

**Full Length Research**

# Effects of Browser Competence and Use on Information Service Delivery by Librarians in University Libraries in South-East Zone of Nigeria

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This study assessed the effects of Browser Competence and Use on Information Service Delivery by Librarians in University Libraries in South East Zone of Nigeria. The study was guided by two objectives, one research question and one null-hypothesis which was tested at 0.05 level of significance. Survey research design was adopted for the study. The target population was all the 189 Librarians working in government owned University Libraries in South East Zone of Nigeria. This includes nine (9) University Libraries as follows: the Anambra State University Uli (ASU), Abia State University Uturu (ABSU), Ebonyi State University Abakiliki (ESUA), Enugu State University of Science and Technology (ESUT) and Imo State University Owerri (IMSU). Others were Federal University of Technology Owerri (FUTO), Nnamdi Azikwe University Awka, University of Nigeria Nsukka (UNN) and Micheal Okpara University of Agriculture Umudike (MOUA). Since the population of the librarians in these Universities was manageable (189), there was no sampling. The research instrument adopted was questionnaire. Data collected were analyzed using: frequency counts, percentage, means, standard deviation, for research question and ANOVA. The following findings were made: the librarians in the Universities in the South-East zone of Nigeria could use ICT to enhance their service delivery to a large extent; the librarian's competence in browsing as well as its use has a significant positive effect on their service delivery. However, it was recommended among others that the University Library Managements in the South-East zone of Nigeria should continue to update the ICT competence of the librarians by exposing them to more seminars, workshops and conferences that will lay emphasis on current trends in the use of ICT; it was also recommended that the library management should expose the librarians to more lectures, Seminars and workshops that will lay more emphasis on browser competence and how to apply these techniques to library functions like cataloguing and classification, serials management, collection management, budgeting, circulation management, referencing, indexing and abstracting in order to improve information services to library users. The study concludes that Librarian's competence in browser techniques has significant effect on their service delivery.

**Keywords:** Librarians, Computer, Browser, Competence, Service, Delivery, Nigeria

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## BACKGROUND OF THE STUDY

The main components of browser competence are ability to: type in an address, follow a link, identify links previously visited, back and forward, history, book marks of favorite, stop and reload, cut and paste, print, send page, find page, and home. These functions above are very crucial when one is browsing the net. Hence, ability to acquire this competence plays a major role in one being able to navigate the internet effectively. This in turn affects the service delivery of the librarians positively. This view was shared by Drake (2005), and Jansen (2000) when they independently reported that librarian profession is evolving and that librarians must be able to browse the net effectively. Nevertheless, Obuh (2009) and Garuba (2007), claimed that the browsing competence are highly important for acquisition and reference librarians who are on daily bases need to source for resources in the internet. According to Sceal and Stain (2002), and Oyedum (2007), the browser competence is a competence that all librarians must acquire if they are to remain relevant in this jet age. Therefore, a very good knowledge and use of browsing competence usually lead to effective service delivery by librarians. Hence, inability to acquire browser competence or skills, simply imply that one may not be able to navigate his or her way in the complex internet. Hence, to use the internet to enhance service delivery by the librarians may not be possible. It is based on this scenario that this research on effect of librarian's browser competence as well as its use on information service delivery by librarians working in university libraries in south-east zone of Nigeria was investigated.

## OBJECTIVES OF THE STUDY

The objectives of the study were to determine the:

1. extent of information service delivery by librarians in university libraries in South-East zone of Nigeria;
2. effect of the librarians' browser competence and use on information service delivery by the librarians in university libraries in South- East zone of Nigeria;

## RESEARCH QUESTION

This study answered the following research question:

1. What is the extent of the librarians' use of ICT to enhance their information service delivery in South-East zone of Nigeria?

## HYPOTHESES

The following null hypothesis was tested:

- H<sub>01</sub>: There is no significant effect of the librarian's browser competence and use on information service delivery in university libraries in South-East zone of Nigeria.

