



Assessment of The Assistive Technology as Leverage of Revitalizing Libraries Southwestern Nigeria Federal Universities

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ABSTRACT	ARTICLE INFO
<p>The study investigated the extent of availability of Library Assistive Technology and its influence on library services quality as well as factors that impede its availability and application in Southwestern Nigeria Federal University Libraries. The study adopted descriptive survey research design while population comprised of all library users in the six federal university libraries in Southwestern Nigeria. 1,200 library users were selected using multistage sampling procedure. Questionnaire titled “Library Assistive Technology (LAT) and Service Quality” (LATSQ) was used to gather data analysed using mean, standard deviation and regression analysis. The decision rule was $\Rightarrow 2.0$ as high extent and <2.0 as low extent, the results showed that LATs were to a high extent available. The findings showed that the overall quality of service exhibited was very high. So also inadequacy power supply, internet facility, ICT infrastructure, settings of the furniture, staff knowledge of the operationalization of LAT, level of LAT skills, high cost of possessing LAT, cost of maintenance of LAT infrastructure, occasional breakdown of LAT facilities, and inadequate funds, The study concluded that the high quality of service delivered is not as a result of availability and usage of various types of library assistive technology.</p> <p>© 2021 Edulib</p>	<p>Article History: <i>Submitted/Received 13 Jul 2021</i> <i>First Revised 28 Aug 2021</i> <i>Accepted 02 Nov 2021</i> <i>First Available online 09 Nov 2021</i> <i>Publication Date 30 Nov 2023</i></p> <hr/> <p>Keyword: <i>Assistive Technology,</i> <i>Leverage,</i> <i>Library Assistive Technology,</i> <i>Revitalisation,</i> <i>Service Quality.</i></p>

1. INTRODUCTION

The continuing evolution of information storage and retrieval emanated from increasing rapidity of technological changes systems, made some people to believe that library is in danger of vanishing or extinction. As a result of Library Assistive Technology, academic libraries can no more be defined as a collection of books and librarians. The LAT and other devices which go along with them marked a major change in clientele's behaviour mostly from browsing to penetrating the internet which has had the main and utmost reaching effect thus far. Eras before the conception and explosion of the internet, users certainly had to carry out their research where the resources are.

The emergence of Library Assistive Technology (LAT) is the spring board of virtual library, the beginning of an open access and ubiquitous library built on the conception of 21st Century library. Library Assistive Technology (LAT) came in such a critical time when the status of library floats between prosperity and extinction heap on the wave of massive desertion of library resources and facilities. The continuing evolution of the information storage and retrieval was emanated from increasing rapidity of a technological changes systems, made some people to believe that library is in danger of vanishing or extinction. As a result of Library Assistive Technology, academic libraries can no more be defined as a collection of books and librarians. However, with LAT, the emergence of web based information technologies reveals that users can presently access information resources and carryout researches anywhere with an internet connection.

The Library assistive technology has highly increased the numbers of individuals using resources in the library from afar. Despite these innovations, there is no gain saying that library facilities are still facing low patronage. The changing functions of library emanated from the diffusion of the Assistive Technologies to the operations of library have brought with it a change in the evaluation process of service quality of library. Good service quality being the expectation of these unprecedented changes in library services that emanated from the diffusion of Assistive Technologies to libraries services. However, the state of library service quality and constraints to its application deserve research attention; hence this study.

The assistive technology is a generic term which includes assistive, adaptive, and rehabilitative devices or products for people with disabilities and also includes the process used to select, locate and use them. Library Assistive Technology (LAT) is a library enhancing technology that enables the user to perform learning tasks and to access the environment, tools, and knowledge more freely, without restriction in terms of distance, location, physical disability, or time. The introduction of Assistive Technology to library operations brought enormous benefits to the extent that libraries can no longer be described as an assemblage of book materials and their staff.

The main objective of this study is to assess the effectiveness of Library Assistive Technology as leverage of revitalizing the existence of library in Southwestern Nigeria Federal University Libraries.

The specific objectives of the study are to: (i) identify the different types of Library Assistive Technology accessible in Federal University Libraries, Southwestern Nigeria; (ii) determine the quality of service exhibited by Federal University Libraries in Southwestern Nigeria; (iii) Ascertain the influence of the diffusion of Library Assistive Technology on library services quality in Federal University Libraries in Southwestern Nigeria; and (iv) Identify the factors that influence the application of Library Assistive Technology in Southwestern Nigeria Federal University Libraries.

