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Information and Communication Technology (ICT) Competence for Library Services Delivery of Library Staff in University Libraries in Imo State

BY

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Abstract

Purpose*: The study focused on ICT competence for library services delivery in university libraries in Imo State. It sought to know the extent library staff are competent in the use of Information and Communication Technology (ICT) for library service delivery in the university libraries*

Methodology*: Descriptive survey design was adopted for the study. The population comprised 262 library staff which was also used as the study's sample. An instrument rated on a four-point scale was used to collect data for the study and data collected were analysed using mean and standard deviation to answer the research questions and one sample t-test to test the hypotheses at 0.05 level of significance.*

Findings*: It was revealed that: there is good provision of core library services; there are low ICT competence among library staff; and systemic challenges plaguing effective library service delivery.*

Implications*: The study recommended that university administrations should allocate dedicated budgets specifically for the enhancement and maintenance of Information and Communication Technology (ICT) facilities within university libraries; develop and mandate regular and practical training workshops aimed at improving ICT competence among library staff; implement alternative and renewable energy solutions, such as solar power and inverters.*

Originality/Value*: This work has not been published in any journal before. Its originality lies in its ability to discover that ICT competence of library staff is essential for effective service delivery in libraries.*

Keywords*: Library Service, ICT, Competence, University Library, Library Staff*

Introduction

Libraries exist in various forms and are structured to address the specific information needs of their respective communities. These include public libraries, school libraries, special libraries, national and academic libraries. Academic libraries particularly those situated within universities play pivotal roles in supporting higher education by providing scholarly materials, digital resources, research support services, and collaborative learning spaces. Ukwueze, Osuagwu and Ani (2022) see university libraries as libraries established in the universities with the aim of assisting their parent institutions to achieve their predetermined goals. They serve as intellectual hubs where students, faculty, and researchers access curated knowledge essential for

teaching, learning, innovation, and knowledge production (Ezeani & Nwankwo, 2022). As the academic heart of the university, the university library not only supports curricular and research activities but increasingly leverages digital technologies to enhance access, usability, and the overall quality of academic engagement. The university library is established to enable the users have access to their information needs and in order to achieve this, they render different kinds of services.

Library services are the assistance rendered to the library users in order to enable them have access to their information needs. Jubb and Green cited in Unegbu, Nwanekezie and Alaehie (2014), observed that university libraries have for centuries played critically important roles in supporting research in all subjects and disciplines within their host universities and colleges. The following are the services provided by a university library: circulation of materials, shelf management, user education programmes, provision of information services, and operation of the Online Public Access Catalogue (OPAC), exhibitions and displays, reader's enquiry services, Selective Dissemination of Information (SDI), trainings and internet services, bibliographic services, indexing services, abstracting services, access to electronic resources and document delivery services. Udo-Anyanwu (2020) in her studied identified user education, reference services, circulation and reprographic services, internet services, CAS and SDI services are some of the library services that are provided to a high extent. The effectiveness and efficiency of services provided by a university library is mainly determined by library users. Aina cited in Okorie and Njoku (2016) recognizes this fact when he stated that the user is very critical in the practice of librarianship. No library can exist without the patrons.

In university libraries, user-centric approaches are a new concept that has embraced traditional services. The growth of technology has led to creating "informal networks" that included email, mailing lists, newsgroups, chats, instant messaging, classroom discussion boards, and other Internet-based tools that develop information in university libraries more than ever. These tools are just some of the tools that have drastically changed information technology in academic libraries (Wang, 2013). For effective delivery of library services, there is need to fully integrate ICT in the library operations.

Information and Communication Technology (ICT) is one of the greatest inventions of mankind which plays unprecedented roles in changing the landscape of human and organization activities around the globe from which libraries are not exempted. In corroboration to this, Dhanavandan, Esmail, Mohammed and Nagarajan cited in Moghadami, Malekolkalami and Senapathy (2021) stress that ICT has drastically changed every facet of

human endeavour of which library is not an exception, such that libraries are now deeply engaged in the digitization of almost all library resources in order to provide a fast, interactive and dynamic information services to users. In reflection to that, information has therefore been disseminated speedily around the globe due to advancement in the channel of communication. Library resources are being transformed from print to digital and web resources, which is being used extensively and subsequently resulted in tremendous growth of information dissemination and service delivery in the library. The use of Information and Communication Technology (ICT) facilities in performing library functions are becoming very useful in the libraries because it makes service delivery to the user faster and more efficient. According to Malanga (2015), ICT is a revolution that provides the platform and technical means of handling information and communication. With the definitions above, ICT can rightly be said to be a catalyst for generating, processing, storing and disseminating information. In order to achieve this, the library staff need to possess certain level of ICT competence.

