INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) CAPACITY BUILDING FOR STAFF PERSONNEL IN POST PRIMARY SCHOOLS FOR EFFECTIVE SCHOOL ADMINISTRATION

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Abstract

This study aimed at identifying strategies for ICT capacity building of staff personnel of post primary schools in Lapai Local Government Area of Niger state. To guide this study two research questions were posed and a null hypothesis was formulated. The design of the study was a descriptive survey design. The population comprised of 6413 made up of 5921 teachers, 277 principals and 205 secretaries of public secondary school in Lapai Local Government. The sample constituted of 29 principals randomly drawn from 17 Local Government Areas of the six Education Zones of the state. Three teachers each were randomly selected form the 29 schools and all the secretaries of the chosen schools were used for the study. Therefore 87 teachers and 29 secretaries were selected. A total of 145 respondents participated in the study. A 12 items questionnaire with a check list for availability of ICT facilities were used for data collection. Mean scores were used to answer the research questions and ANOVA in testing the null hypothesis. The finding showed among others that the strategies are good for building ICT capacity of staff personnel out that the ICT facilities are not available in schools. Based on this, recommendations were profound among which include provision of ICT facilities with internet connectivity for schools.

Introduction

Capacity building is improving the abilities of people in performing tasks. Capacity building in information and Communication

Technology (ICT) refers to the strategies, roles, practices and skills through which the staff personnel of post primary schools in Lapai Local government Area of the state are helped to develop competency in the use of ICT for effective administration of schools.

According to Esu (2005) capacity building requires new strategies for instructional delivery process, increased roles from stakeholders (teachers, government, schools administrators and communities) in providing more access to information and experience through global networks and pools of knowledge. Effective use of ICT in schools guarantees more access to information and experience in the new era of globalization. In other words, there is an important link between education and ICT in a knowledge based society to meet the challenges of the 21st century. Just as Adamu (2006) put it that the link between the two is that utilization of modern ICTin education potentially enhances the effectiveness and efficiency of teaching and therefore, provides a nation with a pool of well trained and skilled labor to meet the demand of both the public and the private sectors.

The new digital information and communication technologies (ICTs) are not single technologies but combinations of hardware, software, media and delivery systems ICT in education encompasses a great range of rapidly evolving technologies such as desktop, notebook, and handled computers, digital cameras, local area networking, the internet and the World Wide Web; CD ROMS and DVDS and applications such as Word Processors, Spread sheets, tutorials, simulations, electronic mail (E mail), digital libraries, computer mediated conferencing, video conferencing, and virtual reality. It is through those means that this new era popularly known as the information age which was born out of information explosion, high teach revolution and above all, the microcomputer contributions has continue to rapidly after the manner by which individuals and organizations communicate (Gilbert, 1989).

The impact of ICTs in the educational sector cannot be over emphasized. Graham in Etesike (2007) puts it that the computer and ICTs as the latest products of technology are making their ways into the class room. Transactions and interactions in the educational sector are new gradually and routinely being characterized by wireless Information and Communication Technologies such as satellite transmission, telephone, television, radio, telemetric, and computer inter connections, the information super high way and related

technologies. The impact of ICTs is clearly seen in the use the following facilities: Television Programs, multimedia and hypermedia, computer Aided Teaching, (CAT), Automated/Digital Library, Audio Video Learning Software and compact disc, Database Management System (DBMS), Computerized grade books and Simulation (Chime 2004).

Nigerian government has identified ICT as areas that can enable the nation have a great deal of leverage in the delivery of quality education and thereby improving the lives of our people. This led to the production of Nigerian National Policy for information Technology which has ten strategies for education among which include:

1. Restructuring the Education system at all levels to respond effectively to the challenges and imagined impact of the information in age and in particular the allocation of a special IT development fund to education at all levels.

2. Making the use of IT mandatory at all levels of educational institutions through adequate financial provision of tools and resource (FGN), Nigerian National Policy for information Technology, Federal Ministry of science and Technology,(2002).

