

ICT USAGE AS A PREDICTOR OF ADMINISTRATIVE EFFECTIVENESS AMONG PRINCIPALS OF PUBLIC SECONDARY SCHOOLS IN ANAMBRA STATE, NIGERIA

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Abstract

Administrative effectiveness is indispensable for the actualization of the educational policy objectives. In other words, in secondary school administration no meaningful progress, can be made without administrative effectiveness because it is through it that school administrators give direction to educational policies implementation, align with set educational policies and change management. The study discussed ICT usage as a predictor of administrative effectiveness among principals of public secondary schools in Anambra State. Two research questions and two null hypotheses were further tested to guide the study. The study adopted a correlational research design. The population for this study comprised 267 principals of public secondary schools in the six education zones of the State. The study was a census study. The instruments for data collection were two structured questionnaires designed by the researchers, titled 'ICT Usage Questionnaire (IUQ) and Principals' Administrative Effectiveness Questionnaire (PAEQ)' was structured after the Likert type scale which had Strongly Agree (SA)=4 points, Agree (A) =3 points, Disagree (SD) =2 points, Strongly Disagree (SD) =1 point. The instruments were validated by three experts, two from Educational Management and one from Measurement and Evaluation, all from Faculty of Education, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus. Cronbach Alpha method was utilized to determine the internal consistency of the instruments. The instrument yielded an average co-efficient values of 0.79 for ICT usage questionnaire and 0.82 for principals' administrative effectiveness questionnaire which was considered highly reliable and suitable for the study. A total of 267 instruments were administered to the respondents but a total of 265 was retrieved which is 96% return rate. Simple linear regression analysis was used to answer the two research questions and the two hypotheses tested at 0.05 level of significance to further guide the study. The findings of the study revealed that there were increase in administrative effectiveness with values of 0.52 computer usage, 0.58 internet usage which positively and significantly predicted ICT usage on administrative effectiveness among principals in public secondary schools in Anambra State. The study concluded that ICT usage had large positive predictive value on administrative effectiveness of principals in public secondary schools in Anambra State. Based on the findings the study recommended that principals should build a good positive community-school relationship to enable philanthropists from host community donate computers for use in secondary school administration. They should embrace the use of digital technology in school administration to foster administrative effectiveness.

Keywords: ICT Usage, Administrative Effectiveness, Principals, Public Secondary Schools

Introduction

Administrative effectiveness is the ability of principals to achieve the educational goals of secondary schools through their administrative prowess. It is indispensable for the actualization of the educational policy objectives. In other words, in secondary school administration, no meaningful progress may be made without administrative effectiveness because it is through it that principals give directives as regards educational policies implementation, alignment with set educational policies and bringing about changes in secondary school administration. Principals have the onerous task of leading efficiently and effectively in the development and management of all the resources within the secondary school system. Recent observation has shown that there are several abnormalities associated with administrative effectiveness among principals in public secondary schools in Anambra State in the areas of poor information dissemination, use of digital tools in school administration, communication with school stakeholders and wide spread of school activities. These are manifested in manual computation of school data, ignorance of school activities among parents that lead to low participation in school activities by parents that are among the stakeholders in public secondary schools. Loss of some school vital records and in some cases non-availability of vital school records because they are manually done and sometimes such papers are either misplaced or

lost, these are pointers to deficiencies in administrative effectiveness among principals in public secondary schools in Anambra State.

Public secondary schools in Anambra state are expected to prepare individuals culturally, scientifically, technologically and commercially. It is also expected to produce school leavers with creative and analytical minds as well as give them the opportunities to acquire reasonable skills and other benefits for useful living within the society and for pursuance of higher education. In order to attain the core objectives of public secondary schools' principals need to communicate with school stakeholders, create and manage a conducive school environment, keep school records, manage defined school system as well as work out a process to improve and sustain school performance. All these are becoming increasingly difficult with the growth of students' enrolment in public secondary schools in Anambra state because of the declaration of free education by Government. ICT usage in secondary schools in this current computer age seems needed to achieve administrative effectiveness among principals of public secondary schools in Anambra State. Atunde et al. (2021) opined that this makes the traditional administrative tasks of principals a complex dilemma, pointing out that it is as a result of the cumbersome managerial processes associated with the storage, preservation and presentation of large volumes of the information in hard copy. Therefore, alternative techniques and methods provided by ICT usage can be considered. Adewole in Nwafor (2019) reiterated that there is need for the use of sophisticated equipment for processing of data by principals of public secondary schools for administrative purposes. In agreement, Atunde et al. (2021) revealed a significant relationship between the usage of ICT facilities and administrative effectiveness of secondary school principals.

