

## **Information and Communication Technology Application in Cataloguing and Classification of Library Materials in Public University Libraries in Abia State, Nigeria**

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### **Abstract**

The study examined the information and communication Technology (ICT) application in cataloguing and classification of library materials in public University Libraries in Abia State, Nigeria. Four articulated purposes of the study guided the research. The study adopted descriptive survey research design and the population for the study was 60 made up of 29 professional and 31 para-professional librarians. Data collated through the instrument of questionnaire were coded, analyzed and presented by the use of descriptive and inferential statistics. The findings of the study revealed that ICT resources were available in the public University Libraries in Abia State and that the predominantly used ICT in cataloguing and classification of library materials was the online search services. The challenges in ICT application in cataloguing and classification of library materials in the university libraries included lack of adequate ICT facilities, lack of training opportunities as well as lack of maintenance of ICT tools, Network fluctuation and internet service failure. The researcher recommended that: there should be provision of adequate ICT facilities; there was need for training and retraining opportunities for library staff more especially professional and para-professional librarians on the ICT application in cataloguing and classification of library materials; and there should be steady and reliable internet access.

**Keywords:** Information and Communication Technology; Cataloguing and Classification; Library Materials; University Libraries.

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## **Introduction**

The convergence of computer and information technologies has popularized electronic access to information. This is because of the competitive advantage of modern technology over the traditional method of providing information services to users. With the advent of electronic method many library and information material are now in electronic formats. The use of information and communication technology (ICT) to facilitate research and other library services has become indispensable. Library and Information Science have experienced phenomenal changes in the last two decades. These changes have been as a result of the acceptance of Information and communication technology (ICT) in library operations. The transformation has been so rapid that libraries today are facing challenges of making themselves relevant in information organization, retrieval and dissemination. In other words librarians are the most challenged. The challenges before librarians in cataloguing and classification operation as identified by Akintunde (2008) have to do with identifying and making use of appropriate technology in service delivery. This according to Akintunde calls for appropriation of both human and material resources in meeting challenges of library services. Cataloguing and classification are core activities of every library. If Cataloguing and Classification are not properly carried out and organized, the library becomes a mere store house for books and other materials. The concept of Cataloguing and Classification of library materials comes about so as to organize material or knowledge, saving a situation whereby a library user or the library worker would otherwise have spent hours trying to locate a particular library material on the shelves. Hence, the successful librarian knows that in order to serve his clientele effectively he must catalogue and classify the knowledge so as to control the material that have been assembled.

Nwosu (2004) rightly stated that the beauty of librarianship lay in the ability of the librarians to achieve order in the arrangement of intellectual material. The librarian brings order to work through

classification from cataloguing process. This explains why the two activities are inseparable and are complementary to each other. Adeyemi (2002) posited that cataloguing and classification represented important intellectual pillar on which the practice of library profession rested. The process of cataloguing and classification qualifies this combination as the hallmark of librarianship.

Cataloguing according to Imeremba (2011) is very vital because that is where library materials are organized for retrieval by users. He further stated that cataloguing is a process constituting of putting together a collection of books and other library materials in order, and making up a record that will serve as an index for keeping track of the individual components of a library collection. Therefore, the researcher, seeing how necessary it is for all the libraries to cue into using ICT in cataloguing and classifying their library materials, embarked on this research in order to find out the status of ICT application in cataloguing and classification of library materials in public University Libraries in Abia State.

### **Statement of the Problem**

Libraries have been playing very important roles in the academic sector by making teaching, learning and research actively easier through the provision of the necessary information resources needed to actualize the educational goals of the individual, the university and the nation at large. It has been noted in various studies that many university libraries in developed countries have adopted the use of ICT in performing cataloguing and classification functions, and Nigerian University Libraries are no exception. Despite the fact that many University Libraries in Nigeria are now automated, application of ICTs to core library duties such as cataloguing and classification has not been addressed adequately in literature. Considering the necessity for the utilization of ICT in cataloguing and classification of library materials, some of the questions that concern this research which need empirical

answers are: Do public University Libraries in Abia State deploy ICT facilities in the cataloguing and classification of library materials? If they do, what is the predominantly used ICT in cataloguing and classification of library materials in the University Libraries? There is no study that provides scientifically verifiable evidence or answers to these questions. The need to fill this information gap necessitates this research which is set out to investigate the ICT application in cataloguing and classification of library materials in the public University Libraries in Abia State, Nigeria.