ICT competence, on the other hand, involves the practical skills and knowledge necessary for handling computer hardware, software, networking systems, Integrated Library Management Systems (ILMS), digital cataloguing tools, and online information services. Okehie (2019) views ICT competence of librarians to be those relevant skills and knowledge to be acquired by those working in the library to be able to fully exploit information search, retrievals and delivery using electronic format. ICT competence underpins critical services including online cataloguing, digital reference services, electronic resource management, institutional repositories, circulation automation, virtual library services, and digital preservation. Effective deployment of these services enhances accessibility, improves user satisfaction, and strengthens the role of libraries in supporting teaching, learning, and research.

The increasing dependence on ICT in library operations makes it essential to assess the readiness and capability of library staff in universities to function effectively in a digital environment. The growth of technology has had a significant impact on the performance of university libraries, on the training of library staff, on the skills and competencies of library employers' expectations, and on the curriculum in library courses. However, the application of ICT competence in service delivery faces several challenges that can hinder optimal performance. One major challenge is the inadequate availability of ICT infrastructure, such as unreliable internet connectivity, limited access to computers, and frequent power outages, especially in developing regions. These limitations restrict the effective use of digital tools and reduce the

speed and quality of service delivery. In addition, there is often skill gap among personnel, as many workers lack sufficient training and continuous professional development in emerging digital technologies, making it difficult to fully utilize ICT systems for efficient service provision (World Bank, 2020).

This study examined digital literacy and ICT competence for library services delivery of library staff in university libraries in Imo State. It focused on the following university libraries in Imo State: Alvan Ikoku Federal University of Education, Owerri; Federal University of Technology, Owerri; Imo State University, Owerri; Kingsley Ozumba Mbadiwe University, Ogboko and University of Agriculture and Environmental Sciences, Umuagwo.

Research Questions

The study posed the following research questions:

1. What are the mean scores on the library services rendered in the university libraries studied?
2. What are the mean scores on the level of ICT competence of library staff in university libraries in Imo State?
3. What are the mean scores on the extent ICT competence influence library service delivery in university libraries?
4. What are the mean scores on the challenges affecting the application of ICT competence to library service delivery in university libraries in Imo State?

Hypotheses

The following null hypotheses are formulated for the study and were tested at 0. 05 significant levels:

Ho_1**:** The mean score on library services rendered in the university libraries studied is not significantly greater than the expected mean of 17.5

Ho_2**:** The mean response on the level of ICT competence of library staff in university libraries in Imo State is not significantly greater than the expected mean of 12.5.

Ho_3**:** The mean score on extent ICT competence influence library service delivery in university libraries is not significantly greater than the expected mean of 12.5.

Ho_4**:** The mean score on the challenges affecting the application of ICT competence to library service delivery in university libraries in Imo State is not significantly greater than the expected mean of 12.5.

Review of Related Literature

Some related empirical studies are reviewed below:

The study by Ikegwuiro (2017) examined the application of internet for service delivery in selected special libraries in Kaduna metropolis. The study was guided by five

research objectives. Survey research design was adopted. The population of the study was made up of 38 library staff from the four (4) selected special libraries. Self-structured questionnaire was used to collect data. Descriptive statistical tools such as simple percentage and tables were used to analyze the data. Findings revealed that the application of the internet to library services is not significantly high, that the librarians derive satisfaction in service delivery, low bandwidth, poor funding, erratic power supply, technology obsolete and high cost of connectivity and maintenance were discovered to be a hindrance to effective application of the internet in the special libraries.

Farah (2013) carried out study on the factors influencing quality service delivery in special libraries in Kenya: A case study of Garissa provincial library. Four research questions guided the study. The study employed descriptive survey design. The sample comprises four (4) librarians, 3 camel riders and 120 library users. Data were collected by use of questionnaire. Data were analyzed by use of qualitative and quantitative means. Findings revealed that availability of reading materials influenced quality library services delivery. The library lacked the required information for all categories of users. Findings further showed that adoption of technology influenced the quality of service delivery. For example, all the library users, librarians and camel riders indicated that the library was not connected to the internet.

