

DETERMINANTS OF USERS' SATISFACTION WITH ELECTRONIC RESOURCES AND SERVICES PROVISION IN FEDERAL UNIVERSITY LIBRARIES IN NIGERIA

ADEGOKE, KUDIRAT ABIOLA

Department of Library and Information Science
Faculty of Education
, Usmanu Danfodiyo University, Sokoto-Nigeria

Prof. AKOR, P. USMAN

Department of Library and Information Technology,
Federal University of Technology, Minna Niger State

Dr. ABUBAKAR, M. BITAGI

Ibrahim Badamosi Babangida Library
Federal University of Technology, Minna Niger State

<https://doi.org/10.37602/IJREHC.2023.4209>

ABSTRACT

Despite the number of studies conducted on users' satisfaction with library services, only a handful of reports was able to assess the level of users' satisfaction with library electronic services. The review showed that previous studies measured the quality of services rendered by the federal university libraries with just a question or an extract from the ServQual instrument without proper application of the ServQual model. Identification of determinants of library users' satisfaction needs an in-depth investigation using different methods before librarians can work towards improving those identified factors for maximum utilization of library resources and services. This present study used the ServQual model for determining users' satisfaction with electronic resources and services provided in six federal university libraries. The instruments used for data collection were descriptive surveys, focus groups, observation, and interview designs. This study applied a multistage sampling technique to arrive at the 733 sample size that represented the registered postgraduate users for the selected federal university libraries from the six geo-political zones of Nigeria. Structural Equation Model and SPSS were used to analyze data collected from the respondents, it was found that the federal university libraries provided minimal (acceptable) electronic services with a beta coefficient of ($\beta=0.66^{**}$) which showed a significant level of user satisfaction with electronic services. Determinants of users' satisfaction were a conducive environment; good Internet connection; constant power supply; adequate computer systems; use of laptops either personal or loan; longer operating hours; remote access to eResources; adequate security measures, availability and accessibility of electronic resources, currency and adequacy of electronic resources. The study concluded that users were moderately satisfied with library services provision but libraries need to improve the quality of resources quality of services provided in the various universities. This paper recommended that, the library environment must be conducive to learning; good Internet connection is provided and sustained; have power backups; provide adequate computer systems; allow users to bring in their laptops to the

library; increase their operation hours; provide remote access to e-resources; re-work the security systems and subscribe to numerous electronic resources to optimally satisfied users.

Keywords: Library services, users satisfaction, electronic resources, ICT, service quality

1.0 INTRODUCTION

The goal of every university library is to provide quick access to information resources by using compatible technologies and techniques usually to complement the available print materials accessible to staff and students who are readers, learners, and researchers of the library's community. It is essential that libraries recognize the needs of their users and try as much as possible to meet those needs. Considering the fact that library users have diverse information needs, the library staff needs to know those needs and expectations for them to be able to provide effective service delivery; meeting the information needs of users requires the provision of the right information whenever it's required. The emergence of information and communication technologies (ICTs) has brought about a dramatic shift from the traditional method of service delivery to a modern method, where libraries and information centers now use computers and telecommunication devices for their in-house operations and services. This is similar to the views of Austin and Nelson (2020) that reported the emergence of e-resources to have had a tremendous change in the way information has been managed in Nigerian academic environments, particularly university libraries. These dramatic changes include the way in which information has been created, processed; stored; and disseminated to university communities. Therefore, the quality of information resources and services rendered should be standard to meet the users' expectations.

The library being the nerve center of academic institutions is shouldered with the responsibility of providing both print and electronic information resources to support the teaching, learning, and research activities of their parent institutions. In view of this perception, it is highly imperative for academic libraries to ensure that users are satisfied with the quality of services they render.

However, University education in Nigeria is facing a critical challenge in meeting the new demands of the 21st century, with its ever-increasing population growth, inadequate library facilities, resources, and insufficient funding. It is through evaluation and assessment of users' satisfaction that the librarians can evaluate the effectiveness and relevance of their service delivery. Delivering effective services requires regular check and balance as described by Jonshon (2012) libraries are expected to evaluate their services on regular basis to ensure it complies with the governing principle which advocates for high standards of provision and delivery of library and information services to the user community. User satisfaction is therefore a step towards retaining users in today's competitive information industries. Actually, libraries must improve the services they render to users to survive in the competitive information industry (Adegoke et. al, 2020).

