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Librarians' ICT Skills and Service Delivery in Private Universities in Nigeria

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Abstract

This paper examined the Information and Communication Technology (ICT) skills of librarians for service delivery in private universities with particular reference to Southern Nigeria. The study adopted the survey research method. Forty-five (45) private university libraries in Southern Nigeria and their librarians constituted the sample size for the study. The study's samples consisted of 181 librarians in the private universities, hence, total enumeration was adopted. Questionnaire was used for data collection from the respondents. Out of the 181 copies of the questionnaire distributed, 173 were returned and found valid for analysis. Data gathered was analysed using the Statistical Package for Social Sciences (SPSS) Version 21 and the results were presented in frequency count, percentage, mean and chart. Findings of the study revealed that librarians in private universities in Southern Nigeria delivered various library services to their users. The librarians have acquired basic ICT skills and were versatile in its application for Internet searches, information retrieval, social communication and Microsoft-office related activities with the exception of programming skills. Majority of the librarians acquired their ICT skills through self-learning. The finding revealed that the acquisition of ICT skills by librarians in Southern Nigeria private universities is relevant to their delivery of improved library services. The paper recommended that regular acquisition of relevant ICT skills is essential for librarians and university management should support librarians' ICT capacity development at national and international levels as this would enhance their relevance and get them abreast of the latest development for effective service delivery.

Keywords

ICT, ICT skills, librarians, private universities, service delivery, Nigeria

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Introduction

Librarians are professional staff that have acquired required qualifications in the field of library, archival and information science to enable them perform different library functions ranging from collection development, knowledge management and preservation of information resources. Other services rendered by librarians to library patrons are Selective Dissemination of Information (SDI), Current Awareness Service (CAS), issuance of notifications, reservation, library orientation and reference among others. These functions and services are carried out through conventional methods and Information and Communication Technology (ICT); they are delivered electronically. ICT has brought about innovative ways through which library services can be delivered to users. With the deployment of ICT facilities in libraries, librarians require adequate ICT skills and knowledge to utilise these facilities optimally in meeting the information needs of library users. ICT can be referred to as tools and techniques for managing and utilising information (Seena & Pillai 2014).

Information and Communication Technology (ICT) elements are the infrastructures, devices, and tools deployed to enhance or change the conventional methods of practice by an individual, organisation, institution or nation. In the context of this study, ICT facilities are applied by librarians to accelerate library service delivery. Librarians are expected to acquire necessary and adequate ICT skills to manage and disseminate various services effectively in university libraries. Ilesanmi (2013); Obasola *et al.* (2014) argue the necessity for librarians to acquire the needful skills for improved productivity and innovative service delivery in university libraries. However, Ahmed (2014) notes that low levels of ICT skills among information professionals studied in some universities.

Nigerian universities' libraries are established to support Teaching, Learning and Research (TLR) mandates of the parent institution. They are integral parts of a university system who have accepted and embraced the application of ICT in different aspects of library service delivery and, this is rapidly gaining ground and being improved upon from time-to-time. The adoption and implementation of ICT in the university libraries has enhanced speedy access to information and other library services without location constraints. Adequate ICT skills are key to librarians' effective service delivery to their users in private universities' libraries in Nigeria. Therefore, there is the need for librarians to acquire the needed ICT skills in order to ensure the provision of innovative service delivery to their patrons. Librarians are to avail themselves of the opportunity to acquire the ICT skills that will enhance their

performance. Adamu *et al.* (2021) opine that ICT skills acquisition by library and information professionals can be done through conference attendance, seminars and workshops which, in turn, enhance information service delivery.

Statement of the problem

ICT has transformed the processes and methods through which library functions are executed. Many libraries operate a hybrid system where both traditional and modern ways of executing library tasks are applied. However, some library activities still go through the conventional method while other libraries operate only a modern method. The acquisition of ICT skills and its use by librarians, especially in the information age, cannot be overemphasized as it is essential for library service delivery. Studies have shown the inadequacy in the ICT skills of librarians which has resulted in poor service delivery in Bangladesh and Nigerian universities respectively (Ahmed 2014; Nnadozie 2016). It is observed by the researcher that there is a dearth of knowledge in the area of ICT skills acquisition for effective service delivery by librarians in the selected private universities in Southern Nigeria. Hence, there is the need to investigate the levels of private universities' librarians' ICT skills in meeting the information age needs of their patrons. It is against this backdrop that this study investigated librarians' ICT skills acquisition and service delivery in private universities in Southern Nigeria.

