Original Research Article

Teachers' Utilization of Computer and Internet facilities for Effective Service Delivery in Secondary Schools in Calabar Education Zone; Cross River State, Nigeria.

Abstract

Aim: The main aim of this study is to examine teachers' utilization of computer and internet facilities on effective service delivery in secondary schools in Calabar Education Zone.

Study design: The research design adopted for this study is a survey design to discover schools with the needed Information and Communication Technology (ICT) facilities and to seek the opinion of the respondent on utilization of computer and internet facilities for effective service delivery in government secondary schools.

Area of the study: This study was carried out in Calabar educational zone. The zone under research has seven (7) Local Government Area namely; Calabar south, Akpabuyo, Municipality, Akamkpa, Bakassi, Odukpani and Biase. The zone has eighty-one (81) secondary schools. The geographical locations of the study area are described as follows. The area share common boundary with Akwa Ibom State with the latitude of 5°4'52.46"N and a longitude of 8°20'59.7"E, Cameroon with latitude 4° 5' and 5° 40' and longitude 8° 25' and 8° 32 East. It lies within the vegetation belt of southern Nigeria and shares the Atlantic coastline with Bakassi to the East and the Republic of Cameroon to the West. Central Senatorial district of Cross River State with latitude of $5^0$19'8.32"N and a longitude of $8^0$20'59.7"E and Guinea the peninsula lies between latitudes 4°25′ and 5°10′N and longitudes 8°20′ and 9°08′E. It consists of a number of low-lying, largely mangrove covered islands covering an area of 665 km² (257 sq mi).

Methodology: the instrument used in this study to enable data collection is 'Teachers' utilization of computer and internet facilities for effective service delivery questionnaire (TUCIFESDQ)'. The population of 1,796 teachers and the sample of 914 teachers out of the population are drawn for the study. 50 percent of the teachers in each of the schools in the zone with the expected ICT facilities were selected using simple random sampling for the study making a total of 914 teaching staff. Out of 914 copies of questionnaire distributed only 879 copies were return and used for the data analysis. Simple percentages, bar graph and One – way analysis of variance is used for the data analysis.

Result: The resultshows that there is a significant influence of teachers' utilization of computer and internet facilities on service delivery in secondary school. This implies that 51.39% and 17.69% of teachers' level of utilization of computers and internet in lesson delivery is low.

Conclusion: Giving the outcome of this study, it is therefore concluded that utilization of ICT facilities such as; computers and internet will improve teachers' effectiveness on service delivery and prepare students for a role in an information age

Keywords: Computer, Internet, Teachers' utilization, Secondary School and Service delivery

1.0 Introduction

Secondary school education is important to national development because it builds on the educational gains of basic education with a view to preparing students for higher learning in tertiary education level. In accordance with the goals of Education For All (EFA), the Federal Government developed a working document for education sector against Vision 2020 with reference to educational service delivery and this development were anchored on the importance and impact of information and communication

