# A Comparative Analysis of ICT Proficiency Possessed Among The Federal University Library Staff in North East, Nigeria

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**ABSTRACT:** *The study is a comparative analysis of the ICT proficiency level possessed among the Federal University Library Staff in North East, Nigeria. Four objectives were formulated to guide the study: determine which university library staff possesses the highest basic ICT proficiency among the federal university libraries in the northeast, Nigeria; determine which university library staff possesses the highest intermediate CT proficiency among the federal university libraries in the northeast, Nigeria; determine which university library staff possesses the highest advanced ICT proficiency among the federal university libraries in the northeast, Nigeria, and to; determine the overall average of ICT proficiency of library staff of federal university libraries in the northeast, Nigeria. In line with the objectives, four research questions were answered. The study adopted the descriptive research design of the survey. A questionnaire was used as a data collection instrument with a population of two hundred and seventy-six (276) library staff of all federal university libraries in northeast, Nigeria using a purposive sampling technique. Data collected were analyzed using descriptive statistics of mean and standard deviation displayed in tables. The study found that: Ramat Library of the University of Maiduguri has a mean of 3.55 and a standard deviation of 0.84, and possesses the highest basic ICT proficiency among the federal university libraries staff in northeast, Nigeria; The University of Maiduguri Ramat Library has the highest mean rating of 2.72 with a standard deviation of 0.92 is hereby declared the ``highest library staff that possesses intermediate ICT proficiency skills among the federal university libraries in the North East, Nigeria; The University of Maiduguri Ramat library staff having the highest mean score of 2.05 and standard deviation of 0.73 possesses the highest advanced ICT proficiency skills in federal university libraries in the northeast, Nigeria, and, the overall ICT proficiency possessed in all federal university libraries in the northeast, Nigeria as indicated by the cluster mean is fair. It is recommended among others that the stakeholders in library management should provide effective training for their library staff.*

**KEYWORDS:** comparative analysis, ICT proficiency, federal university,  library staff, and north east, Nigeria.

## INTRODUCTION

University library has always been viewed as service-oriented organization where the information needs of the user communities are met and have always played a significant part in the advancement of civilization since the dawn of time. The bulk of transactional actions were completed by utilizing information and communication technology (ICT) as a result of its introduction and use in various library activities. Many other significant services are carried out digitally or electronically by specialists in library and information science (LIS). According to Ugwuanyi (2011), university libraries are known for their dual purposes of enhancing teaching and research at all levels of education in Nigeria by offering up-to-date books, journals, and other library services; expanding access to international libraries and information resources for university libraries in Nigeria; and beyond.

University libraries can therefore be defined as the "heart," of universities serving as a vital resource for all of the institution's academic requirements, including teaching, learning, and research. University libraries can also be defined as university-affiliated libraries whose mission is to assist students in their academic endeavors and professors in their research. It can also be seen as the collection of information resources that have been organized and cared for by individuals that are familiar with the arrangements for reading, research, learning, and recreational purposes. It serves as a repository for the organization's records, being their core function to discharge. In the words of Ofodile and Ifijeh (2013) University Library is considered to be a service institution through which the quest for information by the user community is attended to. It is expected that university libraries will always look inward, with the content of the library taking precedence over the external structure, which is only pleasing to the eyes ( Anyanwu, 2018).

The function of the University Library is to contribute in several respects to the university's ambitions by providing high-quality services, making the library appealing for group-specific and individually tailored research and teaching surroundings, providing information, borrowing, and offering online research facilities to library users (Anyanwu 2018). They are libraries located in universities, and their collections are primarily for the faculties, departments, or divisions of the university (Erickson, 2016). This can only be achieved through diligent and critical management of information resources by the library staff.

Management of information resources by the library staff for effective service delivery has been a serious challenge in libraries especially in university libraries in the twenty-first century due to the increase in the number of information sources credited to the emergence

of ICT. It is in the interest of libraries to embrace the current trend of information management if only they would have loved to address those issues that have been responsible for poor services delivery to the use community. The library personnel must become more active to keep up with the rapidly evolving information needs of the user community, which have been revolutionized by ICT (Bansode & Viswe, 2017).