A study on the effect of ICT competence on service delivery in Nigerian university libraries was conducted by Baro and Eze (2015). The purpose of the study was to investigate the level of ICT competence possessed by librarians in selected Nigerian universities and its influence on service delivery. The study adopted a descriptive survey research design and used a sample of 120 librarians from 10 universities across Nigeria. Data were collected through questionnaires and analyzed using frequency counts, percentages, and Pearson correlation. The findings revealed that most librarians had moderate ICT competence and that higher ICT competence was positively associated with more efficient and effective library service delivery.

Bajpai and Margam's (2019) study was on ICT skills and competencies of library and information science professionals working in college libraries, University of Delhi: A study. The study was guided by six objectives. In the present study, the data was collected from the respondents through a structured questionnaire using survey method. The questionnaires were distributed among 60 LIS professionals of various college libraries affiliated to the University of Delhi through online and personal meetings, eliciting a response of 100 per cent. Data collected were analyzed in the form of tables and figures using percentages.

Findings of the study reveal that the majority of the LIS professionals have basic knowledge of ICT skills to manage the libraries with the exception in some areas such as dealing with the operating system and software. The study has provided an insight to meet the changing needs of users by learning ICT skills/competencies in the digital era. In totality, the results provide emphasis on the necessity of ICT skill for efficient delivery of library services for the betterment of the library as a whole.

Ani (2018) carried out a study on the impact of ICT competence in Nigeria academic libraries, a case study of University of Nigeria Nsukka library. The study sought to find out how ICT skills have influenced our university libraries. Six research objectives, six research questions and six research hypotheses were formulated to guide the study. The study adopted survey research design and the population of study was 67 library staff drawn from the library studied. Questionnaire was the instrument used for data collection and data was analysed using frequency count and simple percentage. The study found among other that, ICT competences is needed in a high extent to properly utilize the library resources.

A study on impact of Information and Communication Technology on the effective management of universities in South West Nigeria was conducted by Ezeoba (2017). The purpose of this study is to determine what impact Information and Communication Technology has on the effective management of universities in South- West, Nigeria. Six research objectives and six research questions were formulated to guide the study. It used descriptive research design and a sample of 6 universities with inventory and questionnaire as instruments for data collection from 2,140 members of staff comprising; 1,135 academic and 1,005 non-academic staff. Data collected were analysed using simple frequency table and percentages. The findings of the study show that there was a low level of availability of Information and Communication Technology facilities in the universities in South-West, Nigeria. The findings indicate a significant relationship between the utilization of Information and Communication Technology facilities in the university. The findings of this study suggest that Information and Communication Technology is a critical variable in the impact of ICT in academic library.

Methodology

Survey research design was adopted for the study. The population comprised 262 library staff which was also used as the study's sample. The instrument is structured on a modified four-point Likert rating scale. Research questions 1 and 4 were rated with Strongly Agree (SA), Agree, Disagree (D), Strongly Disagree (SD); research question 2 was rated with Very High Level (VHL), High

Level (HL), Low Level (LL), Very Low Level (VLL). While research question 3 was rated with Very High Extent (VHE), High Extent (HE), Low Extent (LE), Very Low Extent (VLE). All are weighted with 4, 3, 2, and 1 respectively. Data collected were analysed using mean and standard deviation scores to answer the research questions and one sample t-test to test the hypotheses at 0.05 level of significance.

Data Analyses and Presentation

Research Question 1: What are the mean scores on the library services rendered in the university libraries studied?

Table 1: Library services rendered in the university libraries

S/N	Items	SA	A	D	SD	Mean	Std	Remark
1	The university library provides adequate reference services.	91	118	46	7	3.12	0.78	Agree
2	The library offers effective circulation services to users.	86	108	51	17	3.00	0.88	Agree
3	The library provides current awareness service	87	116	49	10	3.07	0.81	Agree
4	The library offers efficient information retrieval services.	88	114	46	13	3.06	0.84	Agree
5	The library provides information literacy programmes	95	100	51	16	3.05	0.89	Agree
6	The library provides Selective Dissemination of Information	98	98	53	13	3.07	0.87	Agree
7	Internet services	83	120	44	15	3.03	0.84	Agree
	Mean of item means					**3.05**		
	Grand mean					**21.40**		

Table 1 shows the mean response scores of the library staff regarding the library services rendered in their university libraries. All the items in the rating scale have their mean scores above the 2.50 cutoff mean for a 4-point Likert scale. This implies that majority of the library staff agree that their university libraries provide adequate reference services (3.12), circulation services (3.00), current awareness service (3,07), information retrieval services (3.06), information literacy programmes (3.05), selective dissemination of information (3.07), and internet services (3.03) The standard deviation scores are very low compared to the mean scores, implying a homogenous spread of the scores. The mean of item means is 3.05 which is also greater than 2. 50, implying that majority of the library staff agree that the stated library services are rendered in their libraries.