The school Net Nigeria which was launched in September 2011 with the support of the ministries of education, Telecommunications Science and Technology and the Education Tax Fund is a non-profit organization created to address the secondary education sector in Nigeria. IT embodies a partnership between diverse range of public and private sector interests in order to mobilize Nigeria's human and financial resources for the purpose of using ICTs in education. IT creates learning communities of educators and learners who use ICTs to enhance education within and beyond Nigeria, and to contribute to the transformation of the education system in Nigeria, into ne which participates in and benefits from the knowledge society. IT's objectives through the people NET (Human Resources Development and Capacity building) programmes include:

1. Develop local, state wide and national ICT in Education Capacity.

2. Support distance education and development through use of ICTs implement training for educators to use technology to enhance teaching and learning.

3. Address the shortage of technical ICT skills (School Net Africa, Net, School Net Nigeria at http://www.schnetafrica.net/443.0htmt).

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The school Net Digi Net Centre Project aims to ensure that Nigerians schools are given the opportunity to allow their students to cross the "Digital Divide", and use ICTs to enhance their learning experience. The project entails reaching all schools in Nigeria, and equipping them with Computer and Communication Technology. More importantly, the school receives educational content, and teachers are put on to a Teacher development programs to ensure that they can effectively use the technology in the classroom (Cuban 2001).

Observations have shown the researchers that those technologies are not use in the most post primary schools classrooms in Niger State. By implication, these projects have to reach most of the Secondary Schools and as such not implemented. In a research carried out by Ugwu and Oboegbulem (2011),there are all indications that staff personnel in Niger state post primary schools are not yet trained in application of Microsoft Word, Excel, Power point, use of search engines World Wide Web, downloading of information among others. They are nor versatile in the use of ICT and are not capable of helping their students in the use of ICT for adjustment into the modern Era of Globalization. This is enough challenge for country at fifty seven that must join the Era of Globalization.

School administration is the process that involves some coordinated activities like planning, organizing, coordinating the activities of others for goal achievement in the current dispensation is the use of ICTs. The official administrative work in schools, registration of student, maintaining, records of students performance, keeping inventory list of supplies, printing report and above all downloading information for effective decision making can be better done through ICTs. A school administrator who has the expert knowledge in the use of ICT can easily update information and coordinate other staff personnel and students activities for effective administration of the school.

As Nigeria celebrates her 57th Birthday with vision of being one of the 20th biggest economies in the world by the year 2020 and beyond, it then becomes necessary that strategies and practice be initiated for building the ICT capacity for the staff personnel of post primary schools for effective administration to meet the challenges of the new era. To meet these challenges demands effective use of ICT. For instance, ICT makes it possible for teachers to engage student for self-paced, self-directed problems based on constructivist learning

experiences, and test student learning in new interactive and engaging ways that may better access deep understanding of content and processes (Freedman2000). Students in this kind of situation remove themselves from riotous activities, cultism, drug abuse, examination malpractice and as such make school administration easier and effective. Improved assessment tools can also be developed using ICT. Such assessment can engage students in task data manipulation, stimulation or other interactive act of knowledge construction. Viz Quit is a multimedia program that allows students to take a chemistry quiz on in computer, but with added advantage that colour graphics, animations and video clips that can be included in the questions (Haddad and Jurich2010). In addition to multimedia capability, such programme hints, remedial feedback worked out solutions or explanations and instantaneous grading teachers can use computer and projector to show slides to illustrate a lesson. Multiple choice quizzes about the content of the lecture can be put on the Web site (Twining2002).

The internet represent the greatest connection of human knowledge ever assembled, and it is available to every students and teachers properly equipped with ICT and knowledge of it operation. The student bursar and the school secretary with expert knowledge of the use of ICT keep accurate and retrievable information of the student. Payment of fees, mails and other official document of the school in the computer neither mails of the school nor be able to format and print out documents when needed for proper administration of the school. In other words, it is only the staff personnel with knowledge of use of ICT that will be able to teach the student with ICTs help in online registration of the students for external examinations, keep retrievable school record in the laptop, type and print mails for effective school administration.

