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Factors Affecting Student Use of Information Technology: A Comparative Study of Federal University of Technology, Owerri and Niger Delta University, Amazoma

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Introduction

The factors that affect the use of information technology by students in Nigerian University libraries varies from availability of resources and materials, management and administration as well as students attitude and disposition. Laudon, (2002) explained that information technology is one of the many tools managers use to cope with changes, adding that computer which is at the core is the physical equipment used for imputing data and processing output. Similarly Haag (2002) asserted that information technology is any computer-based tool that facilitates the search and retrieval and dissemination of information to information seekers and as well support the information and information processing needs of individuals, groups and organization. He further explained that information technology includes keyboards, mouse, screens, printers a telephone's"cellphone,GSM handsets,television, radio, scanners, moderns, word processing and operating system software etc. Ehikhamenor (1993) defines information technology as the acquisition, processing, storage and dissemination of information by means of computer, office machine and telecommunications. Computer provides the processing, storage and retrieval facilities while telecommunications provide the facilities for the transfer or communication of data and information to users.

The emergence and use of information technology has improved efficiency in the performance of routine tasks in the library, like acquisitions, cataloguing and user services. The flow of work is speeded up and library users are served without much delay. Acquisition and cataloguing of some essential relevant materials are now processed online, while the on-line public access catalogue (OPAC) is in vogue in the milieu of most automated (academic) libraries. However, in Nigeria the availability and utilization of information technology is at its lowest ebb and that is why the concern of library and information services must not only be on the survival of libraries but mainly in the formulation of a framework of policy for the development of libraries with modern and up-to-date Information Technology.

This is why Womboh (2008) likened the state of information and communication technology in most of Nigerian university libraries to a mediocre, insisting that any university without a functional ICT connectivity will eventually become extinct and obsolete. Ajayi (2005) maintained that the traditional "brick and mortar" libraries must give way to libraries that are not limited by geography; adding that it is necessary for libraries to reinvent themselves

if they hope to develop and facilitate access to information in this digital age.

Information and Communication technology (ICT) according to Akintunde (2004) is a terminology which has overtaken information technology (IT) because of its appropriateness and relevance. According to him, while Information Technology (IT) focuses on the computer, Information and Communication Technology (ICT) emphasizes the use of technology for development, thus focusing on the use of computer and other technologies such as telephones etc, to process, transport, transfer voice/video and other data singularly or mixed with least interference.

But Harold defines Information Technology (IT) as a generic term that covers the acquisition, processing, storage and dissemination of information-textual, numerical, pictorial and vocal. Wirsiy and Shafack (2002) posited that the term is restricted to systems dependent on the micro-electronics based combination of computer and telecommunications technology" They asserted that information technology is a broad-based term that encompasses the gathering (acquisition) organization (packaging), storage and retrieval (dissemination) of information that can be in textual or numerical (books, documents) pictorial and vocal forms (audio-usual for a combination of all the above (multi-media) using a combination of computers and telecommunication (telephony). While the terms IT and ICT can be used interchangeable, the overall essence for its introduction is to facilitate access to information.

Literature Review

Eres (1987) observed that amongst such factors that militate against the use of information technology in developing countries are the cost factor, problems of foreign exchange required for the purchase of computers, lack of library and information standards, inadequate and unreliable telephone network systems, shortage of manpower, low prestige of information professions, difficulty in recruiting specialist and lack of continuing education. These views were correlated by many writers. Womboh (2008) pointed out the harsh economic condition and government apathy to library services in Nigeria. Due to the same reason he noted that the content and quality of services of most Nigeria university libraries have deteriorated to such a level that the quality of the products of such universities has also been adversely affected. Consequently the result of a research study set up by the national university commission (NUC)quality control division (QCD) to test the quality of Nigeria university academic programme shows that staffing scored a paltry 32% as against the 70% bench mark; physical facilities (including IT facilities/resource) scored 25%, while library and funding scored 12% and 05% respectively as against 70% bench mark for each item.

Igbeka (2002) noticed that the problem encountered by Kenneth Dike library Ibadan during retrospective convention includes problems with the systems after the consultants had downloaded their records. To recall or retrieve the records downloaded was usually difficult. Electricity failure was another problem.