While describing the categories and the minimum standards for university library staff according to the. Librarians' Registration Council of Nigeria (LRCN) (2014) is made up of the following stages and conditions: Professional Staff, paraprofessional and supportive staff. All the staff works toward the progress of the library regardless of the various levels of educational attainments and experiences. Staff development is a crucial concern in a changing library environment since well-equipped professional librarians are vital resources to building and maintaining a high-quality library," says the author (Ajeemsha and Madhusudhan, 2012). According to Emezie and Nwaohiri (2013), university librarians are no longer the custodians of physical books that are always covered with websites but have instead become portals to online information resources.

Information Communication Technology proficiency refers to the capacity to address information needs by utilizing digital technology, communication tools, and network (Ugwuanyi, 2011). ICT proficiency can be considered as the general level of skills needed to utilize ICT in the process of executing professional duties daily. To be successful and effective in carrying out library operations using ICT, the proficiency level of library staff in ICT ought to be strong. According to Oyedokun, Oyewumi, Akanbi, and Laaro (2018) ICT proficiency can be categorized into three: /basic, intermediate, and advanced: skills. Krubu and Osawaru (2011) suggested the need for librarians to take on a new role and develop the ICT proficiency necessary for managing and handling information and, the university library services have been strengthened by the use of IICT facilities in providing required information to support the Teaching, Learning, and Research programs of the parent institution in recent times.

There is no doubt that ICT facilities have been provided in all the libraries studied but it is observed that they are not equally utilized by staff in the university libraries as some are lagging. Therefore, uncertainty exists about whether library staff possesses adequate competencies to operate ICT facilities effectively or not. Without the required skills, it would further cripple the university's basic objectives of teaching, learning, and research. This calls for an urgent need to investigate and compare whether the ICT proficiency level of library staff is responsible for the variation in using ICT for library services in Federal university libraries in the northeast, of Nigeria.

## Objectives of the Study

The general objective of the study was to compare the extent of ICT proficiency possessed among the federal university library staff in northeast Nigeria. The specific objectives of the study shall include:

1. Determine which university library staff possesses the highest basic ICT proficiency among the federal university libraries in northeast, Nigeria
2. Determine which university library staff possesses the highest intermediate CT proficiency among the federal university libraries in northeast, Nigeria
3. Determine which university library staff possesses the highest advanced ICT proficiency among the federal university libraries in northeast, Nigeria
4. Determine the overall average ICT proficiency of library staff of federal university libraries in northeast, Nigeria

## Research Questions

1. Which university library staff possesses the highest basic ICT proficiency among the federal university libraries in northeast, Nigeria?
2. Which university library staff possesses the highest intermediate CT proficiency among the federal university libraries in northeast, Nigeria?
3. Which university library staff possesses the highest advanced ICT proficiency among the federal university libraries in northeast, Nigeria?
4. What is the overall average ICT proficiency of individual library staff of federal university libraries in northeast, Nigeria?

## Theoretical Framework

This study was anchored on the Self-Efficacy Theory (Albert Bandura, 1977) which states that:" People who regard themselves as highly efficacious act, think, and feel differently from those who perceive themselves as inefficacious. They produce their future, rather than simply foretell it". The understanding of this theory is that regardless of seniority and experience, individual library staff may possess all the three categories of ICT literacy skills (Basic, Intermediate, and Advanced). It calls for the carefulness and commitment of the university librarians or head of departments to identify people the possess such skills and assign them library operations based on the ICT literacy level they possessed. The library managers should not look at seniority in assigning library operations to library staff if they want their works to be done accurately but rather, based on the capabilities of staff. This is why there may be variation in the application of ICT proficiency in the libraries without much hindrance and of because users would not have much stress to surf for the required information.

