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Application of ICT Facilities in 21st Century Library Services: The Case of Michael Okpara University of Agriculture, Umudike

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Abstract

This study is on the application of information and communication technology (ICT) facilities in the 21st century library services using Michael Okpara University of Agriculture, Umudike as a focus. The study was guided by five (5) research objectives that sought to examine the ICT facilities available in the library, areas of ICT application to library services, extent of ICT application in the library, issues associated with ICT application to library services and strategies for effective application of ICT facilities in the library. The study adopted a descriptive survey method. The population of the study consisted of 69 library staff of Michael Okpara University of Agriculture, Umudike Library. Structured questionnaire was used for data collection. A total of 69 copies of questionnaires were distributed and fully recovered for data analysis giving a return rate of one hundred percent. Data generated was analysed using frequency counts and descriptive statistics of mean scores and presented in tables. Findings of the study showed that there are various ICT facilities available in MOUAU library, including; laptops, internet facilities, modem, network cables, stand-alone computers, online database, printers, CD-ROM technology, photocopiers, Wide Area Network, hubs, AC adapters, e-mail, projectors, local area network, routers among others. However Machine Readable Catalogue (MARC), telefacsimile among others are not available. The finding also revealed that ICTs are applied in many areas and operations of the library ranging from photocopying, registration of users, classification of books, bibliographic verification, processing of information materials, bibliographic searches,

to descriptive and preliminary cataloguing. The study also revealed that the extent of application of of ICTs in many areas was low. The low application attributable to factors which include lack of a maintenance culture, inadequate number of ICT-competent staff in the library, inadequate technical support and inadequate funding. Strategies advanced for an effective application of ICTs in library services in the library include provision of funds for the procurement of ICT facilities, staff and user training on ICT use, provision of adequate infrastructural facility among. Conclusion and recommendations were made based on the findings of the study.

Key Words: *Information and Communication Technology, Academic Libraries, Library services*

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Introduction

Information and Communication Technology (ICT) has demonstrated its impact on library resources, systems, services and operations. It has provided one of the best innovations in the history of library services, and it is changing the shape of libraries and the role of librarians at an unprecedented pace (Khan, 2016). The essence of ICT is in its power to help individuals and societies achieve greater access to knowledge and ideas for the benefit of humanity (Durudolu, 2017). Scholars have identified benefits of applying ICT facilities in library services to include provision of speedy, accurate and easy access to information; provision of remote access to users; provision of up-to-date information; permanent storage of information; saves time as well as generating fund and enhancement of research (Alison, 2017).

The integration of ICT facilities in academic library services has enhanced the rate at which information and data are sourced from the library, making information retrieval as fast as possible. As a result, it not only enhances the services provided by the academic libraries but also reduces to the barest minimum, the stress and strains hitherto encountered in sourcing and processing information. This corresponds with the assertion of Ramzan and

Sigh (2012) that ICT allows easy integration of various library activities, increases efficiency in acquisition, access to data, cataloguing, classification, information retrieval and dissemination. Mensah (2015) noted that with the application of ICT in academic libraries, one can easily access the collection of other libraries in a network. The author further observed that the result of integrating ICT facilities in academic library services is that the library staff will have more energy and time which can be channelled to serving more library users and perform more professional duties. Similarly, ICT facilities can be used in storing information and archival materials in the library. Lewis (2017) identified ICT facilities used in storing and providing information services in libraries to include computers, microfilm, microfiche, CD-ROM, database, video tapes and audio tapes. The use of these facilities for storage and provision of library and information service according to Lewis (2017), gives libraries a better image as information depot and medium through which information is stored.