Technology (ICT) towards achieving this loadable objectives as the world is becoming a global village. In view of the present deplorable state of secondary schools with regards to teachers' effectiveness, poor educational enrolment of students, poor comprehensive evaluation and assessments of students, poor instructional approaches, poor classroom management, poor monitoring of individual's progress, poor review of curriculum, poor placement as well as careful follow-up of students, low level of teacher's development and inadequate teachers commitment to teaching and ill-equipped laboratories, it is doubtful if secondary school teachers are fully aware of the educational utility of ICT in their teachers' effectiveness. Teachers' effectiveness according to [17] is a component of business that defines the interaction between providers and clients where the provider offers a service, whether that is information or a task, and the client either finds value or loses value as a result; good service delivery provides clients with an increase in value. One of the most common areas of service delivery is through Information Technology Infrastructure Library (ITIL). According to [18] ICT is the infrastructure and components that enable modern computing. Although there is no single, universal definition of ICT, the term is generally accepted to mean all devices, networking components, applications and systems that combined, allow people and organizations to interact in the digital world. According to [4] ICT refers to technologies that provide access to information through telecommunications. This includes the internet, wireless networks, cell phones, and other communication mediums. [10]States that computer is an electronic machine that can solve different problems, process data, and store and retrieve data and perform calculations faster and efficiently than humans. The effective ways of computer service delivery in teaching and learning is about communication between the teachers and the students which involves giving and receiving information [7]. The relevant information, values, skills, attitudes, beliefs and moral for the collective wellbeing of the individual and the society required proper and effective communication. Obviously, it is very known to the school that some of the teachers are not computer literate. Based on this fact, computer service delivery in secondary schools is not effective and in addition affecting teaching and learning processes. Poor service delivery on computer does not gain global recognition in the evolution of information dissemination [15]. Factors that cause poor service delivery in most secondary school include inadequate funds, poor condition of electricity, teachers' incompetence and pervasive poverty in the society [2]. Due to these problems, teachers and students are not interested in using the facilities for the purpose of teaching and learning in the classroom. Teachers' utilization of computers in the classroom with students through Computer Aided Instruction (CAI), Computer Assisted Learning (CAL) and e-learning has been distorted. Therefore, secondary educational institutions should put in place appropriate computer facilities to support all teachers and encourage their involvements in the development and implementation of secondary school policies and guidelines for national development. [12] Sees internet as an electronic library (e-library) where vast amounts of information are provided through different sources and display may be disrupted by poor service delivery.

1.1 Statement of the problem

Lack of skill acquisition and the culmination of antisocial behaviors among young school leavers have become a serious problem to the society. These unpleasant experiences are being attributed to the poor teaching effectiveness in the secondary schools. Such a growing impression informs a compelling need to evaluate teacher's effectiveness with a view to determining their effectiveness in ICT. Teachers effectiveness in secondary schools especially schools in Calabar Education Zone in the area of educational enrolment of students, comprehensive evaluation and assessments, monitoring of individual's progress, review of curriculum, instructional approaches, maintaining of discipline, and placement of students are major problem this article seek to address by the use of computer and internet.

1.2 Aim of the study

The main aim of the study is to examine teachers' utilization of computer and internet facilities oneffective service delivery in secondary schools in Calabar Education Zone. Specifically the study sought to find the extent of:

1. Teachers' utilization of computer facilities for effective service delivery in secondary schools

2. Teachers' utilization of internet facilities foreffective service delivery in secondary schools

1.3 Research questions

1. To what extent does teachers' utilization of computer facilities influence effective service delivery in secondary schools in Calabar education zone?
2. To what extent does teachers' utilization of internet facilities influence effective service delivery in secondary schools?

1.4 Statement of the hypotheses

The following hypothesis shall guide the study:

1. Teachers' utilization of computer facilities does not significantly influence effective service delivery in secondary schools.
2. Teachers' utilization of internet facilities does not significantly influence effective service delivery in secondary schools.

2.0 Literature review

Education (teaching and learning) is simplified through the use of e-learning resources. The use of ICT involves effective teaching and learning with the assistance of computer and other information technology acting as aids which performs the complementary functions in the teaching and learning environment. In concrete terms ICT instructional aides media has enhanced teaching and learning through its dynamics, interactive and engaging contents [9]. [14]Observed that technology has the capacity to change the role of the teacher. The researcher opined that technology use in education is largely influenced by external environmental and personal teacher factors. [13]Showed that positive attitudes toward computers are positively correlated with teachers' extent of experience with computer technology. The confidence a teacher possesses in using computers together with accessibility of computers could therefore greatly influence his or her effective implementation of the technology in the classroom. [19]Carried out a study on "an assessment of awareness and use of e-learning resources by secondary school teachers in the North Eastern states of Yobe State, Nigeria. Finding is in consonance with those of [16], [5] and[11], all of whom suggested that computer training or training ICT resources could be carried out by employers of teachers. Since ICT provide greater opportunity for students and teachers to adjust learning and teaching to individual needs, society is, forcing schools to give appropriate response to this technical innovation.

