Information and Communication Technologoy as a Tool for Effective School Record Management.

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ABSTRACT

The world is becoming globalized, and everything is being electronically manipulated in order to catch up with the trend of this globalization. In this globalization era, there is a change in educational policies and programs. The Nigerian government through education law enforces the accurate keeping of various school records. This paper focused on effective school record management using information and communication   technology. It therefore examined the various areas in school record management which includes the purpose of school record-keeping, types of school records, application of ICT in school record management, potentialities in the use of ICTs in record management and finally, the challenges associated with school record management school. The authors in addition examined the challenges associated with school record management which include lack of ICT facilities, inadequate trained personnel, inadequate supply of electricity and so on. The following recommendations among others were made. Government should step up the funding of education; government should ensure adequate provision of ICTs facilities in all schools; school administrators should supervise and ensure proper compliance to the laws on school record keeping. Well trained personnel should be recruited in all schools to oversee the school record management. Electricity supplies should be improved to enable schools to be connected to the national grid.

Keywords: schools, record-keeping, management, information and communication technologies.

INTRODUCTION

School is a formal organization for the training of children. In a school system, a lot of activities take place on daily basis. These activities are required to be documented in order to preserve them properly for utilization of information from them in the future. This gives rise to school keeping. Record keeping is very necessary in schools as well as in any other organization.

According to Imasuen and Abinuomo (2022), record keeping in every organization including educational system is a vital tool for administration. The authors further stated that record keeping is indispensible in the school system since it plays a role in the day-to-day running of the school. This made koko and Nwiyi (2004) to state that records are information banks establishing what had been done or known, what to be done and how they are to be carried out. Moreover, records serve as banks where information is kept with the hope of retrieving same for utilization in the future. Aminze in Koko and Nwiyi (2004) opined that records provide sources of information not only to the schools but also for the large society, and without record keeping, knowledge and learning are hampered.

The importance of information in every aspect of human endeavor cannot be overemphasized especially in this era of emerging technologies. Everybody is in dire

need of information to be able to carry on with one's daily activities. Achuonye and Nwiyi in Imasuen and Abinuomo (2022) asserted that information is very crucial for day-to-day operations in every educational setting. When information is adequately gathered, it forms part of school documents which must be recorded, stored and retrieved when necessary.

Information gathered from school record on pupils' enrolment can help the school administrator to determine the staff strength or the number of teachers to be recruited, and the quantity of the materials needed for the running of the school. Commenting on the importance of data, in the educational system, Nwagu in Noah, Akpabio & Sammy (2015), argued that effective record keeping is vital in educational development. Moreover, the authors emphasized that, it will be an impossible task to plan and administer in any institution in which records are not kept or are carelessly and fraudulently kept. Consequently, the educational planners and administrators need to have adequate and accurate data on students' enrolment, school personnel and school record for effective planning and management of schools.

Management refers to the way or a process through which administrators use both human and material resources available to achieve the goal of the organization. However, the school head and their subordinates have the administrative responsibilities of directing the available resources towards the actualization of the goals (Noah et al 2015). In addition, the school administration in carrying out their responsibilities, coordinate numerous school activities to ensure that many programmes take place simultaneously without any conflicting issues.

The function of school administrators are becoming more complex by day as a result

of increasing students' enrolment. It then becomes very imperative that there should be an introduction of powerful administrative tools that can help in tackling this problem. One of such tools is computer. Computer can be used for record keeping and other administrative services. For a school administrator to be able to manage school records appropriately using computer he needs to be well informed or well-grounded in information and communication Technology (ICT) applications.

Information and communication technology (ICT) in education refers to the utilization of information and communication technology to support, enhance, and optimize the delivery of information within the educational field. (Nawastheen, Palthamburaj and Thannimalmaj, 2018). The authors further stated that as the global landscape continues to expand, the significance of incorporating ICT in education has grown exponentially. Hence, this study is very germane, because as the population of students increases tremendously, the work of the principals in the area of record keeping becomes more tedious and therefore requires additional tool for its effective management. Moreover, ICT is an all embracing, a comprehensive application of modern communication gadgets for processing, storing, retrieving and sending information of all kinds in whatever form or distance. It is a very fast and accurate means of accessing or receiving, storing, transferring, processing and sending ideas, perception or information. Nwangwu and Otegbulu (2012) defined ICT as any equipment that is used in automatic acquisition, storage, manipulation, management, control, display, switching and transmission of information. For Ikediugwu, Eze and Agada (2017), information and communication technologies (ICTs) are equipment used for

information gathering, storage, dissemination and retrieval.