It is also important to note that the application of ICT facilities in library services has brought with it some challenges. Ebijuwa, (02015) stated that the application of ICT to academic library services has made some users to be far away from the libraries as they believe that they can use their personal computers, laptops, iPods, mobile phones, modem, and other hand-held devices to surf the net for any information needed without necessarily visiting the library. The study carried out by Hussain, Khan and Zaidi(2018) revealed that some faculty members believe that there is no need to go to the library when one can stay in his house and use his laptop to get whatever information is needed. Thus, this paper is timely and is a clarion call on the academic libraries and librarians to re-awaken themselves, reinvent themselves and re-assert their roles as not just custodians of information but information gateways, navigators, etc. They have to reassure the users that they are still relevant by integrating ICT facilities in their services and functions. This will serve to lure the potential and actual users back to the library. There is also a great need for academic libraries to restore the confidence of the library users by adopting and integrating ICT into their operations, services and functions. They must ensure that all the necessary ICT facilities and resources are available, functional and accessible to the teeming users.

Objectives of the Study

The broad aim of the study is to assess the application of ICT facilities in 21st century library services in Michael Okpara University of Agriculture library. The specific objectives are to:Ascertain the Information and Communication Technologies (ICT) facilities applied in MOUAU library services.

1. Examine areas of ICT application to Library services in MOUAU library
2. Find out the extent of ICT application in MOUAU library services
3. Investigate the issues associated with ICT application to library services in MOUAU library
4. Discover the strategies for the effective application of ICT facilities in MOUAU libraries.

Methodology

A descriptive survey design was used for the study. The population of the study consisted of sixty-nine (69) library staff of Michael Okpara University of Agriculture, Umudike library. The sampling technique adopted is the complete census sampling technique whereby the entire population of 69 library staff is considered as the respondents. The instruments for data collection was a structured questionnaire which was constructed on a modified four point rating scale with options of strongly agree (SA) agree (A) disagree (D) and strongly disagree (SD). It was divided into five clusters with hundred and seven (107) items statement addressing the research questions. Sixty-nine copies of the questionnaires were distributed to the respondents in their offices and there were hundred percent return rates. The Statistical Package for Social Science (SPSS) was employed to run the collected data which was analyzed using the descriptive statistics of mean, standard deviation and frequency counts. The criterion mean of 2.50 was used in reaching a decision on whether to accept the response as positive or reject it. This implies that any item with a mean score of 2.50 and above indicated agreement and while items with a mean score below 2.50 indicated disagreement.

Data Analysis

Reseach Objective 1: Ascertain the Information and Communication Technologies (ICT) facilities applied in MOUAU Library services.

Table 1: ICTs Applied in MOUAU Library Services

SN	ITEMS	APPLIED	NOT APPLIED	MEAN	RANK	REMARK
1	Laptops	69	0	**4.00**	1st	Accept
2	Internet facilities	62	7	**3.80**	2nd	Accept
3	Modem	62	7	**3.80**	2nd	Accept
3	Network cables	61	8	**3.77**	4th	Accept
4	Stand-alone Computers	60	9	**3.74**	5th	Accept
5	Online database	60	9	**3.74**	5th	Accept
6	Printers	56	13	**3.62**	7th	Accept
7	CD-ROM Technology	56	13	**3.62**	7th	Accept
8	Photocopiers	56	13	**3.62**	7th	Accept
9	Wide Area Network	56	13	**3.62**	7th	Accept
10	AC adapters	54	15	**3.57**	11th	Accept
11	Hubs	54	15	**3.57**	11th	Accept
12	E-mail	52	17	**3.51**	13th	Accept
13	Projectors	52	17	**3.51**	13th	Accept
14	Local Area Network (LAN)	52	17	**3.51**	13th	Accept
15	Routers	52	17	**3.51**	13th	Accept
16	DVD ROM	49	20	**3.42**	17th	Accept
17	Internet servers	45	24	**3.30**	18th	Accept
18	Switches	44	25	**3.28**	19th	Accept
19	Tin clients	44	25	**3.28**	19th	Accept
20	Close circuit cameras	43	26	**3.25**	21st	Accept
21	Electronic white boards	39	30	**3.13**	22nd	Accept
22	Scanners	38	31	**2.88**	23rd	Accept
23	Radio Frequency Identification Devices (RFID)	12	57	**2.35**	24th	Reject
24	Barcode Readers	11	58	**2.32**	25th	Reject
25	GPS	11	58	**2.32**	25th	Reject
26	Telephones	11	58	**2.32**	25th	Reject
27.	Fax machine	9	60	**2.26**	28th	Reject
28.	IPads	9	60	**2.26**	28th	Reject
29.	Digital cameras	8	61	**2.23**	30th	Reject
30	Typewriters	6	63	**2.17**	31st	Reject
31	Walkman	5	64	**2.14**	32nd	Reject
32	Video cameras	4	65	**2.12**	33rd	Reject
33.	Online Public Access Catalogue (OPAC)	0	69	**2.00**	34th	Reject
34.	Library Based Software e.g. KOHA	0	69	**2.00**	34th	Reject
35	Machine readable catalogue (MARC)	0	69	**2.00**	34th	Reject
36	Telefascimile Equipment	0	69	**2.00**	34th	Reject
Grand Total				**3.01**		**Applied**