3. Material and methods

3.1 Population and sample

The study had a population of 1,796 teachers. The categorization of the population is displayed in Table 1. The sample of nine hundred and fourteen (914) teachers out of the population of the one thousand eight hundred (1,796) teachers was drawn. 50 percent of the teachers in each of the schools in the zone with the expected ICT facilities were selected using simple random sampling for the study making a total of 914 teaching staff. Out of 914 copies of questionnaire distributed only 879 copies were return and used for the data analysis. The breakdown of questionnaire questions filled and returned in various local government areas is shown in Table 2.

Table 1: Population of the study

S/N	Local Government Area	No. of Schools	No. of Teachers
1	Calabar Municipality	3	489
2	Calabar South	2	376
3	Odukpani	3	272
4	Akamkpa	3	297
5	Biase	2	200

6	Akpabuyo	2	101
7	Bakassi	1	61
	Total	16	1796

Source: Secondary School Board Calabar (2017)

Table 2: Sample distribution of the study

S/N	L.G.A	No of teachers
1	Calabar Municipality	240
2	Calabar South	185
3	Odukpani	128
4	Akamkpa	143
5	Biase	91
6	Akpabuyo	41
7	Bakassi	23
	Total	879

3.2 Instrumentation for Data Collection

Teachers' utilization of computer and internet facilities for effective service delivery questionnaire (TUCIFESDQ) was developed as the instrument for the study. The questionnaire has two parts A and B. Part A elicits information of school information. Part B measures six items for independent variables and eight items for dependent variable. The instrument had a Likert-type scale response option of Very Highly Utilized (VHU), Highly Utilized (HU), Fairly Utilized (FU), and Not Utilized (NU) with values of 4,3,2 and 1 respectively. The instrument was administered in the classroomstostudents to obtain information about the teacher because it is expected that information obtained from the students about the teacher utilization of computer and internet facilitiesfor service delivery will be more valid than the teacher self report.

4.0 Results and discussions

4.1 Research question one

To what extent does teacher's utilization of computer facilities influence teachers' effectiveness in secondary school? This question was answered using simple percentages and bar graph. The result as shown in Table 3 showed that 39.23% of the responses of the respondents when collapsed into utilized and not utilized noted that teachers utilize computers in their service delivery while 51.39% noted teachers' level of utilization of computers in lesson delivery is low. The result is presented in Fig 1

4.2 Research question two

To what extent does teacher's utilization of internet facilities influence service delivery in secondary school? This question was answered using simple percentages and bar graph. The result as shown in Table 4 showed that 81.15% of the responses of the respondents when collapsed into utilized and not utilized noted that teachers utilize internet effectively while 17.69% noted teachers' level of utilization of internet in lesson delivery is low. The result is further presented in Fig 2.

Table 3: Simple percentage analysis of responses to utilization of computers among teachers

S/N	Items	VHU	HU	FU	NU
	To what extent does your teacher use the computer for the following:				
1	stores information for future use	463 (52.23%)	211 (23.81%)	109 (12.30%)	103 (11.63%)
2	evaluates students performance	49 (5.53%)	81 (9.14%)	509 (57.45%)	247 (27.87%)
3	processes students data	59 (6.65%)	127 (14.33%)	611 (68.96%)	89 (10.04%)
4	uses computer to check correct spellings o words for students	30 (3.39%)	21 (2.37%)	719 (81.15%)	116 (13.09%)
5	source information in the subject of interest	681 (76.86%)	107 (12.07%)	10 (1.13%)	88 (9.93%)
6	plots graph for students	62 (6.99%)	89 (10.04%)	591 (66.70%)	144 (16.25%)