Oketunji (2000) identified some factors militating the use of information technology in Nigeria universities, which includes access to adequate and reliable electricity, which services are usually restricted to urban centers while most of our universities are usually situated in the rural areas. Aino (2004) identified the negative laissez-faires attitude of lectures students and libraries as other factors militating against the development and use of ICT in university libraries in Nigeria. Aino, while admitting the high cost of ICT training opined that library staffs and student users should do something on their own to improve their IT skills. Similarly, Kamba (2008) discovered the problem of IT especially internet use in Nigeria libraries to include inadequate and poor information infrastructure.

That the country Nigeria lies within the tropics where dust, humidity and heat reign supreme. The problems of environmental control are compounded by the unreliable electricity supply which makes it difficult to maintain a conducive computer environment. The available number of information technology engineers to service and maintain information technology hardware and software are insufficient.

On the management factor, Agaja (1997) posits that librarians should be skillful in the complex art of managing human and material resources, information packaging library repositioning, strategic planning, budgeting and effective allocation of funds among competing needs. It behooves an individual librarian and indeed the university librarian to upgrade perspective technical and human relations skills in order to remain relevant and attractive to patrons of academic libraries especially student users. Hostile and an uncooperative approach is repulsive to student user while lack of dexterity on the part of library management would spell doom for library operation. Efficient management ensures that the best hands are employed and sustained especially in the critical areas of information technology.

Oyesika and Oduwole (2004) in their study of the use of academic libraries discovered that majority of the users (students) do not have the requisite skills and as such shy away from the use of information technology. Lack of user education and time for practical work on the use of information technology was among the problem of students. They advocated that credit unit should be allocated to IT courses.

Background Information

The Federal University of Technology Owerri (FUTO) Library

The decree establishing the Federal University of Technology Owerri (FUTO), together with the University Library, was promulgated in 1980 by the Federal Government of Nigeria. The university alongside the library dwelt on temporary site from its inception in 1981 till 1993 when she moved to its permanent site at Ihiagwa (University Library Guide, 2004).

The University Library has a useable floor area of 1552m², housing a student population of 22,000 and with a sitting capacity of 750 at a time. It has about 100, 0000 volumes of books. In addition to offering full blown professional services, the library has a well equipped reprographic section with photocopying machine cyclostyling machine and binding services. Its IT section/unit is fully equipped to render the following services:-

- Lending of ICT facilities- Overhead Projector CDs, CD-ROM and PAS.
- Providing access to (i) EBSCO host (ii) e-Granary (iii) AGORA Portal (iv) AGORA/TEEAL
- Providing internet search services with computers. Students and staff are allowed use of the internet at a subsidize rate of N50 per hour. The library has acquired Alice for Windows application software and has reached advanced stage in the final computerization of the library operations. The library has started the On-line Public Access Catalogue (OPAC) services to student and staff researchers. The library has a balanced staff strength-professionals, Para-professional and Library assistants.

Niger Delta University Library

The Niger Delta University was established in May 2000 by the Bayelsa state Government. Academic work commenced in 2001/2002 at a temporary site in the Government Secondary School, Amassoma, Wilberforce Island Bayelsa State.

The University Library came into existence in the year 2001/2002 with two professional librarians. However, full library services commenced in 2004/2005 session when the library building completed and more staff employed. The library has 18 computers with internet connectivity which the students and staff make free use of. Computerization process is still at the planning stage. No software has been acquired.

Objective of the Study

The objectives of the study are as follows

- To examine the types of Information Technology (IT) available for students' use in the library.
- To find out the frequency of students use of Information Technology in the library.
- To identify the problems encountered by students in the use of Information Technology in the library
- to proffer solutions to the identified problems

Research Methods

The survey method of investigation was adopted for the study. The population was put at 10,000 registered student users of the library made up of 6000 and 4000 students of FUTO and NDU respectively. A sample size of 2000 registered student users were selected representing 20%, made of 1000 students apiece. The main instrument of data collection was the questionnaire which was distributed to students using stratified random sampling technique. At the end of the exercise, 1200 respondents were correctly and completely filled and returned, representing a 60% return rate. This were made up of 600 registered library users each, from FUTO and NDU respectively. Data analysis was done by the use of frequency table and simple percentage.