Objectives of the Study

The general objective of the study is to examine library service delivery and ICT skills of librarians in private universities in Southern Nigeria. The specific objectives of the study are to:

1. determine the types of services that ICT skills are used for by librarians in private universities in Southern Nigeria;
2. evaluate the level of ICT skills acquired by librarians for service delivery in private universities in Southern Nigeria; and
3. ascertain the sources of ICT skills acquisition by librarians in private universities in Southern Nigeria.

Research Questions

The following research questions were raised to guide this study:

1. What are the types of services that ICT skills are used for by librarians in private universities in Southern Nigeria?
2. What is the level of ICT skills acquired by librarians in private universities in Southern Nigeria?
3. What are the sources of ICT skills acquired by librarians in private universities in Southern Nigeria?

Literature Review

Librarians in universities are expected to deliver various services to their users. Some of the services include document delivery, selective dissemination of information, issuance of notifications on library updates and provision of reference services among others. Literature has revealed that librarians are involved in handling various library services that support research, teaching and community services (Ajayi *et al.* 2013; Aina, 2014). The methods by which these services are being delivered are changing rapidly as technologies evolve. These services were mostly delivered in traditional ways which involved the users visiting the physical libraries to access materials or the materials being mailed to the users through their postal addresses.

But with the different Information and Communication Technologies (ICTs) in place, such services could be delivered virtually through different platforms like email and social media. To perform these functions which are ICT-inclined, librarians are expected to upscale themselves in order to effectively deliver library services to their users. Mabawonku (2017); Agbo and Eyinnah (2022) affirm the relevance of ICT-embedded services and their application among librarians to make them more effective in the delivery of various library operations. Quadri and Garaba (2019) established that library professionals with ICT skills render more current awareness services to their users. They also affirmed that the levels of their respondents' ICT skills enabled knowledge sharing among colleagues for delivering more effective library services.

Husain and Nazim's (2015) findings revealed that 80% of the participants admitted that they used ICT to render library services such as in-house database searches; 75% of the participants indicated their involvement in the provision of electronic books, electronic journals and electronic articles; 55% of the participants revealed that they provided web-based reference and other information services. They called attention to the utility of social media for library services provision. Forty percent of the respondents used ICT to render online tutorials, 35% of the respondents used subject gateways/web portals, 15% deployed FAQ database and 10% utilised e-mailing alert system for information-sharing between librarians and users.

Ojedokun and Okafor (2015) reported that majority of the respondents, who are librarians, used ICT skills for library service delivery as they conveniently used email to compose, forward, reply and forward electronic documents to others; over 80% of the librarians could use basic Microsoft word processing features such as formatting operations. However, less than half of the respondents could use features such as bookmarking, referencing, footnote, drop-cap and watermarking. On Internet and database searching, 87% and 67% of the participants claimed that they used their ICT

skills to formulate as well as refine searches on the Internet and databases respectively but their responses indicated low competence in the areas of web design skills.

Ajayiet *al.* (2013) studied the factors influencing ICT use by library personnel in tertiary institutions in two south-west states in Nigeria. The target population was all library personnel in the college libraries of two states. Total enumeration sampling technique was adopted. Out of 240 copies of the questionnaire that were administered on the respondents, 193 copies were returned and found useful for analysis. Findings of the study reveal that over half of the participants were male while less than 50% were female. The majority of the respondents (84) were between 31 and 40 years of age while 52 respondents were within 21-30 years of age. The results show the respondents' acquisition of ICT skills were in certain areas. The larger percentage of the respondents (83%) specified that they made use of printers, and 80% admitted that they made use of personal computers ICT tools in the library. Many of the library personnel (72%) confirmed that they used scanners and 74% of the respondents made use of flash drives. The results also indicated that 80% of the participants used ICT facilities to retrieve information; 78% of the participants claimed the use of ICT tools to disseminate information; 76% respondents indicated that they used ICT tools for storing information while 70% of the participants used ICT facilities to process information.

