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EDITORIAL

This is the fourth issue of our journal, *The Information Technologist:* an international journal of information and communication technology (ICT). Like the previous issues, we have brought together articles which explored the possibility of the profession of library and information technology reaching out beyond its present confines. It also examined some problems that plague the information profession inwardly. Altogether, twelve articles are presented in this issue.

Our lead article by Professor E.A Onibere and F.A Egbokhare examined the state of software development in Nigeria using formal and informal methods with special focus on the key human resource factors in Nigeria software development organizations.

Dr. Olatokun's article investigated the adoption and use of ICT manufacturing technologies in Nigeria's manufacturing sub-sector.

The paper by A.I. Gambari and Dr. (Mrs.) Adaeze Chike-Okoli surveyed the availability and utilization of information and communication technology (ICT) in tertiary institutions in Niger State, Nigeria.

Mr. John E. Nwogu and Dr. (Mrs.) Chinwe V. Anunobi examined the recent drift by students and staff of an Academic community to the internet providing centers as alternative to libraries, especially as it affects the source of information and the evaluation criteria employed for internet resources.

Dr. Samuel A. Amkpa investigated the gender and age difference in Computer use and attitudes among students of University of Maiduguri.

The article by I. A. Alao, I.O. Ajala and A.K. Makinde investigated the use and control of GSM handsets in seven academic libraries in Oyo State, Nigeria.

Dr. (Mrs.) Clara C. Okoro and Mrs. Ngozi C. Azubogu looked at the concept of bibliotherapy as a means of assisting children to express themselves. They also discussed the importance of bibliotherapy as a veritable tool for improving reading culture in Nigerian children.

Muhammad Etubi and Martins O. Ihekhai discussed their experience in retrospective conversion at the University of Jos library.

J.K Alhassan and S.A Adepoju in their article examined internet connectivity of information technology firms in Minna Metropolis of Nigeria.

Victor E. Ekong and Uyinomen O. Ekong's *middleware* article investigated the B2B and B2C scenarios with emphasis on issue affecting the development of middleware to support m-activities

The article by Saka Katamba Abubakar and Mrs. Salimatu K. Garba analysed the articles published in *the information technologist* journal between 2004 and 2006.

The last article by Dr. William Nkanu, Alfred Michael Obaje and Dr. Boma B. Obi, surveyed the extent of use of E-mail in Nigeria University Libraries.

Finally, on behalf of the members of the editorial board, I wish all our distinguished contributors, subscribers and readers well.

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THE INFORMATION TECHNOLOGIST AN INTERNATIONAL JOURNAL OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

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CONTENTS

SURVEY OF THE EXTENT OF USE OF E-MAIL IN NIGERIAN UNIVERSITY LIBRARIES

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ABSTRACT

This study surveyed the extent of use of e-mail in Nigeria University Libraries. A survey design was used. Questionnaire was the instrument used to collect data from 600 respondents from 13 university Libraries. A total of 590 respondents duly completed the questionnaire. Simple percentage was used to analyze the magnitude of response. While, Chi-square (X^2) analysis was used to test the null hypothesis at 0.05 level of significance. The study revealed that 68.89% of respondents disagree to the none availability of e-mail service in Nigerian University libraries.

While, 57.45% of respondents agree to its regular use in Nigerian university libraries. The tested hypothesis revealed that, the extent of use of e-mail service is either contingent upon or is not contingent upon a particular University as evident in the University libraries studied. It is thus concluded that, for internet connectivity to be made possible in Nigerian University libraries funds should be provided by relevant authorities to University libraries to justify their commitment to the cause of sustaining an ICT-based utilization culture in Nigerian university libraries.

KEY WORDS: **E-mail, Nigeria, University Libraries**

INTRODUCTION

The provision and utilization of information of all kinds is vital in our rapidly changing world. Oduwole, Oyewumi and Oyesiku (2002) assert that all human activities on earth have much to do with information and communication of all kinds. These activities which can be recorded in books or other materials are kept in a medium or organized place called library for general use and consultation. Ochogwu (1984) asserts that before now, library records were stored in papyrus and clay tablets in the great encient libraries of Egypt and Mesopotamia.

That from that time to this present decade in library history, technology has impacted greatly on the operations of libraries in the provision of information services. This is evident in the continued transition of these information storage devices from papyrus and clay tablets to the present day books along with other forms of electronic storage media. Daniel, Oketunji, Okojie and Abdulsalam (2003) observed that the information technologies found in libraries today is a combination of computers, storage media and telecommunications. In other words, computer provides the processing, storage and retrieval capabilities of

information in the library, while telecommunication provides the capabilities for the transfer and or communication of data (information) from one workstation to another in the library.

