August 2013

SOCIO-DEMOGRAPHIC FACTORS AS DETERMINANTS OF ACCESS AND USE OF ICT BY STAFF OF UNIVERSITY LIBRARIES IN OYO STATE

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By

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Abstract

This study examined the influence of socio-demographic factors on access and use of ICT by staff of academic libraries in Oyo state. These universities are: Ladoke Akintola University, Lead City University and Bishop Ajayi Crowther.

Data was collected using a self structured questionnaire using convenience sampling technique. The empirical evidence was based on descriptive and statistical analysis using SPSS. The findings revealed that ease of use, perceived benefits and accessibility were highly correlated with the demographic factors (age, level of education and income), however, none of the demographic variables predicted favorably on challenges of ICT usage.

The study recommends that University authority should put in place sustainable ICT infrastructure that would enhance innovative library service delivery and provide training for library staff to take advantage of new innovations for personal development and professional competence. Furthermore, since power is a major impediment to sustainable ICT investment, the university should consider building an autonomous power plant in addition to providing ICT policy to enhance library service delivery. The federal government on their part should completely privatize the power sector to end the long stalemate in that sector.

Keywords: **ICT, ease-of-use, accessibility, perceived usefulness, complexity**

Introduction

The deployment of Information and Communication Technology (ICT) in most aspects of human endeavors has instituted a paradigm shift which is making it complex for individuals to make tangible contributions to human civilization without access and proficiency in the use of Information and Communication Technology. This necessitates the compliance of library staff to the dictates of ICT in the delivery of their services especially now that information explosion is taking its toll on traditional system of information resource management. Information and Communication Technology has permanently altered traditional librarianship and the duties of librarians and support staff. Information and Communication Technology is primary to library staff because of its innumerable benefits such as enhancement of speed, efficiency and effectiveness.

Academic library as an organization that manages information and information bearing materials cannot afford to underestimate the role of information and communication technology because it is so indispensable to the fulfillment of its objectives. Mullins (2002) observed that organizations wishing to survive have to foster use of innovations among their members. Therefore, academic library staff who are the providers of information necessary to facilitate teaching, learning and research are expected to lead in accessibility and use of ICT to keep abreast of developments in the business of identification, acquisition, processing, storing, retrieving and dissemination of necessary information products and services.

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 the present digital age.

The staff of academic libraries constitutes the human factors that are the determinants of the fulfillment of whatever goals the academic libraries have set in support of their parent bodies. Their ability to access and use ICT will greatly determine the quality of services rendered by their libraries. Each library staff has certain socio-demographic factors which distinguish them from one another. It has been established by Olatokun (2006) that there exists a measure of variance in individuals' access and use of information and communication technology due to socio-demographic factors. These factors: gender, age, income, skills etc may serve as determinants of their access and use of information and communication technology.

It is therefore paramount to analyze the socio-demographic factors of library staff in relation to ICT access and use since library service is a chain of activities in which inefficiency in one department may hamper total quality service delivery in others.

Objectives

1. To investigate how demographic variables (age, gender, income and education) of library staff influence the ease of use of ICT tools.
2. To identify the influence of demographic variables (age, gender, income and education) of library staff on their accessibility of ICT tools.
3. To determine if demographic variables (age, gender, income and education) of library staff have any relationship on the complexity of use of ICT tools.
4. To examine the extent to which demographic variables (age, gender, income and education) of library staff influence their use of ICT tools.

Scope of the Study

The study will focus on socio-demographic factors influencing ICT accessibility and utilization by staff of selected academic libraries. The study will be limited to four university libraries in Oyo state, Nigeria; that is, the University of Ibadan Library (Kenneth Dike); Ladoke Akintola University of Technology Library, Ogbomoso; Lead City University, Ibadan; and Ajayi Crowther University Oyo.

Methodology

The descriptive survey method was adopted for this study and the population of this study shall comprise all categories of library staff (professional, para-professional and support staff) in selected University libraries in Oyo State, Nigeria. The data collection method that will be employed in this study is questionnaire.