## REVIEW OF RELATED LITERATURE

Browser competence is a very important competence if one is to navigate his way in the ever growing complex internet. Surprisingly, there are very little literatures in this area. However, most research works in this regard, agreed that the browser competence of the librarians is very important, if the librarians are to remain relevant in this computer age (Oduwole, 2005).

Tzoc and Millard (2011) conducted a research titled "technical skills for new digital librarians in Ghana". They adopted survey research design. Their target population was university libraries in Ghana. The instrument for the research was questionnaire. Two hundred questionnaires were administered to the librarians in a random sampling. The findings of the research revealed that 60% of the librarians know how to browse the internet for effective information service delivery. However, it was recommended that the library management of the university libraries should organize more workshops, seminars and conferences for the librarians, to expose the librarians to more computer and internet skills.

Rana (2009) conducted a research titled: Impact of information and communication technology on academic libraries in Punjab. He examined the browser competence of 120 librarians. He adopted survey research design; his instruments were questionnaire and interview. He analyzed his data with descriptive statistics (frequency counts and percentages). He also adopted random sampling in distributing his questionnaire. The findings of the research shows that 38% of the librarians can actually browse the net. He recommended among others that the librarians should be exposed to more sensitizations like seminars and workshops that would emphasis more on browser techniques for efficient information service delivery in the library.

Nkanu, Iyishu and Ogar (2013) conducted a survey of 210 librarians in the South - West zone of Nigeria, on browsing and internet use for effective service delivery. They adopted questionnaire as their instrument. The finding of the research revealed that 41% of the librarians were capable of browsing the internet freely without any assistance. The research therefore recommended that more seminars and workshops should be frequently

organized for the librarians in the zone on the current trends in browser use so that they would remain current. The research however pointed out that frequent light failure and low bandwidth were the major problems the librarians faced in using the internet.

However, the reference librarian is the image of the library. Hence, his ability to browse the net will accord him respect, especially amongst the staff and students. This often attracts the library users to the library. Because the library users often feel satisfied each time they consult the library for information. Gong (1998) and Michalak (2009) reported in their work that browsing competence is a competence that any serious minded academician must possess if they are to be relevant in this computer age. Nevertheless, Swanson (2008) and Nwokedi (2009) on separate occasions submitted that browsing the net is one of the major competence librarians need to possess in order to increase their service delivery.

Ibianye (2012) carried out a study on the browsing competence of librarians in south-south zone of Nigeria. The research adopted a survey research method. The target population was all the 128 librarians in university libraries in the South-South zone of Nigeria. The research adopted questionnaire as its instrument. 128 copies of the questionnaire was produced and posted to the librarians. Out of the 128 copies of the questionnaire, 62% were filled, returned and found usable. Inferential statistics (ANOVA) was used to analyze the data. The major findings of the research revealed that 68 % of the respondents know how to browse the internet. However, 80% of the respondents claimed that lack of computers and internet access was their major obstacles.

## RESEARCH METHOD

Survey research design was used and the entire population of 189 professional librarians in 9 Government (both State and Federal) university libraries that started operation before 2010 in South East zone of Nigeria was adopted. This includes: Anambra State University Uli (ASU), Abia State University Uturu (ABSU), Ebonyi State University Abakiliki, (ESUA), Enugu State University of Science and Technology (ESUT) and Imo State University Owerri (IMSU). Others are Federal University of Technology Owerri (FUTO), Nnamdi Azikiwe University Awka, Nnamdi Azikiwe Library University of Nigeria Nsukka (UNN) and Michael Okpara University of Agriculture Umudike (MOUA). In order to achieve the objectives of the study, a self-constructed questionnaire was used for the study. The questionnaire went through content validity check. Copies of the questionnaire were given to senior colleagues in the profession. The essence of this exercise was to ensure that the questions were clear, simple and appropriate for the study. On the basis

of their suggestions and modifications, some of the items were modified to suit the objectives of the study. A final draft of the questionnaire was then prepared and used for the study.