Data Presentation and Analysis

Return rate of students by status of respondents

Table 1: Distribution of Respondents by Status

Student status	FUTO		NDU	
	Frequency	%	Frequency	%
500 level	150	25	130	22
400 level	100	17	150	25
300 level	125	20	140	23
200 level	120	20	100	17
100 level	105	18	80	13
Total	600	100	600	100

Table 1, shows the return rate of respondents from FUTO and NDU according to their level or year of study. 500 level students of FUTO topped the table with (150/25%) respondents. 300 level students of both institutions ranked third, with 125/20% respondents for FUTO, and 140/23% for NDU. 400 level students of FUTO and 100 level students of NDU took the rear respectively, with 100/17% and 80/13% respondents respectively.

What are the types of information technology (IT) available for students use in the library?

Table 2: Types of Information Technology (IT)

S/N	Variables	INSTITUTIONS		NDU	
		Frequency	(%)	Frequency	(%)
1	Computer	300	50%	200	33%
2	Telephone	-	-	-	-
3	Photocopying	450	75%	400	67%
4	Printing	200	33%	200	33%
5	Laminating	-	-	200	33%
6	Binding	200	33%	-	-
7	CD-Rom	300	50%	200	33%
8	Microform	50	8%	-	-
9	Scanner	-	-	50	18%
10	Telefacsimile	-	-	-	-
11	OPAC	200	33%	-	-
12	Internet	350	58%	240	40%

Table 2: shows that the highest frequency is in the use of photocopying machine by registered student users of both FUTO and NDU Libraries (450/75% and 400/67%) respectively. Students use of Internet (350/58%:240/40%): Computer, (300/50%:200/33%): CD-Rom; (300/50%:200/33%), follows in descending order as shown in the table. Students use of computer printer tallies at (200/33%) in both libraries. While only registered student users in FUTO makes use of On-line Public Access Catalog (OPAC) (200/33%) and microform reader (50/8%), only students library users in NDU uses laminating machine (200/33%) and scanning machine (50/8%)

What is the frequency of use of available IT in the library by students?

Table 3: Frequency of Use of Available IT

S/N	Variables	FUTO			NDU				
		No of respondents	Frequency of use		No of respondents	Frequency of use			
			Daily	3/5		2/5	Daily	3/5	2/5
1	Computer	300	50(17%)	100(33%)	150(50%)	200(67%)	40(20%)	80(40%)	100(50%)
2	Telephone	-	-	-	-	-	-	-	-
3	Photocopying	450	100(22%)	150(33%)	200(44%)	400	80(20%)	120(30%)	200(50%)
4	Printing	200	-(%)	80(40%)	120(60%)	200	-(%)	100(50%)	100(50%)
5	Laminating	-	-	-	-	200	-(%)	80(40%)	120(60%)
6	Binding	200	-	70(35%)	-	-	-	-	-
7	CD-Rom	300	-	100(33%)	200(67%)	200	-	80(40%)	120(60%)
8	Micro-form	50	-	20(40%)	30(60%)	-	-	-	-
9	Scanner	-	-	-	-	50	-	20(40%)	30(60%)
10	Telefacsimile	-	-	-	-	-	-	-	-
11	OPAC	200	60(30%)	70(35%)	70(35%)	-	-	-	-

12	Internet	350	80(23%)	100(29%)	170(49%)	240	40(17%)	95(40%)	105(43%)
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Table 3, shows the use of IT facilities. It indicates that registered student users of both libraries uses the facilities less on daily bases. Whereas the number and percentage of student who use the IT facilities once or twice in a week increases in all the cases. It shows therefore that there were no chronic IT adherents amongst students users of IT in FUTO and NDU libraries respectively.

What Are The Main Reasons For The Use of IT?

Table 4: Reasons for the Use of IT?

S/N	Variables	Institutions		NDU	
		Frequency	(%)	Frequency	(%)
1	Typing of document	100	17%	50	8%
2	Browsing the web	300	50%	400	67%
3	E-mailing of letters	250	42%	250	42%
4	Up-dating lecture notes	180	30%	150	25%
5	In depth research work	150	25	120	20%
6	Communication	90	15%	90	15%
7	Leisure /Recreation	70	12%	90	15%

Table 4 shows that internet browsing is top most reason for student use of I.T 300/50% and 400/67% use respectively by respondent student users of both FUTO and NDU libraries. The second reason was e-mailing of letters which accounted for 250/42%. Respondents each research work by students followed in descending order as shown in serial nos 4 and 5 in table 3.

