
Role of ICT in Secondary School Administration: Evidence from Secondary Schools in Yola Metropolis, Adamawa State

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ABSTRACT

Keyword:

*Information,
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The complexity of academic activities in secondary schools demands that there should be effective and efficient ways of handling them in order to achieve qualitative results. The use of Information and Communication Technologies (ICT) definitely provides solution to this challenge. This study examines the role of ICT in secondary school administration in Yola, Adamawa State. Data were collected from 100 teachers in ten selected secondary schools in Yola metropolis bothering on the use of technologies for record keeping and communication. Descriptive analysis was applied to data and it was revealed that ICT was rarely employed for keeping school records and maintaining line of communication with interest parties. It is recommended that government, administrators, and teachers should see investment in ICT as a dependable way for achieving educational goals of secondary schools.

Introduction

The use of Information and Communication Technology (ICT) has been widely adopted by several industries across the globe. This upsurge in the acceptance of ICT as a welcome alternative is occasioned by the persistent growth in the economy in its all facets. The education sector is one of the fastest growing industries, following population explosion in the 21st Century (OECD, 2001,

Elearningeuropa. 2005). This rapid growth has led to many complex academic tasks in the field of education requiring a cost effective method of handling activities. Similarly, flexibility in administrative and learning activities has become paramount in achieving effective and efficient results. Information and Communication Technology is capable of producing the desired efficiency in educational management and administration, ranging from student administration to learning resources and feedback management.

Adamawa State has a robust policy on secondary education. The state government has always reaffirmed its commitment and willingness to prioritize, assist and encourage educational institutions in the state to enable it discharge its function diligently in order to attend a viable stage of development. This anticipated outcome makes the use of Information and Communication Technology a necessity. ICT is expected to provide both students and teachers the opportunities to quickly adapt to learning, teaching and managing the individual needs to bring about the expected change, Moreso, as an engine of innovation, it provides newer and more effective ways of overcoming some of the challenges being faced by the educational system in administration and management.

Therefore, this study examines the role of ICT in achieving efficient and effective secondary education administration in Adamawa State through pilot study. Specifically, the objectives are

- i. To provide an overview of the applications of ICT in secondary school administration and management.
- ii. To examine the use of ICT technology in managing school records
- iii. To assess the influence of ICT in communicating between the school and parents / guardians
- iv. To determine the use of various technologies in record keeping and scheduling in the school

An Overview of the Role of ICT in Secondary School Administration and Management

The educational sector is one of the fastest growing industries in Nigeria. There has been rapid proliferation of both private and public secondary schools across the country following the increased demand for secondary education as a result of the increasing population. For the school system to be more effective, it has to overcome some challenges associated with the complexity of the system. Teaching, learning, evaluation and all aspect of school administration require a more skillful approach in order to achieve the desired results. Information and

Communication Technology (ICT) provides an answer to the question of how to achieve better results in secondary school administration. ICT is a principal means by which educational institutions achieve the crucial role of knowledge generation and learning (Bock 2011). Various aspects of school administration require the use of computers and related technologies.

Application of ICT in School Record Keeping

Secondary schools keep a lot of records, ranging from student admissions to student attendance registers, log books, transcripts, withdrawal register, records of proceedings, events, visitor's book, staff and student personal files, lesson notes, students' report sheet, scheme and record of work, transfer and leaving certificate, staff movement book, receipts and cash book and other matters relating to student, staff and general administration (Badau & Yahya, 2017). Every school keeps certain specific records which could be viewed as authentic registers or instruments or documents of official accounts of transaction or occurrence. These records are usually in the form of books, documents, files, and CDs (Chifwepa, 2014). Relevant information on the growth and development of the school is maintained and kept in the office.

The ICT is very useful and helpful in maintaining the school records and communicating the related information when required or necessary. Some of the ways by which ICT can be used in communicating administrative information as highlighted by Durosaro (2002) and Copolla, (2005), include

- i. Use of computers or electronic media by students to apply for admissions, complete online registration, know class schedule or timetable, communicate academic details of students to their parents / guardians, allocate hostel accommodation, among others
- ii. Use of computers or electronic media for staff recruitment, course or work allocation, automation of attendance in the institution, performance appraisal, e-circulars from the institution regarding official matters, communication with individual staff
- iii. Use of computers or electronic media for general administrative purposes such as allocation of examination venues, processing and display of student results, e-payment platform, information dissemination between the institution and its environ.

Visualizing the increasing role of ICT into the future generation of school administration, Adonis,(2006) describes the use of technologies as the sure way to achieve efficiency in the educational objective of the secondary education through digital libraries, e-mail, internet and other forms of e-learning resources. In the same way, ICT makes it easier to maintain adequate and accurate records in schools and make them easily accessible. With the electronic media, educational programmes and policies formulation, planning and implementation, evaluation and development, are made more efficient and effective.