Statement of the Problem

There is all indication that the staff personnel in post primary school in Niger State are not yet trained in the application of Microsoft Word, Excel, PowerPoint, and use of search engines, World Wide Web, among others (Ugwu and Oboegbulem2011). Even a preliminary visit to [post primary school in Niger state by the researcher showed that ICT facilities are not available in most of the schools and that the staff personnel do not have their own personnel ICT facilities. Based

on this, they are not vast in the use if ICT and are such incapable of helping themselves and their students for adjustment into the era of Globalization.

While there is emphasis on the use of ICT to meet the challenges of the modern era especially as Nigeria with her vision of being one of the twentieth biggest economies in the world by the ye 2020, it becomes necessary for ICT capacity building of the staff personnel in post primary schools in Minna, Niger State. This study is set out therefore identify strategies for ICT capacity building of the staff personnel for effective school administration.

Purpose of the Study

The purpose of this study therefore is to identify strategies for ICT capacity building for staff personnel of [post primary schools in Niger State for effective school administration.

Research Question

The following research questions were formulated to guide the study
1. What strategies are appropriate for ICT capacity building for staff personnel in post primary schools in Niger state for effective school administration?
2. What ICT facilities are available in post primary schools for ICT capacity building for staff personnel?

Hypothesis

One null hypothesis was tested at the 0.05 level of significance
There is no significant difference among the mean ratings of principals, building strategies for effective school administration in post primary schools in Niger State.

Methodology

This study was a descriptive survey. The design was used to collect data from principals, teachers and secretaries in post primary schools in order to identify some ICT capacity building strategies for effective school administration. Seven thousand four hundred and thirteen (743) comprises the population for the study made up of 6921 teachers, 287 principals and 205 secretaries in the state government owned schools (source: post primary schools management Board Niger State. Researcher and statistic Unit 2011).A sample random

sampling techniques was used to select 29 principals from the twenty five local government areas of the seven Education Zones. Three teachers each from the 29 schools were randomly selected for the study while the 29 secretaries of the selected schools were used for the study. A total of 145 respondents participated in the study.

The instrument for data collection was a researcher's developed questionnaire titled "ICT Capacity building for staff personnel" (ICBPS). The instrument was divided into parts. Part A comprises of three open-ended questions that elicited information on the respondent's status, local government area and zone of the school. Part B was divided into two sections. Section A comprises of 12- items on the ICT capacity building strategies for post primary school staff personnel while section B consisted of 16 ICT Facilities that elicited information on their availability in schools for ICT capacity building for staff personnel. Items in section A were structured on a 4 point rating scales Strong Agree (SA) Agree (A) Disagree (D) and Strongly Disagree (SD). A check list was used to elicit information on ICT facilities in schools.

An expert in Measurement and Evaluation and two experts in Educational Technologies all in Federal University of Technology Minna validated the instrument. The experts, made some correction in the spellings and structure of some items after examination of the items. The corrections were effected in the final draft of the instrument. The instrument was also trial tested using the split half method for testing reliability. The copies of the instrument were administered to a sample of 10 principals, 30 teachers and 10 secretaries from post primary schools in Kaduna state. Their mean ratings were separated into two halves of items each. The halves were correlated using the person product moment correlation analysis. The coefficient value for the items was 0.85, which is satisfactory for the study.

The copies of the instrument were administered to the respondents by the researchers. Mean scores were used in answering the research questions. The acceptable levels of means score was 2.50 and above. The Null hypothesis was used using analysis of variance (ANOVA) at 0.05level of significance. ANOVA was chosen because the data was interval and more than two mean groups were compared.

RESULT

Table I: Mean rating of respondents on strategies for ICT Capacity building for staff personnel

S/N	Items On Strategies For Building Capacity	Principal Mean	Teachers Mean	Typist Mean	Decision
1	Provision of computers with internet facilities in schools inform of laboratories	3.37	3.46	3.25	A
2	Personnel on knowledge of operating windows setting up a computer and identification of computer peripherals.	3.30	3.40	3.11	A
3	Training staff on the use of scanners, digital projectors and printers	3.34	3.49	3.64	A
4	Use of disk storage devices e.g. Flash drive, CD ROM	3.50	3.40	3.29	A
5	Training staff on the use of application software e.g. Word processors, spread sheet	3.33	3.42	3.57	A
6	Training staff on use of communication applications e.g. Email programmers and internet browsers.	3.67	3.45	3.38	A
7	Provision of regular light supply in schools.	3.50	3.49	3.46	A
8	Introduction to online learning and entering into face book for global connection.	3.50	3.48	3.43	A
9	Training of staff on use of presentation application	3.50	3.47	3.57	A

e.g. MS, Power Point, Corel presentation.