A pretest of the study was conducted using test and re-test method. Twenty (20) librarians from University of Jos were used to test the reliability of the questionnaire. The reliability coefficient of 0.69 was obtained, and the coefficient was considered high enough for reliability (Tiraeyari, et al, 2011). This enabled the researchers to ascertain whether or not the questions asked were able to generate the required data. The questionnaire was then distributed.

## METHOD OF DATA ANALYSIS

Data collected were analyzed using Descriptive statistics of frequency counts and percentages for answering the research question, and Inferential Statistical analysis of Variance (ANOVA) for the hypotheses. The Statistical Package for Social Science (SPSS) on personal computer was used for the analysis. All statistical methods that were used for testing the stated hypotheses were based on 0.05 level of significance. Tables were also provided where necessary.

## RESPONSE RATE

One hundred and eighty nine (189) copies of the questionnaire were administered to the respondents in all the nine (9) surveyed university libraries in South East Zone of Nigeria. Out of the 189 copies distributed, 168 (88.9%) were filled, returned and found usable. This gave a response rate of 88.9%.

## DEMOGRAPHIC DATA OF THE RESPONDENTS

One hundred and sixty eight (168) librarians from nine (9) University libraries in South-East Zone of Nigeria responded to the questionnaire. The demographic variables considered were: gender, age, and academic qualification.

The responses in table 1 indicates that 64 (38.1%), 26 (15.5%), 26 (15.5%), and 12 (7.1%) of the respondents were from University of Nigeria Nsukka, Federal University of Technology Owerri, Nnamdi Azikiwe University Awka and Ebonyi State University respectively. The higher number of respondents from the four universities was as a result of large number of librarians available in the libraries. The least of respondents were from Michael Opara University Umudike, with only 6 (3.6%) respondents. This could be because of the staff strength in the university library. The size of the university

**Table 1:** Classification of Respondents By Universities Under Survey

Universities	Frequency	Percentage (%)
FEDERAL UNIVERSITY TECHNOLOGY, OWERRI	26	15.5
UNIVERSITY OF NIGERIA, NSUKKA	64	38.1
NNAMDI AZIKIWE UNIVERSITY, AWKA	26	15.5
ABIA STATE UNIVERSITY	9	5.4
EBONYI STATE UNIVERSITY	12	7.1
ENUGU STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY	8	4.8
ANAMBRA STATE UNIVERSITY	9	5.4
MICHAEL OPARA UNIVERSITY	6	3.6
IMO STATE UNIVERSITY	8	4.8
<b>Total</b>	<b>168</b>	<b>100</b>

**Source:** From field work

**Table 2:** Gender Distribution of the Library Staff

Gender	Frequency	Percentage (%)
Male	32	19
Female	131	78
No Indication	5	3
<b>Total</b>	<b>168</b>	<b>100</b>

**Source:** From field work

**Table 3:** Distribution of the Library Staff by Age

Age Cohort (Years)	Frequency	Percentage (%)
26-30	27	16.1
31-35	14	8.3
36-40	63	37.5
41-45	23	13.7
46-50	18	10.7
51-55	16	9.5
56-60	0	0
Above 60	2	1.2
No Indication	5	3
<b>Total</b>	<b>168</b>	<b>100</b>

**Source:** From field work

does not warrant the recruitment of many librarians.

Table 2 shows that 168 library staff members were involved in this study, out of which majority (78%) were female and only 19% were male staff while 3% failed to indicate their gender. This finding revealed that there were more female librarians working in the observed universities than male librarians.

Table 3 shows that out of the respondents involved in this study, largest proportion (38%) were between 36 to

40 years of age, 16% were between 26 and 30 years, 14% were between 41 to 45 years, 11% were between 46 to 50 years, 10% were between 51 and 55 years, 8% were 31 and 35 years and only 1% were above 60 years of age.