Influence of ICT in Communication between School and Parents

In secondary school administration, there should be regular contact between the school and parents/guardians. Information and Communication Technologies play a very vital role in this regard. According to Davies & Birmingham,(2002), Moodiel (2007) and Moyle (2006), communication is required to inform parents about school activities and for developing awareness and understanding among them of their role in the learning and development of their children. The school system depends heavily on ICT in improving parental involvement in school administration in such areas as

- pointing out the obligation of parents and families to provide safe, healthy home environments for their wards
- regularly informing parents and keeping them informed about school programs and their children's progress in school.
- educating parents about opportunities to volunteer for the betterment of their children and the society.
- keeping parents and community abreast of their involvement in the decision making process and governance of the school.

Various Technologies Used for Record Keeping and Scheduling

There are many ICT tools identified by Huffaker (2003) which are very useful and employed in secondary school communication, be it for student, staff or general administration. Some among these resources include:

- (a) **E-mail**, where students, teachers and parents timely contribute chats and forum postings on relevant information affecting the system
- (b) **School Website or Blog**, where all information of the school such as contact information, expectations, school rules, school

history and the teachers, how to use the internet at home, etc can be posted

- (c) **Online survey**, where quick feedback from parents and communities is received through online survey, subjected to data collection and analysis
- (d) **Virtual Learning Environment**, which provides support teaching and learning such as self-evaluation, peer assessment or questionnaire administration
- (e) **Media Sharing Services** such as videos, through which parents are kept informed on important issues like school programmes and events, child rearing, and other related educative services.
- (f) **Social Networking**, such as Facebook, Twitter, LinkedIn, through which students, teachers and parents share important information, both academic and administrative
- (g) **Online Groups and Forums**, such as Google and Yahoo groups where parents in different groups exchange information or ideas
- (h) **SMS and Instant Messaging**, which provides instant medium through which school communicates parents about their children or wards, e. g. if a child becomes a truant or falls ill

These tools and indeed many others not listed here can play significant role in smooth administration of secondary school as they support fast communication and feedback

Advantages of the Use of ICT for School Record Keeping and Communication

The advent of computers and other electronic media has offered a great deal of advantage in secondary school administration and management. A number of authors such as Newhouse (2002), Gama (2010), Suryan (2010) have outlined the contribution of ICT to school's efficient record keeping and management to include

- Ready availability of records and information
- Ease of access and retrieval system
- Fast and efficient communication
- Availability of accurate data and processing
- Administrative efficiency
- Fast, rich decision-making and problem solving ability in the school system

Methodology

A descriptive survey design was adopted in this study. The population comprises all the secondary school teachers in Yola metropolis, Adamawa State. Although the total number to date of secondary schools in Yola metropolis could not be established, there are at least about 110 senior secondary schools (Badau & Yahya, 2017). A convenience, purposive random sampling technique was employed to select 100 respondents, (10 each) from ten (10) secondary schools for the study. Data was collected using researcher instrument titled “Role of ICT in Secondary School Administration Assessment Questionnaire (RISSAAQ). Three research questions based on the objectives of this study guided the construct of the instrument. The instrument was validated by two persons for compliance with objectives of the study - a director from Adamawa State Ministry of Education and a very senior principal from one of the Secondary schools in Yola town. The reliability coefficient of the instrument using Cronbach coefficient Alpha was 0.75. The services of one research assistant from each of the ten schools were employed which helped in achieving 100% return of the questionnaire. Data were analyzed by thematic and content analyses, supported by descriptive statistics

Findings and Discussions

(i) Types of School Records Kept with the Aid of ICT

The teachers were asked to comment and rate the frequency of use of technologies for maintaining various records in their schools, whether computer or any other electronic media, ranging from Never (1) to Rarely, Sometimes, Often and All the time (5). Their responses were as shown below:

Table 1: Types of School Records Maintained by ICT

	N	Mean	SD
Admissions Register	100	1.45	1.21
Attendance registers,	100	1.11	0.75
Log Books,	100	2.06	1.42
Teachers’ Record of Work	100	2.45	1.22
Syllabus or Curriculum	100	3.44	1.18
The School Time table	100	2.22	0.54
Withdrawal register,	100	1.39	1.25
Records of proceedings,	100	3.40	1.18
Records of Events,	100	3.72	1.42
Visitor’s book,	100	1.88	0.96
Staff Record Book	100	2.22	0.55

