PAPER

THE IMPACT OF ICT IN LIBRARY SERVICES IN FCT COLLEGE OF EDUCATION, ZUBA ABUJA

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ABSTRACT

This research examined the impact of information and communication technology (ICT) in library services in FCT College of Education Zuba, Abuja. Issues the research work looked into include concepts of ICT, historical background of the institution under study, review of related literature among others. The instrument used for data collection was questionnaire. The data was analysed using mean score. The findings revealed that application of ICT in library services in FCT College of Education Zuba Library impacted positively in the services provided by the library. These include bringing abstract concept to real life situations, ensuring better retention of subjects taught, saving time among others. The challenges include poor funding, inadequate supply of electrical energy, lukewarm attitude of the Nigeria government, lack of ICT competencies by many Librarians to mention a few. The research work recommends stable electrical energy, provision of new library building, provision of relevant and current textbooks, software and hardware packages, adequate funding, training and retraining of staff, organizing workshops and seminars for students on ICT usage among others. The study concluded that if the relevant government agencies and education institutions use the findings and recommendations revealed in the research work, this could greatly impact adequately in our education, economic and social growth of the nation.

Key words: Information and Communications Technology (ICT), Library, Library Services, Information resources and Library facilities

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Introduction

The relevant of information and communication technology (ICT) to people cannot be overestimated. Information are relatively stored in print or electronic media. Hence, libraries use these electronic media to providing adequate and effective services to its users. The combination of education and technology has been considered the main key to human progress. Education feeds technology which in turn forms the basis of education. Therefore, Jhurree (2005) opined that education reform is occurring throughout the world and one of its tenets is the introduction and integration of ICTs in the education system. In the same vein, Yuen and Majid (2007: 485) stated that:

The advancement of ICT, like many other disciplines, has revolutionized the education sector by opening new avenues of learning and knowledge sharing. Tertiary education students today are blessed with a cornucopia of information for studies and research in comparison with the pre-IT era, more so following the explosion of the World Wide Web (www). It is very imperative to state that information and communication technology (ICT) has affected changes to methods, purpose and perceived potentials of education.

According to the National Policy on Information and Communication Technologies (ICT) in Education (2010), ICT is "the art and applied sciences that deals with data and information. It encompasses all (equipment including computational machinery-computers, hardware, software, firmware, etc and tools, methods, practices, processes, procedures, concepts, principles and the sciences) that come into play in the conduct of the information activities: acquisition, representation, processing, presentation, security interchange, transfer, management, organization, storage and retrieval of data and information. Hornby (2006) opines that information and communication technology is the study or use of electronic equipment, especially computers for storing, analyzing and sending out information.

However, ICT can be seen as the use of all conceivable digital media in managing and processing information. In tertiary institution of learning, the significant important of ICT to patrons of the library cannot be over emphasized. Agu (2006) submitted that library can be considered a store-house of knowledge. It is a building or a room containing a collection of books. A library renders great services to the society, researchers, and students in particular. There are many students who love reading but cannot afford to buy books because the prices of books are very high, so a library provides opportunity for students to borrow books for reading. According to the National Policy on Education (2004) section 11 under educational services, the working policy document states that the library is at the heart of the education enterprise.

It goes further to opine that the virtual library as a platform for sharing knowledge is at rejuvenating Nigerian schools through the provision of current books, journals and other information resources using digital technology. Invaluable books like encyclopedia and large dictionary which are costly for students to purchase but are very useful to enhance their research work can easily be retrieved from the library. In library services, ICT is an assisting tool. ICT is used as a tool for example while making assignments, collection of data and documentation, communication and conducting research. ICT is a medium of teaching and learning (Malik, 2005). Technologies as we all know, have to do with new idea that assist human kind to progress. In any aspect of life, information is central and without it, life will be static.

These information are selected, acquired, organized, stored, retrieved and disseminated by librarians through libraries and information centers. Dissemination itself, involves communication from one point to the other or from a source to a destination. This means that information alone without communication is not complete. Omekwu (2006) observed that "information and technology systems are radically redefining the age-long concept of library as an institution for collecting, processing, storing and retrieving of paper-based materials". He added that modern library systems have emerged and are advancing to media, CD-ROM, internet and digital or virtual libraries. A library well equipped with modern ICT facilities provides the medium through which lecturers, students can engages in research, teaching and learning. It appears in many different forms such as drill and practice exercise, in simulation and educational network (Joshi, 2005).