Ho_1: The mean scores on the library services rendered in the university libraries

under study is not significantly greater than the expected mean of 17.5

Table 2: One sample t-test of difference in mean responses of librarians on library services rendered in the libraries

Variable	N	Criterion mean	Mean	SD	Df	t-cal	α-value	p-value	Decision
Library services	262	17.5	21.40	2.11	261	29.030	0.05	**.000**	Ho_1 rejected

df = degree of freedom, SD= standard deviation

Table 2 shows the corresponding hypothesis of test of difference in the mean responses of the library staff on the services rendered in their libraries. The mean response of the library staff on the services rendered in their libraries is 21. 40. This mean is greater than the criterion mean of 17.50. The p-value is 0.000 which is less than 0.05, leading to the rejection of the null hypothesis. This implies that the mean response of the library staff on services rendered in the university libraries is ++++

Research Question 2: What are the mean scores on the level of ICT competence of library staff in university libraries in Imo State?

Table 3: Summary statistics on level of ICT competence of library staff in university libraries

S/N	Items	VHL	HL	LL	VLL	Mean	Std	Remark
1	Library staff can use library management software effectively.	30	74	105	53	2.31	0.92	Low level
2	Library staff can operate ICT hardware such as computers and scanners.	26	92	83	61	2.60	0.94	High level
3	Library staff can troubleshoot ICT-related problems.	39	67	85	71	2.28	0.23	Low level
4	Library staff can use online databases and electronic resources efficiently.	39	75	96	52	2.39	0.96	Low level
5	Library staff can operate internet-based communication tools for service delivery.	41	84	76	61	2.40	0.11	Low level
	Mean of item means					**2.39**		Low level

Table 3 shows the mean response scores of the library staff on their level of ICT competence. Only item 2 has a mean score above 2.50 (2.60), which implies that majority of the library staff can operate ICT hardware such as computers and scanners. Other items have their mean scores below the cutoff mean, implying that majority of the respondents are not in agreement with the statements. The standard deviation scores are low which means

that the responses of the library staff are homogenously distributed. The mean of item means is 2.39 which is also lower than 2.50 criterion mean mark. This implies that the ICT competence level of the library staff in universities in Imo State is low.

Ho_2: The mean scores on the level of ICT competence of library staff in university libraries in Imo State is not significantly greater than the expected mean of 12.5.

Table 4: One sample t-test of difference in mean scores of library staff on their level of ICT competence

Variable	N	Criterion mean	Mean	SD	Df	t-cal	α-value	p-value	Decision
ICT competence	262	12.5	11.98	2.17	261	1.07	0.05	**.081**	Ho_4 Accepted

df =

degree of freedom, SD= standard deviation

Table 4 shows test of difference in the mean responses of the library staff on the ICT competence from the criterion mean of 12.5. From the table, it is seen that the mean score is 11.98 which is literally lower than the criterion mean of 12.50 with an associated significant p-value of 0.081. Since the p-value greater than 0 05, the null hypothesis is therefore not rejected This implies that the library staff's responses on their level of ICT competence is not significantly greater than 12.50.

Research Question 3: What are the mean scores on the extent ICT competence influence library service delivery in university libraries?

