

UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY FOR SCHOOL RECORD KEEPING: A STRATEGY FOR PRINCIPALS' MANAGEMENT OF SECONDARY SCHOOLS IN AKWA IBOM STATE, NIGERIA

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Abstract

This paper focuses on the use of Information and Communication Technology (ICT) for school record keeping as a strategy for effective management of secondary schools in Akwa Ibom State, Nigeria. The study employed a descriptive survey to investigate the extent of usage, advantages and factors militating against the use of ICT for school record keeping. Out of a population of 228 secondary school principals, 145 were selected to respond to a researcher-made questionnaire. Data collected were analyzed using frequency counts and percentages. The result showed that the level of utilization of ICT for school record keeping was low, the use of ICT in school management help school managers to cope with information explosion, handling and processing of information with greater speed and accuracy. The study also revealed some factors militating against the use of ICT. The paper therefore, recommended that Akwa Ibom State Government should provide ICT facilities to all public secondary schools in the state as well as train principals and teachers on the use of ICT facilities for school record keeping.

Information has always played a vital role in human life. However, in the 20th Century, the role of ICT increased immeasurably as a result of social progress and vigorous development in science and technology. Ogunsola and Aboyede (2005) pointed out that rapid expansion of a mass of diversified information is occurring and this has received the name "information explosion". As the world changes, information and knowledge change rapidly, record keeping as well as school management also has to change. Management of secondary school refers to a process of making use of the available resources towards the achievement of the education goals at secondary school level. The head of school and their subordinates have the administrative responsibilities of directing available resources towards actualization of the goals. They plan classrooms and out-of-classroom activities for teachers and students. They also coordinate school activities in order to ensure that many programmes go on at the same time without one conflicting with others. The fact that the Akwa Ibom State Government is witnessing a tremendous growth in students' enrolment as a result of Universal Basic Education (UBE) has made management of schools complex thereby, creating challenges ranging from management of students and staff, community relations, supervision of instruction to the management of school finance (Okebukola, 1996). Ghaemian (2000) agreed with Okebukola's view and reported that administrative functions in schools are becoming increasingly complex in terms of enrolments population mobility and social problems. This complexity requires the use of powerful administrative tools resulting in better communication, efficient operations and better personnel services. One of such tools is the use of computer for record keeping. The school principal needs to be well informed in ICT application for effective management of secondary schools. This is necessary in the areas of budgeting, collection of students' data recording of results and effective keeping of school records.

Commenting on the importance of data in the educational system, Nwagwu (1995) argued that effective record keeping is vital to educational development. In addition, the author emphasized that, it will be an impossible task to plan and administer 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 records for effective planning and management of schools.

ICT has penetrated all facets of the Nigerian system and its role in the economic, socio-political and educational development in the country is no longer in question. Ogunsola and Aboyade observed that despite the enormous effects of ICT in the development of education within the country, it is disheartening to observe that in many public secondary schools in Akwa Ibom State, Nigeria, ICT tools like computer, printers, photocopiers etc that can aid storage of schools data are hardly use or not available. Onifade (2003) reported that financial allocation to schools was at a low level; this suggests that principals could not readily purchase ICT equipment for effective record keeping in public schools. Ajabor (2001) contended that the usage of computer has been handicapped by non-supply of electricity to many schools. Another constraint to effective utilization of ICT equipment as perceived by Obijifor, Inayatullah and Stevenson (2005) is lack of interest and awareness of the benefits of using ICT for record keeping. They opined that ignorance about the importance of and need for ICTs can make even those rich enough to acquire them, become apathetic to ICTs. It is against this background that this study aimed at examining the extent of utilization of ICT for record keeping as it affects management of secondary schools in Akwa Ibom State, Nigeria.

Information and Communication Technology (ICT)

According to Blurton (1999) ICT refers to a diverse set of technological tools and resources used to communicate and create, disseminate, store and manage information. Also Edom (2007) defined ICTs as the electronic tools or technological resources that are used to gather, process, store, preserve, access, disseminate and retrieve information when required with ease.

To Oliver and Chapman (1993), information technology is the technology that supports activities involving the creation, storage, manipulation and communication of information together with their related methods, management and application. Communication technology consists of both physical devices and softwares that are used to transfer data from one physical location to another. Computer and communication equipment can be connected to networks for handling voice, data, images, sound or even video. These information technology infrastructures provide the foundation or platform on which an organization can build its specific information system.

National Policy on Information Technology (NPIT) (2001) referred to Information Technology (IT) as any equipment that is used in automatic acquisition, storage, manipulation, management, movement, control, switching, interchange, transmission or reception of data or information. It includes the use of these technologies (computing, micro-electronics and telecommunication) and how these technologies are used to collect, store, process and distribute any form of information by electronic means. Information technology is one of the powerful forces that have been causing changes to lifestyles. It has been changing everything and will continue to change

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things, it is very clear now that the development of information technology is rapidly revolutionizing social, economic and educational aspects of most countries in the world.