The revolution of ICT is now making great impact in all fields of knowledge, and the field of librarianship is also deeply affected by this revolution (Rahman, 2002:39). It has been observed that, with the development of multimedia channels (internet, E-mail, CD-Rom, floppy diskettes, papers) to revolutionize the concept of information access and exchange, libraries had to integrate multimedia channels of access to information into their process. This implies according to Omolayole (2000) that libraries had to become proactive in providing information services to patrons. ICT comprises machineries and tools necessary for the generation, processing, storage, retrieval and dissemination of information. These include the computer networked or digitized resources and Internet

access which would facilitate the use of e-mails, browsing and other activities (Mabawonku and Okwilagwe, 2004:21).

The E-mail service is a more popular use of the internet than internet browsing because it is the cheapest, fastest and most convenient way of communication. Good enough Nigerian university libraries are now well informed of the potentials associated with putting the e-mail facilities to effective use for the provision of library and information services. Chifwepa (2003) reports that the main reasons for the use of Internet were e-mail, accessing information on websites and reading other library catalogues. Electronic mail, or e-mail is an amazing way of sending messages from one computer to another (Wallace and Wingate 2003:2). In libraries as in other fields of knowledge, Librarians can use e-mail to send and receive information to and from someone on the other side of the world and this will only take a couple of minutes to arrive comparable to ordinary mail which is so slow. E-mail is cheep to use, it is a quick and efficient way of communicating with

one another. E-mail is currently the most popular facility offered by a worldwide computer system called the Internet. There is more to e-mail according to Wallace and Wingate (2003) than just sending and receiving messages. In e-mail service, you can attach while communicating sounds, pictures, video clips and any other computer files to an e-mail information can be sent to a sizeable number of people as quickly as possible as sending it to just one person.

Keeping track of your message or information is simple in e-mail service.   programmes   can automatically be kept of every message or information you send and received.   It is easy to organize information or message and store them in different places on your computer. The methods of providing library and information services in University libraries in Nigeria is changing because of availability of internet connectivity. It is because of this that Nigerian University libraries have now become the perceived place

to access all the information needed by library clients.   Onwubiko   (2004) maintained that, the internet provides promotional information which entails that the library is still very important in the life of people.

Uzoigwe (2004) asserts that, e-mail allows messages to sent over a telecommunication network from one computer to another without any use of paper. By E-mail service, messages are typed on a computer terminal, stored on a disc or other devices and sent to the recipient. At the receiving end of the circuits messages are held in an electronic mail box opened by the receiver at his will. Messages can be printed out, read and stored from the terminal. The advantage of E-mail over the telephone is that messages may be sent and received by the computer whether or not the recipient is available at the moment. He is also of the view that, among the facilities offered by the internet are electronic mail (E-mail) which facilitates the exchange of text messages between users who are located worldwide.

As an offshoot of ICT, the internet is now a household word among the elite in Nigeria. Many, if not all of us here would have used the internet for one service or the other especially for the electronic mail (e-mail) (Anyakoha, 2005:3). According to Chinsenga (1975) electronic mail is slowly becoming the most commonly used form of communication in African academic environments. Electronic mail is providing timely, convenient, and inexpensive access to colleagues within and outside the University environment. That, within Nigerian University environment, research, teaching library and documentation staff have joined in the electronic mail for communication purposes. Communication in University libraries has improved personal communication, especially when communicating with colleagues in the same or outside environment.

He maintained that using E-mail to send computer files has also been found to be one of the major benefits and advantages of using the University e-mail system. It is a common practice today for abstracts of journals, conference and workshop papers for publication to be sent using E-mail and thus meeting the deadline. Students and staff undertaking distance learning education can send their work or assignments through E-mail, thus making the utilization and exchange of library and information services to be possible.

Objective of the Study

The main purpose of this study is to ascertain whether Information and Communication Technology (ICT) is used in the operations and provision of library and information services in University libraries in Nigeria. In line with this, the objective of this study is to determine the extent of use of E-mail in Nigerian University libraries.

Research Methods

Survey research designed was used. The population of the study was all Federal University libraries in Nigeria. Stratified method of sampling was used in selecting the 13 Federal

University libraries that constitute the sample for the study; A total of 590 respondents duly completed the questionnaire. The questionnaire used in data collection were received from 415 librarians and 175 library support staff. Simple percentage was used to analyze the magnitude of response with respect to the extent of use. while Chi-square (X^2) analysis was used to test the null hypothesis at 0.05 level of significance with respect to whether the extent of use of e-mail among University libraries is or is not contingent upon a particular University.

Data Analysis and Discussion
Research Question

To what extent do University libraries use E-mail in providing library and information services in Nigerian University libraries?

In answer to the research question, the respondents were required to make choice as to what extent University libraries use e-mail service. Respondents opinion in response to this research question is presented in tables 1 and 2 respectively.