## REVIEW OF RELATED LITERATURE

A lot has been said about university libraries and their staff concerning service delivery using ICT technology. In light of the above assertion, Lotriet, Mathee, and Alexander (2010) and Oyedokun, Oyewumi, Akanbi and Laaro (2018) categorized ICT proficiency into three: Lower/basic ICT skills: This includes significant ICT technical know-how required for basic data processing and analysis, including the ability to use generic tools such as Word Processing, spreadsheets, Outlook, and PowerPoint presentations; Moderate/Intermediate ICT skills: These require extensive use of ICT tools for the accomplishment of core tasks and functions; using publishers to create packages that can produce advertising materials and leaflets; develop a data recording package useful for record-keeping and reporting and, develop a data recording package useful for record-keeping and reporting, and Higher-level or advanced ICT skills: These are characterized by the specialist nature of being part of the development of software and hardware as well as its maintenance; participating in collaborative networks via the internet; using search engines, directories and agents to locate information sources, and using ICT facilities to distribute, share, publish and print information via print or the web. .Anyim ( 2017) also noted that inadequate ICT proficiency leads to a shortcoming that deters both library staff and users from navigating the various e-portals, databases, and other e-resources, which would eventually affect the teaching, learning, and research objectives of university libraries.

Similarly, in Bansode and Viswe's (2017) study on the ICT literacy of library professionals working in university libraries in Maharashtra shows that they exhibit good ICT skills. Most library professionals have the fundamental ICT literacy skills needed to manage day-to-day library operations, but a small number still need to improve their proficiency with open-source library automation software, digital library software, institutional repository software, etc. According to a different study by Kumar (2013), "LIS professionals serving in various engineering educational institutions of the Rayalaseema Region of Andhra Pradesh are primarily computer literate and have significant basic ICT skills to handle the library, but there is still enough scope to develop their innovative ICT skills and to implement these skills in the library to provide new ICT-based library services."

Information Communication Technology knowledge and abilities required by academic librarians in the digital library environment in a study covered by Raju (2017) show that between 70 and 75 percent of job advertisements in the academic library sector emphasize advanced IT skills that librarians should have, including knowledge of integrated library systems, advanced computer skills, digitization processes, web design and development, IR, and technical knowledge of repositories, and digitization of digital content. A study

conducted by Chanetsa and Ngulube (2016), revealed that library staff exhibited fundamentals including demonstration and media literacy curriculum design skills, reference and research abilities, including information and search retrieval skills." More than one-third of respondents feel they need new skills, such as web design, online cataloging, classification, knowledge of HTML, virtual reference, and online chats, as well as knowledge of the use of mobile technologies like cell phones and tablets in education and the creation of subject portals for teaching, learning, and research.

The requirement for Professional librarians according to Grady (2012) and Narasappa and Kumar ( 2016) and Batool and Amen (2010) made an appropriate recommendation that libraries be provided with the information technology required to cater to users' demand for information to develop core ICT competencies and abilities that will enable them to transcend the potential danger of becoming largely redundant in the arena of competition in today's virtual era where libraries actually function is prompted by the significant role that ICT plays in shaping and revamping the information service delivery of libraries The fact remains that ICT gives libraries the ability to find, store, retrieve, and distribute information globally is supported by the fact that many studies have found that using ICT in libraries has a significant impact on library operations, resources, services, and other routines (Oyewumi, Akanbi & Laaro 2018). The description of their role in information management as passive personnel has also changed to active information managers that require a high ICT literacy level (Krubu & Osawaru, 2011) and Nagarajan 2012).

It was also revealed by Anyim (2018), that the skill possessed by service providers to enhance their understanding of how to construct, design, manipulate, and upload their information to add to the constantly growing and changing body of knowledge known as the internet. According to Arthur and Hart, cited in Oguche (2017), an individual's low cognitive skills can influence his or her ICT literacy level. This is more applicable to remote or culturally inclined library staff that will not become familiar with computers due to the perceived difficulty of learning and using computer technology. At Punjab University, Batool and Ameen (2010) "examined the status of librarians' technological competencies. Their research showed that while all librarians were proficient in word processing, many lacked hardware knowledge. Further research found that while they were proficient in utilizing online Dewey, OPAC, and MARC data, they were only familiar with basic Internet capabilities rather than more advanced ones.