Table 1 above presents data collected and analyzed on ICTs applied in MOUAU library services. There are thirty-seven ICTs under observation. The overall finding shows that many of the listed ICTs are applied in library services in MOUAU library. This is because the grand mean obtained (3.01) is above the criterion mean of 2.50 selected for the study. The individual items were also either applied or not applied based on the criterion mean. In essence, those ICTs that had a mean score of 2.50 and above indicated application and vice versa. Consequently, the ICTs accepted as being applied in MOUAU library services according to their ranks and mean scores include laptops (4.00); internet facilities (3.80); modem (3.80); network cables (3.77); stand-alone computers (3.74); online database (3.74); printers (3.62); CD-ROM technology (3.62), photocopiers (3.62); Wide Area Network (3.62); hubs (3.57); AC adapters (3.57); e-mail (3.51); projectors (3.51); Local Area Network (3.51); routers (3.51); DVD ROM (3.42); internet servers (3.30); switches (3.28); tin clients (3.28); close circuit cameras (3.25), electronic white boards and scanners (2.88). Furthermore, the ICTs that are not being applied are : Machine Readable Catalogue (MARC) (2.00); telefascimile (2.00); online Public Access Catalogue (OPAC); library-based software (2.00); video cameras (2.12); walkman (2.14); typewriters (2.17); digital cameras (2.23); ipads (2.26); telephones (2.32); GPS (2.32); Barcode Readers (2.32); and Radio Frequency Identification Device (2.35).

Research Objective 2: Examine areas of ICT application to library services in MOUAU library

Table 2: Areas of ICTs Application in MOUAU Library

S/N	Items	SA	A	SD	D	Mean	Rank	Remark
37	Photocopying	65	2	2	0	**3.88**	1st	Accept
38	Registration of users	60	1	6	2	**3.72**	2nd	Accept
39	Classification of books	39	23	5	2	**3.43**	3rd	Accept
40	Bibliographic verification	38	21	10	0	**3.41**	4th	Accept
41	Processing of information materials	45	11	9	4	**3.41**	4th	Accept
42	Bibliographic searches	44	2	15	8	**3.19**	6th	Accept
43	Descriptive/ preliminary cataloguing	24	31	6	8	**3.03**	7th	Accept
44	Receipt of order	9	38	20	2	**2.78**	8th	Accept
45	Ordering	12	35	16	6	**2.77**	9th	Accept
46	Subject cataloguing	6	35	8	20	**2.70**	10th	Accept
47	Reference and referral services	9	31	23	6	**2.62**	11th	Accept
48	Security checks	1	3	31	7	**2.36**	12th	Reject
49	Displays	10	4	53	2	**2.32**	13th	Reject