### **Purpose of the Study**

The purpose of the study is to determine the Information and Communication Technology (ICT) application in cataloguing and classification of library materials in the only two public University Libraries existing in Abia State namely, the Abia State University (ABSU), Uturu and the Michael Okpara University of Agriculture, Umudike (MOUAAU). The specific objectives of the study were:

1. To identify the ICT resources available for cataloguing and classification in the public University Libraries in Abia State.
2. To find out the ICT resources used in the public University Libraries in Abia State in cataloguing and classification of library materials.
3. To ascertain the predominantly used ICT resources in cataloguing and classification of library materials in the public University Libraries.
4. To identify the challenges of ICT application in cataloguing and classification of library materials in the public University Libraries in Abia State.

### **Literature Review**

Information and Communications Technology has radically transformed and improved workflow in libraries and has greatly

reduced manual work (Bhoi, 2017). It is heavily utilized in the storage, processing and documentation of information, and thus, it has made the organization of information very efficient and faster. The use of information and communications technology in information handling and processing has arisen because of the need to cope with information explosion. Ebunuwele, Ola, and Uduebor (2014) outlined the usefulness of ICT in our libraries to include the following: it allows easy integration of various activities; it helps to avoid duplication of effort within a library and between libraries in a network; it helps to increase the range of services offered; it provides marketing opportunities of its services; it increases efficiency; it provides more up to date information; it provides unlimited information from different sources.

The application of ICT to library operations particularly cataloguing and classification also enabled para-professionals in libraries to effectively perform much of the duties that hitherto were the exclusive domain of professional librarians (Eze, 2012). Nwalo (2006) states that cataloguing and its twin sister classification can be described as a "door" leading library user to exploit the rich contents of the library. These twin functions can also be seen as the "hub" of library profession. It is unimaginable to have a library without any form of catalogue. Library materials are catalogued, classified and put on the shelves, the library user, as well as library workers benefit from this saving device, as the device helps to, according to Ranganathan (1969) disclose to every reader his document; Secure for every document its reader; Save the time of the reader; and ultimately grows the library.

According to Alabi (2018) cataloguing and classification are professional and intellectual endeavours central to librarianship. Its overall aim is to ensure that library collections are well organized and retrieval is not cumbersome. Zaid (2008) states that the advantage of online cataloguing and classification cannot be over emphasized. For

cataloguers and classifiers that have embraced the new technology, it is no longer common to see newly acquired information resources held in the cataloguing unit for months, in other words the backlog syndrome is fast dying in most Nigerian Universities, particularly for those who have gained access to online catalogue.

### **Methodology**

This study was carried out to investigate: the ICT resources available for cataloguing and classification in the public University Libraries in Abia State; the ICT resources used in the public University Libraries in Abia State in cataloguing and classification of library materials; the predominantly used ICT resources in cataloguing and classification of library materials in the public University Libraries; and the challenges of ICT application in cataloguing and classification of library materials in the public University Libraries in Abia State.

To realize the purposes of the study, survey research design was adopted and the population of the study is sixty (60). This consists of the professional and Para- professional staff of both MOUUAU and ABSU libraries, which is 29 professionals and 31 Para- professionals. The sample size of this study consisted of 29 professionals, 4 from ABSU and 25 from MOUUAU and 31 para-professionals, 7 from ABSU and 24 from MOUUAU. No sample was drawn from the population since the 60 respondents were considered sizeable and not too large for the study. A researcher-designed questionnaire was used as the instrument for data collection. The data collated for this study through the instrument of questionnaire were coded, analyzed and presented by the use of descriptive and inferential statistics. The criterion mean for this study is 2.5. Hence, mean response equal to or above the criterion mean (2.5) indicates acceptance level whereas mean response below the criterion mean (2.5) denotes rejection level.