The absence of curriculum coverage, refresher courses, and training workshops, according to the experts, are the three biggest obstacles to students learning technology. The bulk of the librarians at Ispahan University in Iran did not have strong computer abilities, according to Safahieh and Asemi's (2010) observation. Despite their extensive experience, none of the librarians thought they had very high levels of expertise. "Computer ability and

competency among librarians in Ondo and Ekiti States and the level of ICT implementation in libraries in the two states" were investigated by Ademodi and Adepoju (2009). Few librarians utilize computers to perform library tasks, which may indicate that their computer proficiency is limited, according to research findings. Only one-third of the respondents to the study had formal computer training, according to the study. Most librarians are computer literate; however, the rate of computer proficiency and competency is low, according to the authors.

For library professionals, in-house training is a crucial component since it allows them to master different technologies and find solutions to organizational issues as they arise (Ajeemsha and Madhusudhan, 2014). Of all the scores, 92% of respondents agree that in-house training will improve their job performance.  According to a survey by Vijay Kumar and Sweety (2015), the majority of library professionals believe that internal training programs have assisted in updating their ICT abilities. It is because of the above assertions that prompted Seena and Pillai (2014) to advocate for all. Library staff to be encouraged to attend in-house training programs, workshops, and public lectures barriers to ICT continuous learning by librarians, according to Mathew and Baby (2012)  and Ayoku and Okafor (2015)  include inadequate training absence of interest in ICT skills, poor funding of libraries, and absence of motivation.

## METHODOLOGY

The descriptive research design was adopted for the study. A self-designed questionnaire was used as the main instrument for data collection. It more appropriate because it intends to seek for the opinions of wider respondents on a particular issue. A total of two hundred and seventy-six (276) federal university library staff in northeast, Nigeria was used as the population for the study through the adoption of purposive sampling technique. Data collected were analyzed using descriptive statistics of mean and standard deviation displayed in tables. Real number scale rating of: (00 -.99) NP = Not Possessed, (1 -2.49)FP = Fairly Possessed, (2.5 -3.49)HP = Highly Possessed, and  (3.5 & above))VHP = Very Highly Possessed was used to take decisions.

## RESULT AND DISCUSSION

 Out of the total number of two hundred and seventy-six (276) questionnaires distributed in the six federal university libraries in the northeast, of Nigeria, two hundred and thirty-one (231) responses representing 83.7% were duly filled and found usable for the analysis carried out.

**Research question 1:** Which university library staff possesses the highest basic ICT proficiency among the federal university libraries in north east, Nigeria?

**Table 1:** A Comparative Analysis of Basic ICT Literacy Skills possessed by Library Staff of Federal Universities in North East, Nigeria.