2.0 STATEMENT OF THE RESEARCH PROBLEM

Several research were conducted on users' satisfaction with library services without paying attention to users' satisfaction with electronic resources and services provided in federal university libraries in Nigeria. Library users come with their expectations and the university

libraries provide them with the available resources, the question here is; are the libraries satisfying users' information needs as expected? If the answer is 'Yes' what are those factors that led to users' satisfaction with the services rendered? In addition, if the answer is "No" then what are the users' expectations and perceptions of the library? What are the things that librarians need to do to enhance users' maximum satisfaction? These amongst other questions were what the research findings answered.

3.0 AIM AND OBJECTIVES OF THE STUDY

The aim of the study is to investigate the determinants of users' satisfaction with electronic resources and services provided in Nigerian federal university libraries. Specifically, the study sought to:

- i. Determine the level of users' satisfaction with the quality of electronic resources and service provision by the federal university and libraries in Nigeria.
- ii. Investigate the determinants of user satisfaction with the electronic resources and services provided by the federal university libraries in Nigeria.
- iii. Find out if there is a significant relationship between the level of satisfaction and users' expectations?

3.1 Research Questions

- i. To what extent are users satisfied with the provision of electronic resources in the federal university libraries in Nigeria?
- ii. What are the factors that led to users' satisfaction with the provision of electronic resources and services in federal university libraries in Nigeria?
- iii. Was there any significant relationship between the level of satisfaction and Users' expectations?

H01 There is no significant relationship between the level of satisfaction and Users' expectations.

3.2 Significance of the Study

Keeping users satisfied is vital and is one of the ways university libraries can know whether they are performing up to expectations or not. This study will help the librarians to:

- know the level of satisfaction derived by the federal university library users with the electronic library resources and services provided;
- identify factors that are responsible for users' satisfaction with library electronic resources;
- let the voices of users heard about their perception of the library services
- Provide a working tool for library administrators and other stakeholders.

4.0 REVIEW OF RELATED LITERATURE

Users' satisfaction is the deep feeling of fulfillment that library users are expected to get after receiving a service or utilizing information resources that addressed their information needs as

desired. In another word, satisfaction is the aftermath feelings that a user will have after their experiences with the library services and resources. Several researchers have defined satisfaction as a comparison of users' service expectations with their perceived service performance, that is, if perceptions exceed expectations one can say that the service is of high quality (Chua, Mentol, and Kua (2004) and Kumar (2009). Similarly, Aighavboa and Thwala (2013) explained that "the word satisfaction first appeared in English during the thirteenth century and was derived from the Latin word 'Satis (meaning enough) and the ending – faction was derived from another Latin word "facere – to do/make)". The word satisfaction as explained by the two authors was used at the earlier stage as a sort of release from wrongdoing but at a later time it was used as a release from uncertainty". Nowadays, the word now broadly used to denote adequate, make pleased or contented, and satiation (enough).

Therefore, user satisfaction was connected with the library's effective services rendered towards satisfying users' information needs to be properly met. In the same study, the authors evaluated users' satisfaction with the library services at the University of Limpopo and Medunsa College (Medical University of South Africa) and found that satisfaction occurred when users make optimal utilization of library resources. Thus, satisfaction has to do with how library users valued or weighed services rendered by the library in order to ensure that their information needs are met usually in a positive way. In a similar vein, Anyim (2018) reported that poor funding, inadequate staffing, inadequate infrastructure, lack of information literacy, deliberate neglect by governments, irrelevant and inadequate information resources and services, low bandwidth, epileptic power supply; lack of awareness and obsolete equipment as problems militating against the provision and utilization of library resources in Nigerian libraries. In corroboration, Udensi and Akor (2014) viewed inadequate funding, inadequate professional librarians, inadequate service provision, poor power supply, constant strikes, theft, and disaster as part of the factor militating against the provision and use of academic library resources in Nigeria.

Electronic resources were broadly categorised into three, namely; online, near line, and stand-alone. Examples of online resources are e-journals, e-books, online databases, and world wide web sites. Near-line resources are information resources accessible on the intranet of any university library, be it full-text databases or abstracts provided they can be accessed within the institution through the university IP address; the stand-alone resources are those resources that are domiciled in the library and can only be accessed within the four walls of the library where it's installed. An example includes CD-ROMs and other portable or storage devices.

In a study conducted by Atimo and Clifford (2018), the electronic resource was described as a product of information and communication technology (ICT) which are regarded as invaluable research tools that complement print resources in any library. The authors viewed perceived ease of use of information communication technology to be the extent to which the resources were being utilized with little or no constraints and their affordability.

5.0 THEORETICAL FRAMEWORK

This study adapted the "SERVQUAL" theory/model to guide the study.