From the above definitions of ICT, it can be seen that, school records will be better managed through the use of ICTs. Information stored in ICT devices will be safer, more secured and reliable and easier to access. However, the school administrators in managing school records through the use of ICTs should not neglect other activities of the school system.

Though, the advancement of ICTs has brought about significant improvement in the efficiency of teaching and learning, administration and management of basic educational system, school record keeping is one of the areas that have been immensely revolutionalized in developed nations and some developing nations. Despite these advancements in ICTs and their uses in teaching and learning, record keeping and other school activities, still face many challenges in basic educational system.

School record keeping:
School record keeping is as vital as the school itself. In fact, it is the sub-system that determines the system. What this means is that there is no school or an institution of learning without good comprehensive school records keeping. Williams (2021) defines school records keeping as the act of keeping information or data which is collected on various aspects of a school and preserved for future use. The information which is written manually or electronically is preserved in books, diskettes, and other electronic materials. Umeri (2022) defines school records as official documents, books, and files containing information that is highly crucial about actions and events that take place in schools. The school office keeps and preserves these records for use and retrieval of information as needed. The responsibility of managing and maintaining school records falls on the school head,

principals, teachers, counselors, or administrative staff. Hence, they should be very conscientious in carrying out this very important responsibility for effective and efficient school management.

Purposes of school record keeping:
To ensure accurate and proper records of students' achievement and growth in schools, there must be information about the students of such schools, which must be made available when needed. This will facilitate and promote efficiency and effectiveness of the system. The purposes for keeping school records are many and varied. Ogunsaju in Bua (2016) asserted that proper school record management provides useful information to an employer of labour who may want to recruit people for job such as testimonial, transcripts, certificates and reference letters and supply the necessary information to the school inspectors. The use of information and communication technologies (ICTs) in the management of students' academic records is expected to bring about better results in terms of effective academic record management as a result of versatility of information and communication technology (Muhammed, Olajide,Muhammed, & Aleshinlonye 2020).

Stated below are some of the purposes served by school records as highlighted by Bua (2016).

1. They serve as sources of information for different people who are concerned and interested in the school when they read through such records; they will get to know more about the school.

2. School records can be used to assess the progress of the school. For instance, the log book contains important happenings in the school. The admission register shows the number of children admitted each year. The visitor's book contains the names of outsiders who visit the school. Due to the

interest the management have in it, all these and other records can give information which will show whether the school is progressing or not.

3. Parents know the performance and progress of their children through school records such as the report cards, continuous assessment record books etc.

4. They serve as reference materials: These records are about events and happenings that took place in the past or that affect the community in which the school is located. They can therefore become materials which people refer to for one reason or the other.

5. School records can also provide information for the purpose of educational planning.

6. School records can also be used as reference materials for both teachers and administrators.

7. The keeping of punishment book for instance, is to justify the type of punishment given to a child.

8. The record book justifies and shows how much the teacher has actually taught every week.

9. The cash book shows the finance of the school in terms of what comes in and how much of such finance was spent (Pp.129).

For Umeri (2022), the purpose of record-keeping and management is to ensure accurate achievement and growth. As a result, the school and parents can easily access information and the child's school activities at any time. For the school system to be effective and efficient, it must value record keeping. Achuonye and Nwiyi in Nwiyi and Osuji (2014), are of the view that the importance of keeping school records are enormous. They highlighted the following as some of the purposes for keeping school records which according them touch on various stakeholders in education as follows:

1. School record keeping helps parents who would want to know the academic performance and general behaviour of their children.
2. It informs the students on their current academic status motivating them to work harder.
3. Inspectors and supervisors of education may require seeing the record as to enable them access the students' performances objectively and give advice for improvement where necessary. However, Achuonye and Nwiyi (2010) highlighted a number of reasons for keeping school records with information and communication technology as follows:

i **For administrative efficiency**: Most principals are not good in keeping school records, but with the introduction of information and communications technologies such as computers, digital libraries, e-mail, internet and so on where information are stored and disseminated, they can do better in keeping records and they can become effective and efficient in performing their roles as administrators. To buttress this, Otario in Achuonye and Nwiyi (2010) stated that the National development in the current world cannot be achieved without the use of computers and information technology for efficient government administration and management. This however, shows the need and the urgency in the introduction of the use of ICT in school records management.

ii. **For a**vailability of information: Information and communication technologies will help to maintain adequate and accurate records in schools.

iii. **For easy retrieval of information:** It has led to easy accessibility and dissemination of information on school records which will become available for national planning, financial budgeting, effective implementation of the educational programmes and policies.