Table 4 shows that out of the respondents involved in this study, largest proportion (45%) did B.L.S programme for the First Degree, 22% did B.Sc. and 13% did B.A. Other First Degree programmes found were: HND - 1%

**Table 4:** Distribution of the Library Staff based on their Qualifications

First Degree Programme	Frequency	Percentage (%)
B.Sc.	37	22
B.L.S	76	45.2
HND	1	0.6
B.A	21	12.5
B.ED	19	11.3
BPA	1	0.6
No Indication	13	7.7
Total	168	100
Highest Educational Qualification	Frequency	Percentage (%)
B.Sc.	11	6.5
B.L.S.	1	0.6
M.A.	21	12.5
M.L.S.	102	60.7
Ph.D.	19	11.3
Total	168	100.0

Source: From field work

**Table 5:** Librarian's Extent of Use of ICT for Enhanced Service Delivery

Librarian's Use of ICT	Weighted Average
Extent of Operating Computer	3.58
Extent of Use of Computer to perform File Management	3.38
Extent of Use of Browser	3.47
Extent of Use of Computer to Search the Internet	3.92
Extent of Use of E-mail Services	4.12
<b>Weighted Average Mean</b>	<b>3.69</b>

Source: From Field work

and BPA - 1 %.

Table 4 also shows that out of the total respondents involved in this study, largest proportion (61%) had MLS certificate, 13% had M.A, 11% had Ph.D., 7% had B.Sc. and only 1% had BLS certificate.

## DATA ANALYSIS

**Research Question 1:** What is the extent of the librarian's use of ICT to enhance their Service Delivery in South East zone of Nigeria?

Table 5 shows the Librarians' Extent of Use of ICT to enhance their Service Delivery in the university libraries in South-East zone of Nigeria. To answer the research question, the overall weighted average was 3.69 which indicated large extent. Therefore, the librarians in the universities in South East zone of Nigeria can use ICT (computer) to enhance their service delivery to a large extent.

## HYPOTHESES TESTING

The hypotheses formulated to assess the effect of Information and Communication Technology Competence and Use on Service Delivery by Librarians in University Libraries in South-East Zone of Nigeria was ANOVA - since the research was interested in testing 'effect' of one Dependent variable on two Independent variables. Note that the P-value used in the analyses (ANOVA) is referred to as the observed level of significance, and If the P-value is greater than the chosen level of significance (0.05), then the null hypothesis will be accepted, but if the P-value is less than the chosen level of significance (0.05), then the null hypothesis will be rejected.

**H<sub>0</sub>1:** There is no significant effect of the librarians' browser competence and use on service delivery by librarians in university libraries in South-East zone of Nigeria.

**Table 6a:** Summary of ANOVA Showing Effect of Browser Competence, Use on Service Delivery ANOVA<sup>b</sup>

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	98633.787	2	49316.893	.019	.186
Residual	304691.947	12	25390.996		
Total	403325.733	14			

**R = 0.495: R<sup>2</sup> = 0.245: Adjusted R<sup>2</sup> = 0.119**

a. Predictors: (Constant), browser competence, browser use

b. Dependent Variable: service delivery

**Table 6b:** Summary of Analysis showing Effect of Browser Competence and Use on Service Delivery Coefficients<sup>3</sup>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	412.759	217.658		1.896	.082
(Use) of Browser	.351	.179	.499	1.965	.007
Competence on Browser	.054	.342	.040	.156	.008

a. Dependent Variable: Service Delivery

Table 6a shows that competence in browsing computer as well as its use contributed 11.9% of the total variance in the service delivery of the librarians (Adjusted R<sup>2</sup> = 0.119). Thus the effect is shown to be significant ( $F_{(2, 12)} = .019$ ;  $p < 0.05$ ). Therefore, Hypothesis three is rejected. Thus there is a significant effect of the librarians' browser competence as well as its use on service delivery by librarians in university libraries in South-East zone of Nigeria.