This research will provide answers to the following study: (i) What are the different types of Library Assistive Technology available Federal University Libraries, Southwestern Nigeria? ; (ii) What is the quality of services exhibited by Southwestern Nigeria Federal university libraries?; (iii) What are the factors that impede the application of library assistive technology in Federal University Libraries at Southwestern Nigeria?

The research hypothesis states that: H01: Diffusion of Library Assistive Technology has no significant influence on the service quality of Federal University Libraries Southwestern Nigeria.

This research will provide answers to the following study: (i) What are the different types of Library Assistive Technology available Federal University Libraries, Southwestern Nigeria? (ii) What is the quality of services exhibited by Southwestern Nigeria Federal university libraries? (iii) What are the factors that impede the application of library assistive technology in Federal University Libraries in South western Nigeria?

The advent of LAT marked a significant shift in the manner in which library users typically search and use information technology from browsing to do internet searching, which has had further influence to date. In line with this growth, Library staff's functions are shifting from book keepers to tour guide on the information highways. LAT has a major influence on human advancement and development. Advancements in science and technology have to contributed to advancements and changes in peoples practices. The rapid progress in assistive library technology is offering new potential in knowledge production and distribution. Technology is have a greater effect on our everyday life and living conditions, and on how we learn and turn the environment into the global village (Ojedokun, 2007).

Libraries around the world are developing new technology to give library clients easier and quicker access to a wide range of tools and reliable information services (Rasul & Sahu, 2011). Cholin (2005) states that LAT has given better ways to achieve high of productivity levels, excellent and efficient library services around the globe. Exploring emerging technology for service delivery is expected to provide incentives for library customers to access cheaper, more reliable and more excellence services. Nitecki (1996) notes that the calculation of library quality based on the library collections has become obsolete; as a result, the standard measure of library quality has changed from the size of library content to how available and affordable are educational resources such as library and IT support services.

According to Parasuraman, et al (1991), cited in Hsu, M (2014) only library users may judge the standard of service quality while all other decisions are considered to be less significant. Change in technology, high print resources costs, distance learning, fund reduction, and library assistive technology development have made librarians analyze library roles and show impact (Cullen, 2001). Brunsdale (2000) says that libraries should excel in the information age, highlighting user-friendliness and competitions, which is emphasizes users' ease of use and competitions, libraries should develop effective strategies to get to their users. This means library management should device a nonlibrary sector tactic, aiming to get users visit the library (Dilevko & Gottlieb, 2002). Libraries like other sectors, orders clienteles' resources such as books and nonbook resources, an environment to study and librarians to assists. Librarians in time past indicated that libraries are not just places where books are kept but places that provide access to information, hence a change in the functions of the Library staff from information expert to user service provider.

Singh & Nazim (2008) concludes that the appearance of library assistive technology, new ways of delivering information and access to information the role of libraries are changing. Students, lecturers and researchers do not have to be in the library physically just to have

access to library resources. With library assistive technology and various indexes, abstracts and database, the series of service libraries deliver has changed intensely. Clienteles could be access library resources without entering the library and unrestricted databases. Library assistive technology has opened the resources of libraries to student and faculty all over the world. According to Ufuoma (2014) University libraries has been the access point for information/library building. Also they can easily access database of library resources far away such as online catalogues knowledge by users towards effective teaching, learning and research. In this regard library roles and functions cannot be actualized without the use of LAT for information and also library service delivery. Library assistive technology refers to the different technology that is applied in the library to process information; it includes storage, retrieval, coding manipulation, also dissemination creation and transmission (Zulu, 2011).

The use of library assistive technology for delivering services in the libraries has passed through different developmental levels. Automated cataloguing, acquisition and circulation method has resulted to better operations, management and enhanced services in the library. With the library assistive technology, libraries do all they can to offer users with available information resources in their library and other libraries. Social media as characterised in library 2.0 model are becoming part of libraries they are also use to improve the library resources/services (Tiemo & Edewor, 2011). Libraries in nowadays use twitter to converse service opening times, arrival of new resources and others developed applications which allow client to explore catalogues from within facebook (Baro & Asaba, 2010).