ICT is a tool for organizing and managing schools. Malik (2005) however, noted that most of the teachers and educators are not able to use media technologies due to lack of training and accessibility to the ICT media in the college library and are left to carry out their research with the use of few available books and newspapers; some of which with outdated information. Abdullahi... et al (2012) added that "many students are de-motivated to go to college library to consult books for their assignments as there is no likelihood of getting relevant books

that will assist them to do their assignment. The few available books are outdated. Lecturers are not left out; they have made refuge with their internet modem to get research materials for their lecturer notes because the books in the library cannot fully satisfy them. Students who ordinarily have poor reading culture now take excuse of inadequate books and internet facilities in the college library as factors responsible for their inability to get their assignment done or read for examination. And the aftermath of these inadequate ICT services in the library and its effective usage is the poor academic performance of the students. Truly, educational systems around the world are under increasing pressure to use the new information and communication technologies (ICTs) to teach students the knowledge and skills they need in the 21st century.

The 2000 UNESCO world education report: "Teachers and Teaching World", describes the radical implications ICTs have for conventional teaching and learning and its usefulness for researchers and students alike who seek information in the school library. Accordingly, with the emerging new technologies, library section is evolving from physical to e- books and interactive learning environments.

Statement of the problem

Information is central to the development of a nation or a people. Using relevant information provides quality services to the library clientele. Students are not provided with current information that will enhance their learning and research activities, ill-equipped college library with outdated books is bedeviling the colleges of education nationwide and FCT College of education in particular. It is observed that students do not have adequate access to internet facilities as a result of constant power failure. Consequently, poor academic performance among students. Most of the students appear pear not to be aware of the existence of e-library section of the library. In the College,

ICTS are mostly used as tools to supporting administration of the college, without deploying the transformative potential of ICT to teaching and learning in classroom setting and usage by students in the college library. It is against these backdrops that the researcher intends to examine the extent ICT has been effectively utilized to enhance effective library services in FCT College of Education Zuba Abuja.

Objectives of the study

Generally, the study is aimed at surveying the impact of information and communication technology [ICT] in library service in FCT, College of Education, Zuba. This work seeks to achieve the following objectives:

1. Investigate the impact of information and communication and technology (ICT) in library services in FCT College of Education, Zuba.
2. Ascertain the availability of ICT media in the library services in the college library.
3. Know the barriers to effective use of ICT in library services in the college library.

Literature Review

In recent years, there has been a notable shift towards electronic sources and networked information delivery in Nigerian tertiary institutions, driven by the increasing demand from both students and lecturers. This shift has been facilitated by the widespread access to the internet, which has revolutionized information gathering, storage, retrieval, and dissemination globally. Academic libraries, being central to the academic endeavors of universities, have had to adapt to these changes by incorporating Information and Communication Technology (ICT) into their services. ICT encompasses the convergence of computing and telecommunications for handling information, including its generation, storage, processing, retrieval, and dissemination. It involves the use of various electronic resources such as computers, communication equipment, networks, and multimedia to enhance knowledge dissemination, information retrieval, acquisition, and retention.

The benefits of ICT to academic libraries are significant, ranging from quick and convenient information exchange to improved access to expertise in various fields, regular updates on topics of interest, enhanced teamwork regardless of geographical distances, access to archives worldwide, and the ability to transfer data efficiently. Additionally, ICT enables virtual migration of information to electronic formats, breaking down physical barriers and providing borderless access to information resources.

Some specific benefits highlighted include improved access to information, educational development, enhanced status of Nigerian libraries, digitization of local content, and conservation of library space. Embracing ICT not only allows Nigerian academic libraries to tap into the global information community but also enables them to contribute local content to the global information pool through initiatives like digitizing local theses, dissertations, rare books, newspapers, and manuscripts. In essence, the integration of ICT into academic libraries is essential for meeting the evolving needs of students and academics, enhancing access to information, and contributing to global knowledge exchange.

Academic libraries in Nigeria play a crucial role in supporting the educational goals of their parent institutions by providing essential services to faculty, students, and academic staff. Established primarily to enhance teaching, learning, and research, these libraries are integral components of higher learning institutions. The objectives of college libraries, which are often found in Colleges of Education, Polytechnics, and similar institutions, include fostering a purposeful use of books and libraries among students, providing instructional resources, and introducing students to imaginative literature. On the other hand, academic libraries in universities and higher institutions have functions that encompass conservation of knowledge, supporting teaching and research, and providing study facilities, among others.

