

# APPLICATION OF ICT IN THE MANAGEMENT OF POST BASIC SCHOOLS IN NASSARAWA EDUCATION ZONE, KANO STATE NIGERIA.

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## Abstract

*This study examined the application of Information and Communication Technology in the management of post basic schools in Nassarawa education zone, Kano state, Nigeria. Three objectives of the study were developed to guide the research and three research questions. A survey research design was used in the study. The target population of this study was one thousand two hundred and thirty-three(1233)teachers. Simple random sampling procedures and research advisor table were use to arrive at the sample. In total the sample size was three hundred and six teachers (n=306).Questionnaire on application of ICT in management of post basic school was used and it was self-developed on application of ICT in management of post basic school, the questionnaire was validated by experts from educational administration and planning and pilot study was conducted from the main population to make sure the instrument is reliable and the reliability with coefficient correlation of .756 was obtained. However, from the analysis, two hundred and eighty-six 286 of them participated in the study. The collected data was analyzed using descriptive statistics, Base on the above conclusion and recommendations were given in line with the research findings*

Keywords: Application, Information Communication Technology (ICT), Management, Post basic.

## Introduction

Information and Communication Technology (ICT) refers to technologies that provide access to information through telecommunications. It is similar to Information technology (IT) but focuses primarily on communication technology. These include the internet, wireless network, cell phones, and other communication mediums. ICT is a technological means that enables processes related with designing, saving operation and passing of information, jointly with the interrelated methods, administration and implementation. ICT permits the tracing, saving, processing, gathering and communicating of data. (Soneye 2012)

Globally, ICT is seen as a technology which enables us to establish effective and useful communication and aid us in the handling of information. ICT now is a vital tool in gathering and disseminating knowledge (Soneye 2012).

Management is the effective utilization of material and human resources to achieve organizational goals or objectives. It also includes directing and appraising program for the purpose of achieving organizational goal. Adesina (1990) Defined management as the organization and mobilization of all human and material resources in a particular system for the achievement of identified objectives in the system. Educational administration is conceived as the systematic arrangement of human and material resources and program that are available for

education and carefully using them systematically within defined guidelines or policies to achieve educational goals. It is also the arrangement of human and material resources and programmes available for education and carefully using this materials and resources for systematic achievement of stated educational objectives (Mwalango 2011)

Ogbonnaya (2010) referred to secondary education as full time education provided after primary education for pupils in secondary schools between the ages of twelve and eighteen plus. Worlu (2014) described secondary education as a transitory level of education received by pupils between primary and tertiary education whose curriculum is pre-vocational and academic at the junior level and comprehensive with core-curriculum designed to broaden pupils out look at the senior level.

Application of ICT in management and administration of schools are currently popular due to its capabilities in facilitating management activities in school, in recent years ICT has become one of the most vital things that help in facilitating knowledge, information and record keeping. Educational institutions are expected to play the role as the engine for knowledge generation and learning environment, in this case ICT become the vital means to facilitate that task. ICT has become an essential part of our everyday life therefore its involvement into education cannot be avoided, ICT in education has become one of the most effective factors in school improvement (Tosun and Baris,2011)

ICT has also been influential in the administration of physical resources. It can be used in record keeping of physical resources as well as educational materials. process among other operations can be transacted with the help of ICT (Cheryl,2015). ICT can also be applied in financial administration through record keeping, preparation of budgets, and many other duties (Grey, 2014).

ICT applications in education can be considered as an effective enabler to create access, store, transmit, and manipulate different information in audio and visual form, due to the capability of ICT in providing efficient environment Kawade & Kulkarni, 2014). ICT applications in education may be used for various purposes. It may be used for effective teaching-learning processes to achieve quality education and overall development of students or for administrative purposes by teachers, staff and management team.

In the recent years, ICT applications are being use in education administration and management to support sustainable development. A software based tools and applications are piece of computer program which execute useful tasks for education, such as word processing, desktop publishing, running a database, creating a presentation or e-mail program (Higgins& Packard, 2014). There are three main administration groups that are applying ICT in their various activities and actions in their daily administration and management job at schools including: Administration head, Administration teachers, and Administrative staff.