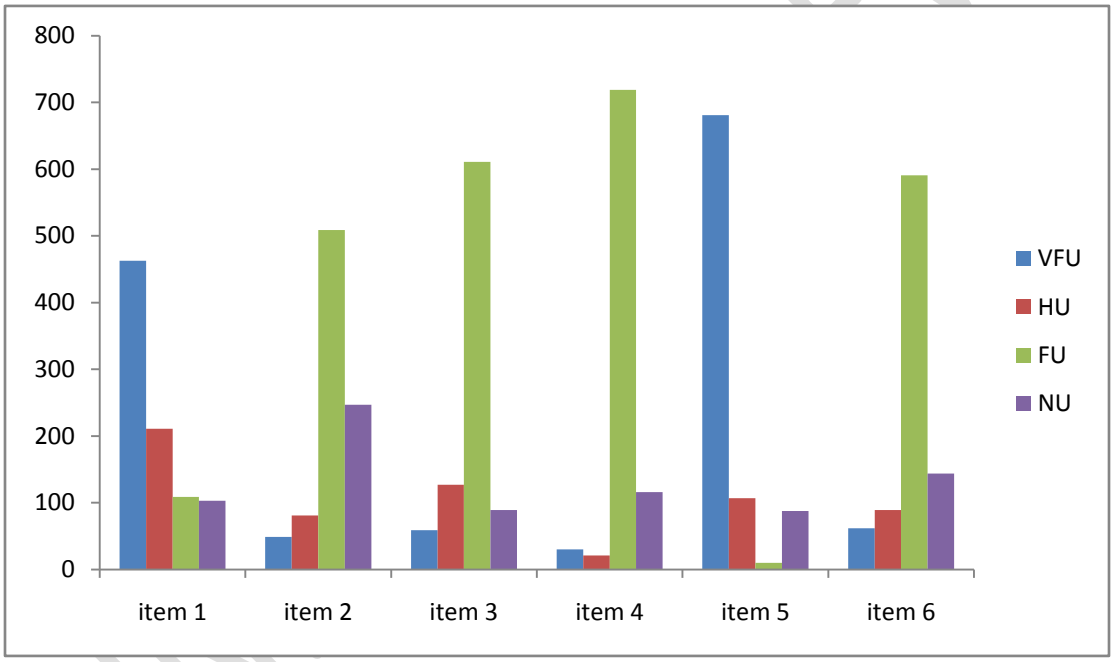

FIG. 1: Bar Graph showing responses to teachers' utilization of computer facilities

Table 4: Simple percentage analysis of responses to utilization of internet facilities among teachers

S/N	Items	VHU	HU	FU	NU
	To what extent does your teacher use the internet for the following:				
1	Browse information in school	521 (86.9%)	173 (19.53%)	88 (9.93%)	104 (17.4%)
2	Send messages to students parents	432 (48.75%)	276 (31.15%)	79 (8.92%)	99 (11.67%)
3	Exchange ideas with other teachers	327	307	182	10

		(36.91%)	(34.65%)	(20.54%)	(1.13%)
4	Send and receive mails in his/her phones	246	318	112	210
		(27.77%)	(35.89%)	(12.64%)	(23.70%)
5	Chat with colleagues in school	468	210	72	136
		(52.82%)	(23.70%)	(8.13%)	(15.34%)
6	Communicate information to students	321	467	25	93
		(36.23%)	(52.70%)	(2.82%)	(10.94%)