50	Library statistics taking	4	21	36	8	**2.30**	14th	Reject
51	Cooperate cataloguing	10	22	9	28	**2.20**	15th	Reject
52	Charging and di scharging of library resources	5	3	51	10	**2.04**	16th	Reject
53	Indexing and Abstracting services	3	10	42	14	**2.03**	17th	Reject
54	Current awareness services	2	4	57	6	**2.03**	17th	Reject
55	Compilation of bibliographies	3	5	41	20	**1.87**	19th	Reject
56	Cooperative acquisition	6	4	29	30	**1.80**	20th	Reject
57	Inter-library cooperation	3	2	34	30	**1.68**	21st	Reject
58	Community analysis/ selection of information materials	5	4	13	47	**1.52**	22nd	Reject
59	Book reservation	2	1	23	43	**1.45**	23rd	Reject
	Grand Total					**2.54**		

Table 2 above shows data collected on the areas where ICT facilities are applied in MOUAU library services. The overall result with a grand mean of 2.54 indicates an agreement on numerous areas of the library where ICTs are applied. Furthermore, the result shows that ICTs are applied in certain areas while they are not in most areas. The areas where ICTs are applied with their mean scores and ranks include: photocopying (3.88); registration of users (3.72); classification of books (3.43); bibliographic verification (3.41); processing of information materials (3.41); bibliographic searches (3.19); descriptive/preliminary cataloguing (3.03); receipt of order (2.78); ordering (2.77); subject cataloguing (2.70); and reference and referral services (2.62). On the other hand, ICTs are not applied in the following areas of the library: book reservation (1.45); community analysis/selection of information materials (1.52); inter-library cooperation (1.68); cooperation acquisition (1.80); compilation of bibliographies (1.87); current awareness services (2.03); indexing and abstracting services (2.03); charging and discharging of library resources (2.04); cooperate cataloguing (2.20); library statistics taking (2.30); displays (2.32); and security checks (2.36).

Research Objective 3: Find out the extent of ICT application in MOUAU library services

Table 3: Extent of ICT Application in MOUAU Library Services

S/N	ITEMS	SA	A	SD	D	MEAN	RANK	REMARK
60	Photocopying	53	7	5	4	**3.58**	1st	Accept
61	Registration of users	55	2	8	4	**3.57**	2nd	Accept
62	Classification of books	39	20	6	4	**3.36**	3rd	Accept
63	Bibliographic searches	39	11	7	12	**3.12**	4th	Accept
64	Bibliographic verification	19	39	9	2	**3.09**	5th	Accept
65	Processing of information materials	26	23	14	6	**3.00**	6th	Accept
66	Descriptive/ preliminary cataloguing	19	38	4	8	**2.99**	7th	Accept
67	Receipt of order	6	27	32	4	**2.51**	8th	Accept
69	Ordering	12	16	33	8	**2.46**	9th	Reject
70	Library statistics taking	4	17	39	9	**2.37**	10th	Reject
72	Reference and referral services	12	9	40	8	**2.36**	11th	Reject
73	Indexing and Abstracting services	10	21	21	17	**2.35**	12th	Reject
74	Security checks	8	13	39	9	**2.29**	13th	Reject
75	Displays	11	4	46	8	**2.26**	14th	Reject
76	Charging and discharging of library resources	8	6	49	6	**2.23**	15th	Reject
77	Cooperative acquisition	11	4	42	12	**2.20**	16th	Reject
78	Current awareness services	4	9	50	6	**2.16**	17th	Reject
79	Subject cataloguing	6	18	8	37	**1.90**	18th	Reject
80	Book reservation	4	10	28	27	**1.87**	19th	Reject
81	Compilation of bibliographies	8	2	29	30	**1.83**	20th	Reject
82	Community analysis/ selection of information materials	10	4	14	41	**1.75**	21st	Reject
83	Inter-library cooperation	12	1	12	44	**1.72**	22nd	Reject
84	Cooperate cataloguing	6	17	3	43	**1.56**	23rd	Reject
Grand Total						**2.46**		**Low**