Acquisition of ICT skills by librarians is essential especially in this information age and cannot be underestimated. Husain and Nazim (2015) in their study asserted that, in the area of information and data management, 70% of the respondents indicated that they received training to perform various library functions. The participants claimed to possess high ICT skills. 12 participants (60%) claimed to have ICT skills in content management; 13(65%) stated their high competence in metadata management; 15(75%) indicated their high ICT skills in web development; 14 (70%) claimed to be highly competent in hardware maintenance and 17(85%) possessed high ICT skills in computer programming. The study concluded that handling library service delivery entails the application of ICT skills which librarians should possess and improve upon from time to time.

In a similar study conducted by Mathew and Baby (2012) which investigated librarians' ICT skills, level of awareness and application of skills to library services, survey research method was used while questionnaire was deployed for data collection. The results revealed that majority of the respondents were of moderate ICT skills. Fifty percent of the participants were skilled in electronic resources

management, 41% participants were skilled in Linux operation, 23% were skilled in institutional repository activities, 22% of the respondents had computer maintenance skills, 17% of the participants were skilled in software development and 14% of the participants could handle metadata. Furthermore, their findings indicated that acquisition of necessary ICT skills would tremendously benefit library and information professionals in optimizing their performance in the information age. Inadequate training in ICT applications and lack of infrastructural facilities were identified as impediments to achieving desired ICT skills by the information professionals studied. Owusu-Ansha *et al.* (2015) also reported the need for regular capacity development among academic librarians for effective library service delivery in four African universities studied.

Ahmed (2014) investigated the Information Technology (IT) facilities provided for service delivery and librarians' ICT skills capacity in government-owned academic libraries. Mixed method (questionnaire, on-site observation and interview) was adopted for data collection. Data collected were analysed and presented in frequency counts and percentages. Out of the 33 university libraries studied, 31 were found useful for the study. The study reported that all the librarians in the universities studied had no skills in the area of IT-related activities. The author submitted that there was the urgent need to have national and international training for librarians in order to fill the gap.

Nnadozie (2016) assessed the relationship between librarians, their ICT skills and the services rendered to the faculty members of the universities studied. Survey research design was adopted for the study. One hundred and twelve (112) librarians and 4,469 lecturers from 11 universities constituted the population of the study. Data was analysed using descriptive and inferential statistics. The results show that the information professionals affirmed their acquisition and use of ICT skills for information resources management and information service delivery with the highest mean score of 3.20. The work reported that the connection between the information professionals' ICT skills and users' service satisfaction was weak, hence, the ICT competencies of the librarians studied was low compared to the faculty members' level of service delivery satisfaction.

Gbaje and Ukachi (2011) explored librarians' ICT skills competencies in two universities in Nigeria. 71% of the respondents indicated their high use of ICT skills in the deployment of Microsoft Office suite, Internet searching and email usage but half of the respondents agreed to having possessed the ICT skills in the area of library management software. Fewer respondents asserted their competence and being

skillful in the areas of digitisation, devices troubleshooting, software installation, web design and social media use. They also reported that all the respondents attested to having ICT skills on Microsoft Office suite. More than half of the librarians indicated acquisition of skills on Virtual/Alice for Windows. Majority of the respondents attested to the need for ICT skills in the areas of web design, evaluation of Internet resources, social media, computer security and software installation. Similarly, Ojedokun and Okafor (2015) examined the relevance and adequacy of librarians' ICT competencies. Results of the study showed that majority of the participants (73%) indicated that they had master's degree in library or information science; 16% had bachelor degree in library studies; 9% had doctor of philosophy and 1% had master of philosophy and national diploma in library science respectively. The majority of the respondents had five years of work experience in library practice while only 4% had about 30 years of librarianship practice. The majority of the respondents claimed to possess average ICT skills to perform different library functions.