With the advent of Information and Communication Technology (ICT), libraries have undergone significant transformations. ICT tools and facilities have been incorporated into library services to enhance teaching, learning, and research. These include educational games, audio and video recordings, computer programs, e-books, and online resources. The impact of ICT on library services has been profound, facilitating digital storage and rapid dissemination of information. The internet has revolutionized access to information, enabling virtual libraries and enhancing resource sharing among libraries globally. Portal technology has further streamlined access to various library services, allowing users to access online catalogs, databases, e-mail, and other resources through a single interface. Subject portals have been developed to aggregate discipline-specific resources, aiding learners in accessing relevant information for their studies.

Overall, ICT has become indispensable in the functioning of academic libraries, facilitating efficient information management, resource dissemination, and user access. It has transformed libraries into dynamic hubs of knowledge exchange, contributing significantly to the educational landscape of Nigeria's tertiary institutions. The text discusses the evolution of resource sharing in libraries with the advent of information and communication technology (ICT). It outlines modern approaches to resource sharing, such as digital libraries, teleconferencing, video conferencing, and electronic mail. Moreover, it emphasizes the significant impact of ICT on cataloging services, highlighting the role of standards like MARC and AACR2 in facilitating computer-based cataloging systems.

Additionally, the text addresses the role of ICT in reference services, noting the increasing use of the internet to answer reference questions. However, it also highlights various constraints to effective ICT utilization in library services, including the lack of ICT infrastructure, inadequate funding, unreliable electrical energy supply, and a lukewarm attitude from government authorities. Furthermore, it discusses challenges such as the lack of ICT competencies among librarians and the absence of technical support specialists. Overall, the text underscores the importance of ICT in modern library services while acknowledging the hurdles that libraries, particularly in Nigeria, face in fully leveraging ICT for information dissemination and resource sharing.

Research Design

The is basically the survey research method. According to Kerlinger (1973), survey research tries to determine the incidence, distribution, and inter-relationship among sociological and psychological variable and is considered appropriate for this study. More importantly is the fact that, survey research typology enables information to be obtained from a representative sample of the population and describe situation as they exist. Furthermore, survey research focuses on people and their views, beliefs, opinions, perceptions, motivations and attitude and behavior.

Population of the Study

The population of the study is made of respondents that comprised staff (Academic and None Academic) and students drawn from five (5) schools in FCT college of Education Zuba Abuja. The schools are;

- School of Education
- School of Arts and Social Sciences
- School of Languages
- School of Sciences
- School of Vocational and technical education

Since the population was large and impossible for the researcher to cover the entire populations, therefore, samples of 200 respondents consisting of 100 students were selected from the schools and 100 staff are used for the study. It is through the students and staff (Academic Staff and None Academic) that the researcher got the required information on the study through the use of questionnaires.

Sample and Sampling Technique

The sample selection was done using random sampling technique. Simple random sampling, according to Awotunde, Ugoduluwa and Ozoji (1997) is a carefully planned procedure for drawing a simple random sampling of an element from a population in such a way that the following conditions are met:

- Every element in the population had an equal chance of being selected in the sample;
- Every possible combination of an element of the population had an equal chance of constituting the sample.

Instrument for Data Collection

The instrument used for the study is a questionnaire which was designed by the researcher. The questionnaire was used to elicit information from respondents on the impact of ICT in library services. The questionnaire was divided into two parts, namely Section A and B. Section A, elicited information on personal data of the respondents while Section B contained items directly related to the research questions. The respondents will be given alternative responses to choose from. It is a closed ended questionnaire in which the responses were categorized as follows:

Strongly Agree (SA)		4
Agree	(A)	3
Strongly Disagree	(SD)	2
Disagree	(D)	1

Validation of the Instruments

With the main instrument developed, it was then necessary to carry out a pilot study purposely to test the reliability or validity of the instrument. A total of 40 copies of the questionnaire were administered to 20 final

year students of Federal College of Education Akwanga, Nassarawa state and 20 questionnaires for Niger state College of Education Minna, and the same 40 copies were filled and returned by these colleges of Education. The responses were analyzed using Kuder-21 formula to obtain the internal consistency and reliability index.

Kuder-Richardson= (K)(SD²)-X(K-X) (SD2) (K-1)

Where K= the number of items in the test

X mean of the scores

SD= the standard deviation of the scores

The internal consistency and reliability were found to be 0.76, which means that the was reliable and valid.

Method and Techniques of Data

Data collected from the administered questionnaire were categorized and presented while the mean score statistical analysis was adopted for the calculation of the research questions based on the related questionnaire items for each of the research question.