From the foregoing, the researchers deduced that ICT is a modern innovation designed for use in organizations for the purpose of enhancing job performance and increase productivity among workers irrespective of the type of organizations.

School Record Keeping

Records, as defined by the American Heritage Dictionary (1980), and cited by Onifade (2004), are 'information or data on a particular subject collected and preserved'. This definition implies that any processed or unprocessed datum that is collected and kept for future use constitutes a 'record'.

On regular basis, information on school personnel (pupils, teachers and non-teachers), facilities, funds and school activities, are collected and preserved. This collection becomes school records. School records are therefore information or data which are collected on various aspects of a school and preserved for future use. The information or data which are written manually or electronically are preserved in books, files, diskettes, flash drives and other electronic materials. Mbiti (1974), summarised this concept when he stated that school records include all books and files containing information on what goes on in school, who is in the school and the type of properties owned by the school. School records include:

- (i) A register of admission and withdrawal
- (ii) A register of attendance
- (iii) A log-book
- (iv) A cash book
- (v) A visitor's book
- (vi) A copy of education law
- (vii) Scheme of work
- (viii) Teacher's record of work
- (ix) School time-table
- (x) Corporal punishment book
- (xi) Counterfoils of transfer and leaving certificates, and
- (xii) Minutes book of the Board of Governors. (Olagboye, 2004 p. 122)

School records serve as a bank in which information is deposited and kept with the hope of retrieving for utilization. Proper keeping of school records could enhance planning process, serve as historical record, provide knowledge on student's academic performance and facilitate schools' financial administration. It will also provide a basis for advisory and counselling services.

School records provide raw data which can be used by officials of education ministries for planning purposes. Data collected from school records on pupil's enrolment and school facilities can be analysed in order to determine the number of teachers and other resources that would be needed by the school. Within the school, records would enhance planning for placement of students into higher classes.

Through records, especially the log-book, the history of the school could be known. Important events of the school are recorded in the log-book. Hence, it serves as a good reference point of whoever intends to know the happenings in the school. In fact, it serves as historical sources of useful information to principal's or headmaster's successor and to outside researchers (Edem, 1982).

School records also enables one know the termly and yearly academic performance of students. School managers will be able to determine the academic progress of the students and take necessary precautionary measures towards improving their academic performance. The financial status of the school could be determined through school records. Income and expenditure of the school are entered into appropriate ledger, and this enhances accountability on the part of the school administrator. School records also provide a basis for advisory and counselling services. Teachers, head teachers and school counsellors could make use of records in order to give advice on students' academic activities.

Using Information and Communication Technology for School Record Keeping

One purpose a school record can serve is to assist in effective management of the school. Principals are required to keep records not only because it is a statutory duty but because of its value in improving management practices. Since the school is a formal organization, there is need for accurate, timely, sufficient and relevant information, which are kept in the form of records and they provide information on the past, present and anticipated future activities of the school. The traditional method of gathering, processing, preservation and presentation/dissemination of large volume of information in print media has failed to facilitate work in the school system because of its attendant problems ranging from limited capacity to total loss of important information (Knezevich, 2005). Consequently, ICT became indispensable in the administration of schools. The principal through his secretarial staff deals with so many books and files containing information on what goes on in the school, who is in the school and what type of properties are owned by the school. Lawal (2001) stated clearly that it is no longer fashionable for a secretarial staff to write all the letters and prepare all other documents by hand or by the use of typewriter. Essentially, the following are the ICT facilities which are commonly used in an ideal office; computer, printer, internet services, photocopying machine, satellite disc, diskettes, flash drives, laptops and other electronic devices.

Effect of ICT in school record keeping cannot be denied. Typing of letters, schemes of work and document filing could be time consuming as it is tedious. Nwosu (2003) noted that ICT assists the school principal to meet the task of school management in the area of record keeping. In view of the human factor involved, information or data which are written manually would often invariably results in errors, arrears of work thus giving room to misleading variables of decision-making as well as making information retrieval difficult. But with the use of ICT, speed, accuracy, quick information retrieval and decision making can take place. Adegun (2002) argued that the introduction of ICT in schools enhances the daily school routine; input and output facilities which facilitates interrogation of files, alterations, displays and retrieval of information which are not possible with manual system can be done.

Definitely, the school principal needs the assistance of ICT equipment such as the computer to neatly produce his documents, reproduce and keep them for future use. From here, it is clear that

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the ability of the school head to effectively plan and manage his school nowadays is enhanced by the use of ICT equipment for record keeping. ICTs serve as necessary aid to the principal in the area of record keeping because of the following advantages they offer (Awoyokun, 2009):

- i. ICT facilities make it easy to store documents and retrieve them when they are required.
- ii. ICT aid in the production of schools documents – time table, schemes of work, reports etc faster and neater.
- iii. They promote accuracy and prompt delivery of services, for instance the school's rules and regulations could be produced and given out to students on admission.
- iv. ICT facilities save labour and also reduce the time spent on a job.