10	Training staff on exploring drives and folders and Folder Managements	3.47	3.45	3.32	A
11	Re-engineering the security standard of schools	3.37	3.46	3.39	A
12	Subsiding from the Government to the staff for possession of individual laptops with internet connectivity	3.47	3.70	3.36	A

Result in table I Show that all the items were rated above 2.50 in all the columns. The respondents agreed that all the items are strategies for ICT capacity building for staff personnel in post primary schools.

TABLE 2 available facilities for ICT capacity building

Schools	NO STDS	Computers NO	Computers AV	Printers NO	Printers AV	Scanners NO	Scanners AV	Bulletin Board NO	Bulletin Board AV	Internet NO	Internet AV	Radio NO	Radio AV	Projector NO	Projector AV	Telephone NO	Telephone AV	Flash Drive NO	Flash Drive AV	CD-ROM NO	CD-ROM AV	Satellite comm NO	Satellite comm AV	Digital camera NO	Digital camera AV	Television NO	Television AV	CD writer NO	CD writer AV	Fax machine NO	Fax machine AV	Personal computer NO	Personal computer AV
1	160	3		1		1						1								3						1							Inadequate
2	940																																	Inadequate
3	1060																																	Inadequate
4	2560	2		1		5		21		1		1		1		1		2		10				1		1				5			Inadequate

S/N																Assessment
5	790						1									Inadequate
6	1200						1									Inadequate
7	1115						1									Inadequate
8	700						1									Inadequate
9	2745						1									Inadequate
10	850						1									Inadequate
11	3200						1									Inadequate
12	4809	15	4	4	1	1	1	1	1	3	10	1	1	1	2	Inadequate
13	1400						1									Inadequate
14	1800	10	2				1									Inadequate
15	699						1									Inadequate
16	488						1									Inadequate
17	250						1									Inadequate
18	1018						1									Inadequate
19	180						1									Inadequate
20	1760						1									Inadequate
21	1100	5	1				1									Inadequate
22	1300						1									Inadequate
23	1680	10	2				1									Inadequate
24	1500						1									Inadequate
25	300					1										Inadequate
26	1470	15	2	2	1	1	1	1	1	5				2	3	Inadequate

			Inadequate
27	720	1	Inadequate
28	1290	1	Inadequate
29	1005	1	

TABLE 2: Shows that most of the schools do not have ICT facilities available for ICT capacity building for the staff personnel. Even the few schools that have some of the facilities, the table showed clear that the numbers available is not adequate when compared with the population of the school.

TABLE 3: ANOVA summary for the mean rating of the principals, teachers and secretaries on strategies for building ICT Capacity of staff personnel in post primary schools in Niger state.

Sources of Variation	Sum of Square	DF	Mean Square	F	Sig level	
Between groups	0.099	2	`0.049			
Within groups	1.817	142	0.013	3.855	0.023	Ho Rejected
Total		144				

TABLE 3: Shows that calculated F value is significant at 0.023 level of significance. Therefore, at 0.05alpa levels, it is significance also. This implies that there is a significant difference between the mean rating of principals, teachers and secretaries on the strategies for building ICT capacity for staff personnel in post primary schools.

