

## Role of Information and Communication Technology in the Administration of Public Secondary Schools in Onitsha North Local Government Area, Anambra State

<sup>1</sup>Friday Oko Orji (PhD), <sup>2</sup>Ikedimma Ifeanyi Francis, <sup>3</sup>Umeh Nathaniel  
Chukwumobi, <sup>4</sup>Nwogbo Mercy Obianuju.

<sup>1-4</sup>Department of Educational Management and Policy,  
Nnamdi Azikiwe University, Awka

### Abstract

*The study investigated role of information and communication technology in the administration of public secondary schools in Onitsha North Local Government Area. Descriptive survey design was adopted for the study, while 5 research questions guided the study. 864 school administrators and teachers constituted population of the study. Purposive sampling technique was used to select sample size of 200 respondents for the study. Respondents-based Structured Questionnaire and SPSS Software were used for data collection and analysis respectively. Results revealed that ICT can be applied for staff members' performance appraisal and promotion, professional development of staff members with regards to personnel administration, supervision of instruction, financial and general administration. Based on the findings, the following recommendations were made: ministries of education should collaborate with ICT experts to organize conferences for school administrators and teachers on the subsystems of school administration.*

**KEYWORDS:** ICT, Administration, Administrators, Teachers, Subsystems

## Introduction

The need for information and communication technology (ICT) is becoming more ubiquitously discernible. It is now more compelling to adopt information and communication technology virtually in all aspects of human endeavor. The world in general is now seeing ICT as solution driven innovation rather than an attempt to solving problems. This is partly because ICT has been tried, tested and verified to be a solution apparatus due to its compatible applications in salvaging virtually all human problems. Unachukwu and Nwankwo (2012) observed that rapid growth in the field of education has made governance (administration) in academic sector a very complex task. They suggested that such tasks could be made simple through the use of latest technology for communication which is known as information communication technology. In essence, ICT facilitates the acquisition and absorption of knowledge, offering educational administrators indispensable opportunities towards enhancing better educational systems.

Maki (2008) posited that information and communication technology plays a vital role in supporting powerful leadership and efficient management and administration. Thus ICT occupies a very central place in modern educational management and administration of the schools in terms of strategy, policy development and implementation, financial effectiveness and customer satisfaction which can be more possible with computerized information systems and modern methods of communications. In the words of Valarie and Ashok, (2011), one of the keys to successful management of any educational institution includes the ability to understand and apply modern management principles and techniques effectively. Hence, having access to ICT facilities such as internet, e-libraries etc., will no

doubt provide an enriching opportunities for an administrator to keep abreast of changes and discoveries in the area of management principles and techniques.

Fisseha (2011) stated that Information and communication technologies unlock the door of education systems. This indicates the growing demand and increasingly important place that ICT have received in education. This is because ICT provide greater opportunity for educators, teachers and students to adjust learning and teaching to current educational needs or policies. It is also noteworthy that usage of ICT in the administration of schools involves harnessing technology for better planning, setting standards, effecting changes when need be and monitoring results of the core functions of public secondary schools. According to Krishnaveni and Meenakumari (2010), ICT provides several facilities and possibilities for educational administrators to do their tasks by allowing information to be transferred, stored, retrieved, and processed to increase managerial effectiveness and efficiency. Yusuf (2005) argued that ICT have the potential to innovate, accelerate, enrich, deepen skills and strengthen teaching-learning encounter. Makewa, Meremo, Elizabeth and Jesse (2013) argued that the twenty-first century principal administrator face numerous challenges emanating from the technology partly because information and communication technologies (ICT) are increasingly used and viewed as important in all spheres of operation including education. This requires effective and dynamic school administration. Makewa etal (2013) identified personnel administration, student administration, supervision of instruction, financial administration as well as general administration as subsystems for ICT-based information system meant for administration of

secondary schools. This shows that ICT has found several areas of application in school administration.