Types of school records

For every school administrator to be efficient and effective in his or her work and be able to achieve the goals and objectives of education, a number of records must be kept in the schools. This is entrenched in the public education edict 1994 and carries penalties for those who fail to keep them. This is to say that it is binding on every school administrator to keep these records in their various schools. In other words, there are school records which are mandatory or compulsory to be kept by every school administrator. These are referred to as statutory records. Though, there are some aspects of the school records that are not mandatory yet there are important to be kept as they serve some internal purposes. These are referred to as non-statutory, non-mandatory or non-compulsory records.

School records according to Bua (2016) vary from school to school. School records though many are subdivided into two major types namely: statutory and non-statutory records.

Statutory Records:

The education law requires each educational institution to keep and maintain statutory records. Bua (2016) stated that statutory records are the records kept in accordance with the educational laws and then must be produced on request by the agents of Ministry of Education and officials on inspection. Such records include admission / withdrawal registers, log books, attendance registers, school timetable, diary of work, visitors' books, examination record books, time/movement books, a copy of national

policy on education, national curricula on different subjects, assignment books for teachers, query books, school list, history of the school, transfer certificate books, Pupils' individual files, sports and games record files, school clubs/societies, annual leave rosters, teachers annual evaluation reports, education inspectors reports, organizational charts, minute books, disciplinary committee files, school land papers, staff notice circular, teachers' lesson plans/notes (Bua, 2016:131).

Non-Statutory Records:

Non statutory records as the name implies are not required by law but are essential for effective administration of a school. Chidiobi (2011) noted that they are complementary to the statutory records in achieving the goals and objectives of education. Nwangwu and Otegbulu (2012) said that though the non- statutory records are not required by law, they are essential for effective administration of a schools and listed the following as some of the examples of non-statutory records:

Individual files, teachers time books, staff minutes books, health record books, duty assignment registers, punishment books, office files, national policy of education, etc.

Application of information and communication technologies (ICTs) in school record management

Adenipekun (2009) observed that records of most schools in Nigeria under public or private sectors are kept manually in paper form. With the passage of time, vital records and information are lost as the papers get defaced. This problem coupled with the difficulty of wading through a mountain of paperwork of students, results in wrong performance analysis, inaccurate planning and insufficient management of schools. Continuing the author stated that the few schools that have adopted the record-keeping and management system have risen

above the challenges as ICT afford school management to have a total view of all the school activities including the school corporate record, finance and staff records as well as student records.

The world is becoming globalized. That is why everything is being electronically manipulated in order to catch up with the trend of this globalization. In this globalization era, there is a change in educational policies and programs. The Nigerian government through the curriculum development agency is introducing some reforms in our educational system with a view of repositioning it in line with the vision of information and communication technology. According to Osakwe (2012), education the world over is being redesigned to fit more into the electronic age for the purpose of efficiency. The author equally pointed out that ICT is a powerful tool for embracing education and the use of ICT will close the vacuum created by manual record keeping.

Furthermore, Osakwe (2012) observed that ICT will facilitate the keeping of accurate records in the area of examination, staff recruitment and promotion, publishing, students' enrollment and admission. Since information and communication technology has been enshrined in every aspect of educational programs, there is therefore the need to uphold it especially in the area of record-keeping in schools.

Becta (2008) stated that ICT is technology that is used to process, store, transmit, communicate, create or exchange information. In other words, ICT is the computing and communication facilities in education. Therefore, it is very imperative that school record-keeping be done through the use of ICTs for effective and efficient attainment of educational goals and objectives.

According to Achuonye (2014), information provides a base for our knowledge and understanding about them and the environment surrounding them. For this purpose, the administrator must be ready to learn the art of getting information, storing and retrieval of same as at and when desired. Such type of activities are said to be parts and parcel of information and communication technology (ICT).

