



Factors Affecting Utilization of Information Technology (IT) Resources by Secondary School Students in Sabon Gari Local Government Area of Kaduna State

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Abstract

The paper examined the use of Information Technology (IT) resources by secondary school students in Sabon Gari, Kaduna state, Nigeria. The research reviewed some related literature; a descriptive survey design was adopted for the study. The secondary consists of 300 public and private secondary school students, the school selected consists of (4) secondary schools in Sabon Gari LGA, kaduna State. The schools comprise of two private and two public schools. 320 questionnaires were distributed and 300 representing 80% was returned and analyzed Likert Scale self-designed questionnaire was the instrument of data collection. Data collected were analysed using frequency, scores, percentage scores and sum means values. The study highlights five major factors that affect positively and challenges facing utilization of IT resources in secondary school students. It was also revealed that the students of Kaduna state are aware of the factor responsible for the availability and utilization of IT resources. The study recommends among others, that training on how to use IT skills should be made paramount, In order to increase users awareness and usage in schools as it affect the students academics performance.

Keywords—Information Technology (IT), Utilization, Academic performance

Introduction

Information technology (IT) can be regarded as a connected computers or devices with its resources such as, software applications, multi-media content, web-based applications, systems and tools that can enhance the teaching and learning procedure and the system of integrating education. Using technology provides support for the integration of technology to the curriculum which in turn significantly contributes an improvement in the teaching and learning environment. In this information explosion era, Information Technology (IT) plays a pivotal role in preserving and serving the information requirements of the users (Dare, 2017). Electronic resources include e-journals, e-discussions, e-news, data archives, e-mail online chatting, just to mention but a few. Electronic information source are wide range of products going from electronic periodicals to CD-ROMs, from mailing list database, all of the having a common feature of being used and sometime modified by a computer (Thanuskodi, 2012). With the new development of

information technology, electronic resources are now available for use in schools. New trends in the computer technology are allowing libraries to do things with me efficient and effective tools. The significant developments in the field of Information and Communication Technology (ICT) have created revolutionary changes in all fields of knowledge. Most importantly, ICT significantly changes the way learning is conducted with the increase of information and communication technologies for instructional design, delivery and technology supported learning. The National Communication Commission (NCC) is saddled with the implementation of communication policy while National Information Technology Development Agency (NITDA) is responsible for the implementation of Information Technology (IT) Policy. Furthermore, some of the implementation strategies, according to the document, include the restructuring of the education system at all levels to respond effectively to the challenges and

emerging impact of the information age and in particular, the allocation of a special IT development funds to education at all levels. It is worth nothing that not only the government, other non-governmental organizations are also helping in funding the integration of ICT at all levels of education in Nigeria (Balarabe et al., 2018).

The provision of IT tools specifically electronic information resources in our institutions of learning is a new way of gaining quick access to a great number of research information and dissemination globally. As a result of the potential benefits offered, they have been embraced by secondary and university libraries. Students, especially those at the secondary and undergraduate level, would benefit from the IT resources if they are well harnessed as they will provide excellent opportunities to access scholarly information which are beyond the reach of libraries due to geographical barriers and limited finances (Alegbeleye et al., 2019). As a result electronic information that derived from IT resources have become the lively substance to the modern libraries reserve in satisfying needs of students, teachers and researchers with minimum risk and time (Dare 2017). However, IT Resources are very important in secondary libraries, where most libraries that provide access to this service gain competitive advantage.

Sinha (2010) examined the role of IT in searching pattern of online journals among the faculty members, Research scholars and post-graduate students to collect the required data. The study revealed that the majority of users were aware of the availability of IT specifically online Journals. It was found that users faced problem when using online journals. They are also interested in taking training in the use of online journals. From the review of literature on the usage of off-line and on-line e-resources (CD-ROM Databases and E-Journals), it has been found that most of the studies have been carried out in Northern India. Undergraduate students should understand the follow before using information: The difference between summarizing and synthesizing, different forms of writing/ presentation style can be used to present information to different communities, data can be presented in different ways and the personal responsibility to store and share electronic information resources, personal responsibility to disseminate information & knowledge; How their work will be evaluated; The processes of publication, the concept of attribution that individuals can take an active part in the creation of electronic information resources through traditional publishing and digital technologies (Sahabi, et al., 2020).

Hence, every classroom teacher should use learning technologies to enhance their student learning in every subject because it can engage the thinking, decision making, problem solving and reasoning behaviors of students (Grabe and Grabe, 2001). These are cognitive behaviors that children need to learn in an information age. Despite successful efforts to acquire computer hardware and to raise the student to computer ratio to 5:1 (World Almanac, 2002), there has been less success identifying, which computer skills should be taught in school and how computers can be used for teaching and learning (Dooling, 2000). Thus, current attention has turned to what is actually happening in the classroom with computer technology.