Table 3above indicates findings on the extent of ICT application in MOUAU library services. Consequently, the overall result shows a low extent of ICT application in the library services. This is because the grand mean obtained (2.46) is below the criterion mean of 2.50 chosen for the study. The result indicates that ICTs are applied to a high extent in few areas of the library while they are applied to a very low extent in several other areas. The areas to which ICTs are applied to a high extent include: photocopying (3.58); registration of users (3.57); classification of books (3.36); bibliographic searches (3.12); bibliographic verification (3.09); processing of information materials (3.00); descriptive/preliminary cataloguing (2.99); and receipt of order (2.51). On the other hand, the respondents indicated that ICT is applied to a low extent in the

following areas of the library: cooperate cataloguing (1.56); inter-library cooperation (1.72); community analysis/selection of information materials (1.75); compilation of bibliographies (1.83); book reservation (1.87); subject cataloguing (1.90); current awareness services (2.23); cooperation acquisition (2.20); charging and discharging of library resources (2.04); displays (2.26); security checks (2.29); indexing and abstracting services (2.35); reference and referral services (2.36); library statistics taking (2.37); and ordering (2.46).

Research Question 4: Investigate the factors affecting ICT application in library services in MOUAU library

Table 4: Factors Affecting ICT Application in Library Services in MOUAU Library

S/N	ITEMS	SA	AD	SD	D	MEAN	RANK	REMARK
85	Lack of infrastructural facilities	48	19	1	1	**3.65**	1st	Accept
86	Lack of maintenance culture	54	6	7	2	**3.60**	2nd	Accept
87	Inadequate technical support	56	4	5	4	**3.58**	3rd	Accept
88	Inadequate number of ICT -competent staff in the library	43	24	2	0	**3.58**	3rd	Accept
89	Inadequate funding	38	29	0	2	**3.49**	5th	Accept
90	Frequent changes in techn ology	52	8	0	9	**3.49**	5th	Accept
91	Absence of good ICT policy in the library	49	9	6	5	**3.48**	7th	Accept
92	Lack of continual training of library staff	27	23	12	7	**3.42**	8th	Accept
93	Incompetent personnel	47	11	2	9	**3.39**	9th	Accept
94	Unstable power supply	43	17	0	9	**3.36**	10th	Accept
95	Management problems	43	17	0	9	**3.36**	10th	Accept
96	Low Internet bandwidth	36	26	5	2	**3.35**	12th	Accept
97	Changes in software applications in libraries	42	12	6	9	**3.26**	13th	Accept
Grand Total						**3.46**		**Accept**

Table 4 above presents results on the factors affecting ICT application in MOUAU library. The summary of the finding shows a high degree of agreement on the factors affecting ICT application in MOUAU library. This is because the grand mean obtained, (3.46) is above the criterion mean. It could also be seen from the table that all the options scored above 2.50 indicating acceptance. The factors with their mean scores and according to their ranks include: lack of infrastructural facilities (3.65); lack of maintenance culture (3.60); inadequate number of ICT-competent staff in the library (3.58); inadequate technical

support (3.58); inadequate funding (3.49); frequent changes in technology (3.49); absence of good ICT policy in the library (3.48); lack of continual training of library staff (3.42); incompetent personnel (3.39); unstable power supply (3.36); management problems (3.36); low internet bandwidth (3.35); and changes in software applications in libraries (3.26).

Research Question 5: Discover the Strategies for the Effective application of ICT Facilities in MOUAU Libraries.

Table 5: Strategies for the Effective Application of ICT Facilities in MOUAU Libraries.

S/N	Options	SA	A	D	SD	Mean	Rank	Remark
98	Provision of adequate technical support	59	5	0	5	**3.71**	1st	Accept
99	Provision of stable power supply	55	10	4	0	**3.71**	1st	Accept
100	Provision of infrastructural facilities	53	11	0	5	**3.62**	3rd	Accept
101	Continual Training of staf f on ICT applications	53	7	4	5	**3.57**	4th	Accept
102	Proper supervision on the use of ICT facility by the management	53	8	2	6	**3.57**	4th	Accept
103	Employment of more ICT competent staff in the library	42	23	4	0	**3.52**	6th	Accept
104	Provision of adequate ICT facilities	43	20	2	4	**3.48**	7th	Accept
154	Provision of adequate Internet bandwidth	51	6	6	6	**3.48**	7th	Accept
106	Organizing frequent training for the library staff	46	15	2	6	**3.46**	9th	Accept
107	Increase funding on ICT application	39	21	0	9	**3.30**	12th	Accept
	Grand Total					**3.52**		**Accept**