There is no disbelief that the using LATs have delivered one of the greatest inventions in library history and role of library staff at an extraordinary way (Lewis, 2007). In this digital era library users are used to immediate access; thereby increase the need for excellent service in libraries. Quality service means services delivered at the right time; excellent service means services delivered to the user that is beyond his/her expectation or request (Nitecki, 1996). However, services rendered should provide the expected outcome at the anticipated time (Pritchard, 2001). Library service quality is the ability of the library to actualize the expected service level of services the library user believes the library should provide. It is attained by bridging the breach between clienteles' anticipations and actual services provided.

2. METHODS

The study adopted a survey research design. The population for the study comprised all the library users of the Federal University Libraries in Southwestern Nigeria. The sample of 1,200 library users was selected from the population for the study. From the six Federal Universities in Southwestern Nigeria, three universities were selected using simple random sampling technique. The three federal universities randomly selected were University of Ibadan, Ibadan; Federal University of Technology Akure and Obafemi Awolowo University, Ile Ife. Non-probability sampling technique was used in selecting 400 research participants from each of the randomly selected universities. The survey instrument used to collect primary data was titled Library Assistive Technology and Service Quality (LATSQ). The questionnaire consisted of three sections. Section A the service quality of the libraries in Southwestern Nigeria Universities. Section B focused on the influence of diffusion of library assistive technology on service quality of the library and Section focused on the factors that impede the application of Library Assistive Technology in Southwestern Nigeria University Libraries. The Data collected were analyzed using Frequency count, mean, standard deviation and regression analysis.

3. RESULTS AND DISCUSSION

3.1 The Different Types Of Library Assistive Technology That Are Available In Federal University Libraries In Southwestern Nigeria

Table 1. Library Assistive Technology.

	NA(%)	SA(%)	UA(%)	AA(%)	Mean	Std. Dev.
Computer	118 (17.8)	213 (20.2)	235 (22.3)	419 (39.7)	2.84	1.13
OPAC (Online public access catalogue)	205 (18.3)	286 (25.6)	276 (24.7)	352 (31.5)	2.69	1.09
Union catalogue	254 (23.7)	287 (26.8)	295 (27.5)	236 (22.0)	2.48	1.08
Tape recorders	418 (34.1)	290 (27.1)	193 (18.0)	168 (15.7)	2.12	1.25
Audio books	436 (40.7)	725 (25.7)	193 (18.0)	168 (15.7)	2.09	1.09
Headphones	512 (47.7)	239 (22.3)	170 (15.8)	152 (14.2)	1.96	1.09
C.D. Rom	331 (30.5)	291 (26.8)	222 (20.4)	242 (22.3)	2.35	1.17
Scanner	276 (25.3)	268 (24.6)	255 (23.4)	291 (26.7)	2.51	1.17
RFID(Radio frequency identification)	487 (60.0)	268 (25.3)	166 (15.7)	137 (12.9)	1.96	1.075
Tele text	401 (38.5)	263 (25.5)	192 (18.4)	183 (17.6)	2.17	1.19
Photocopier	126 (11.0)	198 (17.3)	304 (26.6)	514 (45.0)	3.07	1.03
Printing technology	153 (14.0)	224 (20.5)	279 (25.5)	437 (39.9)	2.91	1.08
Barcode reader/Barcode scanner	404 (38.4)	263 (25.0)	192 (18.2)	192 (18.2)	2.17	1.16
Internet	141 (12.5)	257 (22.7)	267 (23.6)	464 (41.1)	2.93	1.07
Database	194 (18.2)	246 (23.1)	264 (24.7)	361 (33.8)	2.75	1.14
Audiovisual material	278 (26.3)	265 (25.0)	251 (23.7)	264 (24.9)	2.47	1.13
E-mail	234 (21.4)	225 (20.5)	236 (21.5)	401 (36.6)	2.73	1.16
MP3	476 (43.6)	262 (24.0)	177 (16.2)	177 (16.2)	2.05	1.12
MP4	506 (46.4)	262 (24.0)	156 (14.3)	166 (15.2)	1.98	1.10
MP5	558 (51.1)	251 (23.0)	137 (12.5)	164 (13.4)	1.88	1.08

Keys: NA= Never Available, SA= Sometimes Available, UA= Usually Available, AA= Always Available.