Administrative effectiveness therefore, strives towards the attainment of goals of secondary school system. It is the act of making use of the available human and material resources to successfully achieve secondary schools' educational objectives (Onyeukwu, 2022). In other words, administrative effectiveness is judged by the extent to which principals accomplish their core tasks which includes the ability to communicate with necessary stakeholders as at when needed. The component applications and systems embedded in ICT allows people and organizations to interact in the digital world other. This mostly allows easy and free flow of information from one end to the other, it allows principals carry out their administrative tasks easily. In affirmation, Akinwumi et al. (2021) pointed out that the achievement of an effective and efficient school administration is becoming an increasingly difficult challenge without the engagement of information and communication technology (ICT) usage in this current information age. Onuorah and Chukwu (2022), maintained that the usage of ICT in school administration can increase school efficiency and reduce unnecessary bureaucracy and reduce stress thereby make school administration and management less cumbersome. ICT usage in administration of public secondary school is usually in areas like; internet, phones, broadcasting technologies (radio and television), closed – circuit- television (CCTV), hardware, software, telephone and computer. However, for the purpose of this study is delimited to the study of two ICT usage namely; computer usage and internet usage.

Computer usage is one of ICT components in use in the 21st century. It can be used for students, teachers and general administration of public secondary school. Computer is generally known as a device for storing and processing data, no matter the volume and it accomplishes such task with the volume of instruction given to it. No wonder, Zainly in Zuhair and Muhammad (2016) posited that computer provides several facilities and possibilities to educational administrators for their administrative task. They further emphasized that computer usage has changed the very nature of school administration by allowing any information to be shared, stored, retrieved and processed easily by all who work, study or interact with the school. Computer usage by principals in secondary schools is visible in admission procedures, records of school plants, storing of official and students' records, storing of teachers' records, etc. Also, it can be used to perform lots of administrative jobs in the secondary schools ranging from students' admission, personnel administration, financial administration, general administration and even library administration. Computer usage helped principals to bring out information at their fingertips and build very conducive atmosphere for work but it is still at the discretion of principals to use or not to use may it. In their view, Olowo et al. (2021) pointed out that if principals in public secondary schools embrace computer usage in their daily duty, it may improve their working ability and also make them to be more effective in their administrative duties. Adebayo in Nnamdi and Busa (2023) posited that computer usage is

indispensable in contemporary society which allows access to information anywhere in the world. They further added that computer usage has come to stay and thus should be present in all educational system no matter the level. In public secondary schools' administration, computer usage can be useful to prepare school announcements, type letters or school newsletter, minutes of meeting of both teachers and parents, registration of students. Samuel et al. (2018) observed that computer usage can increase school efficiency and reduce unnecessary bureaucracy in school administration while arguing that without computers, school administrators will have to monitor all the records of the school activities by entering the details manually on the books and records of the schools. However, Dauda (2019) found out that most of the important school records are still maintained manually and which has led to delays, inefficiency and ineffectiveness. Bolaji and Bolaji (2022) that revealed that secondary school principals do better administratively when they use computer.

Principals in public secondary schools as the most influential person in that particular secondary school can through the use of internet be able to inform the world about the school and showcase their achievement so as to attract a good number of students and even goodwill to the school. Haruna and Yahuza (2018) stated that the internet usage provides equal and unique opportunity of near instant communication with anyone in any part of the world, therefore, principals of public secondary schools in Anambra state that harness its wide coverage and outreach usually place their schools in a very good road map and visibility. Nevertheless, Onuorah and Chukwu (2022) found out that principals' internet usage based services are utilized to a low extent in Awka education zone, Anambra State. They further pointed out that the situation occurs because principals in Nigeria and indeed Anambra State appear not to possess the necessary ICT skills. They further pointed out that principals can use the internet in areas like; students or personnel administration and human resources among others. Saibhuu and Olarewaju (2020) that revealed that internet usage had significant relationship with administrative effectiveness in College of Education in Kwara State. In other words, internet usage influences administrative effectiveness which is the core task of principals in public secondary schools. Oboegbulem and Ogbonnaya in Olowo et al. (2021) posited that there have been record of changes and more expectation from principals in the area of their leadership, personal accountability, welfare of staff, communication, decision making, planning, power as well as authority. While, Edefiogh in Olowo et al. (2021) clearly stated that ICT usage has increased the effectiveness as well as efficiency of administration and even general management of education. Considering the above statements, it can be deduced that ICT usage has played crucial roles in administrative processes in secondary schools' administration. Okoro (2016) pointed out that the use of computers aid even teachers' job effectiveness, as well as job performance, record keeping, school discipline, and supports students' academic performance which indirectly promotes administrative effectiveness. In other words, if principals align with ICT usage in their administrative duties it may or may not improve their administrative outputs and also make them to be either effective or ineffective in their administrative duties.