**Results**

Table 1: Analysis of Demographic Data

<b>Gender Distribution</b>	Frequency	%
Male	34	57
Female	26	43
Total	60	100
<b>Working Experience in the Cat. &amp; Class. Department</b>	Frequency	%
Yes	37	62
No	23	38
Total	60	100
<b>Working Experience</b>	Frequency	%
1-5yrs	22	37
6-10yrs	13	22
11-15yrs	14	23
16yrs and above	11	18
Total	60	100

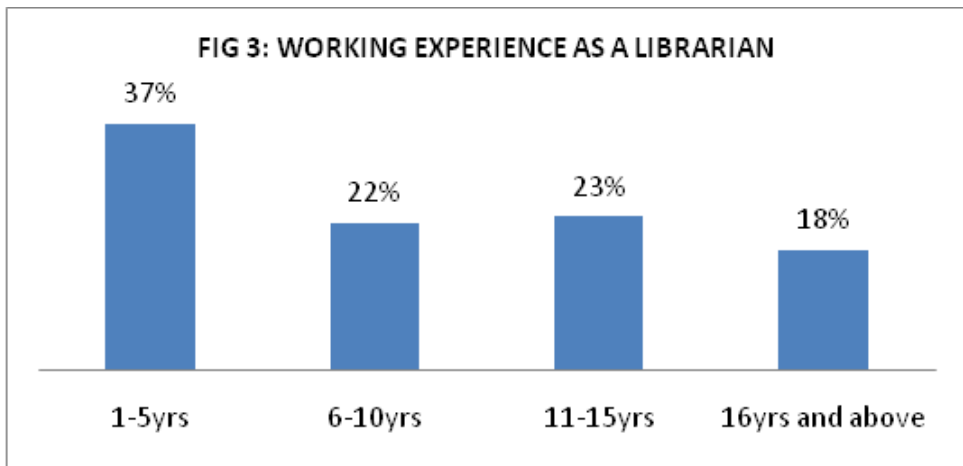
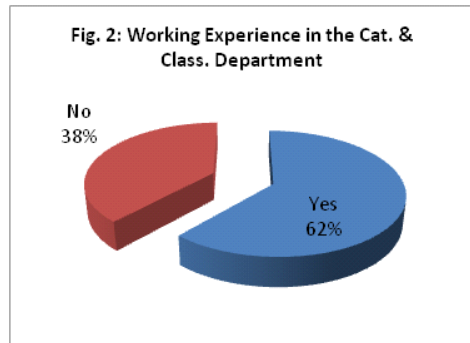
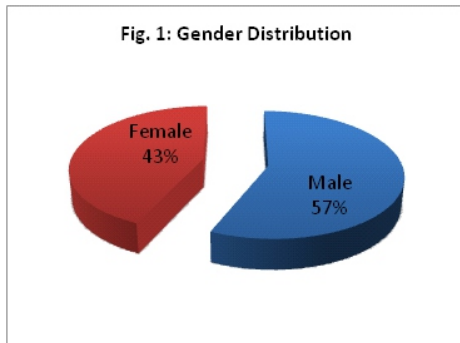


Table 1 shows that there are more male respondents (57%) than female respondents (43%) in this research. The table also shows that 62% of the respondents (Librarians) have worked in the cataloguing and classification department whereas 38% have not worked in the cataloguing and classification department. Table 1 equally revealed that the working experience of the respondents tilted towards category 1-5years (37%), followed by 11-15years (23%) and 6-10years (22%) while the 16years and above category ranked least with 18%. Figures 1, 2 and 3 pictorially depict Table 1.