Table 1 revealed the different types of Library Assistive Technology that are available. 17.8% of the respondents claimed that Computers are not available, 18.3% claimed that OPAC

is not available, 23.7% claimed that Union catalogue is not available, 34.1% claimed that Tape recorders are not available, 40.7% claimed that Headphones are not available, 30.5% claimed that CD Rom are not available, 25.3% claimed that Scanners are not available, 60.0% claimed that RFID are not available, 38.5% claimed that Tele text are not available, 11.0% claimed that Photocopiers are not available, 14.0% claimed that Printing technologies are not available, 38.4% claimed Barcode readers are not available, 12.5% claimed Internet is not available, 18.2% claimed Database is not available, 26.3% claimed Audio Visual materials are not available, 21.4% claimed E-mail is not available, 43.6% claimed MP3 are not available, 46.4% claimed MP4 are not available and 51.8% claimed MP5 are not available. Using simple majority rule at 40% of non-availability of the various Library Assistive Technology, it can thus be inferred that Computer, OPAC, Union catalogue, CD rom, Scanners, Photocopiers, Printing Technology, Internet, Database and E-mail are all available LAT in Southwestern Nigeria Federal University Libraries. Although they can be sometimes available, usually available or always available.

3.2 What is the quality of service exhibited by Federal University Libraries South- western Nigeria

Table 2. Quality Of Service Exhibited At Federal University Libraries In Southwestern Nigeria.

Quality of Service Dimension		Service Quality of Library					
ITEM		SD	D	A	SA	Mean	Std. Dev.
<i>Effect of Service</i>							
1	The staff in my university library always in still confidence in users to use resources even if they are novice of such	117 (10.2)	105 (9.2)	488 (42.6)	436 (38.0)	3.09	.94
2	The staff in my university library always give users individual attention	65 (5.7)	146 (12.7)	5.14 (44.7)	424 (36.9)	3.13	.84
3	The staff in my university library are consistently courteous	55 (4.9)	112 (10.0)	527 (46.9)	431 (38.3)	3.19	.80
4	The staff in my university library are always ready to respond to users' questions	56 (4.9)	102 (8.9)	508 (44.2)	484 (42.1)	3.24	.81
5	The staff in my university library have basic knowledge to answer user questions	60 (5.2)	115 (10.6)	534 (46.3)	444 (38.5)	3.18	.81
6	The staff in my university library always deal with users in a caring fashion	84 (7.3)	151 (13.2)	526 (46.0)	383 (33.5)	3.06	.87
7	The staff in my university library are always willing to help users	66 (5.8)	108 (9.5)	528 (46.6)	431 (38.0)	3.16	.82
8	The staff in my university library always understand the needs of their users	64 (5.6)	162 (14.1)	552 (48.1)	370 (32.2)	3.06	.82
9	The staff in my university library are dependable in handling users' service problems	79 (6.9)	143 (12.5)	532 (46.5)	389 (34.0)	3.07	.86
Effect of Service cumulated mean						3.13	

Quality of Service Dimension		Service Quality of Library					
		ITEM	SD	D	A	SA	Mean
Library as Place							
1	My university library provides library space that inspires study and learning	52 (4.5)	76 (6.6)	382 (33.1)	465 (55.8)	3.40	.80
2	My university library provides quiet space for individual activities	43 (3.7)	81 (7.0)	399 (34.6)	631 (54.7)	3.40	.77
3	My university library is located in a comfortable and inviting location	47 (4.1)	80 (6.9)	411 (35.6)	615 (53.3)	3.38	.78
4	My university library provides a gateway for study, learning or research	36 (3.1)	83 (7.2)	385 (33.5)	645 (56.1)	3.42	.76
5	My university library provides community space for group learning and group study	56 (4.9)	130 (11.3)	419 (36.3)	547 (47.4)	3.28	1.01
Library as a Place cumulated mean						3.38	
Information Control							
1	My university library makes electronic resources accessible from home or office	99 (8.6)	153 (13.4)	481 (42.0)	413 (36.0)	3.05	.92
2	My university library has Web site that enable the users to locate information on their own	53 (4.8)	118 (10.6)	512 (46.2)	426 (38.4)	3.18	.80
3	My university library makes reprographic section readily accessible for printing needed library materials	57 (5.0)	111 (9.2)	518 (45.2)	161 (40.2)	3.21	.88
4	My university library makes electronic information resources readily available	63 (5.5)	92 (8.0)	477 (41.5)	514 (44.8)	3.29	1.46
5	My university library provides Modern equipment that motivate and encourage access of needed information in the library	55 (4.8)	79 (6.9)	489 (42.4)	528 (45.8)	3.30	.80
6	My university library provides easy-to-use access tools that allow users to find things on their own	46 (4.0)	93 (8.1)	475 (41.3)	537 (46.7)	3.31	.78
7	My university library makes information easily accessible for independent use	39 (3.4)	89 (7.2)	494 (43.0)	527 (45.9)	3.31	.76
8	Printed and/or electronic journal collections require for teaching, learning and research are in adequate supply in my university library	42 (3.6)	70 (6.1)	472 (40.9)	569 (49.3)	3.36	.76
Information Control Cumulated mean						3.24	
Overall cumulated mean							