Other reasons for utilization of ICT according to Eynon (2006) are that it aids school administration in speed of doing things because of the astronomical number of students' enrolment in schools and the many jobs they needed to perform. The use of ICT can reduce distance virtually or physically thus, providing scholars with easier access to information. Odufuma (2006) averred that ICTs are used in schools management because they help school managers to cope with information explosion, handling and processing with greater speed and accuracy than the manual method.

Nwagwu (1995) pointed out that school record can enhance managerial duty performance in the areas of planning for resource acquisition and utilization, students and staff personnel services, financial management and school – community relations. The researcher argued that government regulations on what to do, who do it, when to do it, where, and how to do it are vital to school management and that these are contained in such documents as education law and the National Policy on Education which are to be kept in schools.

Statement of Problem

The enormous increase in students' enrolment and teacher data in secondary schools has been noted, this has made the management of schools complex. There is the problem of controlling large population of students as well as conducting examinations on a large scale. Problems of indiscipline are still rampant among teachers and students, the reasons for these could be that school managers are operating within a complex environment which could be posing a lot of challenges to their successful administration. There have been changes in composition of school personnel in terms of number, gender and student-teacher relationship. This complexity has called for the use of sophisticated equipment and facilities such as ICT for the purpose of record keeping in schools. It has been observed that ICT facilities might not have been used effectively for record keeping in schools. The problem of this study therefore is to examine the extent of utilization of ICT, its advantages for keeping schools records and factors militating against the use of ICT in public secondary schools in Akwa Ibom State.

Objectives of the Study

The major objective of this study is to assess the extent of utilization of ICT by school principals for effective record keeping. The specific objectives of the study are to:

- i. ascertain the extent of utilization of ICT by principals for school record keeping in secondary schools in Akwa Ibom State;

- ii. ascertain the perceived advantages of using ICT for school record keeping in secondary schools in Akwa Ibom State;
- iii. identify the factors militating against effective usage of ICT for school record keeping in secondary schools in Akwa Ibom State;

Research Questions

Based on the objectives of the study, the following research questions were raised:

1. What is the extent of usage of ICT for school record keeping in secondary schools in Akwa Ibom State?
2. What are the perceived advantages of using ICT for school record keeping in secondary schools in Akwa Ibom State?
3. What are the factors militating against effective usage of ICT for school record keeping in secondary schools in Akwa Ibom State?

Methodology

The descriptive research design of the survey type was used to investigate the problems of the study. The study population comprised of all the principals of government-owned secondary schools numbering 228 (State Secondary Education Board, 2012). Out of this population, a sample of 145 principals was selected through the stratified random sampling technique. The instrument used for the study was a questionnaire titled "Information and Communication Technology and Effective School Record Keeping Questionnaire" (ICTESRKQ). The questionnaire was in two parts: A and B. Part A was to elicit information on personal data relating to the school while part B consisted of 3 sections based on the three objectives of the study. The instrument was submitted to two experts in Test and Measurement for face and content validity. Test re-test technique was employed to determine the reliability of the instrument; a pilot study was carried out by the researcher on two occasions on randomly selected 15 principals who were not part of the study sample. After a period of two weeks, the instrument was re-administered to the same respondents. The data collected on the two administrations were collated and analyzed using PPMC analysis, the result yielded a reliability coefficient of 0.78. This indicated a high reliability index.

The instrument was administered by the use of research assistants. Returns were received from 145 respondents, out of which returns from 3 copies were poorly completed and were discarded while returns from the remaining 142 copies were used for data analysis. The data collected were collated and analyzed using frequency counts and simple percentages.

Data Analysis

Question 1: What is the extent of usage of ICT for school record keeping in secondary schools in Akwa Ibom State?

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Table 1: Extent of Usage of ICT for School Record Keeping in Secondary Schools in Akwa Ibom State

ICT Facilities	N	Frequently used (%)	Occasionally used (%)	Not used (%)
Computer	142	68(48%)	08(6%)	66(46%)
Printer	142	41(29%)	69(49%)	32(22%)
Handset	142	73(51%)	43(30%)	26(19%)
Photocopier	142	16(11%)	20(14%)	106(75%)
Diskettes	142	0(0.0)	22(15%)	120(85%)
Flash drives	142	0(0.0)	31(22%)	111(78%)
Radio cassettes	142	1(0.1)	26(19%)	115(81%)
Laptop	142	2(1%)	11(8%)	129(91%)
Compact disc	142	23(16%)	14(10%)	105(74%)
Memory card	142	6(4%)	15(11%)	121(85%)

Results from table 1 indicate that 68 (48%) respondents claimed that they use computer for typing, processing and storage of data frequently. ICT facilities such as photocopier, printer, handsets, flash drives and radio cassettes were occasionally used for record keeping in some schools. The table also reveals that diskettes, laptops and memory cards were not used for record keeping in most secondary schools in Akwa Ibom State. It can be observed from the table that most of the ICT facilities were either occasionally used or not used at all; this suggests a low level utilization of ICT facilities for school record keeping in secondary schools in Akwa Ibom State.

