

# Application of Information and Communication Technology by Principals in The Management of Secondary Schools in Ebonyi State for Job Creation and Empowerment in the Era of Covid-19 Pandemic

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**Abstract:** *The study x-rayed the application of ICT by principals in the management of secondary schools in Ebonyi State for job creation and empowerment. Three purposes and three research questions guided the study. The study adopted survey research design which sought information from the respondents without manipulation of the variables. The population of the study comprised 222 secondary principals and 2,085 secondary school teachers making a total of 2, 307 people. Proportionate stratified simple random sampling technique was adopted in selecting a total of 1,222 respondents for the study. A self-structured questionnaire titled “Application of ICTs by Principals in the Management of Secondary Schools in Ebonyi State (AICTMSS) was used for data collection with a response mode of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE) weighted 4, 3, 2, and 1 respectively. The instrument was face validated by one expert in Science and Computer Department and one expert in ICT all in Ebonyi State University, Abakaliki. Split half method for testing reliability was applied to estimate reliability of the instrument using 50 principals and 100 teachers from Ebonyi State Secondary Schools. data collected were computed using the Cronbach Alpha to give 0.72 which seems to be justified for the study. Data collected from the respondents were answered using mean and standard deviation. Findings of the study were that ICT facilities were available to a very low extent, that principals need constant training programmes in the use of ICT facilities and that there are problems inherent in the application of ICT devices by principals in the management of secondary schools in Ebonyi State for job creation and empowerment. The following recommendations among others were made; that government should make provisions in their annual budget for the procurement and distribution of ICT devices to all secondary schools across the Nation and that government should provide training and re-training programmes for secondary school principals.*

**Keywords:** information, communication, technology, management, job creation, empowerment, Covid-19, pandemic

## INTRODUCTION

Education has been globally adjudged to be an instrument for job creation and empowerment. The skills acquired through education will equip the individual to become a useful member of his immediate and wider society. Education is not only for the production of manpower but also for the development of the mind, poverty eradication, job creation, and for self-reliance. With changes in the society, education has gradually transcended from theory to practice giving room for use of the hands in the production of goods. This has led to the establishment of various Technical Colleges of Education and Technical Colleges across the Nation. Conventional secondary schools are also established to cater for students who are arts inclined. However, the introduction of Information and Communication Technology (ICT) in secondary schools has made it mandatory that all students in conventional and technical colleges have to learn how to operate technical gadgets found in their environment for job creation and empowerment on graduation especially during the era of covid-19 pandemic. The FRN (2004) stipulates that secondary education will provide technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development. The skills will be acquired through the use of modern technologies such as computer, telephone, video, multimedia and internet.

Therefore, the importance of ICT in Nigerian secondary schools in general and Ebonyi State in particular cannot be overemphasized in this era of technology driven age where everyone requires ICT skills to survive. It could be seen that in Nigeria, ICT and other technical device skills are required for employment in organizations. This is because ICT facilities enhance efficiency, job creation and job security. Moreover, organizations are finding it very necessary to train and retrain their employees to establish or increase their knowledge of computers and other ICT facilities (Adomi & Ty-Anie, 2006; Tyler, 1998). This calls for early and quick acquisition of ICT skills by students to become self-reliant on graduation as white collar jobs are inadequate in the Nigerian societies. Skills such as bookkeeping, clerical and administrative work, and stocktaking, now constitute a set of computerized practices that form the core information technology skills package: spreadsheets, word processors and databases (Reffell and Whitworth, 2002). The knowledge and skills gained through these processes is a sure way of creating jobs and empowering the youths because of technical innovations that came to be in some years back. Accascina (2000) identified how ICTs are directly and indirectly affected by poverty alleviation, notably in relation to rural development and food security. Examples include delivery of market or employment information, and creation of well-paid jobs that eventually “trickle down” to poor communities. ICT according to UNESCO (2002) may be regarded as the combination of ‘informatics technology’ with other related technology, specifically communication technology. Informatics refer to the science dealing with the design, realization, evaluation, use and maintenance of information processing systems, including hardware, software, organizational and human aspects, and the industrial, commercial, governmental and political implications of these.