It is also important that for the students to make use of the IT resources, they ought to be skilled in information and communication technologies (ICTs) applications in order to gain independent use of various IT tools around the globe. It has been observed that students in Nigerian secondary school are confronted with various challenges relating to inadequate telecommunications' infrastructure, high cost of subscription, poor skills, amongst others in the use of IT resources. Consequent upon these, this study seeks to evaluate the use of IT resources by the secondary school students in Kaduna state.

Statement of the Problem

Information Technology (IT) sources are becoming more and more important for the academic community therefore, awareness of these information resources is of paramount importance to secondary school students. Unfortunately, literature and personal observation had revealed that IT resources are grossly under-utilized by secondary students in Nigerian universities despite the potentials they hold for effective learning and research. Lack of Information Communication Technology in teaching and learning in school in Northern part of Kaduna state has given interest to the researcher which is believed to be among the factors responsible for ineffective use of IT.

PURPOSE OF THE STUDY

To establish the fact that some certain factors are affecting the use of IT in teaching and learning in secondary school students in northern Part of Kaduna state

METHODOLOGY

The survey study was carried out in Kaduna state secondary school. The data were collected from a field aimed at evaluating the use of Information Technology (IT) resources and the factors (variables) influencing IT resources adoption by students in four (4) selected secondary schools in Kaduna State, Nigeria. The schools comprise of two private and two public schools. Each school has students in both junior and senior levels. The proximity between the schools was the reason for the purposive sampling while simple random sampling was used to recruit the respondents. A total of 320 questionnaires were distributed and 300 representing 83.3% was returned and analyzed. The data evaluate the use of Information Technology (IT) resources and the factors influencing the resources. The questionnaire was in two parts, namely, part A and part B. Part A elicited background information such, Age of respondents, the type of school of the respondents, Gender of the respondents and the level of the respondents. Part B elicited measures influencing the usage of IT resources such as; overall use of IT resources, IT resources as a teaching aids and as a tool for learning. These three consists of five (5) questions which are the variables for measuring the usage of IT resources as a tool that influences academic performance of students in the surveyed schools in particular and Kaduna state.

Statistical Method

Statistical factor analysis was used to analyse the data using Statistical Package for Social Sciences (SPSS). The responses were analyzed according to their relevance to the research questions, 3-point Likert scale was used for proper analysis and interpretation of the data. The scores of the responses are presented. The Likert scale coding for the responses is presented in table 1.

Table 1: Likert scale

Responses	Key	Scores
Strongly agree	SA	3 points
Agree	A	2 points
Disagree	D	1 point
Strongly Disagree	SD	0 point

Results and Discussion

Out of 360 questionnaires distributed 60 were excluded as a result of non response. The result gathered from the respondents is shown in table 2, 3, 4 and 5 respectively. They consists of age Respondents' Age, Respondents' category of school, Respondents' gender and the level of the respondents in school. The result shows that 207 (69%) of the respondents public schools. Numbers of female 170(57.3%) are higher than male of 130(42.7%) from the respondent excluding the non response are seen between 11 and 15 Respondents' Age, 88 (29.3%) are seen between the ages of 16 and 20 and 5 (1.7%) are seen as 10 years or below. It can also be seen that respondents are selected from private and public schools; 155 (51.7%) represent public schools and 14 (48.3 %) represent private school. The junior secondary respondent group are recorded as 138 (46%) also 162 (54%) are recorded from senior secondary group.

Table 2. Respondents' Age

Age	Frequency	Percent	Cumulative Percent
0-10	5	1.7	1.7
11-15	207	69	70.7
16-20	88	29.3	100.0
Total	300	100	

Table 3. Respondents' category of school

School type	Frequency	Percent	Cumulative Percent
Public	155	51.7	51.7
Private	145	48.3	100
Total	300	100	

Table 4. Respondents' gender

Gender	Frequency	Percent	Cumulative Percent
Male	130	43.3	43.3
Female	170	56.7	100.0
Total	300	100.0	

Table 5. The level of the respondents in school

Gender	Frequency	Percent	Cumulative Percent
Junior	138	46	46
Secondary	162	54	100.0
Total	300	100.0	

The variable taken as factors that determine the usage of IT Resources

Likert scale was used in this research to determine the various factors responsible for availability and the usage of IT resources as it affects the academic performance of the respondents. The data obtain were grouped and arranged from the least numbers to the top numbers Sum of mean value (SMV) as it is shown in table 6. Factors with top numbers SMV are taken as the variable that influence the IT usage, availability and can be seen as the major effects on the use of IT in teaching and learning that affect their academic performances.