ICT as an extension and intermingling of information technology (IT) and communication technology (CT) adopts the application of computers telecommunication equipment to process, store, retrieve and send information of all kinds. It is all embracing, a comprehensive application of modern communication gadgets for processing, storing and retrieving and sending information of all kinds in whatever form or distance. Also as a very fast and accurate means of assessing or retrieving, storing, transferring and sending ideas, perception or information, it is very much technology-driven in the shape of tools. Equipment and application-support which helps in the collection, storage, retrieval, use, transmission, manipulation and dissemination of information as accurately and efficiently as possible for the purpose of enriching the acknowledged developing communication, decision-making and problem-solving ability of the user (Mangal & Mangal 2009). Information and communication technology encompasses computer and telecommunications. It is concerned with the technology used in handling, acquiring, processing, storing and dissemination of information. Thus, information and communications technology (ICT) is any technology used in producing, organizing and passing information through. Similarly, ICT is an innovative device that can carry out the above or similar functions.

Information and communication technologies are the application of computer and other technologies to the acquisition, organization, storage, retrieval and dissemination of information in the form of data, text messages etc. This information is stored in the form of database which is a collection of files of information organized in such a way that the said information can be accessed from different computers in different locations. Information Communication Technology (ICT) having been defined as the range of technologies are also applied in the process of collecting, storing, editing, retrieving and transfer of information in various forms. This means that ICT could therefore be understood as all those electronic devices that are used in broadcasting, telecommunication and all other electronically mediated information gathering and dissemination process. UNESCO,(2011). Achuonye and Nwiyi (2010) also stated that it is necessary that the school administrators adopt the use of ICT facilities such as computers, email, internet, and world-wide Web (WWW); including digital libraries, computer database, and data processing mechanism, CD – ROMs, DVD and so on in carrying out administrative functions.

The application of information and Communication technologies will enhance and facilitate the achievement of educational goals and objectives and effectiveness in school records and administration. Asogwa in Nwangwu and Otegbulu (2012) however stated that if technologies are appropriately utilized they will enhance administrative efficiency.

On the other hand if accurate and adequate records are not kept in schools, it will be difficult to manage schools effectively. Therefore school administrators should ensure that records are not just kept but should be accurately and adequately kept to ensure smooth running of the school. School

records like certificates, price lists, scores, minutes books, etc are kept via ICT to enable the teachers monitor and keep track of development in children. It also facilitates a teacher's ability to have a clear snapshot of the individual child's continuous development of the skills, character and personality. The ICT is equally made for effective measuring, monitoring and recording progress.

Going by the above assertion it becomes pertinent to apply the use of information and communication technology (ICT) in the school record-keeping and management for effective and efficient attainment of educational goals and objectives. Studies have shown that digital data has transformed the way we communicate in our homes, offices, marketplaces, hospitals and more importantly schools or educational institutions.

Record keeping can be greatly enhanced through the use of ICT by increasing productivity and cost effectiveness. With the adoption of ICT in the school record management, decision-making, student enrollment, evaluation of students' academic achievement, payroll and other school activities are achieved with ease. It also facilitates the attainment of educational goals and objectives without much pressure. Information kept through ICTs can be sustained for a long time and it is hardly defaced due to its high posterity.

Potentialities in the use of information and communication technologies in school record management:
Information and communication technology (ICT) can be a driving force which promotes economic growth and development of many nations including Nigeria. The use of ICT facilities in many organizations especially in schools has become catalysts for change from the traditional way of managing education to this modern way. Osakwe

(2012) is of the view that they use of ICT will close the vacuum created by the manual record keeping and hence facilitate the keeping of accurate records in the area of examination, staff recruitment and promotion, publishing and students' enrollment and admission.

Olaore (2014) stated that during the last two decades countries have invested heavily in ICT. Indeed, the use of ICT in education and training has had a major impact on education sector, on organization and on teaching and learning methods. As such many institutions of learning have adopted the use of ICT facilities in the school record management.

Major challenges associated with ICT use in school records management:
Education sector in Nigeria generally is poorly funded. This however contributes to the inadequate management and maintenance of its facilities which school records form part of. Most of the problems encountered in managing records, especially digital records according to Iwhiwhi in (Aragboye, Awe, Isiag, Folarin, Badmus, Akorede, Akinwale & Annune, 2022) are related to technological obsolence, insufficiently educated staff, policy formation, and implementation and so on.
For Haruna and Abdullahi (2022), challenges facing ICT are not limited to the following:
- Inadequate ICTs facilities for record keeping. Most of the schools do not have ICTs facilities for record keeping and dissemination of information.
- Inadequate trained personnel. There are not enough trained personnel to handle ITCs facilities in record keeping in many schools.
- Inadequate supply of electricity. Most of the public schools in some rural areas in Nigeria are not connected to the national grid, and even those connected do not have enough regular supply of electricity.

