

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) SCHOOL IN THE SERVICE OF ADMINISTRATION AND SUPERVISION IN NIGERIA PUBLIC SCHOOLS

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Abstract

The role of an administrator in the school system at all level of education is very essential and cannot be overemphasized. The flexibility and dynamism of Information and Communication Technology (ICT) makes it fit and useful in every area of school management. One of the main functions of school administrator is to supervise and manage the school, students, teachers and facilities through the use of ICT without which, it will be difficult to carry out the role of school supervision and administration effectively. The presence and availability of ICT make the role of school administrator to be less tasking and easy to perform. In the light of this, the paper looked at the introduction of the concept, roles of school supervisors and relevance of ICT in school supervision. Also, the paper highlighted the role of school administrator, ICT and school administration, factors militating against integrating ICT into school administration and supervision, and benefits of integrating ICT into school administration and supervision. The paper recommended that school administrators should ensure the application of ICT into school supervision and school management, such that, it will benefit all stakeholders in the education sector.

Keywords: School administrator, Supervision, Information and Communication Technology (ICT)

Introduction

Education is a very strong instrument which individuals and societies around the world depend on. Societies and countries develop economically, industrially, socially, technologically, through individuals who

have acquired knowledge, skills, techniques and training through education. That is why all governments around the world prefer to invest a reasonable size of their resources on education and institutions where education

can be attained. According to National Policy on Education (2014), education in Nigeria is an instrument “par excellence” for effecting national development. Education in any society has depended on the evolution surrounding it. For example, during the stone-age, man only survived his environment by observing and copying what his predecessors did, and that was the means through which education was acquired then. During the iron-age, man survived his environment through farming and learning the act of war, while in the industrial age, people acquire training and skills through apprenticeship. In the era of information technology, education is being facilitated through Information and Communication Technology (ICT).

One of the ways through which government and organizations around the world (Nigeria inclusive) invest in and run education is through Information and Communication Technology (ICT). The presence and availability of ICT in education and school system made the administration and supervision of education easier and convenient for government and school administrators. There are several roles played by school administrators within the school system so as to achieve effective education. These roles are some time tasking and enormous. The presence and availability of ICT make the roles and task of school administration and supervision less tasking and easy to perform by school administrators. The flexibility and dynamism of ICT make it fit in and useful in every area of school management. With this information age, it will be very difficult for a school administrator to carry out its functions or roles of school supervision and administration effectively and successfully at any level without the use of ICT.

Roles of School Supervisors

Personnel supervisory role of a school supervisor includes:

Monitoring student and staff personnel: A supervisor monitors students’ classroom activities within and outside the classrooms towards the attainment of the school’s educational goal. He also facilitates the design and implementation of suitable instructional materials which will aid students’ learning process. Supervisors ensure that teachers update and equip themselves with new information, discoveries, development and methods from various valid and appropriate sources before they begin to draft their lesson note for classroom teaching and those students understand and digest what they are being taught in their various classes. The supervisor also determines the method teachers will adopt in the evaluation of their students both within and outside the classroom. They ensure time to time record of students’ academic performance and its criteria.

Instructional supervision: This is one of the important roles played by a school supervisor. In order to make teachers more effective in performing their task, supervisors lead teachers in classroom teaching instruction. They also coordinate teachers in designing, formulating and implementing an effective classroom teaching-instruction plan. School supervisors as instructional leaders, enhance the distribution of instructional materials to teachers and ensure that teachers make use of the instructional materials in their various classroom teaching. They also see to the development of school teachers both professionally and skillfully through on-the-job training, seminars, workshops, fora, in service training, etc.

It is highly tasking and sometimes cumbersome for a supervisor to perform all the roles in a roll, but the introduction and integration of ICT into school supervision makes it easy and time saving.