The effective use of ICT and other technological devices for job creation and empowerment of secondary school graduates depends largely to some reasonable extent on the management of secondary schools. Management according to Ibukun (2003) is to arrange workers into units with specified activities to be performed for the purpose of ease of supervision and performance evaluation. Similarly, Aina (2001) opined that educational management is the identification, organization and co-ordination of human, materials, physical, time, and fiscal resources as well as other available educational programmes, using them judiciously towards the attainment of objectives of education.

It then behooves on principals of secondary schools in Ebonyi State to manage the secondary school system in such a way as to co-ordinate the effort of the staff to ensure the realization of one of the objectives of secondary education stipulate in FRN (2004) section 5 sub-section 22 paragraph (h) that it shall provide technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development. This they will do through the proper application of ICT and other technical know-how in teaching the students. A clear identification of the goals of secondary education by managers of secondary schools in Ebonyi State is a critical factor required for effective management of the educational institution. To ensure effective management of secondary schools in Ebonyi State, the managers or administrators must intensify efforts towards the provision of ICT devices and training of staff in the use of these new technologies.

The technologies used in the process of information gathering, storage, editing, retrieval, and transmission are included under ICT according to Obiadazie and Obijiofor (2016). It then implies that a broad range of technological equipment such as computers, mobile telephones, storage devices, fax machines, internet connectivity, file transfer protocols, networked software and hardware, satellite systems, World Wide Web (www) etc. are used for information exchange among people for different purposes.

The use of these ICT devices is an important way of having potential to innovate, accelerate, create jobs, enrich and deepen skills, to motivate and engage students and graduates, with the purpose of enhancing education and facilitating educational reform, bridging the gap between classroom learning and real-world job requirements, and ensuring the economic sustainability of the workforce of the future. Equally the management of secondary schools through the use of ICT will be achieved if there are enough and qualified personnel. Unfortunately, one of the ravaging problems of effective teaching and learning of ICT devices is poor skilled personnel. Most principals in Ebonyi State secondary schools lack the proper knowledge and skills in handling ICT devices. Falojimi and Ejiofor (2000) reported that teachers especially science teachers lack competence in the use of ICT skills and its application in instruction and this may affect the student tremendously. This goes to buttress the saying that “one cannot give out what one does not have”. Similarly, Kwacha (2007) lamented that the common problems associated with the effective application of ICT are lack of qualified personnel, cost of equipment, management attitudes, inconsistent power supply, inadequate telephone lines and non-inclusion of ICT programmes in teachers training curriculum at the basic levels of education. It is worthy of note that most

secondary schools in Ebonyi State still make use of chalkboard and textbooks in classroom activities. Kaku (2005) reported that lack of adequate search for skills and access points in the schools are some of the factors inhibiting the use of the internet by secondary school teachers. In the same way, Adomi, Okiy and Ruteyan (2003) noted that absence of ICT equipment in most Nigerian secondary schools lead students to resort to Cybercafe's for internet access. These catalogues of problems seem to be an impediment in the application of ICT in the management of secondary schools by principals in Ebonyi State.

### **Statement of the Problem**

The rate at which secondary school graduates of Ebonyi State constitute nuisance in the society as a result of lack of jobs is a worrisome phenomenon to parents, guardians and indeed the general public. There seem to be a managerial lacuna on the part of secondary school principals as it relates to application of Information and Communication Technology (ICT) in the management of secondary schools in Ebonyi State for job creation and empowerment. Principals of Ebonyi State secondary schools seem not to have qualified personnel to handle ICT facilities, and also it does appear that inconsistency of power supply hamper the use of ICT Gadgets. The Use of chalkboards, textbooks, absence of ICT equipment and Nigerian students resorting to the use of cybercafés for internet access are all indications that principals run short of application of ICT in the management of secondary schools.