Mommoh and Saka (2016) conducted a study on librarians' competencies in the area of Information and Communication Technology use for delivering services in some libraries in Abuja, Nigeria. Five ICT skills: computer operation, database management, the Internet use, libraries application package and networking were assessed. The findings revealed that all the respondents indicated that they had acquired modern technology skills in computer operations, database management, the Internet, library management software and networking on the job. The majority of the librarians (75%) confirmed that they used database skills, 70% consented to the use of the Internet skills for service delivery but networking skills were by lesser number of respondents.

Baro *et al.* (2013) reported that librarians' skills and time were relevant and important to service delivery in university libraries. The authors submitted that training and retraining of librarians' in the area of ICT skills is essential for their competencies in rendering library services. Their findings also showed that over 85% of the participants indicated that they had acquired skills in emerging technologies for library service delivery. In the same vein, a study by Ajayiet *al.* (2013) revealed that majority of the participants (69%) had excellent ICT skills in the use of computers and 61% could use the Internet effectively. Similarly, a study by Bajpai and Margam (2019) on ICT skills of information professionals in Delhi revealed the respondents' high level of competencies in the application of ICT to service delivery. Sixty professionals participated in the study. Questionnaire was the instrument used for

data collection. The results of the study showed that majority of the respondents had the basic knowledge of ICT skills in application software such as Microsoft Office (Word, Excel, PowerPoint and Access) to perform library functions.

On the contrary, a study was conducted by Kattimani and Naik (2013) on the assessment of librarians' ICT competencies and their challenges in India. In some public and private colleges studied, a critical examination of librarians' ICT skills in the areas of creation of files and folders, system troubleshooting, use of desktops and laptops, library management software, Internet use, website design, radio frequency identification detector, conversion of analogue information resources to digital formats and use of various search engines. The results showed that all the categories of librarians studied possessed ICT skills and competencies which they applied to library services delivery. Esse (2013)'s study found that 72% of the participants who are librarians indicated that it was important to attend workshops in order to acquire the ICT skills necessary for rendering services to library patrons. Amoah and Akussah (2017) assessed academic librarians' capacity development and performance in Sam Jonah Library, Ghana. Their findings revealed that internal and external training programmes were in existence for staff to tap into. Seminars, training on specialised activities in the library and library orientation for newly employed staff were among the internal programmes highlighted. The external training programmes included formal professional training programmes outside the library. They concluded that staff development was one of the necessary and valuable techniques for improving employees' effectiveness.

In a study conducted by Adamuet *al.* (2021) on the professional development of 82 librarians in three federal universities in North-Central Nigeria, the majority of the respondents claimed that the sources through which they acquired new ICT skills were conferences, workshops and in-house training. According to Mbagwu (2020) in a study on the ICT skills of 64 selected information professionals in six public tertiary institutions (three universities, two polytechnic and one college of education), the professionals obtained their ICT skills from various sources such as attending private computer training, personal practice and on-the-job staff training. However, the prevalent means of their professional development was on-the-job staff training. Similarly Manzo (2020) reported a high level of ICT skills among the respondents, who are librarians, from Katsina State's tertiary institutions. The majority of the respondents (85.2%) affirmed that they acquired their ICT skills through in-house training; this group was followed the 83% who obtained their ICT skills through self-study. In the same vein, Gbaje and Ukachi's (2011) studies

submitted that majority of the participants in the survey admitted that the modes of their ICT skills acquisition were through in-house training and the Nigeria Library Association's training workshops. The least modes of ICT skills acquisition, as identified by the respondents, were capacity-building workshops organised by international bodies such as the Macarthur Foundation, Carnegie Foundation and other non-governmental organisations such as eIFL.net.

Theoretical Framework

This study was anchored to the Technology Acceptance Model (TAM). This model was propounded by Davis (1989). The model proposes that, when an intended user of an aspect of Information and Communicated Technology (ICT) perceives the technology to be useful and easy to use, there would be a positive change in attitude and behaviour towards the technology. Hence, the technology will be accepted and used. Situating this model in the study, one concludes that librarians can perceive the positive influence of any technology on their work and this can inform their acceptance and use of such a technology. They will acquire the necessary skills for deploying the technology for an innovative library service delivery.