Table 6. The level of factor influence use of IT Resources and Services as it affects the academic performance of secondary school students' using the Sum of mean value (SMV)

Factors	Responses	SMV	MV				
				0	1	2	3
CD's	4	20	94	182	754	2.51	
Cassette	15	21	111	153	702	2.34	
OPAC	12	37	88	163	702	2.34	
Multimedia Device	16	37	98	149	680	2.27	
Computer studies	12	27	139	122	671	2.24	
Internet facilities	20	32	112	136	664	2.21	
E-Journals	19	44	114	124	641	2.14	
E-mail	19	44	128	109	627	2.09	
Printing & scanning	18	57	105	120	627	2.09	
On-line databases	18	39	142	101	626	2.09	
Google	17	56	118	109	619	2.06	
Instructional materials	40	62	114	84	542	1.81	
Scholarly website	34	80	97	89	541	1.8	

Almanacs	35	72	116	77	535	1.78
Readiness	121	86	49	44	316	1.05

Factors responsible for the ICT adoption

The following section provide five ungrouped factors that influence the uses of IT Resources and Services as it affects the academic performance of secondary school students

- i) IT resources provide strong support for students in improving academic learning
- ii) collaboration in teaching and learning process
- iii) IT aids in preparing Vision and Plan access to skill development about the recourse Education
- iv) IT Increases creativity and ICT knowledge based among students
- v) IT integrating operational strategy-making skills for effective teaching and learning method

Also, the following section provide five ungrouped challenges facing IT Resources and Services as it affects the academic performance of secondary school students

Inadequate Professional support: there is a need for teachers and students to be offered good points of entry into practices supporting ICT use and student centered teaching. To begin effective changing in their practice from whatever point their context and current practice requires introduction of IT in teaching and learning which could cause disconnection of students from face-to-face relationships. It could cause students to adopt and use irrelevant resources for decision making

Level of Inability to Access the ICT Infrastructure

One of the key features accessing the latest IT infrastructure is to use up-to-date software and hardware resources . In recent years, most of the schools are not well equipped with different kinds of technological infrastructure and IT resources. It can easily lead to **lack of understand, alignment between Information technology and school curriculum**

Lack of Support to Computer-Using Teacher in the Workplace.

Lack of IT infrastructure and Cost of IT resources, the lack of technical support as one of the major barriers that resulted in computers being underutilized in the classes. Teachers did not want to use computers because they were not sure where to turn for help when something went wrong while using computers.

On the basis of IT Education, it is still difficult to achieve direct communication between teacher and student.

Psychological Factors

The study revealed that some respondent were aware of various IT resources that are accessible in their school, but the rate of using the resources is low, it was also learnt that a large proportion of the respondents made use of the IT resources mostly for research and ignore teaching and learning elementary subject

Inadequate computer-based teaching and learning to the students

The quality of student's academics performance can be improved in area of IT, when the school provides computer-based courses to students. The school management must explore community and government to give maximum support to computer driven initiative,. Students should be encouraged to carry out their assignment, project, and seminar work through the use of computer system and allow teachers and Parent to have proper coordination.

CONCLUSION

Information Technology (IT) services have become increasingly important in providing assistance and reference services to the users in various institution in Kaduna state. The researcher can concluded that the use of IT resources had tremendous impact on the academic performance on students of Sabon Gari Local Government Area, Zaria Kaduna State; however, the study reveal that there was need for them to acquire more IT recourses and more skills in the use of IT resources in their various schools.

The research work also showed among other factors which include five major factors that affects IT utilization and students performance in teaching and learning in Sabon Gari Local Government Area of Kaduna state.

RECOMMENDATIONS

On the bases of the findings, the researcher has made the following recommendations;

There should be regular teachers ICT training. This will enhance the skills on them. Also, both the teachers and the students should be enlightened on the best way and the important of using ICT in teaching and learning computer. This will go a long way to inculcated on them good attitudes about ICT usage.

Government and top management of schools are required to drive the ICT adoption by development of policy and strategies for implementation.

Secondary schools library should provide access to subscribe electronic resources, free web based resources, locally digitized resources and open access resources.

Secondary school should implement and monitor strategies for promoting good system maintenance practices.

Strategies for maintaining of ICT resources and electronic information resources and services should be given adequate attention in the planning and implementation of ICT programmes and projects.

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