Data Analysis and Result

In this chapter, the researcher presents data obtained from the study. The analysis was conducted using data collected from the administered questionnaire and were categorized and presented while; the mean score statistical analysis was adopted for the calculation of the research questions based on the related questionnaire items for each of the research question. 200 copies of questionnaire were dispatched but not all the questionnaires were dully filled by the respondents. About 25 copies of questionnaires were rendered invalid because, some students could not fill them appropriately while others could not return of theirs. At the time of collection only 172 copies were duly countered A which however made the total number of the questionnaire analyzed to be 172. Mean statistics and percentage were used for analysis of data collected. The formula adopted is stated below:

$$X = \frac{Efx}{Ef} \quad \text{where}$$

X mean

Σ= Summation or addition

f= Frequency

EfX= Addition or summation of all the total frequency

The researcher used 2.50 as the cut off mean score to take decision on whether to accept or reject the responses of the respondents, mean score of 2.50 and above indicate positive response to the questionnaire items while a mean score of 2.49 and below indicate negative answer to the questionnaire items.

Demographic data of the respondents

Table 1

Gender	%	Female	%	Staff No.	%	Student No.	%
Male	45	96	55	20	116	152	88.4

From the above table, it shows that the male gender constitutes 45% of the respondents, while the female gender constitutes the remaining 55%. In addition, the staff constitutes 11.6% (20) of the respondents while the student population makes up the remaining 88.4% (152) of the respondents.

Research Question I: What are the impacts of information and communication technology (ICT) in the college library services?

Table 2

Age Range	No. of respondents	Percentage
20-30	80	46.5%
31-50	70	40.6%
51-70	22	12.7%
Total	172	100%

The above table is aimed at establishing the age of the respondents. Most of the respondents are between the age ranges of 20 - 30 years.

Table 3

S/N	Items	SA	A	D	SD	4	3	2	1	Fx	X	Decision
1	ICT medial brings abstract concept to real life situations for proper understanding of students	88	60	15	9	352	180	30	9	571	3.32	Accepted
2	ICT media in the library such as television, computer and projector ensure better retention of subject taught and make learning more permanent	29	60	56	27	116	168	120	27	431	2.51	Accepted
3	ICT media helps to stimulate students interest in reading and save time to be spent in the library	68	52	41	11	272	156	82	11	521	3.02	Accepted
4	Use of Library ICT like internet help staff and students have access to relevant research materials	46	77	15	37	184	231	30	37	482	2.80	Accepted
	AVERAGE MEAN SCORE										**2.91**	

Table 3, shows the responses of the respondents on the impacts of information and communication technology (ICT) in the college library services. From the table, it is clear that ICT media brings abstract concept to real life situation for proper understanding of students and staff allowing them have access to relevant and available materials. The conclusion is reached because the average mean score of 2.91 is above the bench mark of 2.50.

Research Question 2: Are ICT media available for library services in college library.

Table 4

S/N	Items	SA	A	D	SD	Weight				Fx	X	Decision
						4	3	2	1			
1	There are enough ICT media like computer electronics gadgets and overhead projectors in the college Library	52	81	29	10	208	243	58	10	529	3.08	Accepted
2	There is adequate provision of television and video recording in the college library	39	84	36	13	156	252	72	13	493	2.87	Accepted
3	Opaque and video camera are available in the college library	55	76	31	10	220	228	62	10	520	3.02	Accepted
4	There is adequate provision of ICT (Computer) learning software in all the school subjects in the college library	69	77	19	7	276	231	38	7	552	3.21	Accepted
	AVERAGE MEAN SCORE										**3.04**	

Table 4 above shows that the responses of respondents on the availability of ICT media in library services in the college library. From the table, it is clear that enough ICT media like computer electronics gadgets and overhead projectors in the college library. There are also adequate provision of video recordings, opaque, video camera and computers that are available in the college library. The conclusion is reached because the average mean score of 3.04 is above the bench mark of 2.50.

Research Question 3: What are the constraints to effective use of ICT in the college Library Services?