- **Record management:** One of the effective roles played by a school supervisor is the planning, controlling, directing, organizing, training, promoting and managerial activities involving the lifecycle of information, including creation, maintenance (use, storage, retrieval), and disposal, regardless of media. Record management involves the storage, retrieval and use of information. More precisely, Record management is the application of systematic controls and cost reduction principles to the creation, maintenance and disposition of recorded information. ICT facilities help the supervisor to perform these functions more effectively. ICT is very useful in the creation and distribution, use, retention, storage, retrieval, protection, preservation and final disposal of school information such as students' academic records, students and personnel attendance records, staff record, financial records, etc.

ICT and school supervision: There is a need to ensure that educational activities are carried out in accordance with the resources that are allocated and used efficiently. This means that all hands should be on deck to perform various duties assigned to them to achieve the school's educational goals and objectives. The school administrators have a lot of activities and materials within the school to supervise. Such activities are teachers' activities, students' activities and performance, school resources, instructional materials, school facilities, etc. This made supervision of school to be cumbersome and sometimes tasking. ICT made school supervision to be less cumbersome and easier. The various components of ICT and

the flexibility to which it is being used made ICT to fit more into performing these tasks. Agboeze (2014) opined that the computer which is one of the components of ICT would be a very handy tool in the hands of an effective school administrator. At all levels of education, the school administrator has to blend with the changes that occur in this present technology age.

The Nigeria educational goal is to adapt to changes that occur in our school system, (Olele and Williams, 2014) so do the strategies, techniques and pedagogies for ICT integration in the school emerges. The purpose of supervisory role of every school administrator is to make sure that teaching is more effective in the classroom. ICT can improve the supervision of instruction in the classroom by the school administrator and can also encourage better teaching and learning in the classroom by both teachers and students. The integration of ICT into our school system can solve the problems that are facing or challenging the quality of education in Nigeria. Erinle and Abioye (2003) mentioned some of the problems that are facing our schools in Nigeria. These include poor academic performance, gross indiscipline among staff and students, weak and incompetent teachers, poor quality teaching, poor performance in public examinations, wastages (in time and limited resources) etc. Therefore, the factor that is responsible for poor quality of work in our schools is not but outdated method of supervisory instruction by the principal as a school administrator. This factor of outdated method of supervision has been practised for centuries without improving on it. The principal, being the school administrator, needs to integrate ICT into his/her operation so as to improve the quality of his/her work within the school system.

It is expected that a competent and experienced school administrator should blend some elements of ICT to his method of supervision in this 21st century, one of the hallmarks of supervision in the classroom. In the secondary school, principal needs to utilize ICT appropriately and constantly, so as to enhance effective teaching and learning. The potentiality of ICT in the school should be harmonized into supervision of classroom activities, school plants, staff rooms, school laboratories, etc so as to keep the school into proper shape. The school administrators at all levels of education should integrate ICT facilities into their supervisory roles for unique instructional approaches and to improve productivity.

Relevance of ICT in School Supervision

The relevance of ICT to school supervision in Nigeria is very enormous. There are various ways through which ICT can be put to use in the area of school supervision, since supervision sometimes poses to be a tedious task for a school administrator. This is because school administrators supervise various activities within the school system. Some of these activities include: instructional supervision, supervision of school facilities, personnel supervision, resource supervision, clinical supervision, etc. Therefore, the areas of school supervision that can be effectively driven by ICT are briefly discussed below:

1. **Personnel supervision:** The important role ICT plays in the area of personnel supervision is so crucial and enormous. Personnel supervision which is divided into student and staff personnel has to do with the supervision of both the students and staff activities within the school system. ICT in this case is very important and on other hand, makes the

task easier. ICT components such as computer, Internet, close circuit cameral television (CCTV), biometric device, metal scanner, etc. can be used to supervise students' admission process through online registration, monitor students' academic performance, monitor students' behaviour in school, check if students bring dangerous and deadly objects to school, monitor students' attendant in school, obtain students' quarries (Ebhomien, Oriahi, Okogwu and Ebhomien, 2014). ICT components such as the Computer, internet, intranet, etc can be used to supervise student's admission process, academic performance, students' classroom records and students' quarries or complaints. While components such as CCTV, computers, metal scanner are used to monitor/supervise students' behaviours, activities and roles within and outside the classrooms. In the same vein, ICT is also used to supervise/monitor teachers' performance, activities, commitment to work, method of teaching, etc within the school system. ICT device such as computer, CCTV, biometric scanner/device, internet/intranet device, etc are used by the school administrator to carry out these roles. Therefore, school administrators should endeavour to imbibe the use of ICT when carrying out their tasks of school supervision.

2. **Instructional/Teaching and Learning Supervision:** The quality of education depends on the knowledge gained by stakeholders (students, teachers, lecturers, educators, administrators, etc) in the education sector. To make teaching-learning process to be effective in this jet age, there must be an

integration of Information and Communication Technology (ICT). Adedoyin (2008) in Oke, (2014) opined that Information and Communication Technology (ICT) has impacted positively on the quality of teaching and learning in the education system. ICT such as internet can help unite people and create powerful and synergistic partnerships at local, regional and international levels. For example, Skype, youtube, Whatapps, Video call, facebook etc. can be performed through the use of computer systems. Oni (2010) affirmed that computers enhance teaching and learning via presentation of instruction, more opportunities to practice and analyse and more access to source of materials via internet. He further explained that internet connectivity has been enhancing communication and interaction between colleagues within faculties, between classmates, and between faculties and students.

Thus, students, lecturers, teachers, educators, employers, administrators etc intuitively feel that the integration of the computer into education will enhance learning. This will greatly increase students/lecturers' ability to apply knowledge and skills to future problem solving situations in their academic world. Olatoye and Ogunkola (2014) stressed that although provisions of ICT facilities may take time and money, they work well in improving access and usage. They further explained that sound technical support cannot be overlooked if ICT is to achieve the desired goals. Therefore, ICT motivates students, lecturers, educators to teach and learn with ease through the means of internet facilities. There are many useful sophisticated technological facilities/

gadgets that could be used to improve/enhance the instructional process at the lecture room level. Some of the electronic presentation equipments/gadgets include interactive board, projector, audio and television learning called closed circuit television (CCTV).

3. **Quality Assurance Supervision:** The quality of teaching and learning in Nigeria higher institution lies on the quality of supervision of the instructional activities by the quality assurance committee. Supervision can be properly done when the ICT equipment facilities facilitate the task effectively to bring out better results. Supervision or monitoring of teaching and learning in the classroom through ICT facilities should cut across every nook and cranny of learning. Both the teacher and students are inclusive in the supervisory process. The area which supervision should be looking at are examination's supervision, classroom teaching activities, monitoring research equipment/facilities, students' activities, movement in the school premises, teaching gadgets etc, through the means of ICT facilities around the school. The ICT facilities like CCTV gadget, website portals, projector, Computer, sensors etc can enhance effective supervision and proper monitoring of teaching and learning process in the classroom. Internet can also reduce examination malpractices during students' examination through Computer Base Test mechanism. Education has various dimensions to be looked into for effective academic performance. This aspect of education according to Babalola (2010) cited in Ebhomien et. al (2014) could be divided into four major aspects, namely: resourcing, moderation,

invigilation and security. The technological equipment which could be introduced or used to facilitate examination supervisory process and the facilities are: website portal, use of biometric identification, On-line examination portal, supervision /monitoring of examination through the use of closed circuit television (CCTV).