Data analysis and presentation

Table 1. Demographic Characteristics of the Respondents

Variable		Frequency (%)
Institutions	Kenneth Dike Library, U.I	80(53.3%)
	Ajayi Crowther University Library	21(14%)
	Lead City University Library	19(12.7%)
	Ladoke Akintola University	30(20%)
	Total	100
Level of Education	Secondary	18(12%)
	OND	42(28%)
	HND	12(8%)
	Bachelor degree	30(20%)
	Masters degree	48(32%)
	Total	100
Age	Below 30yrs	60(40%)
	31-40yrs	51(34%)
	41-50yrs	33(22%)
	51-60yrs	3(2%)
	Above 60yrs	3(2%)
	Total	100
Gender	Male	69(46%)
	Female	75(50%)
Which section do you work?	Serial section	27(18%)
	Internet section	33(22%)
	Cataloguing & Classification	42(28%)
	Training	12(8%)
	Circulation	24(16%)
	Reference	12(8%)
	Total	100
Monthly Income	N5,000-N20,000	30(20%)
	N21,000-N40,000	27(18%)
	N41,000-N60,000	27(18%)
	N61,000-N80,000	27(18%)
	N81,000-N100,000	3(2%)
	N101,000-N150,000	24(16%)
	N151,000-N200,000	3(6%)
	Above N200,000	9(6%)
	Total	100
Religion	Christianity	128(84.8%)
	Islam	20(13.2%)
	Others	3(2%)
	Total	100
Positions in Library	Chief Librarian	4(2%)
	Assistant Deputy Librarian	4(2%)
	Librarian 1	10(6%)
	Librarian 2	42(28%)
	Library Assistant / Officer	62(42%)
	Industrial Trainee	28(18%)
	Total	100

Demographic Characteristics of the Respondents

Table 1 presents the demographic characteristics of the respondents. The table shows that librarians in Kenneth Dike Library accounted for (53.3%) of the respondents, Bishop Ajayi Crowther University (14%), Lead City University Librarians (12.7%), while (20%) of the respondents were from Ladoke Akintola University. In the level of education category, librarians with only secondary education accounted for (12%), OND and HND (28%) and (8%) respectively. Those with bachelor and masters degree accounted for (20%) and (32%) respectively. Amongst the librarians, males accounted for (46%), female (50%). Respondents below 30 years accounted for the highest percentage which is (40%) of respondents, those within age 31-40yrs, (34%), those between 41-50years were (22%), while those between the age group 51-60 years and above 60 years each accounted for (2%). In the monthly income category, librarians with monthly earning N5,000-N20,000 were (20%), those that earn N21,000-N40,000, N41,000-N60,000, and N61,000-N80,000 were (18%), whereas those that earn above 100,000 were (36%) of the respondents. In the position category, Chief Librarian and assistant deputy librarian each, were (2%), librarian1 and librarian 2 (6%) and (28%) respectively, while the respondents who are library assistant/officer and industrial trainee accounted for (42%) and (18%) respectively.

Table 2 Ease of Use of ICT by Library Staff

Variables	Responses (%)			
	Disagree	Agree	Don't Know	Missing
I find it easy to use computers.	15(10%)	135(90%)	0%	0%
It is easy to use mobile phones.	12(8%)	138(92%)	0%	0%
Internet is very easy to use	9(6%)	138(92%)	3(2%)	0%
I find it easy to use internet enabled phones	24(16%)	108(72%)	15(10%)	3(2%)
It is easy to use computer for cataloguing and classification	21(14%)	114(76%)	12(8%)	3(2%)
Searching electronic resources from an internet-enabled computer is easy	6(4%)	132(88%)	9(6%)	3(2%)
Searching electronic resources from an internet-enabled phone is easy	23(15.3%)	100(66.7%)	24(16%)	3(2%)

Table 2 presents the respondent perception on ease of use of ICT by Library staff. Many (90%) of the respondents admitted they find it easy to use computers, likewise, many of the respondent also find it easy to use mobile phones (92%) and the internet (92%). I find it easy to use internet enabled phones accounted for (72%), It is easy to use computer for cataloguing and classification (76%), Searching electronic resources from an internet-enabled computer is easy and Searching electronic resources from an internet-enabled phone is easy accounted for (88%) and (66.7%) respectively.