However, despite the numerous literature already written on the prospects of ICT in the administration of schools, it appears most school administrators and teachers in Onitsha North are yet to comprehend how, when and where to apply ICT in a quest to improve school administration. The foregoing issues become the motivating factor that influenced the choice of investigating the role of Information and Communication Technology in the Administration of Public Secondary Schools in Onitsha North Local Government Area.

### **Research Questions**

This work will be guided by the following research questions:

1. In what ways does ICT help in personnel administration in secondary schools?
2. In what ways does ICT help in student administration in secondary schools?
3. In what ways does ICT help in supervision of instruction in secondary schools?
4. In what ways does ICT help in financial administration in secondary schools?
5. In what ways does ICT help in general administration in secondary schools?

The above questions are what this work intend to provide lasting answers to.

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## **Research Design**

Descriptive survey research design was adopted for the work. Orji (2011) buttressed that descriptive research is often used when a researcher intends to elicit responses from a relatively large number of respondents by administering pertinent instruments for collecting primary data on a portion of the population known as sample.

## **Area of the Study**

The study was carried out in Onitsha North Local Government Area. Onitsha North is bounded in the North by Nkwelle Ezunaka, in the South by Onitsha South, in the East by Nkpor and in the West by River Niger / Asaba. The inhabitants of Onitsha North are predominantly business men and women as their major source of livelihood. Onitsha North is also accustomed with an annual festival/carnival called 'Ofo-ala'. The traditional festival is richly celebrated to commemorate with the Obi of Onitsha on his remarkable ascension to the throne.

## **Population of the Study**

The population is 864 school Administrators and Teachers from the 16 public secondary schools which are managed by Onitsha North Local Government Area. The population is composed of 16 Principals, 16 Principal Administration, 16 Principal Academics and 816 Teachers.

## **Sample and Sampling Techniques**

Purposive sampling technique which is a non-randomized method of sampling in which researcher chooses certain sample composition and size which s/he considers appropriate, relevant and adequate was used for the study. A sample size of two hundred (200) composed of thirty (30) school administrators (Principals, Principal Administration and Principal Academics) and 170 teachers were chosen from ten (10) sampled public secondary schools in Onitsha North Local Government Area.

## **Instrument for Data Collection**

The instrument used for the study was Respondents-based Structured Questionnaire (RSQ) which is composed six (6) sections, namely: Section 'A' (personal data and instructions on how to respond to the questionnaire), section 'B' (the ways in which ICT help in personnel administration in secondary schools), section 'C' (the ways in which ICT help in students administration in secondary schools), section 'D' (the ways in which ICT help in the supervision of instruction in secondary schools), section 'E' (the ways in which ICT help in financial administration in secondary schools) as well as section 'F' the ways in which ICT help in general administration in secondary schools. A part from section 'A', others were made up of five (5) research questionnaire items. The response patterns were Agree (A), Strongly Agreed (SA), Disagreed (D), Strongly Disagreed (SD) while the scoring patterns were Strongly Agreed (SA) = 4 points, Agree (A) = 3 points, Disagree (D) = 2 points and Strongly Disagree (SD) = 1 point.

### **Validity of the Instrument**

Copies of the Respondents-based Structured Questionnaire (RSQ) were certified for face and content validity by two (2) research experts in the department of Educational Psychology, Nwafor Orizu College of Education, Nsugbe.

### **Reliability of the Study**

To determine the reliability of the questionnaire, fifty (50) copies were administered to fifty (50) school administrators and the teachers in public secondary schools in Onitsha South Local Government Area which share similar features with Onitsha North Local Government Area. Statistical Package for Social Sciences (SPSS) was used to compute Cronbach alpha for reliability test. Thus the result gave a reliability coefficient of 0.918 which was considered excellent and appropriate for the study.

### **Data Analysis**

Statistical Package for Social Sciences (SPSS Software) was used to analyze the data collected to arrive at the various Mean ( $\bar{x}$ ) for each questionnaire item. On taking decisions regarding rejecting or accepting a particular questionnaire item, mean range (0-2.49) falls within rejection region whereas mean range (2.5-4.0) falls within acceptance region.