4. **Supervision of student's project/dissertation/thesis and editing of research work/academic publications:**

Project writing in higher institution of learning is very vital either for academic use or outside academic system. The quality work in project supervision can be facilitated through the effective supervision by the lecturer to read, correct, modify, add and delete with ease (Adegoke, 2010). To make project more robust, the technological equipment /gadget and ICT software must be employed to facilitate project supervision. The technological facilities like computer (both hardware and software), e-mail address, website portal, goggle etc can be used. In fact, lecturer will supervise with ease when it comes to the area/aspect of project work and it will be faster than before. Also, editing which is an art of proof reading documents or literatures for proper correction and perfect work can be enhanced. This is common in the academic setting whereby the lecturer reads and corrects the thesis of his/her students for presentation. In order to make the work more robust and faster and safer on the side of lecturer and students, there is a need to inject electronic devices to it. The internet facilities, computer, website portals, e-mail address etc are very much needed.

5. **Resource and Record Keeping Supervision:** One of the major roles of

administrative activities is to keep daily record of official academic and administrative documents of various educational institutions, ministries and boards coordinating education in Nigeria. This is part of routine tasks by any administrator of an organisation. To make the job well done, faster and saver, the electronic devices should be employed in order to facilitate the sophistication of the work. The facilities like internet, schools portal, computer software and hardware etc are needed for ICT intervention in the process of record keeping (Durowaju, Onuka and Ajisegiri, 2012). This has been done or practiced in the developed nations in which administrative assignment is faster and safer. The following electronic advanced technologies could be employed to facilitate record keeping in higher institutions of learning: website portal, customised e-mail address, internet facilities, computers etc. This is called e-record keeping and it is very effective in the administrative setting in higher institutions.

6. **E-library:** The library is a place where books, journals, documents, literature materials etc. are kept for conserving, preserving, collecting for students, lecturers, teachers, educators, readers for further consultation for knowledge. It is equipped with literature materials, journals, books etc which can be displayed for the students and lecturers to retrieve for further study. There are many e-library on-line created by various institutions for research in Universities, research institutions, companies, private organisations, Non-governmental organisation etc. Milken Exchange on Education Technology (1999) in Amadi and Adetoro (2010) stated that

Information and Communication Technology (ICT) assisted learning can be divided into (i) computer-assisted learning, which is the interaction between a student and a computer system designed to help the students learn (drill and practice, tutorials, simulations and virtual realities), (ii) Computer assisted research implies where ICT is used as an aid to doing library and empirical research. This is enhanced through the growth of World Wide Web which has created virtual library that can only be accessed by the technologically literate. In the e-library platform, the cataloguing, list of books, journal, literatures etc. to be consulted. The electronic facilities and equipment needed to facilitate e-library are: website portals of the library, e-mail address of the library users, audio-visual aids, library films show, internet facilities (Olibie, Akudolu and Uzoehina, 2010). It can help student to have access to literature materials anywhere, and at anytime in the world without going to the library to get the books to read.

7. **E-conferencing:** E-conference is very important in the academic setting between the lecturers and the students so that teaching/learning process will be easier for both parties. It is a form of distance learning programme whereby lecturers will pass instruction to their students via internet facilities. This is a means of transmitting voice, audio-visual images of participants at different places into a single location through electronic gadget/equipment. Ajayi (2008) in Ebhomien et. al (2014) affirmed that video teleconferencing has the advantages of being able to show an image of the speaker (lecturer), three dimensional objects, motion, and pre

produced video footage. He further stated that its ability to show the image of people (students), video conferences can create a social presence that closely approximates face-to-face interaction. The element or components of this e-conferencing are internet facilities, computer, website portals, closed circuit television (CCTV), interactive board etc. It is the use of telecommunications designed to facilitate students' learning through e-mail, interactive web sites and two-way audio/video that is called e-conferencing (Oke, 2014).