Methodology

A survey research method was adopted for the study. The method is found suitable because it is used in gathering holistic and unbiased responses from participants. The population of the study consists of all the librarians in the 45 private universities in Southern Nigeria. The total number of librarians in the private universities was 181. All the librarians that constituted the population of this study participated in the research; hence, total enumeration sampling was adopted for the study. Questionnaire was used as an instrument for data collection. The researcher and five research assistants personally distributed and collected copies of the questionnaire from the universities covered within the period of five months. The data gathered was analysed using the Statistical Package for Social Sciences (SPSS) Version 2.1 and the results were presented in frequency counts, percentages, mean scores, standard deviation and charts.

Results and Discussion

The distribution of private universities in Southern Nigeria and their librarians is presented in Table 1.

Table 1: Distribution of private universities and their librarians in Southern Nigeria

Southern Nigeria zone	Name of university	No. of university	No. of librarian
South-East	Caritas University Evangel University Gregory University Godfrey Okoye University Madonna University Paul University Renaissance University Rhema University	8	25
South-South	Benson Idahosa University Igbinedion University Novena University Obong University Ritman University Samuel Adegboyega University Wellspring University Western Delta University	8	33
South-West	Achievers University Adeleke University AfeBabalola University AjayiCrowther University Augustine University Babcock University Bells University of Technology Bowen University Caleb University Chrisland University Christopher University Covenant University Crawford University Crescent University Dominican University Elizade University Fountain University Hallmark University Joseph Ayo Babalola University Kings University Koladaisi University Lead City University Mcperson University	29	123

	Mountain Top University Oduduwa University Pan-Atlantic University Redeemer's University Southwestern University Wesley University of Science & Technology		
Total		45	181

Source: National Universities Commission (NUC) website and field data

Table 1 revealed that majority of the librarians in the private universities in Southern Nigeria were from the south-west zone. This is followed by the south-south zone which has eight private universities and 33 librarians respectively. This result implies that more private universities are located in South-West Nigeria than other geographical zones in Southern Nigeria.

Questionnaire distribution and response rate

Table 2: Distribution of questionnaires and return rate by librarians of private universities in Southern Nigeria

Southern Nigeria Zone	No. of university	No. of librarians and administered questionnaire	No. of copies returned
South-East	8	25	24
South-South	8	33	30
South-West	29	123	119
Total	45	181	173 (96%)

Table 2 revealed that out of the 181 copies of the questionnaire distributed to librarians in the 45 private universities, 173 (96%) were returned and found useful for analysis. Table 2 shows the return rate of the distributed copies of the questionnaire.

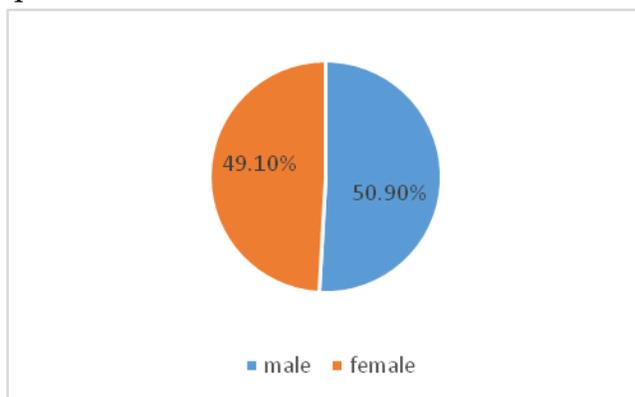


Figure 1: Distribution of respondents by gender

The response rate of the respondents by gender is presented in Figure 1. There were more female participants than their male counterparts. It can be deduced from this result that there are more female librarians than male librarians in private universities in Southern Nigeria. This result is in line with the findings of Quadri and Garaba (2019) who reported the higher number of female information professionals among the librarians in six federal universities in South-West Nigeria. This implies that more female librarians are engaged in the practice of library and information science in Southern Nigeria Universities.