Table 6b shows that the F calculated at .019 to 12 degree of freedom has a t value at 1.965 for browser use and 0.156 for browser competence. This implies that as  $p < 0.05$ , for both competence and use, there is a significant effect of the librarians' browser competence and use on service delivery by librarians in university libraries in South-East zone of Nigeria. Therefore, Hypothesis three is again rejected.

## SUMMARY OF FINDINGS

Based on the analysis and presentation of data, the following are summary of findings:

1. The librarians in the Universities in South-East zone of Nigeria can use ICT to enhance their service delivery to a large extent.
2. There was a significant effect of the librarians' browsing competence and use on service delivery by librarians in university libraries in South-East zone of Nigeria.

## DISCUSSION

Research question one sought to find out the extent of the librarian's use of ICT to enhance their service delivery in South-East zone of Nigeria. To answer the research question, the overall weighted mean average obtained from the analysis of Extent of service delivery of librarians in university libraries in South-East zone of Nigeria was 3.69 which indicated large extent. This implies that librarians in the universities libraries in South-East zone of Nigeria can use ICT to enhance their service delivery to a large extent. This finding could possibly be because, the influx of ICT facilities into the academic libraries in Nigeria in the 90s and early 2000s have made librarians to embark on self- development on the use of ICT particularly computer skills. Nevertheless, most academic libraries in Nigeria have developed in-house training of librarians on the basic use of ICT facilities, particularly computers. This could possibly explain why most of the librarians appeared ICT literate. This finding corroborates the works of Okiy (2010) and Oduwole (2005) who on separate occasions stated that large percentage of librarians in the South-East zone of Nigeria are computer literate. They however, lamented the fast deterioration of ICT facilities in most libraries in South-East zone of Nigeria.

The result of the hypothesis tested revealed that browser competence and use had a significant positive effect on service delivery of the librarians. The positive relationship implies that increase in a librarian's competence in browsing and use of the browser in their

jobs, could bring about increase in service delivery. This finding corroborates the work of Okiki (2011) who examined the browsing techniques of 120 librarians in Nigeria and concluded that majority (91) of the librarians know how to use browsers. This observation supports the works of Sceal and Stain (2002) who discovered in their researches that the browsing competence of reference librarians are directly proportional to their service delivery. Thus Garuba (2007) submitted that the browsing competence is highly important for librarians, particularly reference and acquisition librarians who are on daily bases needed to source for resources in the internet for library users and library management respectively. Therefore, a very good knowledge and use of browsing competence usually lead to effective service delivery of reference and acquisition librarians. This view was supported by Oduwole (2005) who in his study, submitted that browsing competence of librarians are very important, particularly in the reference section of the library and in interlibrary loans. Gong (1998) and Michalak (2009) reported in their works that browsing competence is a competence that any serious minded academician must possess if he or she is to remain relevant in this computer age. Nevertheless, Swanson (2008) and Nwokedi (2009) on separate occasions submitted that browsing the net is one of the major competences librarians need to possess in order to increase their service delivery.

## CONCLUSION

Results obtained from the analysis, showed that the null hypothesis was rejected, thus indicating that the librarians' browser competences as well as its use, has a significant positive effect on the service delivery of librarians in university libraries in South-East Zone of Nigeria. Thus, this has revealed that the librarians in the university libraries in South East Zone of Nigeria are ICT competent and also know how to apply their competences to library operations to enhance their service delivery.

## RECOMMENDATIONS

It was recommended that the library managements in the universities in South East zone of Nigeria should continue to update the ICT competence of the librarians by exposing them to more seminars, workshops and conferences that will lay emphasis on current trends in the use of ICT. This will update their knowledge, and they will continue to be relevant in this ICT era. The faulty or bad ICT facilities in the libraries should be repaired and put to use for effective service delivery.

The library managements in universities in south east

zone of Nigeria should sponsor their librarians to more seminars and workshops. The training should pay more attention to the basic techniques in browsing and how to apply the technique to library operations in order to enhance the librarians' service delivery.