8. **Result/convocation process:** One of indicators of quality of graduates is education per excellence. To make the process of graduation to be effective and efficiency, there is need for introducing/applying Information and Communication Technology (ICT) into it. Babalola (2000) in Ebhomien et. al (2014) stated that there are many steps in the graduation process starting with the conduct of examination, result grading, recording and submission of marks, computation of results, issuance transcripts and certificates. To achieve the hastening of results processing, ICT devices/facilities must be employed by higher institutions of learning. The devices are computers, internet facilities, website portals, e-mail address etc.
9. **Security Supervision:** This is important when we talk about protecting school and school properties against robbery, vandals and who may want to misuse them. Human efforts alone cannot guarantee the protection of the school and its property from any form of attack, there is need to employ ICT to aid the job (Macharia, 2010). Devices such as computer, closed circuit television (CCTV), alarm, automated camera, etc

must be placed around the school premises to make properties save against robbery and damages from both internal and external forces.

Roles of School administrator

Planning: One of the roles of a school administrator is planning. The planning principle of a school administrator involves the articulation of objectives, selecting of the best strategies, mapping out of policies, programmes and procedures that would best help in achieving the stated objectives. The goals and objective of education cannot be achieved without proper and effective planning which must be reviewed from time to time.

Staff Recruitment and Admission of Students: School administrators are saddled with the role of staff recruitment. Through the process of supervision, staff vacancies in terms of the criteria, qualification, grades and disciplines in accordance with the requirement of the school are outlined to ensure that the right type of staff are recruited for the right type of job. School administrators also see to students' enrolment into school, and by scrutinizing their credentials, ensure that the right and qualified students are offered admission.

Coordination: The coordination of school activities is one of the roles played by a school administrator. An administrator co-ordinates the efforts of all participants and ensure that all the various responsibilities and functions of individual staff and students are fused together to achieve the main objectives and goal of the school.

Curriculum development: School administrator sees to time to time structuring and designing of school curriculum. A school administrator

structures an effective school curriculum at the various stages of school education which will be in line with the nation's education goals and objectives to achieve national development. He also sees to the time to time review and update of the existing school curriculum to ensure that the school meets up with the required standard.

ICT and School Administration

For a nation to achieve its goals, educational institutions are expected to play an important role by creating skilled and knowledgeable citizens who will drive the goal of the country through commerce, technology, science, agriculture, industry, politics, economy, trade and investment, etc. In order to achieve these objectives, human resources are put in the helm of decision making, planning, organizing, communication, influencing, coordinating, evaluating, managing, supervising, motivating, etc. The human resources referred to are school administrators who are in-charge of school administration. Administration is the process through which appropriate human, capital and material resources are made available and effectively managed to accomplish the purpose, objectives and goals of an organization or an enterprise (Erwat, Isah and Emunemu, 2010). School administration is, therefore, the process through which appropriate human and material resources are made available, coordinated, supervised and effectively managed to achieve the purpose, objectives and goals of education.

ICT plays a vital role in the area of school administration with a wide range of events/activities within the school which are highly tasking, risky, time and energy sapping and most times cumbersome to bring about change in the way and manner schools at all levels are being administered or run. But with the advent of ICT, the roles

of school administration are easier to perform. Also, the introduction of ICT in school administration is said to save more time, resources, energy, cut cost and eliminate unnecessary duplication of offices and roles. Njoku (2006) emphasized that due to the diffusion of ICT innovations in the education industry, work has radically changed as ICT offers tremendous possibilities in improving and developing administrators' professional capability. 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, student enrollment via school portal, stock/record keeping, school community relationship, staff personnel, students personnel, physical facilities, supervision of student/staff performance, monitoring of staff/resources productivity, general duties, school finance/business management, etc.

Furthermore, the diffusion of ICT innovations in educational institutions has radically changed how schools are being run. The Federal Ministry of Education (FME, 2014) in recognition of the prominent role of Information and Communication Technology in advancing knowledge and skills necessary for effective functioning in the modern world, noted that there is urgent need to integrate ICT into education in Nigeria. ICT emerged from the need for faster and easier management of enormous information, thereby making it an important tool for quick and effective decision making within an educational institution.