Table 2 is showed the quality of service exhibited by Southwestern Nigeria Federal University Libraries by the respondents the three areas of service dimension identified were

Effect of service, Library as a place and Information control. The cumulative mean for Effect of Service is 3.13, Library as a place 3.38 and Information control 3.24. The dimension of library services that ranked highest is Library as a place with mean= 3.38 of four point Likert type scale. This implies that the Southwestern Nigeria Federal University Libraries inspires studying and learning, comfortable, provide gateway for studying and make provision for group studying and learning. This is followed by information control with a mean of 3.24 of four point Likert type scale. This implies that the libraries have a good easy to use access tools, electronic information resources are readily available, accessibility of library resources without distance barriers.

The third dimension of service Affect Service ranked the lowest with mean of 3.13 of four point Likert type scale. Despite being ranked lowest among other dimension, it is still regarded as having high quality mean of 3.13 of four point Likert type scale. The respondents attested to the fact that the library staff are accommodating, they have adequate knowledge of the resources available, respond to users questions and appropriately dependable in handling users request. The table further revealed the overall service cumulated mean of the quality of service exhibited by Federal University Libraries in Southwestern Nigeria mean was 3.32 of four point Likert type scale. It can therefore be concluded that overall quality of library services is adjudged to be very high. Respondents reported that the service quality of Federal University Libraries in Southwestern Nigeria is very high. The dimension of service quality that was adjudged to be of highest quality is dimension Library as a place, followed by dimension information control while Effect of Service was rated last.

The implication of this is that libraries in Southwestern Nigeria Federal Universities are operating to the expectations of their clientele this finding is supported by [Matins \(2003\)](#) whose findings from the investigation of service quality in health libraries reveals that clienteles were more pleased with services rendered in the library in spite of having definite concern on few aspect of the library service. However, this findings is against [Onuoha,et al \(2010\)](#) who worked on Assessing Service Effectiveness and Satisfaction with Library Service at Babcock University revealed that 83.0% of the respondents were satisfied with library service to a little extent only, 15% of respondents claimed to be satisfied with the library service to a great extent. That was many respondents expressed little satisfaction with the library services.

3.3 What are the factors that impede the application of Library Assistive Technology in Federal University Libraries in Southwestern Nigeria?

Table 3. Factors that impede the application of Library Assistive Technology in Federal University Libraries in Southwestern Nigeria.

S/N	Items of LAT Infrastructure	SD (%)	D (%)	A (%)	SA (%)	Mean	S.D
1	Epileptic power supply	112 (9.8)	151 (13.2)	447 (38.9)	438 (38.2)	3.06	.95
2	Impeded internet facility.	96 (8.4)	176 (15.5)	480 (42.1)	386 (33.9)	3.03	.91
3	Inadequate information as per the availability of the assistive technology in the library	61 (5.4)	186 (16.4)	538 (47.4)	349 (30.7)	3.04	.83
4	Non-availability of ICT Infrastructures	76 (6.7)	151 (13.3)	514 (45.2)	397 (34.9)	3.08	.86

S/N	Items of LAT Infrastructure	SD (%)	D (%)	A (%)	SA (%)	Mean	S.D
5	Inadequate settings of the furniture meant for the operation of these LATs	69 (6.1)	164 (14.5)	523 (46.2)	375 (33.2)	3.06	.85
6	Staff inadequate knowledge of the operationalization of LAT	64 (5.7)	153 (13.5)	563 (49.8)	350 (30.9)	3.06	.82
7	Low level of LAT skills	66 (5.8)	159 (14.1)	582 (51.5)	323 (28.6)	3.03	.81
8	High cost of possession of LAT	62 (5.5)	202 (17.9)	557 (49.3)	307 (27.2)	3.01	1.2
9	High cost of maintenance of LAT infrastructure	78 (6.9)	185 (16.3)	547 (48.3)	322 (28.4)	2.99	.85
10	Occasional breakdown of LAT facilities	96 (8.5)	229 (20.3)	541 (47.9)	263 (23.3)	2.86	.87
11	Non-availability of funds	93 (8.1)	166 (14.5)	528 (46.2)	356 (31.6)	3.00	.89

Table 3 showed the factors that impede the application of LAT as provided by the respondents.