## REFERENCES

- Drake, T.L. (2005). Attitudes about performance appraisal. In *Personnel Selection and Assessment: Individual and Organizational Perspectives*, ed. H Schuler, JL Farr, M Smith, pp. 141-62. Hillsdale, NJ: Erlbaum
- Garuba, A.R. (2007). Impact of automation on library staff: A case study of John Harris Library, University of Benin. *Nigeria Library Link* 5 (83), 18-27.
- Gong, Y (1998). Structural Profiles of China's Library and Information Systems. *Asian Libraries*. 7 (2), 21-36
- Ibanye, D. E. (2012). Challenges & prospects of Digitization of Library Resources in Nigeria Universities: The Experience of Kashim Ibrahim Library. *European Journal of Globalization and development Research*, 5 (1), 288-300.
- Jansen, M. (2000). African Internet Status. Available at <http://www3.sn.apc.org/Africa/Afstat.htm>. Retrieved on the 26<sup>th</sup> November, 2013.
- Michalak, C.C. (2009). Job experience correlates of job performance. *Journal of Applied Psychology*, 7(3), 327-330.
- Nkanu W. O., Iyishu V. A. and Ogar F. O. (2013). Education and training for Library and Information Science Professionals in Nigeria: Their Role, Opportunities and Challenges in the Information Age. *Knowledge Review*, 28 (2), 95 - 104.
- Nwokedi, V.C. (2009). Use of Search Engines for Academic Activities by the Academic Staff members of the Faculty of Natural Sciences, University of Jos. *The Information Technologist*, 6 (2), 129 - 138.
- Obuh, A.O. (2009). Use of electronic resources by postgraduate students of the department of library and information science of Delta state university, Abraka, Nigeria. *Library Philosophy and Practice*. Available at: <http://www.unllib.unl.edu/lpp/obuh.htm>
- Oduwole, A. A. (2005). Information Technology Skill Acquisition and Utilization by librarians as Correlates of Job Performances in University and Research libraries in Nigeria, unpublished Ph.D. Seminar, LARIS University of Ibadan, Ibadan.

- Okiki, H. (2011). Digital Divide or Digital Exclusion? The Role of Libraries in Bridging the Digital Divide. Conference imparted LIASA Seventh Annual Conference. Pretoria: LIASA. Retrieved January 11th 2007 from: [http://www.liasa.org.za/conference/conference2004/papers/LISA\\_conference\\_2004\\_Mp](http://www.liasa.org.za/conference/conference2004/papers/LISA_conference_2004_Mp)
- Okiy, R. B. (2010). Globalization and ICT in Academic Libraries in Nigeria: The Way Forward, Library Philosophy and Practice 2010 accessed 13/05/14
- Oyedum, G.U. (2007). Internet Use in the Library of Federal University of Technology, Minna: A case study. *Gateway Library Journal*, 10 (1), 23 - 32.
- Rana, H.K. (2009). Impact of Information and Communication Technology on Academic Libraries in Punjab. Available at : <http://www.goarticles.com/cgi-bin/showa.cgi=1239032>
- Sceal, J. M.; Tank, A.S. & Stain, M. (2002). The Presence of IT Skill Sets in Librarian Position Announcements. *College & Research Libraries*, 70(3), 250-257. Retrieved <http://crl.acrl.org/content/70/3/250.full.pdf+html>
- Swanson, J. (2008). Technical skills for new digital librarians. *Library Hi Tech News*, 28(8), 11-15.
- Tiraieyari, N; Idris, K. Uli, J & Hamzah, A. (2011). Relationship between human development competence and work performance. *Australian Journal of Basic and applied Sciences*, 5 (5), 1356-1363, Retrieved from [Insiput.net/ajbas/2011/1356-1363.Pdf](http://insiput.net/ajbas/2011/1356-1363.Pdf) 10<sup>th</sup> October, 2011
- Tzoc, E. & Millard, J. (2011). Technical skills for new digital librarians. *Library Hi Tech News*, 28(8), 11-15.