**Table 2:** Availability of ICT facilities in cataloguing and classification departments

S/N	Availability of ICT in cataloguing and classification department		HA (4)	A (3)	FA (2)	NA (1)	Total Weighted Score	Mean (x)	Std Dev. (SD)
1	CD ROM	Freq	11	29	15	5	140	2.33	0.58
		Score	44	87	8	1			
2	ALICE FOR/ WINDOWS	Freq	3	5	24	28	88	1.47	0.37
		Score	12	15	48	13			
3	CD/ISIS	Freq	18	9	26	7	158	2.63	0.66
		Score	72	27	52	7			
4	SLAM	Freq	3	21	29	7	140	2.33	0.58
		Score	12	63	58	7			
5	KOHA	Freq	3	20	32	5	141	2.35	0.59
		Score	12	60	64	5			
6	COMPUTERS	Freq	19	33	8	0	175	2.92	0.73
		Score	76	99	0	0			
7	PRINTERS	Freq	21	35	4	0	197	3.28	0.82
		Score	84	105	8	0			
Grand mean								2.47	0.62

The analysis on table 2 which seeks to investigate the responses of the respondents on the availability of ICT resources in cataloguing and classification department, shows that the mean responses for items 3, 6 and 7 surpassed the criterion mean (2.63, 2.95, 3.28 > 2.5) whereas items 1, 2, 4 and 5 are below the criterion mean (2.33, 1.47, 2.33, 2.35 < 2.5). This implies that ICT gadgets such as CD/ISIS, Computers and Printers are more available in the cataloguing and classification department more than items like CD ROM, Alice for windows, SLAM and KOHA. Consequently, the grand mean response of the respondents (2.47) is less than the criterion mean 2.5. This indicates that the respondents rated the availability of ICT in the cataloguing and classification department as low. The general conclusion on table 2 is that the extent of availability of ICT in Cataloguing and Classification department in the area of study is low.



**Table 3:** ICT resources used in cataloguing and classification of library materials Librarians.

S/N	ICT resources used in cataloguing and classification of library materials	Freq/Score	SA (4)	A (3)	D (2)	SD (1)	Total weighted Score	Mean (x)	Std Dev. (SD)
1	The Library acquired and maintained the necessary ICT tools and equipment to carry out the function of the department	Freq: 8 Score: 32	8	14	9	6	98	2.65	0.66
2	The cataloguing and classification department uses internet services	Freq: 4 Score: 16	4	13	14	6	89	2.41	0.60
3	The cataloguing and classification department uses CD ROM services	Freq: 6 Score: 24	6	13	12	7	94	2.54	0.64
4	Cataloguing and classification department of uses local Area Network services	Freq: 4 Score: 16	4	9	22	2	89	2.41	0.60
5	Cataloguing and classification department uses online search services	Freq: 9 Score: 36	9	14	9	5	101	2.73	0.68
6	Cataloguing and Classification department use Strategic library automation management (SLAM) software services	Freq: 3 Score: 12	3	11	16	7	84	2.27	0.57
7	Cataloguing and Classification department utilizes ICT resources in cat/class of library materials	Freq: 8 Score: 32	8	15	9	5	100	2.70	0.68
8	Cataloguers have access to online cataloguing in cataloguing and classification of library materials	Freq: 6 Score: 24	6	15	14	2	99	2.68	0.67
	<b>GRAND MEAN</b>							<b>2.55</b>	<b>0.63</b>

Table 3 shows the Mean and standard deviations of the responses of Professional Librarians in the utilization of ICT in cataloguing and classification in academic Library. It can be deduced that the majority of the respondents (Professional Librarians) rated the items under the utilization of ICT in cataloguing and classification of library materials as high. This is evident from items 1, 3, 5, 7 and 8 which surpassed the criterion means (i.e 2.65, 2.54, 2.73, 2.70 and 2.68 > 2.5).