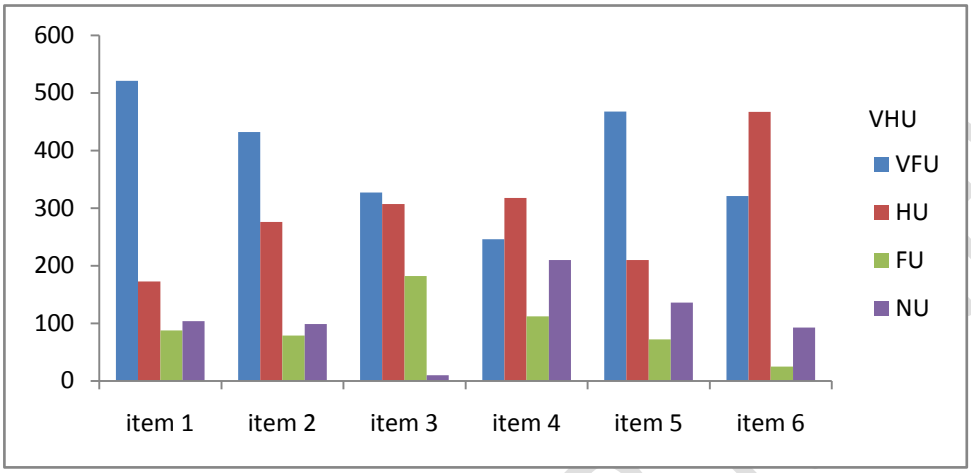

Fig 2: Bar graph showing responses to teachers' utilization of internet facilities

4.3 Hypothesis One

Utilization of computer facilities does not significantly influence teachers' effectiveness. The independent variable is teachers' utilization of computer facilities categorized as high, moderate and low while the dependent variable is service delivery. To test this hypothesis, one – way analysis of variance (ANOVA) technique was employed and the result as presented in Table 5 showed that (F=3.22, p=.05). Since p(.000) is less than p(.05) , this implies that there is a significant influence of teachers utilization of computer facilities on service delivery in secondary school.

Table 5: One way analysis of variance (ANOVA) result on the influence of teachers' utilization of computer facilities on service delivery

Variables	N	Mean	Std.Dev
High	145	14.75	3.604
Moderate	35714.31	4.836	
Low	377	13.73	4.426
Total	879	14.13	4.489

Source of variation	df	SS	MS	F	Sig
Between groups	2	129.305	64.652	3.224	0.04
Within groups	876	17704.98	20.051		
Total	878	17834.28			

4.4 Hypothesis two

Utilization of internet facilities does not significantly influence teachers' effectiveness. The independent variable is teachers' utilization of internet facilities categorized as high, moderate low while the dependent variable is teachers' effectiveness. To test this hypothesis, one – way analysis of variance (ANOVA) technique was employed and the result as presented in Table 6 showed that (F=15.08, p=.05). Since p(.000) is less than p(.05) , this implies that there is a significant influence of teachers utilization of internet facilities on service delivery in secondary school.

Table 6: One way analysis of variance (ANOVA) result on the influence of teachers utilization of internet facilities on teachers' effectiveness

Variables	N	Mean	Std.Dev
High	466	15.10	4.832
Moderate	193	14.91	4.673
Low	220	13.37	3.069
Total	879	14.13	4.489

Source of variation	df	SS	MS	F	Sig
Between groups	2	589.201	294.60	15.08	0.000
Within groups	876	17245.083	19.530		
Total	878	17834.28			

4.5 Discussion of findings

The finding is in corroboration with the findings of [1]that information and communication technology (ICT) facilities are not available in most of the secondary schools covered. This shows that computer facilities are available in schools but fairly utilized in teaching and learning process.Finding in the aspect of internet facilities revealed that service delivery is highly utilized by teachers and that internet facilities significantly influence teachers' effectiveness in secondary schools. The research finding is in consonant with [8] who stated that internet utilization in many developing countries has not been satisfactorily explored despite the numerous advantages accruing from the use of internet. The study is also in line with [3] who states that the introduction of e-learning facilities into the education system is aimed at improving educational delivery and preparing students for a role in an information age. In addition [6] said access to online journals is made possible through e-learning.

5.0 Conclusion

Giving the outcome of this study, it is therefore concluded that utilization of ICT facilities such as; computers and internet will improve teachers' effectiveness on service delivery and prepare students for a role in an information age. More so, the utilization of ICT facilities will enable students and teachers get a better chance of reaching out to books and journals made available on the internet. And this will cushion the problem of mass failure of students in most of the National Examinations, lack of skill acquisition and the culmination of antisocial behaviours among young schools leavers.

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