### **Presentation of Results**

**Research Question 1:** In what ways does ICT help in personnel administration in public secondary schools?

**Table 1:** Analysis of responses of School Administrators and Teachers on the ways in which ICT help in personnel administration of public secondary schools

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Questionnaire items	N	Sum	Mean	Dec
ICT for staff members performance appraisal/promotions	200	640	3.20	A
ICT for intra-inter communication with staff members	200	605	3.03	A
ICT for automatic attendance and movement of staff	200	645	3.22	A
ICT for leave and promotion management	200	596	2.98	A
ICT for professional development of staff members	200	665	3.32	A

\*A = acceptance and NA = rejection

From table 1 above, it is found that Mean of all the items (3.20, 3.03, 3.22, 2.98 and 3.32) fall within the acceptance mean range (2.5-4.0).

**Research Question 2:** In what ways does ICT help in students' administration in public secondary schools?

**Table 2:** Analysis of responses of School Administrators and Teachers on the ways in which ICT help in students' administration in public secondary schools

Questionnaire items	N	Sum	Mean	Dec
Usage of ICT for students registration/enrolment	200	601	3.00	A
Usage of ICT for students attendance and punctuality	200	623	3.12	A
Usage of ICT for communicating to students parents	200	616	3.08	A
Usage of ICT for extra-curricular activities of students	200	646	3.23	A
Usage of ICT for disciplinary records of students	200	626	3.13	A

\*A = acceptance, NA = Rejection

In table 2 above, it is found that Mean of all the items (3.00, 3.12, 3.08, 3.23 and 3.13) fall within the acceptance mean range (2.5-4.0).

**Research Question 3:** In what ways does ICT help in supervision of instruction in public secondary schools?

**Table 3:** Analysis of responses of School Administrators and Teachers on the ways in which ICT help in supervision of instruction in public secondary schools

Questionnaire items	N	Sum	Mean	Dec
ICT for grading of students performance	200	649	3.24	A
ICT for posting of students' scores	200	645	3.22	A
ICT for online instruction procedure/moderations	200	663	3.32	A
ICT for online conferencing and symposium	200	618	3.09	A
ICT for monitoring scheme/lesson plan/lesson notebook	200	654	3.27	A

\*A = acceptance and NA = rejection

Table 3 above, revealed that Mean of all the items (3.24, 3.22, 3.32, 3.09 and 3.27) fall within the acceptance mean range (2.5-4.0).

**Research Question 4:** In what ways does ICT help in financial administration of public secondary schools?

**Table 4:** Analysis of responses of School Administrators and Teachers on the ways in which ICT help in financial administration in public secondary

schools

Questionnaire items	N	Sum	Mean	Dec
ICT for staff members' salaries & bonuses	200	645	3.22	A
ICT for management of school fees	200	616	3.08	A
ICT for managing miscellaneous expenses	200	645	3.22	A
ICT for managing donations from PTA/philanthropists	200	596	2.98	A
ICT for the managing school-bank transactions	200	649	3.24	A

\*A = acceptance and NA = rejection

Table 4 above, reported that Mean of all the items (3.22, 3.08, 3.22, 2.98 and 3.24) fall within the acceptance mean range (2.5-4.0).

**Research Question 5:** In what ways does ICT help in general administration of public secondary schools?

**Table 5:** Analysis of responses of School Administrators and Teachers on the ways in which ICT help in general administration in public secondary schools

Questionnaire items	N	Sum	Mean	Dec
ICT for students' application and enquiries	200	654	3.27	A
ICT for processing and displaying students' tests results	200	640	3.20	A
ICT for managing official matters (inspection, supervision)	200	645	3.22	A
ICT for scheduling and allocation examination venues	200	646	3.23	A
ICT for backup of all school records	200	616	3.08	A

\*A = acceptance and NA = rejection

Based on Table 5 above, Mean of all the items (3.27, 3.20, 3.22, 3.23 and 3.08) fall within the acceptance mean range (2.5-4.0).