Parasuraman, Zeithaml, and Berry's ServQual Model (1985)

SERVQUAL model is also known as the gap model or RATER model designed with five dimensions for measuring service quality through gap analysis of the “Tangibles, Reliability, and Responsiveness, Assurance, and Empathy dimensions, respectively.

6.0 MATERIALS AND METHODS

The study adopted mixed methods approach to describe the situation under study. The methods were descriptive survey, focus group, observation, and interview designs. The sample size for this study was 773 postgraduate users. This study applied a multistage sampling technique to arrive at the sample size that represented the registered postgraduate users for the selected federal university libraries from the six geo-political zones of Nigeria. The study adopted a purposive sampling technique to select federal universities running postgraduate programs from the 43 federal universities in Nigeria. In selecting the 6 universities that represented the 6 geo-political zones of Nigeria, a stratified sampling technique was been adopted and finally, a simple ballot system of random selection was used to select one federal university from each geo-political zone. This was done in accordance with Taherdoost (2017)'s opinion that a random sample of sufficient size is needed to avoid sampling errors or biases in the generalization of research findings. The following university libraries were randomly selected to represent the entire six geo-political zones of Nigeria: the University of Technology Library, Owerri, (South-east), Abdullahi Fodiyo Library Complex, Usmanu Danfodiyo University, Sokoto (North-west), Ibrahim Badamosi Babangida Library, Federal University of Technology, Minna (North-central), Hezekiah Oluwasanmi Library, Obafemi Awolowo University, Ile-Ife (South-west), Ramat Library, University of Maiduguri (North-east) and John Harris Library, University of Benin, Benin City, Edo State (South-south) geo-political zones respectively.

The instruments used were Library User’s Assessment Questionnaire (LUSAQ) and the focus group guide. The face and contents of the instruments were validated by three lecturers in the field of Library and Information Science including two supervisors and one expert in Measurement and Evaluation. The data collected from the pilot test were subjected to further testing using Cronbach Alpha to ascertain the reliability of the questionnaires before administration. The analysis for this research was conducted in several stages using a combination of standard Statistical Package for the Social Sciences (SPSS) version 25 for descriptive analysis of the respondents’ socio-demographic, individual, and scale items as well as Structural Equation Modeling (SEM) of the STATA version 16, to determine level and determinants of the postgraduate users’ satisfaction with electronic resources and services quality in federal university libraries in Nigeria. Items less than the average threshold of 2.5 were interpreted to mean disagreement, while any result from 2.5 and above signified positive/ agreement. The hypothesis formulated for the study was tested with SEM using Confirmatory Factor Analysis (CFA). All tests were accepted at a confidence interval of +/-5% (p < 0.05), and descriptive data presentation used included frequency and percentage tables, pie charts, and bar chat. Table 1 showed the response rate of the questionnaire distributed.

Table 1: Response Rate

S/No.	Name of Library/ Institution	No. of Questionnaire	No. Retrieved	Percent Retrieved
-------	------------------------------	----------------------	---------------	-------------------

Administered				
1	Ibrahim Badamosi Babangida Library (FUT), Minna, Niger State	30	30	100
2	Ramat Library (UNIMAID), Maiduguri, Borno State	41	41	100
3	Abdullahi Fodiyo Library Complex (UDU), Sokoto State	155	153	99
4	John Harris Library Benin, UNIBEN Edo State	151	109	72
5	Federal University of Technology Library, Owerri, Imo state	155	150	97
6	Hezekiah Oluwasanmi Library (O.A.U), Ile-Ife, Osun State	241	239	99
Total		773	722	93

The study collected data from the 30 (100%) postgraduate users of the Ibrahim Badamosi Babangida Library and Federal University of Technology, Minna, and 41(100%) registered users from Ramat Library University of Maiduguri returned duly completed questionnaires. For Abdullahi Fodiyo Library Complex (UDU), Sokoto 153 out of 155 (99%) questionnaires were returned; John Harris Library (UNIBEN), Benin, Edo State returned 109 out of 151 (72%) questionnaires, the Federal University of Technology Library, Owerri, Imo state returned 150 (97%), while Hezekiah Oluwasanmi Library (O. A. U), Ile-Ife, Osun State returned 239 (99%) out of the 241 questionnaires administered.

Research Question 1: To what extent are users satisfied with the provision of electronic resources in the federal university libraries in Nigeria?

Table 2 presented the details of the level of users’ satisfaction with the provision of electronic resources and services in federal university libraries in Nigeria.