**Table 4:** ICT resources used in cataloguing and classification of library materials - Para professional

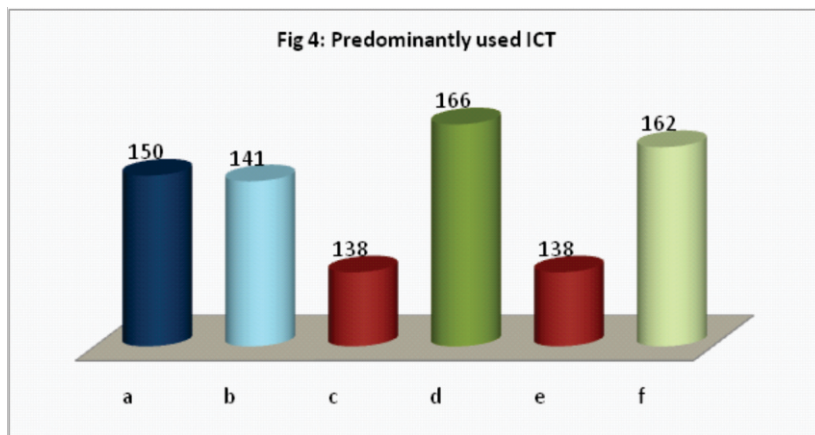
S/N	ICT resources used in cataloguing and classification of library materials – Para-professionals	Freq/Score	HA (4)	A (3)	FA (2)	NA (1)	Total Weighted Score	Mean (x)	Std Dev. (SD)
1	The Library acquired and maintain the necessary ICT tools and equipment to carry out the function of the department	Freq 3 Score 12	8	10	2	2	58	2.52	0.63
2	The cataloguing and classification department uses internet services	Freq 3 Score 12	10	9	1	1	61	2.65	0.66
3	The cataloguing and classification department uses CD-ROM services	Freq 2 Score 8	5	13	4	4	53	2.30	0.58
4	Cataloguing and classification department of use local Area Network services	Freq 1 Score 4	3	16	3	3	48	2.09	0.52
5	Cataloguing and classification department use online search services	Freq 2 Score 8	8	9	4	4	54	2.35	0.59
6	Cataloguing and Classification department use Strategic library automation management (SLAM) software services	Freq 3 Score 12	7	9	4	4	55	2.39	0.60
7	Cataloguing and Classification department utilizes ICT resources in cat/class of library materials	Freq 6 Score 24	11	6	0	0	69	3.00	0.75
8	Cataloguers have access to online cataloguing in cataloguing and classification of library materials	Freq 5 Score 20	8	9	1	1	63	2.74	0.68

Analysis of responses on Table 4 as it relates to the rating of para-professional Librarians on the Utilization of ICT in cataloguing and classification of library materials shows that items 1, 2, 7 and 8 were rated high as their mean surpassed the criterion mean (2.52, 2.65, 3.00 and 2.74 > 2.5). This implies that the Library acquired and maintained the necessary ICT tools and equipment to carry out the functions of the department

**Table 5:** Means and standard deviations of the responses on the predominantly used ICT in cataloguing and classification of library materials (N=60)

Code	Predominantly Used ICT in cataloguing and classification of library materials	HU 4	U 3	FU 2	NU 1	Total weighted Score	Mean (x)	Std Dev. (SD)
A	The cataloguing and classification department uses internet services	Freq 7 Score 28	23	23	7	150	2.50	0.85
B	The cataloguing and classification department uses CD ROM services	Freq 8 Score 32	16	48	11	141	2.35	0.93
C	Cataloguing and classification department of use local Area Network services	Freq 5 Score 20	12	36	4	138	2.30	0.71
D	Cataloguing and classification department use online search services	Freq 22 Score 88	11	33	9	166	2.77	1.10
E	Cataloguing and Classification department use Strategic library automation management (SLAM) software services	Freq 6 Score 24	18	54	12	138	2.30	0.90
F	Cataloguers have access to online cataloguing in cataloguing and classification of library materials	Freq 11 Score 44	23	46	3	162	2.70	0.82
GRAND MEAN							2.49	0.89