Question 2: What are the perceived advantages of using ICT for school record keeping in secondary schools in Akwa Ibom State?

Table 2: Advantages of Using ICT for School Record Keeping

Stem	N	Agree	Disagree
ICTs make it easy to store documents and retrieve when they are required	142	141(99%)	1(1%)
It aids in production of documents faster and neater	142	105(74%)	37(26%)
ICTs promote accuracy of information	142	130(92%)	12(8%)
With ICT devices loss of important information is reduced	142	88(62%)	54(38%)
Storing information or data in ICT devices save time and labour	142	101(71%)	41(29%)

In table 2, 141 respondents (99%) agreed that ICTs make it easy to store documents and retrieve them when required. While Ninety-two percent of the respondents affirm that information recorded on ICT facilities are accurate, 8% disagree to that statement. The table also shows that 71% of the respondents agree that storing information in ICT devices saves time and labour than manually stored information.

Question 3: What are the Factors Militating Against Effective Usage of ICT for School Record Keeping in Secondary Schools in Akwa Ibom State?

Table 3: Factors Militating against Effective Usage of ICT for School Record Keeping in Secondary Schools

Stem	N	Agree	Disagree
Sporadic disruption of electricity supply	142	142(100%)	0(0%)
Lack of expertise on the use of ICT devices	142	127(89%)	15(11%)
Inadequate funds to provide ICT devices	142	110(77%)	32(23%)
Inadequate facilities such as furnished office, accessories etc	142	62(44%)	80(56%)
Lack of interest among principals to adopt the use of ICT devices	142	91(64%)	51(36%)
Ignorance on the advantages of ICT devices	142	83(58%)	59(42%)

As indicated in table 3, all the respondents (100%) agreed that sporadic disruption of electricity supply is the most outstanding factor militating against the use of ICT for school record keeping in Akwa Ibom State. In the same vein, 127 respondents (87%) agreed that lack of expertise on the use of ICT devices for record keeping is one of the factors. Other factors include lack of funds (77%), lack of interest and ignorance on the part of the principals to effectively utilize ICT devices for school record keeping.

Discussion of Findings

The study investigated the extent of utilization of ICT facilities for school record keeping, the perceived advantages of ICT usage and the factors militating against ICT usage among principals of secondary schools in Akwa Ibom State. The findings from the study showed that the use of ICT facilities for school record keeping in secondary schools in Akwa Ibom State is at a low level. Although some schools use computer, handsets and printers for record keeping, most schools did not use diskettes, flash drives and radio cassettes. This finding supports the opinion of Osunde and Miller (1999) who stressed that these facilities must not only be available but effectively utilized so as to enhance efficiency in relevant skills, knowledge and attitude.

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The study also reveals the perceived advantages of ICT for record keeping in secondary schools. This finding is in consonant with that of Nwosu (2003) who noted that ICT assists the school principal to meet the task of school management in the area of record keeping. Odufuma (2006) averred that ICTs are used in schools management because they help principals to cope with information explosion, handling and processing with greater speed and accuracy than the manual method.

The factors militating against the usage of ICT for school record keeping found in this study were consistent with those of Onifade (2003) and Ajabor (2001). Ajabor (2001) contended that the use of computer for processing and storage of data has been handicapped by non-supply of electricity to many schools. This seems to be a national problem. The problem of funding agreed with the findings made by Onifade (2003) who reported that financial allocation to schools was very low and as such principals are not able to purchase ICT facilities for effective record keeping in public schools.

Conclusions

Based on the findings of this study, it is evident that the use of ICT for school record keeping in secondary schools in Akwa Ibom State is at a low level. The study has provided an insight into the perceived advantages and constraints to effective utilization of ICT equipment for record keeping in public schools.

Recommendation

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

1. The state government should supply the necessary ICT facilities to all secondary schools in the state. This could be done by providing funds for the purchase and maintenance of ICT facilities and accessories.
2. The state government should also improve the training of principals, teachers and computer instructors on the use of computer and other ICT facilities through seminar, workshops and in-service training.
3. Principals should develop interest in the use of ICT facilities for effective school record - keeping.
4. The state government should provide generators to all public schools in order to forestall the intermittent disruption of electric power supply in the state.

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