Table 2: Level of Users’ Satisfaction with the Provision of Electronic Resources and Services in FULs in Nigeria

S/N	Items Provision of (EIR)	HD =1	D =2	S=3	HS =4	N	FX	M	SD	Remark
		Freq (%)	Freq. (%)	Freq. (%)	Freq. (%)					
1	How satisfied are you with the available electronic resources?	54 (7.5)	132 (18.3)	459 (63.6)	77 (10.7)	722	2003	2.78	0.73	Satisfied
2	How satisfied are you with the adequacy of electronic resources in the library?	38 (5.3)	179 (24.8)	426 (59)	79 (10.9)	722	1990	2.76	0.71	Satisfied

3	How satisfied are you with reliability of the links to electronic resources?	43 (6)	195 (27)	391 (54.2)	93 (12.9)	722	1978	2.74	0.75	Satisfied
4	How satisfied are you with the ease of access to library electronic resources?	24 (3.3)	188 (26)	393 (54.4)	117 (16.2)	722	2047	2.84	0.72	Highly Satisfied
5	How friendly are the designs of the library electronic resources portal or databases?	31 (4.3)	184 (25.5)	412 (57.1)	95 (13.2)	722	2015	2.80	0.71	Satisfied
6	How satisfied are you with the conduciveness of library environment/ atmosphere?	27 (3.7)	67 (9.3)	449 (62.2)	179 (24.8)	722	2224	3.08	0.69	Satisfied
7	How satisfied are you with the quality of Library ICT facilities?	33 (4.6)	183 (25.3)	404 (56)	102 (14.1)	722	2019	2.80	0.73	Satisfied
8	How satisfied are you with the library e-resources awareness services?	51 (7.1)	255 (35.3)	287 (39.8)	129 (17.9)	722	1938	2.69	0.84	Satisfied
9	How satisfied are you with the library security measures?	562 (78)	102 (14)	40 (6)	18 (2)	722	958	1.33	0.02	Dissatisfied
10	How satisfied are you with the attitude of some library staff (friendliness).	52 (7.2)	176 (24.4)	391 (54.2)	103 (14.3)	722	1989	2.76	0.78	Satisfied
11	How satisfied are you with the overall quality of staff services and competence	42 (5.8)	126 (17.5)	454 (62.9)	100 (13.9)	722	2056	2.85	0.72	Satisfied

Table 2 presented showed the level of users' satisfaction with the provision of electronic resources. These responses ranged from (M = 1.33; S.D 0.02) ("Users' inability to use the library because of inadequate security measures put in place") to M = (3.08; S.D 0.69) ("Conduciveness of library Environment/ atmosphere"). Thus, all the results can be described as moderately satisfactory for all the items used in measuring the level of users' satisfaction with the provision of electronic resources except the use of the library for security measures. However, responses during the focus group discussion gave a clearer view of the majority of the respondents that have agreed based on the fact that the libraries provided a conducive environment for reading and research and some useful library facilities which contributed to their reasons for visiting the library but not that they were highly satisfied with the electronic library service delivery as they experienced some challenges such as lack of power back up, inadequate computer systems and lack of retrieval skills. This is similar to the findings of Adeniran (2013) and Haliso (2011) who reported users' dissatisfaction with library services due to a lack of adequate electronic resources, ineffective service delivery, and a slow network.

Library security measure with the lowest mean score is a clear indication of the respondents' high level of dissatisfaction with the library's inability to provide adequate security for users' properties. A large number of the respondents during focus group discussion reported cases of theft of personal belongings and the library management's inability to recover their stolen items which were among the factors that were responsible for the low utilization of the fee-based (Internet Protocol (IP)) based electronic resources because users must be on the university network before accessing them, and some of these resources have login parameters that can only be provided by a delegated library staff.

Research Question 2: What are the factors that led to users’ satisfaction with the provision of electronic resources and services in federal university libraries in Nigeria?

This section reported the responses of postgraduate users on their perception of satisfaction and the factors that led to their satisfaction with library services and resources.

Responses from Focus Group Discussion with Postgraduate Students on Determinants of their Satisfaction

“I need a quiet library environment to be satisfied”.

“If you provide good connectivity for me I will be satisfied”.

“I want you to extend your library café opening hours”.

“Provision of adequate systems with good connection will make students satisfied”.

“I need specialized databases and a good connection”.

“I need remote access to library electronic resources”.

“I like to have access to strong connection”.

“I will like the library to provide adequate security measures for my personal effects”.

“I want the icon of open resources to be on the desktops for easy access ”.

“I want the library to permit Laptop use in the library”.

“I want the library to create more awareness”.