The frequency distribution of responses on the predominantly used ICT in cataloguing and classification as represented in table 4 shows that the respondents rated item 'd' (Cataloguing and classification department use online search services) first, followed by item 'f' (Cataloguers have access to online cataloguing in cataloguing and classification of library materials). Items 'c' and 'e' ranked last with a tie (138 each). This is pictorially depicted in figure 4.



a=Internet service, b=CD-ROM service, c= LAN services, d= Online search services, e=SLAM, f= Online

**Table 6:** Challenges in the use of ICT in cataloguing and classification of library materials

S/N	Challenges Cataloguers face in Utilization of ICT	Freq / Score	SA 4	A 3	D 2	SD 1	Total weighted Score	Mean (x)	Std Dev. (SD)
1	Lack of adequate ICT skills	Freq 34 Score 136	21	4	1	60	208	3.47	0.69
2	Lack of training opportunities	Freq 16 Score 64	28	11	5	60	175	2.92	0.88
3	Lack of adequate ICT Tools	Freq 21 Score 84	25	8	6	60	181	3.02	0.94
4	Lack of maintenance of ICT tools j	Freq 41 Score 164	15	2	2	60	215	3.58	0.71
5	Lack of knowledge of Librarians emerging roles and services in the ICT era	Freq 14 Score 56	22	13	11	60	159	2.65	1.03
6	Lack of access to ICT software and equipment	Freq 29 Score 116	18	5	8	60	188	3.13	1.04
7	Administrative Bottlenecks and use of ICT facilities	Freq 10 Score 40	31	17	2	60	169	2.82	0.74
8	Network fluctuation and service failure	Freq 37 Score 148	20	1	2	60	211	3.52	0.77
9	Lack of adequate number of ICT trained Librarian	Freq 33 Score 132	21	2	4	60	203	3.38	0.84
<b>GRAND MEAN</b>								<b>3.16</b>	<b>0.85</b>

The analysis of the responses on table 6 sought to examine the challenges in the use of ICT in cataloguing and classification of library materials. The table showed that the respondents agreed to all the stated items indicating their challenges in the use of ICT in cataloguing and classification of library materials. This conclusion was reached because the mean of the items surpassed the criterion mean of 2.5.

### **Findings**

The major findings of the study are:

1. ICT resources are available and used in Cataloguing and Classification of library materials in the public University Libraries in Abia State.
2. The predominantly used ICTs in cataloguing and classification are first, the use of online search services; second, access to online cataloguing in cataloguing and classification of library materials; third, the use of internet services; fourth, the use of CD ROM services; the ranked fifth and sixth predominantly used ICTs were the use of local Area Network services and the use of Strategic library automation management (SLAM) software services respectively.
3. The challenges in the use of ICT in cataloguing and classification of library materials, as agreed by the respondents were Lack of adequate ICT skills, Lack of training opportunities, Lack of adequate ICT tools, Lack of maintenance of ICT tools, Lack of knowledge of Librarians emerging roles and services in the ICT era, Lack of access to ICT software and equipment, Administrative bottlenecks in the use of ICT facilities, Network fluctuation and service failure, Lack of adequate number of ICT trained Librarian.

### **Conclusion and Recommendations**

Based on the findings of this study, the public University Libraries in Abia State (MOUUAU and ABSU) could be said to be providing ICT resources in Cataloguing and Classification of library materials. But much more is required to improve

their ICT facilities to aid speedy and adequate cataloguing and classification activities in the libraries. The ICT tools available in the University Libraries should be upgraded and maintained. Also, there should be reliable and regular network availability for internet service provision. The study recommended that the library managements of the public universities should develop and implement policies targeted towards improving their ICT based cataloguing and classification tools. It further recommended that there should be provision of adequate ICT facilities; there was need for training and retraining opportunities for library staff more especially professional and para-professional librarians in ICT based cataloguing and classification.

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