## Discussion of Results

### Research Question 1

Table 1 show that all the suggested research questionnaire items are accepted. These reveal that ICT can be applied for staff members' performance appraisal and promotion, intra-inter communication with staff members, automatic attendance and movement of staff members, leave and promotion management as well as professional development of staff members with regards to personnel administration. These finds are in consonant with Krishnaveni and Meenakumari (2010) who earlier reported that automation of attendance and leave management of staff members in the institution, performance appraisal and communication with staff constitute staff administration. In essence, our secondary school administrators explore for software developers to help in building applications that will support the above finds in Onitsha North secondary schools and beyond.

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### Research Question 2

In table 2, all research questionnaire items were accepted. These reveal that ICT can be applied for students' registration/enrolment, students' attendance and punctuality, communicating with students' parents, recording extra-curricular activities of student, and for disciplinary records of students with regard to students' administration subsystem. The finding is in tandem with Krishnaveni and Meenakumari (2010) who reported that students' administration subsystem is used for students applying for admissions, students' registration / enrolment, maintenance of attendance of students, communication of academic details of students to their parents / guardians, notifications regarding hostel accommodation as well as notifications regarding transportation.

### Research Question 3

Table 3 shows that all the suggested research questionnaire items were accepted. These show that ICT can be used in the grading of students' academic performance, posting of students' scores/results, online instruction procedure/moderations, online conferencing as well as monitoring of scheme, lesson plan and lesson note in relation to supervision of instruction subsystem. If school administrators understood how effective and efficient teaching-learning will become with the incorporation of these finding, it must mean well for the school system.

### Research Question 4

Table 4 shows that all the suggested research questionnaire items are accepted. These mean that ICT can be applied in the payroll and remuneration management, management of school fees, managing miscellaneous expenses, managing donations and managing school-bank transactions with regards to financial administration subsystem. Electronic payments are now embraced and used by develop countries with high level of efficient being attained. These could be replicated by school administrators in Onitsha North secondary schools through appropriate proposals.

#### Research Question 5

Table 5 shows that all the suggested research questionnaire items are accepted. Thus ICT can be applied enabling students and prospects students make enquiries and apply for admissions in the school, processing and posting of students' results, managing official matters (inspection/supervision), scheduling and allocation of examination venues as well as backup for all school records with regard to general administration subsystem. In this situation, a lot of planning is required. The finding of this study in line with Maki (2008) who reported that schools are responsible at the end of each year regarding reporting human resources (teachers, clerical staff) and technical infrastructure (computers for students and for school staff, photocopiers and overhead projectors for teaching purposes). These constitute part of planning for next academic year.

#### **Conclusion**

The place of ICT in all human endeavour is elastic and can be applied in all spheres of human activities. It is on this note that the various possible ways in

which ICT can be adopted and applied in subsystems of school administration (personnel administration, students' administration, financial administration, supervision of instruction and general administration) have been explored in this work. Hence, efforts should be made to adequately harness the potentials of ICT in an attempt to improve school administration.

### **Recommendations**

The following recommendations were made for this study:

1. Government should make funds available to school administrators or supply schools with all the necessary assistance needed for the incorporation of findings of this study in schools;
2. Ministries/commissions/board of education should collaborate with ICT experts and private firms to organise conferences and workshops for the school administrators and teachers on the various subsystem of school administration in which ICT can be applied for better administration;
3. School administrators should solicit for sponsors from various wealthy philanthropists towards the provision of functional ICT-based equipment in the school;
4. Federal ministry of education and the ministry of Information Technology where applicable should collaborate to provide reliable and functional internet services in schools as this will help in ease access and sharing of information, ideas and innovations within and outside the school.

5. ICT literacy should be made a compulsory requirement for the recruitment of personnel in the school system, among others.

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