Factors militating against integration of ICT into school administration and supervision

ICT is a potential instrument that can enhance our system of education to a greater

level. There are many challenges of diffusing ICT into the administration and supervision in school activities by the administrators.

- Lack of administrative and political will:

There is lack of the will from both school administrators and supervisors to use ICT as a result of lack the technical know-how. Even if ICT facilities are available in schools, most school administrators and supervisors neglect the use of ICT for the conventional ways of doing things. This is because most of this school administrators and supervisors are not ICT literate while some think that if ICT is introduced or integrated into school administration and supervision, they might lose their jobs. Therefore, they try everything possible to frustrate the introduction and integration of ICT into school administration and supervision.

- Inadequacy of educational resources:

The issue of scarce resources such as financial and personnel resources in most schools has posed a lot of difficulties in the implementation of ICT into school administrations and supervisions. In most educational institutions at primary, secondary and tertiary levels in both public and private institutions, shortage of financial resources has hindered the integration of ICT into school administration and supervision. The scarcity of funds has made it difficult for most schools to acquire ICT facilities/tools for use in the area of school administration and supervision. On the other hand, inadequate ICT personnel also serve as a problem in the implementation of ICT into school supervision and administration. This is because the availability of ICT facilities without personnel to operate it is like a sailing ship without a captain. Since ICT facilities cannot be operated without skillful

personnel, there is the need for the provision of ICT personnel in the implementation of ICT in schools. Effective school administration and instructional supervision would be difficult to execute if financial resources are not available. School administrators as well as instructional supervisors would require certain ICT resources in the execution of their role and function; non-availability of these ICT resources would affect school's administration and supervision exercise.

- Lack or inadequate educational planning:

Inadequate proper planning makes ICT integration into school administration and supervision difficult. Most educational institutions at primary, secondary and tertiary levels, fail to put into proper planning the resources and facilities that will be needed to carry out the function of school administration and supervision perfectly. Schools most times fail to put in place proper budget plan, development plan and implementation plan for the acquisition of ICT resources and how such resources will be implemented and put into use for the development and attainment of the school's goals and objectives. One of the major challenges facing the integration of ICT into administration and supervision in Nigerian schools is the issue of competence and technical knowledge on the part of school administrators and supervisors on the use and importance of ICT.

Misplacement of priority: The integration of ICT into school's administration and supervision is faced with the problem of misplacement of priority. School administrators and supervisors, most times, divert limited resources available to schools to projects that need little or no attention or most time misappropriated. On the part of

government, little resources are voted to education; for example, in Nigeria, government vote 8-13 % of its national budget to education instead of the 26% speculated by UNESCO. Most times, the little resources voted to education are misappropriated by politicians, government officials and school administrators. All these problems affect the integration of ICT into education, especially, in the area of school administration and supervision.

- Inconsistency in government's educational policies:

The frequent change in the type of educational policy adopted by government poses a lot of difficulties in the implementation of ICT in school administration and supervision. Education policies tend to change with different governments and different policies. In Nigeria, for instance, it is a common thing that the successive administration always discontinues the policy and programmes put in place by the previous administration. Whereby government with the motive of integrating ICT into education, once leaving office, such policy will be neglected and new policy will emerge from the new administration. In other words, inconsistent policies on how instruction in schools should be supervised and the categories of people to be involved would adversely affect and pose a big challenge to instructional supervision, especially in secondary schools in Nigeria.

Others, according Erwat, et. al (2010) and Durowoju, et. al (2012), are; lack of confidence, lack of competence, lack of effective training, resistance to change and negative attitudes, lack of technical support, lack of infrastructure and lack of political will on the part of school administrators, supervisors, staff, government, etc.