Table 5: Summary statistics on responses on the extent of influence of ICT competence on library service delivery in university libraries

S/N	Items	VHE	HE	LE	VLE	Mean	Std	Remark
1	ICT competence of staff enhances the quality of library services.	81	120	53	8	3.05	0.79	High extent
2	ICT competence improves the efficiency of library operations.	85	124	40	13	3.07	0.82	High extent
3	ICT competence boosts staff capacity to support users effectively.	87	103	57	15	3.00	0.88	High extent
4	ICT competence aids timely dissemination of information resources.	75	122	51	14	2.98	0.83	High extent
5	ICT competence contributes to overall user satisfaction.	93	108	48	13	3.07	0.85	High extent
	Mean of item means					**3.03**		High extent

Grand mean	**15.17**

Table 5 shows the mean response scores of the library staff on the extent to which ICT competence influence library service delivery in university libraries. All the items in the table have their mean scores above the criterion mean of 2.50, indicating wide range of agreement with the responses. The mean of item means is 3.03 which is also greater than the criterion mean. This implies that majority of the library staff are of the view that ICT competence positively influence library service delivery in university libraries.

Ho_5: The mean scores on extent ICT competence influence library service delivery in university libraries is not significantly greater than the expected mean of 12.5.

Table 6: One sample t-test of difference in mean responses of library staff on influence of ICT competence on university libraries

Variable	N	Criterion mean	Mean	SD	df	t-cal	α-value	p-value	Decision
Influence of digital literacy and ICT competence	262	12.5	15.18	1.83	261	23.667	0.05	**.020**	Ho_5 rejected

df = degree of freedom, SD = standard deviation

Table 6 shows the t-test of difference in the mean response scores of library staff on influence of ICT competence on service delivery from the criterion mean of 12.5. The sample mean (x= 15.18, p= 0.020) is significantly greater than the criterion mean of 12.50 with a p-value less than 0.05 as shown in table 10. The null hypothesis is therefore rejected. This implies that the mean responses of library staff on the influence of ICT competence on library service delivery is significantly greater than the criterion mean of 12.5.

Research Question 4: What is the mean score on the challenges affecting the application of ICT competence to library service delivery in university libraries in Imo State?

Table 7: Summary statistics on responses on the challenges affecting the application of ICT competence to service delivery in universities

S/N	Items	SA	A	D	SD	Mean	Std	Remark
1	Inadequate ICT facilities hinder effective digital literacy application.	115	107	32	8	3.26	0.78	Agree
2	Poor funding limits acquisition of ICT tools in the library.	108	117	32	5	3.25	0.74	Agree
3	Insufficient ICT training opportunities reduce staff competence.	107	121	28	6	3.26	0.73	Agree
4	Erratic power supply affects effective use of ICT tools.	106	118	30	8	3.23	0.76	Agree
5	Poor internet connectivity affects digital service delivery.	113	107	39	3	3.26	0.74	Agree
	Mean of item means					**3.25**		Agree
	Grand mean					**16.26**		

Table 7 shows the mean response scores of the library staff on the challenges affecting application of ICT competence to library service delivery in university libraries in Imo State. All the items in the rating scale have their mean score above 2.50 criterion mean mark. The standard deviation scores are low which means that the individual responses of the respondents were tightly packed around the mean. The mean of item means is 3.25 which is also greater than 2.50. This implies that the challenges facing application of ICT competence to library service delivery include: inadequate ICT facilities (3.26), poor funding (3.25), insufficient ICT training opportunities (3.26), erratic power supply (3.23), and poor internet connectivity (3.26).

Ho_6: The mean scores on the challenges affecting the application of ICT competence to library service delivery in university libraries in Imo State is not significantly greater than the expected mean of 12.5.

Table 12: One sample t-test of difference of the mean responses on challenges affecting application of ICT competence to library services

Variable	n	Criterion mean	Mean	SD	df	t-cal	α-value	p-value	Decision
Challenges	262	12.5	16.25	1.57	261	38.68	0.05	**.000**	Ho_6 rejected

df = degree of freedom, SD= standard deviation

Table 8 shows the one sample t-test of difference in responses on challenges to application of ICT competence to library service delivery from the criterion mean of 12. 50. The sample mean is 16.25 with an associated significant p-value (0.000). The mean is clearly greater than the criterion mean of 12.5. This leads to the rejection of the null hypothesis.

Discussion of Findings

Provision of Library Services

The first finding of the study revealed that university libraries studied provided core library services such as adequate reference services, circulation services, current awareness services (CAS), information retrieval services, information literacy programs, selective dissemination of information (SDI), and internet services. The mean response, being significantly greater than the 17.5 criterion mean, indicates a strong assessment of service delivery by the library staff. The fundamental task of academic libraries is to support the core mission of universities which is to propagate teaching, learning, and research. This further means that university libraries have successfully evolved from traditional, passive print repositories into proactive, diverse service hubs. Offering specialized programs indicates that academic libraries are beginning to align their services with the dynamic, individualized research demands of 21st-century academia. This finding aligns with that of Udo-Anyanwu (2020) that library services are provided to a high extent. This finding however debunks previous findings from Ikegwuiro (2017) who recorded in a similar study that core library services were not delivered to a high extent in South-East university libraries. Also, Farah (2013) in a study on provision of services among university libraries in Kenya revealed that many major core library services were not delivered in the studied libraries.