The factors that impede the application of LAT as shown are epileptic power supply with mean = 3.0 (SD= .95), impeded internet facility, mean = 3.03 (SD= .91), inadequate information as per the availability of the assistive technology in the library mean = 3.04 (SD = .83), non-availability of ICT Infrastructures mean = 3.08 (SD = .86), inadequate settings of the furniture meant for the operation of LATs mean = 3.06 (SD= .85), staff inadequate knowledge of the operation alization of LAT mean = 3.06 (SD= .82), Level of LAT skills mean = 3.03 (SD= .81), cost of possession of LAT mean = 3.01 (SD= 1.2), high cost of maintenance of LAT infrastructure mean = 2.99 (SD= .85) and occasional breakdown of LAT facilities mean = 2.88 (S- D= .87) and inadequate funds mean = 3.00 (SD= .89). This finding is in line with that of [Chisenga \(2004\)](#) who surveyed the use of ICT in libraries in tenth Anglophone African countries, the study shows that all libraries used for the study, pointed out lack insufficient ICT staffs, lack of funds and findings, from two libraries in Nigeria reveals poor supply of electricity.

3.4 Research Hypotesis

H₀₁: Diffusion of Library Assistive Technology has no significant influence on the service quality of Federal University Libraries in Southwestern Nigeria.

Table 4. Diffusion of Library Assistive Technology on Library Service Quality.

Model		Sum of Squares	Df	Mean Square	F	R ²	Sig.
1	Regression	14165.079	1	14165.079	423.887		
	Residual	386667.313	1198	322.761		0.035	
							.000 ^a
Total		400832.392	1199				

a. Predictors: (Constant), diffusion
b. Dependent Variable: Perceived Service Quality

Table 3 shows the regression analysis of coefficient and significant value of 0.035 of influence of LAT application on service quality of southwestern Nigeria Federal University libraries. The result reveals that there is no significant influence of diffusion of LAT on service quality of federal University Libraries in Southwestern Nigeria as calculated value of $R^2 = 0.035$. Therefore the null hypothesis is not rejected.

3.5 Discussion

The study investigated Library Assistive Technology and service Quality of University Libraries in Southwestern Nigeria. The section begins with the discussion of findings from demographic information of the respondents. There after the findings from each of the four research questions and one hypothesis which were based on determining the relationship between diffusion of Library Assistive Technology and Library Service Quality. Findings from research question one revealed that computer, OPAC, union catalogue, CD Rom, scanners, photocopiers, printing technology, internet, database and E-mail are the available LAT in Southwestern Nigeria Federal University Libraries. The findings is in line with the findings of [Jamal and Nazmul \(2012\)](#) who worked on use of Information Technology in Library Service and discovered that technologies like photocopier, CD Rom, E-mail, internet, computer, OPAC, teletex are available in the library and are used in operation of library service.

[Achala \(2008\)](#) in his work on Effectiveness on National union catalogue in sharing Information in Sir Lankey, found out that the technology union catalogue is available but it is not adequately use by the student in the area of study. Similarly, [Thompson \(2012\)](#) worked on student use of library computers, she discovered that the computer is available in the library and the result shows that student constantly prefers to use computers in the library with 78% declaring a preference to the use of computer in the library over other computers on campus. [Alarape et al \(2017\)](#), who worked on evaluation of e-resources in Obafemi Awolowo University, Ile-Ife revealed that the extent of e-resources availability in the Obafemi Awolowo University is high.

Another obvious fact this study revealed is the findings of research question two that shows that internet, photocopier, computer, printing technology, database, E-mail, audio visual materials, scanners, union catalogue, CD Rom are used in the library by library users in their quest for information of any form from time to time. This is in agreement with [Armah \(2009\)](#) who examined how students, lecturers and research fellow have been using internet service provided by the three oldest public universities in Ghana, the Balme Library of the University of Ghana, Legon; the Kwame Nkrumah University of Science and Technology Library and the University of Cape Coast Library. The result of this study shows that some of respondents sometimes used the resources mainly for sending and receiving information.