Benefits of ICT integration into school administration and supervision

There are a lot of direct and indirect benefits associated with the use of ICT in school administration and supervision.

i) It is cost effective: Most times, there is unnecessary cost incurred in the process of school administration and supervision where ICT is not involved. An education institution that does not integrate ICT into its school management tends to recruit several personnel for various functions which can be performed by one or few personnel using ICT. For instance, in the area of tuition/school fee payment, a non ICT inclined school tends to employ different personnel for collecting tellers, writing of receipt, checking of receipt, recording of payment details, etc. for which only one personnel can perform if ICT is involved. These personnel are paid salaries leading to high cost of school administration, but with ICT only one or few school personnel can perform these functions, therefore, reducing the cost of administration and supervision.

ii) It is time saving: The use of ICT in school administration and supervision allowed for quick processing of information and data without going through unnecessary bureaucratic process, therefore, saving time and enhancing quick decision making. Administrators and supervisors need to correspond through e-mail and the internet, phone sms, phone calls, etc. They can save time while using ICT programme or applications to communicate to parents, teachers, students, other school administrators and the outside world instead of using the conventional way of posting letters or travelling a long distance to dispatch information.

iii) It increases school and personnel productivity: ICT in many organizations (schools inclusive) increases productivity.

The integration of ICT into schools operations will enable the empowerment of the school and its personnel by making them do less to gain more (i.e. to get more results) therefore, increasing their productivity.

iv) It promotes accountability: The use of ICT in school administration and supervision promotes and encourages accountability among staff, students and management of a school. ICT enables staff, students and school management to be accountable for their actions and inaction which can further increase productivity within the school system.

v) It helps in quick and accurate decision making: The integration of ICT into schools help school administrators and management to take faster and accurate decision concerning issues that need urgent attention. The use of ICT in the administration and supervision of a school helps school management to avoid the process of cumbersome paper work, bureaucracy, unnecessary delay, duplication of functions/responsibility, logistic problem, etc. which can delay the taking of decision in the case of issues that needed urgent attention. Therefore, allowing for quick and accurate decision making on matters that need urgent attention.

vi) It helps to discover lapses in the school system for necessary correction: ICT helps the school administrator to identify the problem and its source within the school system. ICT integration into school supervision and administration will enable school management to trace, identify and correct any challenges that might want to deter the achievement of the school goals.

vii) It removes duplication of office and functions in the school system: In most educational institutions at primary, secondary and tertiary levels where ICT is not adopted, there is unnecessary duplication

of office and functions. For instance, most schools without ICT unnecessarily duplicate the function of a school bursar and that of a school account, vice principal academic and administration, principal and vice-principals, vice principal and teachers, etc. which could lead to organizational conflict. In a nutshell, ICT helps prevent and remove the crisis of organization conflict through the creation of soft-ware application that will enable individual personnel to perform his/her duties without interference. Soft-ware application such as spread-sheet, Peachtree, etc. helps the school accountant to perform his/her duty without the school bursar interfering.

viii) It enhanced effective school management: The integration of ICT into school administration and supervision has a positive effect on school management. The use of ICT in school activities helps school management to be easy, productive and effective. Area such as finance, staff personnel, student personnel, instructional materials, curriculum development, school records, budgeting, etc. can be developed, controlled, supervised and managed effectively through the use of ICT. Schools now make use of computers, internet facilities, soft-wares and even create their own website to carry out all these functions. For example, student registration and teacher recruitment are done online via the school's website. In most times, students make payment of their school/tuition fee online through the school website. School records (such as student's record, staff records, accounting record, financial/budgeting record, exam record, library record, etc.) are stored and saved in the school data bank on the computer system. Schools also make use of social media (facebook, YouTube, twitter, WhatsApp, instagram, etc.), SMS messages, e-mails, phones, etc. to pass information to

their staff, students, parents, etc and receive the same from them. Running a school system (administration and supervision) without ICT is like sailing the sea without a compass, it makes it difficult and frustrating. There is therefore, the need for ICT to be integrated into the management and running of all educational institutions.