Table 5 above presents data collected and analyzed on the strategies for enhancing ICT application in MOUAU library services. The overall finding shows a high level of agreement and acceptance of the twelve (12) strategies by the respondents. This level of agreement was possible because the grand mean score of 3.52 is above the criterion mean selected for the study. It could also be observed from the table that the entire item options scored above 2.50 and were all accepted. The strategies with their mean scores and according to their ranks include: provision of stable power supply (3.71); provision of adequate technical support (3.71); provision of infrastructural facilities (3.62); continual training of staff on ICT applications (3.57); proper supervision on the use of ICT facility by the management (3.57); employment of more ICT competent staff in the library (3.52); provision of adequate ICT facilities (3.48); provision of adequate internet bandwidth (3.48); organizing frequent training for the library staff (3.46); recruitment of competent staff in the library (3.45); building of

strong ICT policy in the library (3.38) and increase funding on ICT application (3.30).

Discussion of Findings

The study reveals that numerous ICTs are applied in the library. Out of thirty-seven (37) ICTs examined, the respondents accepted that twenty-three (23) ICTs are used while fourteen (14) are not. The ICTS applied include: laptops, Internet facilities, modem, network cables, stand-alone computers, online database, printers, CD-ROM technology, photocopiers, Wide Area Network, hubs, AC adapters, e-mail, projectors, local area network, routers, DVD ROM, Internet servers, switches, tin clients, close circuit cameras, electronic white boards and scanners, whereas, Machine Readable Catalogue (MARC), telefascimile, Online Public Access Catalogue (OPAC), library-based software, video cameras, walkman, typewriters, digital cameras, Ipads, telephones, GPS, barcode readers and RFID, were not applied. Furthermore, laptops were found to be the most applied ICT in the library, followed by Internet facilities and modem. In summary, the researcher found out that MOUAU library applies a great deal of ICTs in its library services. This finding agrees with the work of Krubu and Osawaru (2018) who found out the existence of numerous ICTs in academic libraries in Nigeria.

The study revealed the application of ICTs in different areas and functions of the library. This can be inferred from the fact that out of twenty-three (23) areas of the library surveyed, the result showed the application of ICTs is in only eleven (11) areas. On the other hand, ICTs are not applied in twelve (12) areas. The areas accepted to have ICT application, include: photocopying, registration of users, classification of books, bibliographic verification, processing of information materials, bibliographic searches, descriptive/preliminary cataloguing, receipt of order, ordering, subject cataloguing and reference and referral services, while little or no application of ICTs. is found in the area of book reservation, community analysis/selection of information materials, inter-library cooperation, cooperation acquisition, compilation of bibliographies, current awareness services, indexing and abstracting services, charging and discharging of library resources, cooperate cataloguing, library statistics taking, displays and security checks. This study contradicts the findings of Walmiki and

Ramakrish (2017) which revealed the application of ICTs to all the functions in the academic library.

On the extent of ICT application in the library, the study found a state of low extent of application of ICT in the library. This finding was based on the rejection of most options as presented in Table 3. Furthermore, the areas found to have a high extent of ICT application are bibliographic verification, descriptive/preliminary cataloguing, classification of books, receipt of order, processing of information materials, photocopying and bibliographic searches. Other areas of the library scored a low extent of ICT application in them. This agrees with the work Sivakumaren, Geetha and Jevaprakash (2016) on application of ICT in academic libraries which revealed that though the libraries had hardware, software and communication facilities to some extent, ICT based resources and services were not reaching the users to the expected extent.