## **Objectives**

- 1- Find out whether ICT facilities are available in post basic schools in Nassarawa education zone, Kano state.

- 2- Find out whether ICT is applied in record keeping in post basic schools in Nassarawa education zone, Kano state.
- 3- Find out whether ICT is applied in communication in post basic schools in Nassarawa education zone, Kano state.

### **Research Questions**

- 1- Are ICT facilities available in post basic schools in Nassarawa education zone Kano state?
- 2- In what ways is ICT applied in record keeping and reporting in post basic schools in Nassarawa education zone Kano state?
- 3- In what ways is ICT applied in communication in post basic schools in Nassarawa education zone, Kano state?

### **Statement of the Problem**

In secondary schools the use of ICT is different because of the large population. Secondary school education face a lot of challenges due to the increase in the number of students' enrolment or due to the over population of the schools. Hence, its management demands more from the managers to achieve the educational set goals. Due to this complexity, Schools administrators are sometimes faced with the challenge of managing schools in a productive way. Some of the problems they are facing include poor communication within the staff and students and even with external governing bodies of the school and sometimes effective planning because most of the processes are still carried out manually and the number of the students are more than the ICT' gadgets. One of the challenges faced by post basic schools in Nassarawa zone is lack of ICT application usage among teacher. The ICT facilities are available in the schools but because of their low level literacy in ICT knowledge and capability they don't utilize it well in the management of the schools. Hence, we look at the administrators' perspective towards the use of ICT tools in effective school management and some of the challenges they are facing in the use of ICT for effective management.

Application of ICT in any organization or school or field is to improve the standards from a lower level to a high level. In this case, application of ICT in post basic schools is expected to improve the standards of the school from one level to the other. There are a number of the schools that have develop the use of ICT in administration, but still they never improve in the standards either academically or financially. They have been faced by different challenges such as mismanagement of financial resources, poor record keeping, lack of ICT knowledge from both staff and students, lack of well equipped computer rooms, low academic performance of students of which have resulted due to poor school administration. this study want to find the ways in which ICT is used in schools management by examining the application of ICT in school administration in selected Secondary Schools in Nassarawa education zone Kano state.

### **Methodology**

The design of this study was descriptive survey research design. The target population of this study comprised the teachers in post basic schools in Nassarawa Education Zone of Kano State. Nassarawa education Zone comprised 38 post basic Schools. Nassarawa local government had 22 post basic schools and Fagge local government had 16 post basic schools with a total number population of teachers at one thousand two hundred and thirty-three (1,233) spread across the two-local governments. (734+499=1,233) with an average age ranging from 30-50 years.

A total sample of three hundred and six (306) subjects was selected for this study. This sample as drawn from the total population of one thousand two hundred and thirty-three (1233) teachers spread across the Nassarawa Educational Zone Kano state. This is in Accordance with Research advisers (2006) which state that if a population of a research is one thousand two hundred and thirty-three (1,233) subjects, three hundred and six (306) will be selected as sample size for the research.

The sampling technique employed in this study was simple random sampling method. Simple random sampling method was used in selecting the subjects from the population and in the end using proportional method to assigned each school with the required instrument.

The instrument for the study was a self-developed validated questionnaire titled questionnaire on application of ICT in management of post basic schools in Nassarawa education zone. The questionnaire has (2) two section, section A general information and section B of the questionnaire is a Likert four point scales. The instrument is 15 items scale with response of three point formats. Ranging from Strongly Agree (SA) Agree (A) Disagree (D) and Strongly Disagree (SD). Likert scale was used for the scoring procedure.

The questionnaire on application of ICT in management of post basic schools in Nassarawa education zone was subjected to face and content validity. This is in order to make sure that the instrument is appropriate for the intended population and the purpose of the study. All the necessary corrections were made by experts in administration and planning, Test and Measurement to make it valid.