S/N	Items	SA	A	D	SD	Weight				Fx	X	Decision
						4	3	2	1			
1	Staff consider the use of ICT media as waste of time	68	64	19	12	272	192	38	21	523	3.04	Accepted

S/N	Items	SA	A	D	SD	4	3	2	1	Fx	X	Decision
2	Insufficient energy supply act as barrier to effective use of ICT in library services in the college	77	64	19	12	308	192	38	12	550	3.19	Accepted
3	The lack of expertise to handle these ICT media by library staff and students is a barrier to effective use of ICT in library services in the college	83	81	6	2	332	243	12	2	589	3.42	Accepted
4	Poor quality and inadequate maintenance of ICT hardware is a barrier to effective use of ICT in library services in the college	77	81	4	10	308	343	8	10	669	3.84	Accepted
	AVERAGE MEAN SCORE										**3.37**	

Constraints to effective use of ICT in the college library services. The table revealed that the use of ICT in the library services is constrained with the fact that staff consider the use of ICT media as waste of time and insufficient energy supply act as barrier to effective use of ICT in the college library services. Also, lack of expertise to handle these ICT media by library staff and students is a barrier to effective use of ICT in the college library service too. The conclusion is reached because the average mean score of 3.37 is above the bench mark of 2.50.

Research Question 4: What are the measures to solving the problems associated with the use of ICT in the college library services?

Table 6

S/N	Items	SA	A	D	SD	Weight				Fx	X	Decision
						4	3	2	1			
1	If fund is made available by government, the college will make provision for the use of ICT media to five schools in the institution	74	73	15	10	296	219	30	10	555	3.23	Accepted

2	If staff and students are trained on the use of ICT media through organized seminar and conference, they will make appropriate use of ICT media	68	64	19	12	272	192	38	21	523	3.04	Accepted
3	If college management makes appeal to ICT companies such as HP computer, and comPAQ etc, they will assist the college in the provision of computer instructional gadgets	88	60	15	9	352	180	30	9	571	3.32	Accepted
4	Provision of stable power supply will ensure appropriate use of ICT media in library services in college	55	76	31	10	220	228	62	10	520	3.02	Accepted
	AVERAGE MEAN SCORE										**3.15**	

Table 6 shows the responses of the respondents on measures to solving the problems associated with the use of ICT in the college library services. The table revealed that all the respondents agreed that problems associated with the use of ICT in the college library services can be solved if fund is made available by government for the college library authority to purchase ICT media for the library and subsequently train library staff in the use of these ICT media. It also revealed that if the college management makes appeal to ICT companies such as HP computer and COMPAQ etc, they will assist the college in the provision of computer instructional gadgets as well as provision of stable power supply will also ensure appropriate use of ICT in library service in the college. This conclusion is reached based on the average mean score of 3.15 which is above the bench mark of 2.50

Discussion of the Findings

In the course of the analysis of the data collected from the field and represented as shown on the various tables and through the use of mean score statistical analysis, the following findings were made;

(i) ICT media brings abstract concept to real life situations for proper understanding of students;

(ii) ICT media in the library such as television, computer and projector ensure better retention of subject taught and make/earning more permanent;

(iii) ICT media helps to stimulate student's interest in reading and save time duly spent in the library;

(iv) The use of internet helps staff and students have access to relevant research materials;

(v) There are enough ICT media like computer electronics gadgets and overhead projectors in the college library;

(vi) There is adequate provision of video recording in the college library;

(vii) Opaque and video camera are available in the college library;

(viii) There are adequate provisions of ICT (Computer) learning software in all the school subjects/courses in the college library;

(ix) Lecturers consider the use of ICT media as waste of time;

(x) Insufficient energy supply act as barrier to effective use of ICT in the college library services;

(xi) The lack of expertise to handle these ICT media by library staffs and students is a barrier to effective use of ICT in the college library services;

(xii) When fund is made available by government, the college will make provision for the use of ICT media to five schools in the institution;

(xiii) When college management makes appeal to ICT companies such as HP, Samsung, Toshiba and COMPAQ etc, they will assist the college in the provision of computer instructional gadgets;

Conclusion

The study critically looked at the use of ICT in library services. Information and communication technology is the application of computers in handling generation of data, storage, processing, retrieval and dissemination of information. The research work also examined the concept of information and communication technology (ICT), benefits of ICT to academic library, ICT tools in library services, impact of ICT in library services, constraints to effective use of ICT in library services among others. A research design method was used in the study, and the population of the study is made up of respondents that comprised staff and students drawn from the five schools in FCT College of Education Zuba. The questionnaires used as instrument for data collection were analyzed using mean score. The research work or findings revealed that ICT brings abstract concept to real life situation for proper understanding by students; ICT helps to stimulate student's interest in reading and save time duly spent in the library among others. The study also proffered suggestions to the problems identified in the course of carrying out the work. The study recommended stable electricity supply, appropriate funding, adequate textbooks to mention but a few. Finally, the work made suggestions for further studies based on the other areas in ICT that are very crucial in the use of ICT in library services.