ICT usage has helped in information dissemination as well as communicate whatever information was available to the staff the moment they logged – in as they read, know, and acted on it, thereby aid in the duplication of information, thus enhancing administrative effectiveness and contributing to instructional leadership. However, Ocharo et al. (2015) pointed out that computers were mainly used by principals for clerical jobs such as typing letters and other school documents. Also, Uko et al. (2020) emphasized that principals' utilisation of ICT for record keeping and principals' usage of ICT for admission process significantly relate with secondary school administrative effectiveness in Cross River State of Nigeria.

Statement of the Problem

The responsibility of maintaining administrative effectiveness is the core task of principals of public secondary school. However, the attainment of administrative effectiveness in secondary school depends on the individual principals' capability, knowledge, and skills to discharge specific responsibilities towards achieving the goals of secondary school system. The ability to keep records, disseminate information and send out same are among the core tasks of principals but seems an unattainable feat today. Recent observation has shown that there are several abnormalities associated with administrative effectiveness among principals in public secondary schools in Anambra State in the areas of poor information dissemination, use of digital tools in school administration,

communication with school stakeholders and wide spread of school activities. These are manifested in manual computation of school data, low turn-out of parents in school activities as a result of poor information dissemination. Loss of some school vital records and in some cases non-availability of vital school records because they are manually done and sometimes such papers are either misplaced or lost all are pointers to administrative ineffectiveness among principals of public secondary schools in Anambra State. Considering this digital era, the researcher's interest was aroused to investigate ICT usage as a predictor of administrative effectiveness among principals of public secondary schools in Anambra State.

Research Questions

The following research questions guided the study:

- (1) What is the predictive value of computer usage on administrative effectiveness among principals of public secondary schools in Anambra State?
What is the predictive value of internet usage on administrative effectiveness among principals of public secondary schools in Anambra State?

Hypotheses

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

1. Computer usage by Principals would not significantly predict administrative effectiveness in public secondary schools in Anambra State.
2. Internet usage by Principals would not significantly predict administrative effectiveness in public secondary schools in Anambra State.

Methods

The researchers adopted a correlational research design. The population for this study comprised 267 principals of public secondary schools in the six education zones of the State. The study was a census study. Two research questions and two null hypotheses were tested at 0.05 level of significance to further guide the study. The instruments were validated by three experts, two from Educational Management and one from Measurement and Evaluation, all from Faculty of Education, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus. Cronbach Alpha method was utilized to determine the internal consistency of the instruments. The instrument yielded an average co-efficient values of 0.79 for ICT usage questionnaire and 0.82 for principals' administrative effectiveness questionnaire which was considered highly reliable and suitable for the study. The instruments for data collection were two structured questionnaires designed by the researchers, titled 'ICT Usage Questionnaire (IUQ) and Principals' Administrative Effectiveness Questionnaire (PAEQ)' were structured after the Likert type scale which had Strongly Agree (SA)=4 points, Agree (A)=3 points, Disagree (SD)=2 points, Strongly Disagree (SD)=1 point. A total of 267 instruments were administered to the respondents but a total of 265 was retrieved which is 96% return rate. Simple linear regression analysis was used to answer the two research questions and the two hypotheses which were tested at 0.05 level of significance.

Results and Findings

Research Question One

What is the predictive value of computer usage on administrative effectiveness among principals of public secondary schools in Anambra State?

Table 1: *Simple Regression Analysis with Computer Usage as Predictor of Administrative Effectiveness among Principals of public secondary school in Anambra State (n=257)*

Predictor	Unstandardized B	SE	B	Remark
(Constant)	52.31	2.17		
Computer usage	0.60	0.06	0.52	Large positive predictive value
R =0.52				
R ² = 0.27				

Adj = 0.27

The summary of simple regression analysis displayed in Table 1 used computer usage as predictor of administrative effectiveness of principals in public secondary schools in Anambra. The regression R squared ($R^2 = 0.27$) indicates that computer usage accounted for 27% of the variance in administrative effectiveness in public secondary schools in Anambra State. Specifically, the regression beta weight (β) of 0.52 suggests that a unit increase in computer usage in leads a 0.52 unit increase in administrative effectiveness among principals of public secondary schools in Anambra State. This value was considered a large positive predictive value.

Research Question Two

What is the predictive value of internet usage on administrative effectiveness among principals of public secondary schools in Anambra State?

Table 2: *Simple Regression Analysis with Internet Usage as Predictor of Administrative Effectiveness among Principals of public secondary school in Anambra State (n=257)*

Predictor	B	SE	B	Remark
(Constant)	43.80	2.59		
Internet usage	0.83	0.07	0.58	Large positive predictive value
R = 0.58				
$R^2 = 0.34$				
Adj = 0.34				

The summary of simple regression results displayed in Table 2 used internet usage as predictor of administrative effectiveness of principals in public secondary schools in Anambra. The regression R squared ($R^2 = 0.34$) indicates that internet usage accounted for 34% of the variance in administrative effectiveness in public secondary schools in Anambra State. Furthermore, the regression beta weight (β) of 0.58 suggests that a unit increase in internet usage in results in a 0.58 unit increase in administrative effectiveness among principals of public secondary schools in Anambra State. This value was considered a large positive predictive value.