Staff and student personal files, 100	100	1.20	0.37
Lesson notes,	100	1.55	1.11
Students' Report Sheet,	100	4.60	0.60
Transfer and Leaving Certificate	100	2.89	1.08
Staff Movement Book, receipts	100	1.12	1.42
Stock Book	100	2.87	1.11
Punishment Book	100	1.90	1.44
Minutes Book	100	4.30	0.73
Continuous Assessment Records	100	2.00	1.33
School Cash Book	100	3.03	0.84

Source: Survey 2019

From the above table, it is apparent that secondary schools in Yola metropolis do not employ the use of computers and other electronic media for keeping most of the school records. Out of 21 items of records, only 8 (about 38%) were agreed to be **sometimes** or **often** maintained electronically ($x = 3.85$, $SD = 0.89$). These include record of events and programs, syllabus, students' report sheet, minutes of meetings, records of proceedings, continuous assessment records, stock accounts and cash book.

The implication of this is that most of the important school records are still maintained manually and this will lead to delays, inefficiency and ineffectiveness contrary to the advantages opined by Gama (2010) and Survan (2010)

(ii) Use of ICT in Communicating with Parents/Guardians

As much as they were aware, the teachers were asked to rate how computers and / or other related technologies were used by students and school to communicate with parents / guardians. The table below represents the responses

Table 2: Use of ICT for Communicating with Parents

Use of ICT for Communicating With Parents	N	Mean	SD
Application for admissions,	100	1.72	0.56
Online registration	100	1.35	1.10
Class schedule or timetable	100	1.05	0.66
Academic details of students	100	2.25	1.83
Allocation of hostel accommodation	100	1.20	0.16
Allocation of examination venues,	100	1.89	1.05
Display of student results,	100	2.65	1.11
E-payment platform,	100	3.85	1.40

Display of School Events	100	2.18	1.54
Academic Calendar	100	2.77	1.24

Source: Survey 2019

Table 2 above reveals the extent to which the ICT applications were adapted in communicating with parents / guardians in secondary schools in Yola. For mean scores of 2.65, 2.77 and 3.85 respectively,, computers were used sometimes for display of students' results and academic calendar and often for e-payment. The e-payment services include mobile App, USSD, internet banking. This coincides with Adonis (2006) who opines that computers provide a ready medium of quick transactions with parents and students in secondary schools. However, such important communication as application for admissions, registration and distribution of students' results are better done electronically.

(iii) Various ICT Tools Used for Record Keeping and Communication

As much as they were aware, the teachers rated how different ICT tools were employed in school administration, especially in communicating between teachers and students, and between the school and the parents / guardians

	N	Mean	SD
(a) E-mail	100	4.01	0.80
(b) School Website or Blog	100	2.35	1.12
(c) Online survey	100	1.87	1.00
(d) Virtual Learning Environment	100	3.28	1.45
(e) Media Sharing Services such as YouTube videos	100	2.31	1.69
(f) Social Networking, such as Facebook, Twitter, LinkedIn	100	2.95	1.71
(g) Online Groups and Forums, such as Google and Yahoo groups	100	1.45	0.84
(h) SMS and Instant Messaging,	100	3.54	1.08

Source: Survey 2019

Given the data on table 3 above, the ICT tools popularly engaged in record keeping and communication in the course of secondary school administration include only email ($x = 4.01$, $SD = 0.80$), and SMS Instant Message ($x = 3.54$, $SD = 1.08$), which were often used. Virtual learning and Social Networking were employed sometimes. This development rhymes in part with Suryani (2010). However, this condition is considered inadequate for yielding remarkable outcome.

Conclusion

The role of Information and Communication Technology in secondary school education administration cannot be overemphasized. The craving for efficient and effective record keeping and inter and intra communication network by management calls for more skillful methods. In the same way, teaching and learning is made more interesting with the use of computers or electronic media. The secondary schools in Yola metropolis do not take adequate advantage of ICT for maintaining their records and network of communication. Investment in computers or ICT gadgets is a step in the right direction. Therefore, it is recommended that

1. The Adamawa State Ministry of Education in collaboration with other relevant agencies should make frantic effort to computerized the secondary schools so as to improve the teaching and learning process.
2. Principals should encourage their teachers to train and acquire computer literacy with the aim of establishing functional ICT or Management Information System unit
3. The world is going paperless. The numerous records maintained by schools with the attendant volume of communication can be made easy with introduction of ICT.
4. Computer Application and Appreciation should be taught at all level of classes to acquaint the students with the rudiments and basics of Information and Communication Technology. Since almost every parent, teacher and student have access to personal phones and cyber café, the introduction of ICT system in secondary schools will be successful

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