveness in computation of results in public secondary schools in Ikot Ekpene Education Zone of Akwa-Ibom State.

Hypothesis Two

The utilization of the available ICT does not significantly correlate with principals' administrative effectiveness in computation of result in public secondary schools in Ikot Ekpene Education Zone, Akwa Ibom State.

Table 4:Regression Analysis on the Relationship between the Utilization of the Available ICT and Principals' Effectiveness in Computation of Results

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	123.352	1	123.352	207.099	.032[b]
	Residual	398.724	669	.596		
	Total	522.076	670			

The table above reveals the F-value of 207.10 and the significant value of 0.032. Since the significant value of 0.032 is less than the alpha value of 0.05, the null hypothesis stated was rejected. Therefore, the utilization of the available ICT significantly correlates with Principals' effectiveness in computation of results.

Discussion of Findings

Utilization of the Available ICT and Principals' Communicative Effectiveness.

The result from this study shows that the utilization of the available ICT facilities predicted 57% of the principals' communicative effectiveness. The present findings agreed with Okorji (2014) that the ICT tools are means of communication which schools employ in communication.

Further analysis with linear regression revealed that the utilization of the available ICT facilities in communication process significantly correlates with the principals' administrative effectiveness. The finding is also consistent with the view of Okorji (2014) who stated that communication is the fountain of every school organization and significant for administrators to perform the crucial functions of management. This is so because communication in school management facilitates goal achievement, promotes good planning, enhances progress and assists in the controlling process, thus, helping the principals to be effective in their school administration. This further concurs with Mbipom (2000) that the computer and other ICT tools would be a very handy tools in the hands of an effective school administrator who would utilize them to enhance effective communication.

Utilization of the Available ICT and Principals' Effectiveness in Computation of Results.

The results of the analysis of data in Table 3 indicated that the utilization of the available ICT predicted 53% of principals' effectiveness in computation of results in public secondary schools in Ikot Ekpene Education Zone of Akwa Ibom State. This result implies that the ICT facilities are very useful to the principals in the computation of results.

Further analysis with linear regression revealed that the utilization of the available ICT (internet and computer) facilities significantly correlate with the principals' effectiveness in computation of results. The findings agree with Adeniyi (2001) who found that the uses of ICT facilities such as computers and internet in computerization of students' academic records are the means of achieving effectiveness in that area of administration.

Recommendations

Based on the findings discussed and conclusions reached in this study, the following recommendations were made:

1. Developing Policy and Criteria for Appointment of Principals: Since the utilization of ICT is found to contribute to principals communicative effectiveness, the policy and criteria for the appointment of principals' should stipulate that only those who possess adequate ICT communicative skills should be appointed as principals' of schools. The principals, who are currently serving, should be given in-service training on ICT communicative skills to assist them on effective communication.
2. Educating Prospective School Principals: The school principals' should be given in-service training on effective ways of using ICT for computation of results.

REFERENCES

Adeniyi, E. O. (2001). The Problems in Nigeria Educational System. In *R. Pillai (Ed.) Strategies for introducing new Curricula in West Africa in Financial Accounting*. Lagos: Thomas Roy press. Pp. 205-211.

Adeyemi, T. O. & Olaleye (2010). Impact of Information and Communication Technology (ICT) for the Effective Management of Secondary Schools for Sustainable Development in Ekiti State, Nigeria. *American Journal of Scientific Research,* 5 (2), 106-113.

Ben-Zion B. (1995). *Information Technology in Educational Management*. London: Chapman and Hall Ltd.

Besong, J. B. (2001). Personal Background and Administrative Effectiveness of Primary School Head – Teachers in Cross Rivers State, Unpublished M. Ed Thesis University of Calabar, Calabar.

Cheng, V.T. (2012). A study of incorporating Multimedia Technology in power point on Demand. *The New Educational Review,* 27 (1), 172 – 182.

Chidobi, R. U. (2015). *Educational Administration, Management and Supervision*. Enugu: God'swill Printed Enterprise.

Federal Republic of Nigeria (2004). *National Policy on Education.* Lagos: NERDC
John, W. D. (2004). *A Guide to Effective Communication.* Tennessee.

Merihue, W. V. (2000). *Managing by Communication*. New York: Mc Graw-Hill.

Mbipom, G. (2000). *Educational Administration and Planning.* Calabar: University of Calabar Press.

Mumandi, I. A. (2012). *Management of IT-Based Classrooms. Through Smart Laboratory* London: Ultimate Index Publishers.

Njoku, S. (2006). ICT and Nigerian Teachers. Paper delivered at the National Workshop held by Teachers Registration Council of Nigeria (TRCN), Abuja: TRCN, 17th – 21st October, 2006.

Nwogbo, V.N. (2014). The Basic Concepts in Educational Administration and Management. In: *G.O. Unachukwu and P.N. Okorji (ed)., Educational Management: A Skill Building Approach.* Awka: Rex Charles and Patrick Limited. pp 12-34.

Okorie, D. N, Agabi, O. G. & Uche, C. M. (2005). Application of Information and Communication Technology (ICT) in the Management of Public and Private Universities. *Nigerian Journal of Educational Administration and Planning*, 5(1), 29-36.

Okorji, P. N. and Unachuckwa, G. O. (2014). The Educational Administration and Management. In: *G.O. Unachuckwa and P.N. Okorji (ed)., Educational Management: A Skill building Approach*. Awka: Rex Charles and Patrick Limited pp 3-33.

Ololube, N. P. (2007). ICT and Distance Education in Nigeria: A Review of Literature and Accounts, *Proceedings of the 2nd International Open and Distance Learning (IODL) Symposium.* Eskiesehir, Turkey, September 12 – 15th, 2007. Pp. 218.

Uko, A. A. (2013). *Computer Application in Education*. Ikot Ekpene: Esmon Publisher.

UNESCO (2008). Management and Maintenance of Educational Buildings and Equipment. *Educational Policy and Planning,* Series B, Geneva: UNESCO.