Table 3 Accessibility of ICT by Library Staff

Accessibility of ICT by Library Staff	Responses (%)			
	Disagree	Agree	Don't Know	Missing
I have easy access to computer in my section/department.	16(10.7%)	131(87.3%)	3(2%)	0%
I have easy access to computer to perform my duties.	19(12.7%)	125(83.3%)	6(4%)	0%
I visit the e-library centre to access e-resources	43(28.7%)	89(59.3%)	15(10%)	0%
I access e-library resources from my office	27(18%)	111(74%)	9(6%)	3(2%)
I access e-library resources from my office	17(11.3%)	118(78.7%)	15(10%)	0%
Access to e-resource is better using internet-enabled mobile phone	28(18.7%)	95(63.3%)	27(18%)	0%

Table 3 depicts the respondents responses on accessibility of ICT by Library Staff. Majority of the respondent admitted they have easy access to computer in their section/department (87.3%), while those that agreed to I have easy access to computer to perform my duties were (83.3%) compared to those that admitted visiting the e-library centre to access e-resources (59.3%). Those that admitted to having access to e-library resources from their office were (74%), while I access e-library resources from my office and access to e-resource is better using internet-enabled mobile phone accounted for (78.7%), and (63.3%) respectively.

Table 4 Frequency of Accessibility to ICT by Library Staff

	Responses (%)					
Frequency of accessibility of ICT by library staff	Daily	Weekly	Fortnightly	Monthly	Occasionally	Never
I have access to computer	81.3%	8.7%			8%	2%
I have access to mobile phone	98%	1.3%				
I have access to e-mail	72.7%	13.3%	2%		10%	2%
I have access to internet	80.7%	3.3%	2%	4%	8%	2%
I have access to Social network	72.7%	8%	2%		9.3%	8%

Table 4 shows the frequency of accessibility to ICT by Library Staff. From the table, I have access to computer, mobile phone, e-mail, internet and social network daily accounted for (81.3%), (98%), (72.7%), (80.7%) and (72.7%) respectively. Weekly access for the same showed lower result, accounting for (8.7%), (1.3%), (13.3%), (3.3%) and (8%) respectively. Those that use computers, mobile phone, e-mail, internet and social network fortnightly, monthly, occasionally, and never accounted for between (2%) and (10%).

Table 5 Challenges to Access and Use of ICT by Library Staff

Challenges to Access and Use of ICT by Library Staff	Responses (%)			
	Disagree	Agree	Don't Know	Missing
I'm not computer literate	126(84%)	21(14%)	3(2%)	0%
Internet-enabled phone is difficult to use	132(88%)	15(10%)	3(2%)	0%
I don't use internet phone because it is expensive	112(74.7%)	32(21.3%)	6(4%)	0%
I don't use internet phones because the screen is too small	120(80%)	24(16%)	6(4%)	0%
Using Internet is complex and difficult	125(83.3%)	18(4%)	6(4%)	1(0.7%)
I get discouraged from using the internet because of slow internet access	116(77.3%)	25(16.7%)	6(4%)	3(2%)
I seldom use the internet because there is no internet access in the whole library	130(86.7%)	17(11.3%)	3(2%)	0%
I seldom use the internet because there is no internet access in my section/department	130(86.7%)	17(11.3%)	3(2%)	0%
I cannot use a mobile phone to browse the internet	132(88%)	15(10%)	3(2%)	0%
I dislike computer because I don't like reading from screen	128(85.3%)	14(9.3%)	6(4%)	0%
I don't use the internet for lack of constant power supply	110(73.3%)	27(18%)	0%	13(8.7%)

Table 5 shows the respondents responses on challenges of using ICT. The respondents that consented to being computer illiterate accounted for (14%) when compared to those that can use computers (84%). Equally few are those that admitted that internet –enabled phone is difficult to use (10%) as compared to those that find it easy to use (88%). Those that do not use internet

phone because it is expensive and because the screen is too small accounted for (21.3%) and (16%) respectively as against (74.7%) and (80%) respectively. Only (4%) agreed that using Internet is complex and difficult, and I get discouraged from using the internet because of slow internet access (16.7%), as compared to (83.3%) and (77.3%) who felt otherwise. I seldom use the internet because there is no internet access in the whole library and because there is no internet access in my section/department got the nod of (11.3%) respectively, while those that disagreed to the same where (86.7%) respectively. The respondent who admitted they cannot use a mobile phone to browse the internet were few (10%) compared to (88%) that can. Those that admitted disliking computer because I don't like reading from screen were (9.3%) against (85.3%) and those that don't use the internet for lack of constant power supply (18%) as compared to the large number (73.3%) that use internet despite the power challenges.