These situations have made it difficult for secondary school graduates to become useful in terms of engaging themselves in any meaningful ventures that will help them earn their living. They rather engage themselves in kidnapping, internet frauds, rape, banditry, rituals, human tracking, and political thuggery because they were not exposed to the use ICT facilities to make them self-reliant and employers of labour on graduation. The problem of this study therefore put in a question form is "what is the extent of application of Information and Communication Technology by principals in the management of Ebonyi State secondary schools with the purpose of empowering students and creating jobs as the COVID-19 pandemic unfolds?"

### **Objectives of the Study**

The general objective of the study is application of Information and Communication Technology by principals in the management of secondary schools in Ebonyi State for job creation and empowerment. Specifically, it sought to find out the extent of:

1. availability of ICT facilities in Ebonyi State secondary schools.
2. principals and teachers need training programme in the use of ICT facilities in Ebonyi State secondary schools.
3. of constraints to the application of ICT facilities by principals in the management of Ebonyi State secondary schools.

## Research Questions

The following research questions guided the study.

1. What is the extent of availability of ICT facilities in Management Ebonyi State secondary schools by principals?
2. To what extent do principals and teachers need training programme in the use of ICT facilities in the Management Ebonyi State secondary schools by principals?
3. What is the extent of constraints in the application of ICT facilities by principals in the management of secondary schools in Ebonyi State?

## METHODOLOGY

The study examined the application of information and communication technology by principals in the management of secondary schools in Ebony State for job creation and empowerment. Three purposes and three research questions guided the study. Survey research design was adopted which sought information from the respondents without manipulation of the variables. The design is appropriate for the study because it involves collecting data from a sample of teachers and principals regarding the availability, training needs and constraints in the application of information and communication technology by principals in the management of secondary schools in Ebonyi State for job creation. The population of the study comprised 222 public secondary school principals and 2,085 secondary school teachers, making a total of 2, 307 people. Proportionate stratified simple random sampling technique was adopted in selecting 1,000 secondary school teachers and all the 222 principals were used making a total of 1,222 respondents. For this study, we used a self-structured questionnaire called "Application of ICTs by Principals in the Management of secondary schools in Ebonyi State (AICTMSS)" to gather information. The questionnaire had four weighted categories: Very High Extent (VHE), High Extent (HE), Low Extent (LE), and Very Low Extent (VLE). The instrument was face validated by one expert in Science and Computer department and one expert in ICT all in Ebonyi State University, Abakaliki. Split half method for testing reliability was applied to estimate reliability of the instrument using 100 teachers and 50 principals from Ebonyi State secondary schools. Data collected were computed using the Cronbach Alpha to give 0.72 which seems to be justified for the study. The copies of the instrument were administered on the sampled respondents in their schools through the help of three research assistants. All the copies of the questionnaire were returned and used for data analysis. The data collected were answered using mean and standard deviation. The mean of 2.50 and above were regarded as very high and high extent while 2.49 and below were regarded as low and very low extent.

## RESULTS

**Research Question 1:** What is the extent of availability of ICT facilities in the management of Ebonyi State secondary schools by Principals?

**Table 1: Mean and Standard Deviation of respondents on the extent of availability of ICT facilities in the management of Ebony State secondary schools by Principals**

S/N	Items: Availability of ICT facilities	X	SD	Dec
1.	Fax machine	1.67	0.47	VLE
2.	E –library	1.34	0.97	VLE
3.	Internet services	1.31	0.63	VLE
4.	Audio/Video tapes	1.41	0.91	VLE
5.	Computer sets	2.61	0.45	HE
6.	Computer accessories	1.81	0.81	VLE
7.	Scanners	2.51	0.61	HE
8.	Photocopy machines	2.75	0.41	HE
9.	Printers	2.61	0.57	HE
10.	Multi-media television	1.32	0.46	VLE
	<b>Grand Mean</b>	<b>1.93</b>	<b>0.95</b>	<b>VLE</b>