Discussion

In Table I, the mean responses of the principals, teachers and secretaries indicated that following strategies should be adopted for building IC capacity for staff personnel in post primary school, provisions of computers and internet facilities to schools training of staff personnel on knowledge of operating windows, setting up a computer and identification of computer peripherals,. Training staff and unused of printers, scanners, digital projectors, flash drive, CD Rom, application software, communication application and online learning among others. The finding showed that the strategies were highly rated and should be practically applied in secondary schools for building ICT capacity of staff personnel in an era of Globalization. Adamu (2006) stated that ICT have been used to improve access and quality of teacher training. He cited an example with Cyber Teacher Training Centre (CTTC) in South Korea that is taking advantages of the internet to provide better teacher professional development funded (CTTC) established in 1997, offers self-directed, self-paced Web need Based Courses for primary and secondary school teachers. This kind of development is needed in Nigeria and particularly Niger State, no wonder the strategies were rated high b the respondent.

Furthermore, there are many good prospect for the use of ICT in teaching and Learning in secondary schools in Nigeria, for example Computer plays the role of a tutor and present the learning with a variety of content, computers serve an administrative function of replacing laborious exercise of filling papers in filling cabinets and shelves were records accumulates dust over a long period of time. Computers are used for budget planning, writing despondence and reports, aids scoring test which help to reduce paper work. Computer can change the current practice in secondary school which is dependent on the traditional lecture method which according to Smith, (1999) changes the role of the teacher

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from information dispenser to information manager. Computer can offer the Nigeria teacher improvement in the techniques of research and information for decision making. The cumbersome experience of searching b hand through the library's card or periodical indexes can be made easier by typing few key words of the research topic into a computer and extensive list of related sources or articles in books and journals will appear in just a matter of minutes. The above enumerated prospect in ICT may likely be among the reason why the respondents rated the items high for capacity building for the staff personnel in other to join the information age.

The data in table I indicates that ICT facilities available in secondary schools in Niger state are inadequate for ICT Capacity building for staff personnel. In line with this Uzodimma (2006) stated that a formidable obstacle to the ICT is infrastructure deficiencies, computer equipment was made to function with other amenities like electricity under "Controlled Conditions"

There is difficulty in providing stable and reliable electricity supply. Besides, this research has shown that the ICT facilities are not available in secondary schools let alone the light to operate them. The few internet access available in Niger state is found in the Urban Centers.

The ANOVA test for the null hypothesis showed that there is a significant difference in the Mean ratings of principal teachers and secretaries on the strategies. This may be attributed to the; level of understanding of the possibility for ICT compliance in secondary schools. The teacher seem to exhibit higher acceptance of the strategies than the principal who are also higher than the secretaries. The teachers are more enthusiastic on the application of the strategies than the ageing principals and secretaries.

Implications of the Research Findings

The findings of the research identified strategies for building ICT capacity of staff personnel in post primary schools in Niger State especially as Nigeria is 57 and need to face the challenges of becoming the first twentieth economies by the year 2020. This findings is of important to Government , Ministry of Education, Post Primary Schools

Management Board (PPSMB), Principals, teachers, Secretaries and all Stakeholders in Education in the sense that to achieve vision 20-20-20, quality staff personnel on the current dispensation must be produced to breed quality students that will make the nation become among the first economies of the world. The awareness has also been created on the minds of the stakeholders in Education that ICT facilities are not available in schools and the need for their provision for ICT capacity building for staffs of Post Primary Schools for the information age.

Conclusion

This study identified strategies for building ICT capacity of staff personnel in post primary Schools in Niger State especially in relation to the Nations Vision 20-20-20. It was shown that strategies such as provision of computers with internet facilities to schools, training of staff personnel on knowledge of use of computer and internet, provision of regular light supply among others, are good strategies which should be used in building the ICT capacity for staff personnel. The study also showed poor availability of ICT in schools to elicit the ICT capacity building. There is need for provision of these facilities for effective capacity building of staff in the use of ICT, based on the discussion and implications of the study recommendations were made.

Recommendation

1. Intensive ICT Capacity building of principals, teachers and secretaries to be carried out by the PPSMB Niger State.
2. Provision of ICT capacity including regular light supply to all secondary schools in Niger State with the help of Parents Teachers Association (PTA).
3. Compulsory own ship of Laptop with internet connectivity to be passed as law for all academic staff personnel in post primary schools in Niger State.
4. Frequent workshops and seminars to be organised for staff personnel of PPSMB for adjustment into current happenings of the new era.

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