ICT Competence among library staff

The second finding of the study revealed that the library staff in university libraries in Imo State have low level of ICT competence. This goes to show that theoretical literacy does not always translate to practical competence. While the staff understand what digital tools can do and how to consume digital data (literacy), they lack the advanced, hands-on technical skills (competence) required to configure, maintain, and troubleshoot these environments. This deficit exposes a major gap the studied library staff are proficient digital consumers but weak digital creators and administrators. This finding aligns with that of Bajpai and Margam (2019) who revealed in a similar study that majority of the LIS professionals studied have only basic knowledge of ICT skills to manage the libraries with major gaps in core competencies such as dealing with the operating system and software. However, Baro and Eze (2015) showed moderate ICT competency levels

among studied library staff in some selected Nigerian universities.

Influence of ICT Competence on Service Delivery

The findings further showed a strong consensus among library staff that ICT competence poses a positive influence on library service delivery. This finding implies that the library staff clearly appreciate the importance of ICT and digitalization for progression in academic libraries. The staff recognize that their own technological capabilities directly dictate the speed, accuracy and overall quality of user experiences. This finding brings to bare, the role played by human capital rather than hardware alone in the technological success of academic libraries in the modern times. This finding corroborates a previous finding from Ani (2018) who in a similar study, recorded that library staff in University of Nigeria Nsukka viewed ICT competences as a much needed skill for proper utilization of the library resources. In the same vein, Ezeoba (2017) recorded strong relationship between ICT and digital competencies and effective library service delivery in southeast universities in Nigeria.

Challenges impeding ICT application in Academic Universities in Imo State

The final finding of the study revealed barriers such as inadequate ICT facilities, poor institutional funding, insufficient ICT training opportunities, erratic power supply, and poor internet connectivity, with a mean response significantly greater than 12.50 as factors plaguing application of ICT in academic libraries. These challenges represent structural deficiencies characteristic of public infrastructure in developing nations of which Nigeria is not exempted. The combination of erratic power supply and poor internet connectivity acts as a constant clog point which renders quality hardware useless during outages. Furthermore, the lack of structured training opportunities directly explains the low ICT competence levels observed in finding four. Without institutional funding and targeted workshops, staff are forced to rely on informal, peer-to-peer, or trial-and-error learning, which cannot foster advanced technical competencies This finding is in line with World Bank's (2020) assertion that there is often skill gap among personnel, as many workers lack sufficient training and continuous professional development in emerging digital technologies, making it difficult to fully utilize ICT systems for efficient service provision.

Conclusion

This study offers a close look at the digital landscape within university libraries in Imo State, revealing an environment rich in infrastructure but constrained by specific technical limitations. The persistence of low applied ICT competence poses a significant barrier to modern library practice. This technical gap, exacerbated by systemic challenges like poor funding, unstable electricity, and limited training, prevents these

libraries from optimizing their digital investments. For these institutions to serve as effective engines of modern research, university administrations must invest heavily in hands-on, competency-driven staff training and reliable alternative energy solutions. Only by turning conceptual digital literacy into applied technical competence can academic libraries deliver the seamless, high-tier information services required by today's academic community.

Recommendations

Based on the findings of the study, the researchers recommend that:

1. The university management should create opportunities for improvement of library services.
2. University librarians in academic libraries should develop and mandate regular, practical training workshops aimed at improving ICT competence among library staff, with a focus on technical skills such as troubleshooting system management, and the use of advanced digital tools.
3. Libraries should establish specialized ICT support teams staffed by trained personnel to provide ICT-based services since digital literacy and ICT competence of library staff enhances service delivery.
4. University administrations should implement alternative and renewable energy solutions, such as solar power and inverters, to mitigate the challenges posed by erratic power supply affecting ICT operations and also collaborate with technology providers, academic institutions, and funding agencies to support infrastructural upgrades and staff training initiatives.

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