The reliability was determined by using test re test method to check if the instrument is consistent. The sample of the pilot study was 20 teachers from the main population the instrument was subjected to test and re test reliability using 20 teachers before and after, test re-test method was conducted with an interval of two weeks between the two tests, then after the correlation index was found to be .756 which shows a strong positive correlation. This is to say the instrument is reliable to be use for the research. Pearson Product Moment Correlation (PPMC) was used in obtaining the coefficient of correlation(r).

The data collected was analyzed using tables, frequencies, number/numerals and percentage to determine the subject responses on the items of the questionnaire. The responses were tabled in tabular form for computing using simple percentages.

### Data presentation and Analysis

The study result are presented in the following section along with the interpretation

**Table 1: Availability of ICT facilities in Post basic Schools**

S/N	Items	SA		A		D		SD	
		F	%	F	%	F	%	F	%
1	My school has enough ICT facilities	83	29%	115	40%	33	12%	55	19%
2	I am unable to use ICT tools	97	34%	73	26%	51	18%	65	23%
3	My school lack ICT tools	104	36%	81	28%	66	23%	35	12%

**Source:** Field Survey, 2023, NOTE: N =Frequency, %=Percentage, SA = Strongly Agree, A= Agreed, D= Disagree, & SD – Strongly Disagreed

Table 1 shows the responses as regarded the degree to which school has enough ICT facilities 83 (29%) respondents strongly agree that they have enough ICT facilities, while 115 (40%) agree to the statement, 33(12%) disagree and 55 (19%) strongly disagree, respectively. This shows that majority are of the opinion that they have enough ICT facilities. Item two on the table above shows whether they are unable to use ICT facilities, 97(34%) respondents strongly agree that they are unable to use ICT, while 73(26%) agree to the statement, 51(18%) disagree and 65(23%) strongly disagree respectively. This indicated that majority are of the opinion that they are unable to use ICT tools. Item three on the table shows whether their school lack available ICT tools. 104(36%) respondents strongly agree that their school lack available ICT tools while 81(28%) agree to the statement, 66(23%) disagree and 35(12%) disagree respectively. This indicated that majority are of the opinion that their school lack available ICT facilities.

Table 2 Research Question Two: In what ways is ICT applied in record keeping in post basic schools in Nassarawa education zone, Kano state.

**Table 2: Record Keeping and Reporting in Post Basic Schools**

S/N	Items	SA		A		D		SD	
		F	%	F	%	F	%	F	%
4	I apply ICT in record keeping of my class lesson activities	82	29%	90	31%	63	22%	51	18%
5	ICT is used in my school for storing all data regarding staff members and student in the school	105	37%	72	25%	33	12%	76	26%
6	ICT helps me to manage students record efficiently	132	46%	78	27%	32	11%	44	15%
7	ICT enable me to gather data and information from students and colleague	93	32%	88	31%	43	15%	62	22

**Source:** Field Survey, 2023, NOTE: N =Frequency, %=Percentage, SA = Strongly Agree, A= Agreed, D= Disagree, & SD – Strongly Disagreed

Table 2 shows the responses as regard the degree to which ICT is applied in record keeping of replace with school activities. Item four on the table, 82(29%) strongly agree that they apply ICT in record keeping school activities, while 90(31%) agree to the statement, 63(22%) disagree and 51(18%) strongly disagree respectively. This indicated that majority are of the opinion that they apply ICT in record keeping school activities Item five on the table shows whether ICT is used in the schools for storing all the data regarding staff members and students in the school: 105(37%) strongly agree that ICT is used in the schools for storing all the data regarding staff members and students in the school, while 72(25%) agree to the statement, 33(12%) disagree and 76(26%) strongly disagree respectively. This indicated that majority are of the opinion that ICT is used in the schools for storing all the data regarding staff members and students in the school.