Other roles of ICT in school administration and supervision according to Liverpool and Jacinta (2013) and Olatoye and Ogunkola (2014) are as follows:

□□ **Organisation of Information:**

Institution administrators need to have basic information on students, teachers and lecturers data (for example, categorise data on student/staff by sex, level, state of origin, performance in schools etc). They could use Microsoft Access or Excel to organise data into an easily accessible format and can be easily stored and retrieved from the micro computer.

□□ **Computation and Processing of Paper Work:**

ICT are used to map out different activities of the academic session such as number of weeks for teaching, conducting of continuous assessment tests, examination periods and when the result could be released to students and other activities such as stipulated time for teaching practice and student industrial work experience scheme (SIWES). Institutional administrator could use Microsoft Access, Excel or other simple applications to collect and keep records of events, enhancement of effective happening in the institution, issuing out notices of meeting for staff, students and parents.

□□ **Enhancement of Effective Communication:**

With the installation of computers and internets, communication made it easier for the institutional administrator to use telephone, fax and

other communication facilities for transforming thoughts, sharing and imparting information, growing and receiving and understanding of message within a network of independent relationship across international frontiers.

□□**Enhancement of Planning:**

Institutional administrator could use ICT to plan and make decisions on the basis of accurate and readily available facts. ICT could be used to plan the budgets of the college expenditure and plans for replacement of both obsolete and repairs of broken down equipment or institutional facilities.

□□**Improvement of Monitoring:**

Institutional administrators use microcomputers in monitoring various areas in the institutional system, such as the uses of continuous monitoring and assessment of students learning and achievement in the institution. Campbell and Sellburn (2002) pointed out that ICT can be valuable for storing and analysing data on education indicators, students' assessments, educational, human and material resources, cost and finance.

□□**Management of Instruction:** This is an approach by the institutional administrators to use computer in scheduling courses/subjects, space, installation, inventory and personnel control, recording and reporting attendance, school accounting, storage and retrieval of student information marks management. This is capable of generating the demographic data of students and institutional staff, production of results online, retrieving lecture timetable online and enlisting of courses and registration through online.

Conclusion

In order to fully achieve the school goals, school administrators and supervision

need to be given proper consideration. The place of Information and Communication Technology (ICT) in the day-to-day administration and supervision of schools cannot be overstressed. School administrators and supervisors should recognize the fact that the application of ICT into school administration and supervision can be used to achieve the school's educational goals. School administrators should ensure the application of ICT into school administration and supervision. It must be strategically applied into school management such that, it will benefit every stakeholder in the education sector.

This paper highlighted the various areas of school/education administration and supervision through which we can apply the use of ICT for effective attainment of the school's educational goal. It also promotes the knowledge and increase use of ICT for school supervision among school administrators. This will bring about the effectiveness and efficiency in all the activities that take place within and outside the school premises, using ICT. Also, the paper show case how the benefits of ICT integration into school administration and supervision will bring about increase performance and productivity among the principal, teachers and students at large, in this present world.

Meanwhile, it is necessary for school administrators, government and other stakeholders in the education sector to provide proper technical infrastructure, training, supports, policies and right political will to ensure the success of the use of ICT application in the school educational system for maximum achievement of the educational goals.

Recommendations

Based on the above study, the paper recommended that government should

ensure that ICT facilities such as Closed Circuit Television (CCTV) be installed in all the classrooms and school environment and also, develop some applications that can be used to report and collect feedbacks from students and staff of the school. School administrators should be provided with functional electronic device such as computer and internet facilities by government to enable them have accurate information on school activities through such device so as to ensure optimum performance. Also, government at all levels should be provided with electronic data interchange to enable monitor students' academic progress. Moreover, government should organise time-to-time training programmes on ICT for school administrators and members of staff to enhance their proficiency and usage of ICT. School administrators should be supported by education stakeholders so that they can key into ICT inclusion in the school system.

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