Hypotheses Testing

Hypothesis One: Computer usage by Principals would not significantly predict administrative effectiveness in public secondary schools in Anambra State.

Table 8: *Test of Significance of Simple Regression Analysis with Computer Usage as a Predictor of Administrative Effectiveness among Principals of public secondary school in Anambra State (n=257)*

Predictor	B	SE	B	T	P	Remark
(Constant)	52.31	2.17		24.09	0.00	
Computer usage	0.60	0.06	0.52	9.71	0.00	Significant

As shown in the summary of simple regression in Table 8, computer usage by principals was a significant predictor of administrative effectiveness of principals in public secondary schools in Anambra State, $\beta = 0.52$, $t = 9.71$, $p < 0.05$. The null hypothesis was rejected since the p-value was less than 0.05.

Hypothesis Two

Internet usage by Principals would not significantly predict administrative effectiveness in public secondary schools in Anambra State.

Table 9: *Test of Simple Regression Analysis with Internet Usage as a Predictor of Administrative Effectiveness among Principals of public secondary school in Anambra State (n=257)*

Predictor	B	SE	B	T	P	Remark
(Constant)	43.80	2.59		16.91	0.00	
Internet usage	0.83	0.07	0.58	11.40	0.00	Significant

The simple regression result displayed in Table 9 shows that internet usage by principals was a significant predictor of administrative effectiveness of principals in public secondary schools in Anambra State, $\beta = 0.58$, $t = 11.40$, $p < 0.05$. Since the p-value was less than 0.05, the null hypothesis was rejected.

Discussion of Findings

The findings of the study are discussed in line with the research questions and hypotheses that guided the study. Findings of the study showed computer usage as having high positive predictive value in administrative effectiveness of principals in public secondary schools in Anambra. In other words, this reveals that the use of computer by principals in public secondary schools in Anambra State enhanced administrative effectiveness. This finding is in agreement with Ocharo et al. (2015), that revealed that computer was found to make work easier as they could detect and correct errors, store large volume of work, edit documents and produce accurate reports invariably enhance administrative effectiveness. This is also, in line with Bolaji and Bolaji (2022) that revealed that secondary school principals do better administratively the more they use ICT resources. They pointed out that secondary school administrative effectiveness may be in danger in the absence of computers. They further pointed out that by implication, the use of computer makes is crucial to enhance administrative effectiveness of secondary schools. In other words, principals suffer a lot when administrative tasks are done manually, no wonder, Okoro (2016) pointed out that the use of computers aid even teachers' job effectiveness, as well as job performance, record keeping, school discipline, and supports students' academic performance which indirectly promotes administrative effectiveness. showed that internet usage had high positive predictive value on administrative effectiveness of principals in public secondary schools in Anambra State. In other words, it supported that internet usage has enhanced administrative effectiveness of principals in public secondary schools in Anambra State. This is supported by Saibhuu and Olarewaju (2020) that revealed that internet usage had significant relationship with administrative effectiveness in College of Education in Kwara State. They noted that internet usage through email messages, software facility system and other internet facilities really enhanced administrative effectiveness. In other words, internet usage in its various forms contributed to enhance administrative effectiveness. Principals' internet usage could easily disseminate any information fast and easily to others, it could be an urgent issue that needs urgent attention through internet usage principals have been able to solve such issues and timely too thereby enhancing administrative effectiveness in public secondary school administration. Also, Atunde et al. (2021) revealed that principals demonstrated high rate of utilisation of internet tools such as search engines, e-mail services, online storage system, social media, google docs, e-records management tools, online security apps, open office and e-timetable apps which helped in the enhancement of administrative effectiveness of secondary schools. Furthermore, Uko et al. (2020) also agreed as they found out that principals' utilisation of ICT for record keeping and principals' usage of ICT for admission process significantly relate with secondary school administrative effectiveness in Cross River State of Nigeria.

Conclusion

Based on the findings of the study, the researchers concluded that ICT usage is a good elements of administrative effectiveness among principals of public secondary schools in Anambra State. Thus ICT usage when well used in administration foster efficiency, effectiveness and brings good outcome in administration to enhance administrative effectiveness of principals of public secondary schools in Anambra State. Finally, the study concluded that ICT usage had a significant variation on administrative effectiveness among principals of public secondary schools in Anambra State.

Recommendations

The following recommendations were made following the findings and conclusion of this study.

1. Principals should embrace the use of computers in administrative tasks and as well seek self-training on how to use it.
2. Principals should embrace the use of digital technology in school administration to foster administrative effectiveness.

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