Also, item six on the table above shows whether ICT helps them to manage students record efficiently. 132(46%) of the respondents strongly agree that ICT helps them to manage students record efficiently, while 78(27%) agree to the statement, 32(11%) disagree and 44(15%) strongly disagree respectively. This indicated that majority are of the opinion that ICT helps me to manage students record efficiently. Item seven on the table shows whether ICT enable me to gather data and information from students and work colleagues. 93(32%) of the respondents strongly agree that ICT enable them to gather data and information from students and work colleagues, while 88(31%) agree to the statement, 43(15%) disagree and 62(22%) strongly disagree respectively. This indicated that majority are of the opinion that ICT enable them to gather data and information from students and work colleagues.

Research Question Three: In what ways ICT is applied in communication in post basic schools in Nasarawa education zone, Kano state.

Table 3: Application of ICT in Communication in Post Basic Schools

S/N	Items	SA		A		D		SD	
		F	%	F	%	F	%	F	%
8	ICT enable me to communicate with my superior's colleagues, subordinates or students.	111	38%	84	29%	31	11%	60	21%
9	ICT helps to communicate online with parents	66	23%	81	28%	77	27%	62	22%

**Source:** Field Survey, 2023, NOTE: N =Frequency, %=Percentage, SA = Strongly Agree, A= Agreed, D= Disagree, & SD – Strongly Disagreed

Table 3 above shows whether ICT enable them to communicate with their superiors, colleagues, subordinates, or students. 111(38%) of the respondents strongly agree that ICT enable them to communicate with their superiors, colleagues, subordinates, or students, while 84(29%) agree to the statement, 31(11%) disagree and 60(21%) strongly disagree respectively. This indicated that majority are of the opinion that ICT enable them to communicate with their superiors, colleagues, subordinates, or students. Item 9 on the table above shows whether ICT helps to communicate online with parents. 66(23%) of the respondents strongly agree that ICT helps them communicate online with parent, while 81(28%) agree to the statement, 77(27%) disagree and 62(22%) strongly disagree respectively. This indicated that majority of the respondents are of the opinion that ICT helps to communicate online with parent.

### Discussions

The first findings of this study reveals that schools have enough ICT facilities. They have available ICT facilities and they utilize it in day to day management of the school, this findings agreed with the observation of Nwana, Ofoegbu & Egbe, (2017) in a study on the availability and utilization of Information and Communication Technology resources in teaching and learning computer education in secondary schools in Anambra State, Nigeria, identified that computers, scanners, printers, Modems, CD-ROMs, audio-video discs, flash drives and courseware template are the Information and Communication Technology facilities available in secondary schools studied.

The second finding of this study reveals that they applied ICT in record keeping of their school lesson activities, the findings agreed with the observation of Odo (2003) reported that the school management software is a computerized application and programme which helps in effective and controlling the running of the operations of a school, such as storing, controlling and centralizing all the activities of the school. This software can equally be used in keeping record of all the data and events in the school which can be retrieved when needed.

The third finding of this study revealed ICT is applied in communication in post basic schools Nassarawa education zone, Finding of this study agreed with the finding of Etudor-Eyo, Ante and Emah (2011) revealed the extent of administrators' use of ICT and the extent of administrators' effectiveness in communication are high. It was further noted that there is a significant positive relationship between administrators' use of ICT and administrators' effectiveness in communication; the effectiveness of secondary school administrators in communication is significantly predicted by the use of ICT.

### **Recommendation**

Based on the findings of the study the following recommendations were made:

1. Post basic schools should put in place procedures for re-training teachers in ICT integration, management should provide adequate support, and post basic schools should equip schools with more computers.
2. School authorities need to create more facilitation for more ICT integration not only in the school but also in the classrooms including ensuring that all the classes have appropriate infrastructure like sockets for ICT equipments as well as replacing blackboards with whiteboard or smart boards so as to reduce dusty classrooms and improve projection of the work from the computer.
3. Additionally, besides using ICT in the classroom setup, there is need for more education of ICT adoption training among teachers and school principals in using ICT in the administration purposes.

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