Table 3: Demographic information of librarians of private universities in Southern Nigeria

Background information	Categories	Librarians n=173	%
Marital status	Married	133	76.9
	Single	36	20.8
	Widow	3	1.7
	Widower	1	0.6
Age	25 - 35	67	38.7
	36 - 45	65	37.6
	46 - 55	31	17.9
	56 - 65	10	5.8
Status	Deputy University Librarian	3	1.7
	Principal Librarian	9	5.2
	Senior Librarian	17	9.8
	Librarian I	42	24.3
	Librarian II	49	28.3
	Assistant Librarian	52	30.1
	Graduate Assistant	1	0.6
Position	Acquisition Librarian	17	9.8
	Circulation Librarian	32	18.5
	Serials Librarian	18	10.4
	Systems Librarian	14	8.1
	Reference Librarian	12	6.9
	Readers' Services Librarian	25	14.5
	E-resources Librarian	6	3.5
	Institutional Repository-Librarian	2	1.2
	Faculty Librarian	7	4.0
	Digital Librarian	3	1.7
	Cataloguer	37	21.4

Qualification	PhD	7	4.0
	MLS	116	67.1
	M.Inf.	12	6.9
	M.Phil.	1	0.6
	PGD	37	21.4
Years of work experience	1 - 5 years	57	32.9
	6 - 10 years	78	45.1
	11 - 15 years	24	13.9
	16 - 20 years	6	3.5
	21 - 25 years	2	1.2
	26 - 30 years	0	0.0
	31 - 35 years	6	3.5

Table 3 shows that the majority of the respondents (77%) were married. In terms of age, majority of the participants were between 25 and 45 years of age. This implies that the librarians in the private universities are responsible and youthful. Many of the participants of the study were on the lower cadre of the profession (Assistant Librarian were 30.1%, Librarian II were 28.3% and Librarian I were 24.5%) respectively. In addition, the result revealed that majority of the respondents were cataloguers (21.4%) and circulation librarians (18.5%) but respondents in the institutional repository librarian cadre (1.2%) were the least. Most of the respondents (74%) were master's degree holders while 4.0% of the respondents had the PhD degree. This result is in line with the findings of Ojedokun and Okafor (2015) that the higher percentage of library and information professionals with master's degree. Moreover, many of the respondents indicated that they had been on the job for between 6-10 years. This implies that they had sufficiently acquired different skills on the job as there is regular redeployment within the library system and there is also room for continuous development of their skills for effective service delivery as long as they are still on the job. The finding of the study corroborates the result of Bajpai and Margam (2019) that majority of the respondents had spent 10 years on the profession.

Table 4: Types of services delivered by librarians of private universities in Southern Nigeria

	N = 173	
Services delivered by librarians		
	N	%
Library materials recommendation	111	64.2
Library registration	103	59.5
Interlibrary loan	56	32.4
Selective dissemination of information	110	63.6
Document delivery	67	38.7
Reference service	119	68.8
Outreach service	26	15.0
Prompt notification of library development	59	34.1
Notification of OPAC additions	64	37.0
Notification of Institutional Repository update	45	26.0
Notification of new library resources arrivals	99	57.2
Images/photos service	24	13.9
Library orientation	121	69.9
Library education	107	61.8
Charging and Discharging of library materials	104	60.1
Translation services	15	8.7

Table 4 shows that library orientation (70%), reference service (69%) and library materials recommendation (64%) and selective dissemination of information (64%) respectively topped the types of services rendered by librarians while the least service rendered was translation (9%). These results corroborate the findings of Aina

(2014); Quadri and Garaba (2019); and Agbo and Eyinnah (2022) who reported that librarians render variegated library services that are ICT-related to their users. Husain and Nazim (2015) also asserted the use of ICT skills by librarians to provide services such as offline and online database searches, electronic delivery of information resources, reference services and current awareness service. Adamuet *al.* (2021) concluded that the participants were involved in the provision of various quality library services to the users. The implication of these findings is that librarians would continue to be relevant as their ICT skills are improved upon to provide qualitative library services to universities, polytechnics and colleges of education stakeholders.