This finding on factors affecting ICT application in MOUAU library show the various problems associated with ICT application in academic libraries. Among these problems as reported by the study include; lack of infrastructural facilities, lack of maintenance culture, inadequate number of ICT-competent staff in the library, inadequate technical support, inadequate funding, frequent changes in technology, absence of good ICT policy in the library, lack of continual training of library staff, incompetent personnel, unstable power supply, management problems, low internet bandwidth, and changes in software applications in libraries. Consequently, the finding agrees with the findings of Ramzan and Singh (2012), Igwebuike and Agbo (2015) and Sivakumaren, Geetha and Jeyaprakash (2016) who found that lack of funds, poor management support, unskilled man power and lack of infrastructural facilities necessary for full application of ICT were some of the problems encountered in the library which hinders their application of ICT resources in their areas of operations and services.

The finding on the strategies for enhancing ICT application in MOUAU library shows many strategies that can enhance MOOUAU; provision of stable power supply, provision of adequate technical support, provision of infrastructural facilities, Continual training of staff on ICT applications, proper supervision on the use of ICT facility by the management, employment of more ICT competent

staff in the library, provision of adequate ICT facilities, provision of adequate Internet bandwidth, organizing frequent training for the library staff, recruitment of competent staff in the library, building of strong ICT policy in the library and increase funding on ICT application. This finding agrees with the recommendations of Itsekor and Ugwunna (2014), Bappah (2014) and Cholin (2015) who suggested that provision of funds for the procurement of ICT facilities, staff and user training on ICT use and literacy, provision of adequate infrastructural facility among other remedies should be the top consideration of any academic library with the view of applying ICT in their operations and services.

Conclusion/Recommendation

ICTs are applied in different areas of in MOUAU library. This ensures that all the services and areas of operations of the library experience innovation and is carried along without allowing one to suffer at the expense of other. However, tasks in these areas where ICTs are applied are easily performed. Although numerous ICTs are applied in the library in different areas, the application is to a low extent. The low extent could be accounted to unawareness on the importance of ICT application in libraries, inadequate funds or other factors as identified by the study. However, the study revealed that many strategies can be put in place to remedy the problems associated with the application of ICTs in the library. These strategies are provided in the recommendations below:

* Adequate and relevant ICTs should be made available to academic libraries. These libraries should be careful to avoid the application of ICT that would stand as monuments or images instead of being utilized.
* Libraries, especially, the academic libraries should develop means of generating additional funds to finance most of their projects. This is because findings have revealed that academic libraries suffer from inadequate funding. They may place most of their services on fee-based, solicit support from individuals and philanthropists, among other means.
* Academic libraries should build on the infrastructural facilities available in their library. This is due to the fact that most of these ICTs require

some infrastructure such as strong desk, air-conditioned rooms, etc. for their application and functioning.

* Academic libraries should recruit more ICT competent staff that would man most of the library section where ICT application is low. Gone are the days when libraries are analogue in nature. In this dispensation, ICT-experienced library staffs are required in the project of ICT application to libraries.

* It could be seen that most academic libraries suffer from epileptic power supply. It is also important to understand that most of these ICTs work with electricity. Therefore, epileptic power supply felt in most academic libraries, is a hindrance to ICT application in these libraries. To this end, library management should develop strategies of improving supply. This could be through purchase of a standby generator or building of solar energy panels among other means of generating additional power supply.

* Technicians should be mounted at each area of the library where ICTs are applied. This is to ensure the maintenance of the ICT facilities and resources to avoid its frequent breakdown or misuse either by the library staff or the library user. Also academic library staff should be provided with basis technical knowledge, especially, in relation to some precautionary measure in the ICT application and use.

* Library authorities and management should frequently, organize trainings for its staff. This training may be sending them to another library in another country or organize in-house trainings on ICT for them. This would enable the library staff move with current trends and also acquire skills for ICT application and use in the library.

* Internet servers should be built in the libraries to ensure provision of adequate Internet bandwidth. This is because most of the ICTs require Internet connections for its effective application.

* Academic libraries should develop policy that makes provision for the type and pattern of ICT application. This policy would provide a roadmap for the library in their desire to digitize or hybridize their operations and services

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