Recommendations

Based on the forgoing analysis, the following recommendations are proffered :

i.   There should be provision for stable power supply to ensure appropriate use of ICT media in library services in the college. This is to ensure that alternative standby generator is available for the college library;

ii.   College management should make appeal to ICT companies such as HP, Toshiba, Samsung etc to assist the college in the provision of computer instructional gadgets;

iii.   There should be construction of new library building with large reading space to facilitate efficient utilization of library resources in the college;

iv.   There should be proper maintenance of hardware as well as provision of suitable educational software for the use of staff and students;

v.   Government should make fund available for the provision of ICT media to the existing five schools in the college.

References

Abdullahi, C...et al (2012). Issues in Academic Libraries. Lagos: Durex.

Adomi, E. E. and Igun, S. (2009). ICT Policies in Africa. In Cartelli, and Palma M. Encyclopaedia of Information Technology.vol. (A-LM) Hershey: IGI Global 384-389

Agu, P.C. (2006). Administration of Academic Libraries: In a book of Readings. Ekere F. C. Nsukka: UCO Academic

Aguolu, C. (1983). Academic Libraries in Nigeria and Issues of ICT Applications. Ibadan: Odegu Publishing Press.

Ajibero, M. I. (2006). Current Trends in Technical Services: The role of ICT. In Lasisi, Information and (ed). Current Trends Communication in Technology: Proceedings of Selected Papers of Cataloguing, Classification and Indexing Section of the Nigeria library Association. Dansalama Press. pp.3-7

Akanni, P. C. (2008). ICT and Library Services: Which Way? Lagos: Apex Publishing Press

Akintunde, S. A. (2003). New Emerging Tools for Library Practice in the New Millennium. Lagos: Journal of-library and Information Science.vol.1 (1) pp 67-72

Akintunde, S. A. (2006). State of ICTs in Tertiary institution in Nigeria: In Compendium of Papers Presented at the 44th Annual National Conference and A G M of Nigeria Library Association, Abuja.18 23 June.

Alasa, M and Kelechukwu I (1998). Internet and Academic library Services in Nigeria. Nigeria Libraries, vol.33 (1)17-28

Anuforo, E. and Olayinka, C. (2010). Minister, others Face flop. The Sanctions over 6,000 MW target Guardian. Tuesday January 5.pp 1-2

Awotunde, E C, Ugoduluwa, E. S. and Ozoji, F C (1997). Research Methods for Tertiary Education. Lagos: Apex.P.22

Federal Republic of Nigeria (2004). National Policy on Education: Lagos: NERDC Press

Fiste, D. A. and Thormton, P. C. (1993). Bibliographic Services of the Future. Technical Services Quarterly, 10 (3)

Gbage, E. S. (2007). Provision of On-Line Information Services in Nigeria Academic Libraries. Nigeria Libraries, vol. 40 pp1-

Gerrity B., Leyman T. and Tallent E. (2002) Blurring Services and Resources: Boston Colleges Implementation of Metallib and SF X. Reference Services Review, vol.30 (3) PP229-241

Groenewegen, D and Huggard, S. (2003). The answer to all our Problems? Trailling a Library Portal. Library Review, vol.52 (9) pp 452-459

Guardian Newspapers (2009). World e-books Library Sign up Zinox exclusively for West Africa. The Guardian Newspapers, 12 August

Mohammed, H (2004). The Relevance of Information and Communication Technology to Information Professionals of the Digital Age: Challenges for Library and Information Centres. Library Focus. vol.22 (1) pp61-65

Nwalo, K. I. (2000). Collaboration in the Provision and Utilization of IT Facilities for Library and Information Science Education in Nigeria. In Papers Presented at the 10th Biennial Conference of NALISE 4th June.pp42-49

Nwizu, S. C. (2008) Analysis of ICT Usage in Information Generation and Dissemination by Distance Education (D E) Participants: Implications for the Attainment of Millennium Development Goals in Nigeria. In Boucouvalas, M and Aderinoge, R. (Eds) Education for Millennium Development: Essays in Honour of Professor Michael Omolewa, vol.2

Ogunsola, L. A. (2004)). Nigeria University Libraries and the Challenges of Globalisation: The way forward. Electronic Journal Academic and Special Librarianship.vol.5 (2-3)