Conclusion
The impact of ICTs in school record management cannot be overemphasized because of the roles played by ICTs in school record management. With the introduction of ICTs in school record management, school administration has become very easy. A lot of problems encountered with the manual record-keeping have been overcome thereby enhancing effective and efficient school record management.

Recommendations
- The following recommendations among others were made:
- Government should step up the funding of education.
- Government should ensure adequate provision of ICT facilities in all schools for effective and efficient school record management.
- School administration should supervise and ensure proper compliance to the laws of school record keeping
- Well trained ICT personnel should be recruited in all schools to oversee school records management
- Electricity supply should be improved to enable schools to be connected to the national grid.

REFERENCES

Achuonye, K, (2014). Contemporary educational technology. Port Harcourt: pearl publishers.

Achuonye, K. A., & Nwiyi, G.U (2010). Information and communication technology and record keeping in secondary schools in Nigeria. *Approaches in international journal of research development.2(1) Pp117-121*

Adenipekun, O. (2009). The need for application of ICT in record keeping in schools. Vanguard (Lagos). 25th November, 2009.

Aregboye, M; Awe, O; Isiaq, M; Falorin, A; Badmus, A; Akorede, S; Akinwale, A; & Annune, D. (2022) Pivotal role of information communication technology in record and archive management. *Library philosophy and Practice*. Pp 1-18 http://digitacomms.un/.edu/libphilpractice/6877.

Becta, B. (2008). What is ICT? British Educational Communication and technology agency. http://schoolbecta.org.uk

Bua, F.T. (2016). Educational Management: A Tri – Dimentional Approach. F.D. Judens Ventures Nigeria. Markurdi.

Chidiobi, R.U. (2011). Educational Administration, Management and supervision: Revised edition. Enugu: God's will Prints Enterprises.

Haruna, L., & Abdullahi, I.(2022).Roles of information and communication technology for school record keeping in school management and administration for effective teaching and learning.International *Journal of research and innovation in applied sciences.(IJRIAS). 7(4) ISSN 245-6194 Pp30-33*.

Ikediugwu, N.P.,Eze,T.A., & Agada.F.C (2017).Principals perception of information and communication technology (ICT) enabled education in secondary schools in Enugu State, Nigeria. *International Journal of contemporary applied sciences.4(2) Pp 21-28.*

Imasuen, K& Abinuomo, P.M (2022). Analysis of the application of information and communication technologies on school record keeping in secondary schools in Benin-City, Nigeria. *African-British Journal of computer networking and IT.* 5(1) Pp1-10.

Koko, M.N., & Nwiyi, G. U. (2004). Information and communication technology and school record keeping in secondary schools. *International Journal of research and development.* Pp1-5.

Mangal, S.K. & Mangal, U.M.A. (2009). Essentials of educational Management. New Delhi: PHI Learning Private Limited.

Muhammed, J.O.,Olajide,A.O., Muhammed,A.a.,Aleshilonye,H.(2020). Information and communication technology for academic records management in colleges of education in Kwara State,Nigeria. *AL-Hikmah Journal of education 7 (2).*

Nawastheen, F. M, Palthamburaj, & Thannimalgi, T. (2018).A study on the readiness and attitudes of Sri Lankan Tamil medium teachers towards the use of ICT on teaching and learning. *International Journal of advanced and applied sciences*.

Noah, A.S, Akpabio, I.U & Sammy, M.E. (2014). Utilization of ICT for school record keeping: A strategy for principals'management of secondary schools in Akwa-Ibom State, Nigeria. *Multidisciplinary journal of research development 22(1) Pp1-10*

Nwangwu I.O. & Otegbuulu, R.I. (2012). Perspectives on School Administration. Enugu: New Generation Books.

Nwiyi,G.U & Osuji,C.U (2014).Administrative competency challenges of principals of secondary schools in Nigeria. *International Journal of Education Development 4(2) Pp175-180.*

Olaore, I.B. (2014). The impacts (positive and negative) of ict on education in Nigeria. Developing country studies 4(23). Pp154-156

Osakwe, R.N. (2012). Problems and prospects of using ICT for record keeping in tertiary institutions in Nigeria. *Journal* of *Education and Practice* 3(14) Pp.39-43 Advancement of Knowledge 15(9) Pp. 148-152

Umeri, V. (2022). School record management. *SAFSMS.com*

UNESCO (2011). Transforming education, the power of ICT Policies. France.

Williamsedublog.com (April,7th 2021) School record keeping/6 exciting and amazing modern strategies for keeping school records.