Table 5: Respondents' ICT skills acquired for library service delivery

ICT skills	N = 173										M e a n	STD
	Very High		High		Moderate		Low		Very Low			
	N	%	N	%	N	%	N	%	N	%		
Social media skills												
Facebook	14	7.8	54	30.2	80	44.7	26	14.5	5	2.8	3.65	.809
Blog	73	40.8	63	35.2	30	16.8	9	5.0	4	2.2	4.15	.804
You Tube	44	24.6	54	30.2	52	29.1	24	13.4	5	2.8	3.66	.839
Twitter	39	21.8	55	30.7	65	36.3	16	8.9	4	2.2	3.87	.838
Skype	33	18.4	61	34.1	60	33.5	18	10.1	7	3.9	3.63	.755
WhatsApp	50	27.9	65	36.3	37	20.7	18	10.1	9	5.0	4.22	.805
Flickr	63	35.2	66	36.9	33	18.4	12	6.7	5	2.8	3.93	.934
Microsoft office skills												
Ability to install, update and use MS office such as: Word processing	33	18.5	40	22.5	62	34.8	24	13.5	19	10.7	3.59	.933
Power point	64	35.8	47	26.3	57	31.8	10	5.6	1	0.6	4.05	.839
Excel spreadsheet	72	40.2	41	26.3	47	26.3	19	10.6	0	0.0	3.92	.737

Access	3 4	19. 0	3 3	18. 4	5 6	31. 3	3 6	20. 1	2 0	11. 2	3.1 7	.895
Publisher	3 5	19. 6	2 4	13. 4	5 8	32. 4	4 5	25. 1	1 7	9.5	3.1 2	.843
Outlook	3 4	19. 0	2 2	12. 3	4 1	22. 9	5 5	30. 7	2 7	15. 1	2.6 3	.856
Sharepoint	3 0	16. 7	3 9	21. 8	5 1	28. 5	3 9	21. 8	2 0	11. 2	3.0 1	.809
Information retrieval skills												
Search and retrieve information from electronic resources database	8 4	46. 9	4 5	25. 1	3 8	21. 2	1 1	6. 1	1	0.6	4.1 2	.839
Search and retrieve information from Online Public Access Catalogue	7 8	43. 6	5 1	28. 5	2 8	15. 6	1 5	8.4	7	3.9	3.9 3	.838
Internet use skills												
Search for information	7 4	41. 3	6 5	36. 3	2 6	14. 5	1 2	6.7	2	1.1	4.2 9	.805
Download materials	9 7	54. 2	5 4	30. 2	2 1	11. 7	4	2.2	3	1.7	4.2 7	.934
Save materials	9 8	54. 7	4 5	25. 1	2 8	15. 6	7	3.9	1	0.6	4.3 2	.923
Print materials	9 2	51. 4	5 2	29. 1	2 8	15. 6	6	3.4	1	0.6	4.2 1	.933
Use e-mail	8 9	49. 7	5 7	31. 8	2 7	15. 1	3	1.7	3	1.7	4.1 1	.839
Use diverse search engines	7 9	44. 1	6 7	37. 4	1 5	8.4	1 5	8.4	3	1.7	3.8 9	.737
Programming skills												
Website design	3 8	21. 2	3 3	18. 4	4 9	27. 4	2 4	13. 4	3 5	19. 6	2.7 0	.843
Networking	2 9	16. 2	2 6	14. 5	5 1	28. 5	4 2	23. 5	3 1	17. 3	3.3 3	.856
Software installation	5 6	31. 3	4 3	24. 0	5 4	30. 2	1 3	7.3	1 3	7.3	2.7 9	.809
Conservation/preservation skills												
Digitising into different formats	6 2	34. 6	4 6	25. 7	4 4	24. 6	2 2	12. 3	5	2.8	3.6 7	.839

Create records of digitised information	4 8	26. 8	4 3	24. 0	4 1	22. 9	3 5	19. 6	1 2	6.7	3.5 9	.838
Upload files into the repository	3 6	20. 1	5 7	31. 8	4 6	25. 7	2 4	13. 4	1 6	8.9	3.8 0	.755

In Table 5, the participants indicated that they had acquired skills in all the ICT-related functions that were listed. However, it was found that the level of acquisition differed among the respondents. The respondents claimed that they had a significantly high level skills in the use of social media with the following mean scores: WhatsApp (mean = 4.22) and blogs (mean = 4.15) respectively. Baro *et al.* (2013) study is in agreement with this study's findings as it reported that 85% of the respondents claimed that they acquired social technology skills for various library services. The level of skills acquired by the respondents on the application of Microsoft Office suite was also high as the majority of the respondents had mean scores above 3 in the use of PowerPoint, Excel and Word. The findings are in tandem with Mbagwu (2020) who reported that many of her respondents claimed to have had Microsoft Office skills which they used for the provision of library services. The results also revealed that the respondents had gained competencies in the application of online and offline databases for information retrieval as the mean scores recorded indicated (mean = 4.0).