Key: VHE = Very High Extent He= High Extent, LE= Low Extent and VLE = Very Low Extent, x = Mean, SD= Standard Deviation and Dec=Decision

Result on table 1 revealed that items 5,7,8 and 9 were available to a high extent while items 1, 2, 3, 4, 6 and 10 were available to a very low extent. The grand mean of 1.93 with a standard deviation of 1.95 is an indication that ICT facilities were available to a very low extent for the management of secondary schools by principals in Ebonyi State for job creation and empowerment.

**Research Question 2:** To what extent do principals need training programmes in the use of ICT facilities in the management Ebonyi State secondary schools by Principals?

**Table 2: Mean and Standard Deviation of Respondents on the extent Principals and Teachers need Training Programmes in the use of ICT Facilities in Ebonyi State Secondary Schools.**

S/N	ITEMS: Training needs of principals and teachers	X	SD	Dec
1.	ICT teachers need to be able to teach students on how to use the keyboards.	3.27	0.62	VHE
2.	In the areas of how to use the photocopy machines	3.76	0.47	VHE
3.	How to use the scanners in scanning already typed and printed information.	3.13	0.04	VHE
4.	How to create new files	3.31	0.92	VHE
5.	How to store and retrieve information from the computer	3.28	0.62	VHE
6.	How to save information in case there is sudden power outage	3.74	0.56	VHE
	<b>Grand Mean</b>	<b>3.41</b>	<b>0.56</b>	<b>VHE</b>



*Key: VHE = Very High Extent He= High Extent, LE= Low Extent and VLE = Very Low Extent, x = Mean, SD= Standard Deviation and Dec=Decision*

Result on table 2 showed that all the items were to a very high extent because they were all 2.50. The grand mean which is 1.41 with a standard deviation of 0.76 is an indication that principals and teachers need constant training in the use of ICT facilities in the management of Ebonyi State secondary schools.

**Research Question 3:** What is the extent of constraints in the application of ICT facilities by principals in the management of secondary schools in Ebonyi State?

**Table 3: Mean and Standard Deviation of Respondents on the Extent of Constraints in the Application of ICT Facilities by Principals in the Management of Secondary Schools in Ebonyi State.**

S/N	Item: Extent of Constraints	X	SD	Dec
1.	Insufficient ICT facilities for principals	3.34	0.67	VHE
2.	Constant power outage	3.21	0.42	VHE
3.	Inadequate fund for the purchase of ICT facilities.	3.33	0.72	VHE
4.	Inadequate supply of computer sets.	2.93	0.42	VHE
5.	Limited training programmes for principals	2.77	0.86	HE
6.	Lack of incentives to ICT principals	3.30	0.92	VHE
7.	Poor implementation of ICT curriculum			
8.	Large class size	3.27	0.63	VHE
9.	Poor maintenance of the existing ICT facilities	3.82	0.38	VHE
10.	Inabilities of secondary education board to employ qualified ICT experts.	3.16	0.76	VHE
<b>Grand Mean</b>		<b>2.91</b>	<b>0.92</b>	<b>HE</b>

*Key: VHE = Very High Extent He= High Extent, LE= Low Extent and VLE = Very Low Extent, x = Mean, SD= Standard Deviation and Dec=Decision*

Result on table 3 showed that items 4 and 5 were responded to a high extent by respondents with mean of 2.93 and standard deviation of 0.84 and 2.77 with a standard deviation of 0.86 respectively while items 1, 2, 3, 6, 7, 8, 9 and 10 were respondent to very high extent. However, the grand mean of 2.91 with standard deviation of 0.92 indicates that there are numerous factors which impede the application of ICT facilities by principals in the management of secondary schools in Ebonyi State.