What are the problems encountered by students in the use of IT in the library?

Table 5: Inhibitors to Students Use of IT.

S/NO	VARIABLES	INSTITUTIONS			
		FUTO		NDU	
		Frequency	(%)	Frequency	(%)
1	Insufficient availability of IT resources	500	83.3	300	50
2	Inadequate training in the use of IT	150	25	250	42
3	Uncooperative attitude of library staff	50	8	60	10
4	Time constraint	100	22.2	100	22
5	Cost of utilization of IT resources.	200	33.3	50	8.3
6	Obsolete equipment	40	7	40	7
7	Space constraint	150	25	100	22.2
8	Epileptic power supply	180	30	80	13.3
9.	Systems' failure	80	13.3	50	8

Table 5, shows that insufficient availability of IT resources was the highest reason that inhibited students use. This accounted for 500/83% of the respondents in FUTO Library as well as 300/50% respondents in NDU library. Inadequate training or lack of requisite knowledge in the use of IT by registered students users of the library followed closely as was indicated by 150/25% and 250/42% of the respondents in FUTO and NDU respectively. The cost of utilization of IT affected FUTO students more with (200/33.3%), than their counterparts in NDU with (50/8.3%). Epileptic power supply and space constraint was more visible in FUTO with (180/30:150/25%) than NDU with (80/13.3%:100/22.2%). Time constraint on the side of the students accounted for 100/22% in both FUTO and NDU, while uncooperative attitude of the staff was reported by 50/8% and 60/10% respondents in FUTO and NDU respectively. System failure accounted for 80/13.3% in FUTO while it was 50/8% in NDU.

Discussion of Findings

Registered student users of FUTO and NDU library make adequate use of IT resources. However the return of duly completed questionnaire shows that 500 level students of FUTO and 400 level of students of NDU uses the IT in the library more than other levels as shown in table 1. The use of photocopying machine ranked highest amongst the student of both University. But a similar study on the use of internet and electronic resources by Dental

science students at Baba Farid university of health science shows that the use of e-mail topped with 163(95.3%) out of 171 respondents, unlike the use of photocopying machine that ranked topmost in Nigeria.

200 or 33% of registered student users in FUTO library access On-line Public Access Catalog (OPAC) to locate reading materials through the computer terminals displayed at the user services unit, unlike their counterparts in NDU. The major reasons for students use of IT was for browsing the Internet as shown in table 4. On the main reason for student use of IT, again Manhas (2008) discovered that Dental science students in India browse information pertaining mainly to health and Dental needs while browsing the net was topped most reason by both students of FUTO and NDU respectively.

The major inhibitions to use of I.T by students in both FUTO and NDU library is insufficient availability of IT resources. This accounted for 500/ 83.3% in FUTO and 300/50% in NDU. The findings of Kamba in studying researchers use of internet at Bayero university Kano confirmed problems of accessibility of library materials due to inadequate IT facilities, but the study also added the high level of poverty as inhibitors to use of IT. Similarly, the problem of electricity failure which was second to the highest problem encountered by Dental science students of Indian University competed favourably with erratic and epileptic electricity power situation in Nigerian Universities. Cost of utilization of IT accounted for 33.3% in FUTO, whereas it poses little or no problems to students in NDU as it accounted for a paltry 8.3% in NDU. Epileptic or erratic power supply was more visible in FUTO with (180/30%) than in NDU which recorded (80/13.3%) as shown in title 5. Non-cooperative attitude of Library staff and obsolete equipment was fast phasing out. Library staff are now more user friendly and obsolete equipment were being replaced with modern ones in this era of modern technology. Table 5 shows that the problem of non-cooperation and obsolete equipment played the least inhibiting factors (50/8%): 60/10%) respondents respectively, while a negligible (40/2%) respondents apiece was attributed to obsolete equipment. As students grapple with hectic lecture periods, available time becomes a problem. 100 or 22% of student's respondents identified time constraints as problem of both FUTO and NDU Students.

In conclusion therefore if most of the problems identified in the course of this and similar studies will be vigorously addressed, university libraries will live to halt the deterioration in the academic standard and as well improve the product churned out by Nigerian Universities.

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