Concerning the use of the Internet, the result in Table 5 found that private university librarians had very high skills in the use of the Internet for searches, download of information in different formats, printing and sending emails. These findings are in line with the results of Mommoh and Saka (2016); Bajpai and Margam (2019); Mbagwu (2020); Adamuet *al.* (2021) which concluded that librarians' ICT skills have enhanced their library service delivery to the clientele. Moreover, Table 5 has also revealed that librarians in private universities in Southern Nigeria have low level skills in website design and software installation. Both Gbaje and Ukachi (2011) and, Bajpai and Margam (2019) reported that the studied professionals had low ICT skills in operating systems and softwares, and web design. This is in agreement with the findings of this study. On the contrary, both Kattimani and Naik (2013) and, Husain and Nazim (2015) reported a high level of web and software development skills among young librarians.

Furthermore, the level of skills acquisition by librarians on conservation and preservation of information resources was high as their mean scores were above 3.5. This result implies that there was a high level of skills acquisition in respect of information resources preservation and management by the respondents. The

general inference that could be drawn from the foregoing analysis is that the level of ICT skills of librarians in private universities was significantly high. It is evident that, as technology evolves, librarians are improving on their skills for effective library service delivery to their users. Husain and Nazim's (2015) which also revealed the high level of ICT skills acquisition among the respondents is in tandem with the findings of this study. In contrast, Ahmed (2014) reported a low level of ICT skills among the studied information professionals. This study has established that librarians keep updating and improving their ICT skills from time to time in order to keep abreast of latest technologies and sustain their relevance as professionals that deliver library services. Evidently, regular ICT skills acquisition would positively impact the quality of service delivery among information professionals.

Table 6: Distribution of respondents by sources of ICT skills acquisition

Source	Private Universities N=173			
	Agreement score		Disagreement score	
	N	%	N	%
Self-learning	161	93.1	12	6.9
Through In-house training	140	80.9	33	19.1
Through national conferences and workshops	130	75.1	43	24.9
Through professional online networks	109	63.0	64	37.0
Through international conferences and workshops	99	57.2	86	49.7

In addition, the sources of ICT acquisition of librarians were investigated and the result is presented in Table 6.

The results shown in Table 6 reveal that most of the librarians in the study (93%) indicated that they acquired their ICT skills through self-learning. This result corroborates the findings of Gbaje and Ukachi (2011); Mommoh and Saka (2016); Manzo (2020); Mbagwu (2020); Adamu *et al.* (2021) which revealed that majority of their respondents acquired their ICT skills through self-development and in-house training. Acquisition of ICT skills by librarians in private universities in Southern

Nigeria through international conferences and workshops had the lowest percentage. This could be as a result of inadequate funding as private universities depend mainly on the allocation of resources by the parent institutions.

Conclusion and recommendation

Changes in the ways librarians handle library operations and functions and the evolving development in service delivery have necessitated the acquisition of ICT skills by librarians from time to time. This development has enhanced the provision of tandem services to the users regardless of location and time. Librarians are exposed to new ICT skills and are readily available to render library services in a world-class mode. This study, which has investigated the level of ICT skills of librarians in private universities in Southern Nigeria, has established that information professionals acquire the needful ICT skills through self-study and in-house training to render effective service delivery in their respective libraries. Continuous capacity development of librarians is crucial as it influences the quality of library service delivery to the users in the tertiary institutions.

The paper recommends that:

- university and library management should regularly support the librarians on acquiring up-to-date skills, especially in the area of application of ICT;
- acquisition of ICT skills should be undertaken more through international workshops, conferences and exchange programmes; and
- there should be an increase in the institutional budgets for staff training and development in order to accommodate a reasonable size of staff for ICT skills development at national and international levels; this will enhance librarian efficiency and ability to compete with their contemporaries around the world, at all times, in the area of library service delivery to their users.

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