Research Question 3: There is no significant relationship between the level of satisfaction and Users’ expectations

Table 3 gave details of the hypothetical relationship that existed between library service quality and users satisfaction.

Table 3: SEM Analysis of the Hypothesis

Causality Direction	Standardized Path Coefficient	P. value	S.E	Decision
Service Quality → Users’ Satisfaction	.66	0.000**	.025313	Sig. H01 Rejected

The study examined the hypothesized relationships within the model. Table 3 depicted the path coefficients for the hypothesized relationships within the proposed research model. As shown

in Table 3 null hypothesis III in the model must be rejected since the service quality ($\beta=0.66^{**}$), was found to have a significant positive influence on users' satisfaction with electronic resources.

7.0 FINDINGS OF THE STUDY

- i. Users' level of satisfaction was moderate.
- ii. Services such as conduciveness of library environment; good Internet connection; constant power supply; provision of adequate computer systems; access to laptops; longer opening hours; remote access to resources; adequate security measures and access to numerous electronic resources were factors responsible for users satisfaction.
- iii. There was a significant relationship between the level of satisfaction and Users' expectations.

8.0 CONCLUSION

They found that previous studies did not use a mixed method approach to investigate library users' satisfaction and found that users were only satisfied with some services provided by the library but not the adequacy of electronic resources.

9.0 RECOMMENDATIONS

- i. Federal university libraries must improve on their service delivery, particularly on their security measures and other services that fell below 2.5 thresholds if they want users' level of satisfaction to move from minimal to maximal.
- ii. Federal university libraries should ensure that their environment is conducive to learning; good Internet connection is provided and sustained; have power backups; provide adequate computer systems; allow users to bring in their laptops to the library; increase their operation hours; provide remote access to e-resources; re-work the security systems and subscribe to numerous electronic resources to optimally satisfied users.
- iii. Federal university libraries must provide relevant and adequate resources and sensitize their users regularly to strengthen the existing relationship between them and their users' expectations.

REFERENCES

- Adeniran, P. (2013). Usage of electronic resources by undergraduates at the Redeemer's university, Nigeria. *International Journal of Library and Information Science*, 5 (10): 319-324. Retrieved from <https://digitalcommons.unl.edu/libphilprac/1428/>
- Aighavboa and Thwala (2013). Aighavboa, C. and Thwala, W. (2013). A theoretical framework of users' satisfaction/ dissatisfaction theories and models. 2nd international conference on arts, behavioral sciences and economics issues (ICABSEI'2013) Dec. 17-18, Pattaya (Thailand). 1-6.
- Anyim, W. O. (2018). E-library resources and services: improvement and innovation of access and retrieval for effective research activities in university e-libraries in Kogi state

- Nigeria. *Lincon: Library Philosophy and Practice* 4(2), 23. Retrieved from <https://digitalcommons.unl.edu/libphilprac/1647>.
- Atinmo, M. I & Clifford, I. B. (2018). Influence of fee-based library and information services on access and use of information resources in university libraries in Nigeria. *Nigerian Libraries*. Abuja, 51(1). 74-91.
- Austin J. & Nelson, E. (2020). Challenges Associated with postgraduate students' awareness and use of online journals in Nigerian universities. *Information Impact: Journal of Information and Knowledge Management*, 11:1, 16-24. Retrieved from DOI: [dx.doi.org/10.4314/ijikm.v11i1.2](https://doi.org/10.4314/ijikm.v11i1.2)
- Chua, J., Mentol, R. & Kua L. (2004). Customer satisfaction in libraries. 121-131. Retrieved from <http://www.consal.org.sg>.
- Haliso (2011). Factors affecting information and communication technologies. *Library Philosophy and Practice*. 4, 571 Retrieved from <https://digitalcommons.unl.edu/libphilprac/571/>
- Johnson, S., et.al (2012). Key issues for e-resource collection development: a guide for libraries. *International Federation of Library Associations and Institutions*. 2-38. Retrieved from <http://www.ifla.org>
- Adegoke, K. A., Akor, P. U., & Bitagi, A. M. (2022). Prototyping the expectancy disconfirmation theory model for quality service delivery in federal university libraries in Nigeria. In A. Sharma, S. Kautish, P. Agrawal, V. Madaan, C. Gupta & S. Nanda (Ed.), *Knowledge Engineering for Modern Information Systems: Methods, Models and Tools* (pp. 26-59). Berlin, Boston: De Gruyter. <https://doi.org/10.1515/9783110713633-toc>
- Kumar, A. (2009). Use and usage of electronic resources in business schools in India: FIIB. *International Conference on Academic Libraries*, 46, 573-578