Table 1: **Percentage Analysis of Agree Response Scores of the Extent of use of E-mail in Nigerian University Libraries.**

Extent of use of E-mail in University Libraries.	Response Score	Percentage Score
Regularly	339	57.45
Occasionally	249	42.21
Rarely	241	40.88
Not available	213	36.11

Table 2:   Percentage Analysis of Disagree Response Scores of the Extent of use of E-mail in Nigerian University Libraries.

Extent of use of E-mail in University Libraries.	Response Score	Percentage Score
Regularly	251	42.55
Occasionally	341	57.79 ←
Rarely	349	59.12
Not available	377	68.89

The data analyzed with respect to the research question as presented in tables 1 and 2 above show that 377 respondents representing 68.89% disagree to the none availability of e-mail in Nigerian University libraries against 213 respondents responding 36.11% who agree to it while 349 respondents representing 59.12% also disagree to its rare use against 241 respondents representing 40.80% who agree to it. It follows as well that 314 respondents representing 57.79% disagree to the occasional use of E-mail in Nigerian University libraries against 249 respondents representing 42.21% who agree to the occasional use. But, inspite of this,

339 respondents representing 57.45% have agreed that E-mail is regularly used in Nigerian University libraries against 251 respondents representing 42.55% who disagree.

Hypothesis

The extent of use of e-mail in Nigerian University libraries is not contingent upon a particular University.

In order to determine whether the extent of use of E-mail in Nigerian University libraries is contingent or is not contingent upon a particular University. The analyzed hypothesis below was tested using Chi-square analysis.

Table 3: X^2 **Analysis of the extent of use Email in Nigeria University Libraries**

University		Regularly	Occasionally	Rarely	Not Available	Total	X^2	Decisione (P-05)
UI	f_o	127	105	99	87	418	0.05	~ NS *
	f_e	(128.13)	(103.75)	(99.90)	(86.21)			
UNN	f_o	138	88	102	96	424	4.15	NS
	f_e	(129.96)	(105.23)	(101.34)	(87.45)			
ABU	f_o	264	137	101	24	526	136.48	S**
	f_e	(161.23)	(130.56)	(125.72)	(108.49)			
OAU	f_o	127	127	98	85	415	5.6	NS
	f_e	(127.21)	(103.00)	(99.19)	(85.60)			
UNIL	f_o	142	104	101	103	450	2.16	NS
	f_e	(37.94)	(111.69)	(107.55)	(92.82)			
UNIP	f_o	98	79	100	68	345	4.95	NS
	f_e	(105.75)	(85.63)	(82.46)	(71.16)			
UNIJ	f_o	132	97	99	93	421	1.08	NS
	f_e	(129.05)	(104.49)	(100.62)	(86.83)			
UDU	f_o	101	124	93	97	415	11.59	S
	f_e	(127.21)	(103.01)	(99.19)	(85.59)			
UNIM	f_o	145	105	116	96	462	1.19	NS
	f_e	(141.62)	(114.46)	(110.42)	(95.29)			
ABTU	f_o	94	128	103	75	400	16.24	S
	f_e	(122.61)	(99.28)	(95.60)	(82.50)			
FUTY	f_o	92	93	97	106	395	15.29	S
	f_e	(121.08)	(98.04)	(89.32)	(81.47)			
FUTM	f_o	101	105	90	123	419	22.38	S
	f_e	(128.44)	(103.99)	(100.14)	(86.42)			
UAAB	f_o	98	79	100	68	345	4.95	NS
	f_e	(105.75)	(85.63)	(82.46)	(71.16)			
Total		**1,666**	**1,349**	**1,299**	**1,121**	**5,435**		

* S =Significant; *NS = Not Significant at 0.05 level; df = 3, critical value = 7.82

key

UI	-	University of Ibadan, Ibadan
UNN	-	University of Nigeria, Nsukka.
ABU	-	Ahmadu Bello University, Zaria.
OAU	-	Obefemi Awolowo University, Ile-Ife
UNIL	-	University of Lagos, Lagos.
UNIP	-	University of Port Harcourt, Port Harcourt .
UNIJ	-	University of Jos, Jos.
UDU	-	Usman Danfodoyo University, Sokoto
UNIM	-	University of Maiduguri, Maduguri.
ABTU	-	Abubakar Tafawa Balawa, University, Bauchi.
FUTY	-	Fed University of Technology, Yola.
FUTM	-	Fed University of Technology, Minna.
UAAB	-	Unisversity of Agriculture, Abeokuta.