## DISCUSSION

The ability of secondary school principals in Ebonyi State to effectively and efficiently apply ICT facilities in the management of secondary schools in a sine qua non for job creation and empowerment. This will be achieved if ICT facilities are provided by concerned stakeholders in the education sector. Surprisingly, there are some of these ICT facilities that are needed in

secondary schools in Ebonyi State that were conspicuously not available, such as internet accessibility, laptops, computers to mention but a few. However, some are available to high extent while majority are available to a very low extent. Looking at the results on table 1, e-library, fac machine, audio/video tapes, computer accessories, and photocopy machines, are available to a very low extent. This situation is very worrisome because the inadequacy of the ICT facilities will hinder their application by principals of Ebonyi State secondary schools for job creation. The above findings agree with Ocho (2005) who lamented that ICT equipment are not adequately provided in secondary schools to enhance access to internet and other relevant information technology tools for teaching and learning. Similarly, Okonkwo (2021) noted that ICT facilities provided for student personnel services such as TP- Link, Router, computer services, television, satellite, over-head projector, e-mail series are not reasonably available to a low extent.

Result on table 2 revealed that teachers needed constant training and retraining in the of ICT facilities in Ebonyi State secondary schools. This is very important because teachers who have no skills or knowledge on these ICT facilities will not help the students to apply them when they graduate from school. This implies that ICT programmes have to be provided for both principals and teachers to keep them abreast in the use of ICT facilities to enable them carryout their day – too-day school administration. This is in line with Obiadazie and Obijiofor (2016) who asserted that teachers and other school personnel in secondary schools need massive ICT and computer literacy training programme to learn ICT skills.

Table 3 addressed the extent some factors are constraints in the application of ICT facilities by principals in the management of secondary schools in Ebonyi State for job creation. Result on the table 3 showed a myriad of problems. The respondents affirmed that constant power outage, limited training programmes for principals, large class size, poor maintenance of existing ICT facilities, lack of fund for the purchase of ICT facilities, to mention but a few are all constraints to the application of ICT facilities by principals in the management of secondary schools in Ebonyi State for job creation and empowerment. This conforms with the view of Kwacha (2007) who lamented that the common problems associated with the effective application of ICT are lack of qualified personnel, high cost of equipment, management attitudes, inconsistent power supply, inadequate telephone lines and non-inclusion of ICT programmes in teachers training curricula at the basic levels of education.

## CONCLUSION

In this age of the COVID-19 pandemic, it is more important than ever for principals of secondary schools in Ebonyi State to make use of information and communication technologies in order to empower their students and create jobs for them. the paradigm shift from analogue to digital use of technologies has necessitated the 21<sup>st</sup> century principals to be abreast with use of ICT facilities in the management of secondary schools to enable students become self-reliant and employers of labour on graduation. It will equally help principals of secondary schools to queue in, in the global ICT competitiveness. This study revealed that non-availability of some ICT facilities such as computer sets, printers, scanners, and photocopy machines to mention but a few were impediments to principals' application of ICT devices in their management of secondary schools. it also revealed



that teachers need constant training and retraining programmes in the use of ICT devices to make them compete globally with other world countries. There are a lot of problems inherent in principals' application of ICT in their management of secondary schools revealed by the study. They include: inadequate power supply, insufficient trained personnel, and limited training programmes for principals among others.

### **Recommendations**

Based on the study's results, the following suggestions were made:

1. Government should as a matter of urgency make provisions of substantial amount of money in her annual budget for the purchase of ICT facilities in secondary schools across the nation for principals to apply in their management of secondary schools.
2. Government should also provide training and re-training programmes for secondary school principals and teachers to enable them become abreast with the use and application of ICT devices in their management of secondary schools.
3. Government should device strong and meaningful strategies in tackling problems associated with the use and application of ICT facilities in their management of secondary schools.

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