Discussion of Findings

The result of the study shows the significance of education in this study and it is highly correlated in technology usage and adoption as reflected in (Olatokun, 2006), Grambrel and Cianci (2003). The findings of this study further confirmed the importance of education in service delivery as it is the case in every other industry. Those with high education are known to possess high level of acceptable attitude and disposition in their work culture. In terms of technology usage, which most often could require a medium and sometimes high level of reasoning, according to (Ajuwon and Rhine 2008), only those who are educated could cope with the inherent complexity of new technology innovation. In addition the library system requires expertise in library services such as cataloguing, indexing, bibliometrics, database management, and more recently, online cataloguing and classification that enhances access to electronic

databases and resources. All these competencies require someone who possesses a good education most especially in library and archival studies. Hence, a high correlation between level of education and ease of use did not come as a surprise but rather as a confirmation to the global acknowledge of the importance and relevance of education in services delivery most especially in the university library.

Also the significance of age in ease of use of technology is well documented in empirical literature e.g Carmen (2006), Nwalo (2000), Idowu (2004). The younger age group appears more technology enthusiast than their older counterpart who are slow in technology adoption and most often are too busy to experiment with new technology innovations. Young adult are more technology savvy and can easily contend with the challenges and complexities of the innovation. On the hand, gender, likewise is known to have various impact on technology usage. Studies such as; (Rana, 2009, Bailin & Grafstein, 2005), have shown high internet usage in male than in female who often do not dedicate much time on technological experimentation as compared to their male counterpart. This is probably as a result of their gender role in attending to domestic issues in the family. Male are also known to send more sms as observed in (Cheng, 2001, Duff, 2003) than women, and often makes more call to their biologically passive female counterpart that enjoys being called than do the calling. More male play computer games and often sees computer as a partner for business and for pleasure.

Furthermore, income as a significance variable yet confirms the traditional role money plays. Not only it is used in meeting domestic and basic needs, it is also used in enhancing career, enjoying leisure, and also used in building and maintaining vital relationships. High income increases the possibility of owing expensive technologies (Krubu and Osawaru, 2011) and makes

one to be in the forefront of technology adoption. New technologies are usually expensive and only those that have high saving could afford it.

Conclusion

Empirical evidence showed that level of education, age, gender and income influenced ease of use, accessibility, and use of ICT. However, none of the demographic factors influenced challenges of use ICT. This calls for the stakeholders in the academe to take appropriate step in enriching the librarians experience through provision of steady ICT tools and infrastructure as well as educating the librarians on the importance of ICT as tools that is capable of enhancing library service towards ensuring that library users get the optimal benefit in library usage. The government on the other hand is enjoined to end the long awaited impasse of the power sector to enable the Nigeria academia to trail the global trend towards sustainable development in library services.

Recommendation

The findings of this study show that ease of use, accessibility and use of ICT were significantly predicted by level of education, age, gender, and income. However, all the demographic variables were poor predictors of challenges to ICT use in the university libraries. Based on this background the following recommendations are made:

1. The university authority should provide reliable ICT and internet infrastructure for increased accessibility and usage to facilitate consistent and sustainable library services
2. The university authority should embark on a full digitalization project of the library resources, and implement an electronic database system that would enable both librarians and users to access the digital resources on the mobile phone, tablet pc and ipods.
3. The university library should train librarians on the use of ICT so as to instill job confidence that arises from threats in advances in ICT developments and implementation in the library system.
4. The university authority should have a clear ICT policy that will guide present library practices as well as set a platform on which future IT development can crest to ensure that continuous delivery of innovative services in the library system.

5. Since power supply is part of the challenges, university authority should consider building its own independent power plant.
6. The federal government should consider a full privatization of the power sector liken to the GSM instance, to end the incessant power supply.

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