As presented in table 3 above in answer to the hypothesis, the critical value is 7.82, while the calculated values for UI, UNN, OAU, UNILAG, UNIPORT UNIJOS, UNIMAID and UAAB is 0.05, 4.15, 5.6, 2.16, 4.95, 1.08, 1.19 and 4.95 respectively. Since the critical value (7.82) is greater than the calculated values at 0.05 level of significance, the result is not significant. Therefore, the null hypothesis is upheld with reference to these universities. Thus the extent of use of E-mail in the provision of library information services in Nigerian university libraries is not contingent upon a particular university. In the other hand, the calculated values for ABU, UDU, ABTU, FUTY and FUTYM is 136.48, 11.59, 16.24, 15.29, and 22.38 respectively. Since the critical value (7.82) is less than the calculated values at 0.05 level of significance, the result is therefore significant with reference to these universities. Thus, the extent of use of E-mail in the provision of library and information services in Nigerian universities libraries is contingent upon a particular university.

DISCUSSION

The extent of use of E-mail in providing library and information services in Nigerian universities libraries as revealed in tables 1 and 2

does not give room for doubt of the non available of this service in Nigerian universities libraries. The data in table 1 shows that university libraries in Nigeria regularly used e-mail with the highest agreement rate of 57.45% with 4255% and 68.89%, 5812% and 57.79% disagreed with its none availability rarely and occasionally use. The regular use of it with 57.45% presupposes that e-mail utilization in Nigerian university libraries is gaining grounds in the provision of information services. This confirms Chiwepa's (2003) view that one of the main reasons for the use of Internet is to provide e-mail services. Among university libraries in Nigerian, the e-mail service is a more popular use of the Internet than Internet browsing because it is the cheapest, fastest and most convenient way of communication. However, Nigerian university libraries are expected to put their e-mail facilities to a more effective use to enhance free information of flow.

With knowledge of the diverse use of e-mail in providing library and information services, its none availability, rare and occasional use which accounted for 68.89%, and 57.79% disagreement confirm its availability and regular use in Nigerian university libraries. The regular use of e-mail in providing library and information services shows that, e-mail is used as a tool for generating, obtaining, processing, storing, retrieving as well as disseminating library and information services. In agreement with this, Daniel (2000) reports that, e-mail offers efficiency over any traditional based communication. That, by communicating over electronic communication lines and network technology, the human interaction to deliver messages is removed from the main delivery system and it also provides cheap means of communicating, devoid of distortions that are usually introduced in relay telephone message or even fax.

As to whether the extent of use of e-mail among university libraries in Nigeria in the provision of library and information services is or is not contingent upon a particular university,

the results in table 3 with respect to the hypothesis clearly show that Nigerian university libraries regularly used e-mail as shown with the highest frequencies expected (fe) with reference to the university libraries investigated. Even at this, there is dissimilarities in the calculated chi-square (X^2) values of individual university libraries. Table 3 also shows a clear difference in the chi-square (X^2) values as to the contingency or none contingency for university libraries of Ibadan (UI), Nsukka (UNN), Lagos (Unilag), Port-Harcourt (Uniport), Jos (Unijos), Maiduguri (Miad) and Abeokuta (UA), the calculated Chi-square (X^2) values 0.05, 4.15, 2.16, 4.95, 1.08, 1.19 and 4.95 respectively are less than the critical chi-square (X^2) values of 7.82. This implies that the extent of provision of library and information services is contingent upon a particular University as it affects these Universities. While, the calculated chi-square (X^2) values of 136.48, 11.59, 16.24, 15.29 and 22.29 and 22.38 for university libraries of

Zaria (ABU), Sokoto (UDU). Bauchi (ABTU) Yola (FUTY) and Mina (FUTM) are greater than the critical chi-square (X^2) values of 7.82 respectively. This implies that the extent of use of e-mail in providing library and information service is not contingent upon a particular university as it affects these universities.

CONCLUSION AND RECOMMENDATIONS.

One of the major problems confronting Nigerian university libraries is the continuous provision of library and information services in the traditional way, which in turn appears to be affecting the state of their effectiveness in the provision of these services. This in effect constitute the emerging contemporary development, challenges as well as issues affecting university libraries in Nigeria. In order to support the growth and development of ICT-based university libraries, it is hereby recommended that, the Federal government of Nigeria should re-order her priorities through a major policy shift in order to provide full Internet

connectivity for Nigeria. By this, Nigerian university libraries will be able to face squarely the challenge of inadequate and ineffective library and information services provision for her teaming patrons in the 21st century university libraries. Adequate funds should be provide for the much talked about library automation in all Nigerian university libraries. For Internet connectivity to be possible in Nigerian university libraries, electricity and telecommunication which are very important in the sustenance of ICT utilization should be provided by relevant authorities to justify their commitment to the cause of sustaining an ICT-based utilization culture in Nigerian university libraries.

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