Similarly [Ingutta-Oyieke \(2008\)](#) examines the main features of ICT used by a public and private university library in Kenya in support of formal and informal teaching and learning. The findings revealed that there is insufficient ICT infrastructure especially library network and computer at Kenyatta University Library; access to and use of ICTs is affected by lack of skills. ICT usage differs with Kenyatta students lagging behind but University of Eastern Africa Baraton (UEAB) students and student learning outcomes are diverse, UEAB students benefited from the use of Library E-resources to meet their formal and informal needs and Kenyatta students do not benefit at all. [Emmanuel \(2015\)](#) who worked on Utilization of Information and Communication technology in public library service in Nigeria reveals that library users use ICT facilities for various purpose in public libraries. Users use ICT facilities for accessing educational information, self-development, downloading and storing information, internet browsing, checking of mails and word processing. [Alarape et al \(2017\)](#) reveal that there is a high level of usage of e-resources in Obafemi Awolowo University.

Respondents reported that the service quality of Federal University Libraries in Southwestern Nigeria is very high. Dimension of service quality that was adjudged to be of highest quality is dimension Library as a place, followed by dimension information control while effect of Service was rated last. The implication of this is that libraries in Southwestern Nigeria Federal Universities are operating to the expectations of their clientele this finding is supported by [Matins \(2003\)](#) whose findings from the investigation of service quality in health libraries reveals that clienteles were more pleased with services rendered in the library in spite of having definite concern on few aspect of the library service. However, this findings as against [Onuoha, et al \(2010\)](#) who worked on Assessing Service Effectiveness and Satisfaction with Library Service at Babcock University revealed that 83.0% of the respondents were satisfied with library service to a little extent only, 15% of the respondents claimed to be satisfied with the library service to a great extent.

The high rate of respondents reported that epileptic power supply, impeded internet facility, inadequate information as per the availability of the assistive technology in the library, non-availability of ICT Infrastructures, inadequate settings of furniture meant for the operation of LATs, staff inadequate knowledge of the operationalization of LAT, Level of LAT skills, cost of possession of LAT, high cost of maintenance of LAT infrastructure, occasional breakdown of LAT facilities and inadequate funds. This finding is consonance with [Chisenga \(2004\)](#) who surveyed the use of ICT in libraries in ten Anglophone African countries, the study shows that all libraries used for the study, pointed out lack insufficient ICT staffs, lack of funds and findings, from two libraries in Nigeria reveals poor supply of electricity.

Similarly, the report submitted by Montenson Centre for international library programs at Illinois Urbana Campaign 2005 points out that unstable power sources, lack of fund, insufficient of workers development and inadequate and costly internet bandwidth affect work performances of librarians. Also [Siddike, et al \(2011\)](#) who worked on adoption of the information communication technology (ICT) in the university libraries of Bangladesh, the result shows that the key factor that militates against effective adoption of ICT is lack of awareness of information communication technology abilities by clienteles. Fifteen surveyed academic libraries in Bangladesh face negative attitudes of staff towards library automation.

Ten surveyed university libraries of Bangladesh face negative attitude of university authority on lack of infrastructure, ICT, high cost of infrastructure development, uninterruptible internet connection, lack of trained personel, and lack of support financially. [Haliso \(2011\)](#) worked on Factors Affecting ICT use discovered that poor electricity supply and inadequate budget are factors affecting the application of ICT. [Alarape et al \(2017\)](#), who

worked on An Evaluation of E- resources in Obafemi Awolowo University, Ile-Ife found out that factors such as irregular internet access, poor network system, inadequate ICT infrastructure, poor and erratic power supply and lack of standby generator were identified as constraints to effective and efficient utilization of the benefit of the innovations in the library.

The result of the regression analysis used to determine the influence of LAT diffusion on the quality of services rendered by Southwestern Nigeria Federal University Libraries revealed that there is no positive degree of influence in the relationship $r=0.035 < P=0.05$. Therefore the null hypothesis is not rejected. This implies that there is no significant relationship between LAT diffusion on the quality of Service in Southwestern Nigeria Federal University Libraries. The implication of this result is that the diffusion of Library Assistive Technology does not significantly affect the quality of service the libraries render to their community of users.

4. CONCLUSION

From the findings of this study, it was concluded that LAT are available in Federal University Libraries in Southwestern Nigeria and they are used by library clientele and libraries in their various operations. But however, the conclusion shows that the influence of LAT on service quality exhibited by the libraries is insignificant.

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