| Libraries | Analysis | Using word processor to prepare letters. | Using ICT to provide directional service to users | Using ICT to provide referral service | Using ICT to keep statistic records. | Using ICT to process overdue notices | Using ICT to send orders notices. | Using ICT for photo-copy services | Using ICT to register new clients & clearance | Using ICT to send bulk text messages | Mean | St d St S t d | N | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fed. Uni Wukari | Mean | 3.0714 | 3.3714 | 3.2143 | 2.8103 | 3.3594 | 3.5421 | 2.7435 | 3.5857 | 3.6340 | 3.01 | 0.79 | 14 | HP |
|  | St d | .91687 | .73005 | .87496 | .80178 | .75090 | .85485 | .79449 | .69929 | .65044 |  |  |  |  |
| Fed. Uni Kaashere Gombe | Mean | 3.3635 | 2.8063 | 3.1545 | 3.6523 | 3.8576 | 2.6598 | 3.7045 | 2.6021 | 3.5523 | 3.11 | 0.85 | 20 | HP |
|  | St d | .78210 | .83351 | .83671 | .87509 | .93330 | .98809 | .53110 | .89545 | .94451 |  |  |  |  |
| Fed. Uni Gaishua | Mean | 2.6801 | 3.2567 | 3.2534 | 3.4453 | 3.3034 | 2.8854 | 2.8432 | 3.4432 | 3.4576 | 3.17 | 0.82 | 25 | HP |
|  | St d | .98826 | .91287 | .76376 | .50000 | .57735 | .97125 | .85049 | 91652 | .90000 |  |  |  |  |
| ATBU Bauchi | Mean | 3.7959 | 3.1224 | 2.9184 | 3.1633 | 3.0816 | 3.3265 | 2.4490 | 2.7143 | 3.4236 | 3.11 | 0.83 | 49 | HP |
|  | St d | .72020 | .69226 | .95387 | .71726 | .83757 | .80805 | .78130 | .97895 | .98025 |  |  |  |  |
| Fed. Uni Yola | Mean | 3.1538 | 3.3077 | 3.3846 | 2.8615 | 2.7854 | 2.8500 | 2.9385 | 3.7692 | 3.8462 | 3.21 | 0.80 | 26 | HP |
|  | St d | .72044 | .61071 | .94136 | .80767 | .96771 | .94868 | .72882 | .66987 | .83390 |  |  |  |  |
| University of Maiduguri | Mean | 3.7423 | 3.3196 | 3.6804 | 3.7010 | 3.8969 | 3.9691 | 3.7629 | 3.7835 | 3.8969 | 3.55 | 0.84 | 97 | VHP |

| | St d | .83265 | .63628 | .81069 | .92607 | .79693 | .96235 | .64854 | .98136 | .95180 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cluster Mean | 3.30 | 2.65 | 3.27 | 3.27 | 3.38 | 3.21 | 3.07 | 3.15 | 3.40 | 3.19 | 0.69 | 231 | HP |

**NB:** (00 -.99) NP = Not Possessed,, (1.00 -2.49)FP = Fairly Possessed, (2.50 -3.49) HP = Highly Possessed & (3.50 & above))VHP = Very Highly Possessed

Table 1 above is a display analysis of the degree of basic ICT proficiency possessed by individual university library staff. This shows that Ramat Library of the University of Maiduguri possesses a Very Highly Basic ICT proficiency with a mean of 3.55 with a standard deviation of .84. However, all the university libraries possess high ICT proficiency since their means range from 3. 01 to 3.21. The standard deviation ranges from 0.79 to 0.85 respectively. The closer the standard deviation to 1.0, the more reliable the proficiency possessed by the library staff exists. Furthermore, the federal university library staff in northeast, Nigeria possesses high ICT proficiency since the cluster mean is 3.15 and the standard deviation is 0.69. It is therefore concluded that Ramat Library of the University of Maiduguri having a mean of 3.55 and a standard deviation of 0.84, possesses the highest basic ICT proficiency among the federal university library staff in the northeast, Nigeria.

**Research Question 2:** Which university library staff possesses the highest intermediate ICT proficiency among the federal university libraries in north east,Nigeria?

**Table 2:** A Comparative Analysis of Intermediate ICT proficiency Skills possessed by Library Staff of Federal Universities in North East, Nigeria

| Libraries | Analysis | Using barcode for book loans | Skill of coding system | Using ICT to navigate storage devices | Using ICT to access OPAC files | Skill of using ISBN For bibliog. control | Skill of using ICT to cat & class | Using ICT to review searches | Using ICT to recall books | Using ICT to send overdue notices | Mean | St d | N | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fed. Uni Wukari | Mean | 2.7857 | 2.7143 | 2.8431 | 1.8571 | 2.6429 | 2.6239 | 3.5210 | 2.5714 | 2.7143 | 2.09 | 0.80 | 14 | P |
| | St d | .69929 | 1.06904 | .86444 | .77033 | .84190 | 1.04495 | 1.05485 | .91355 | .86881 | | | | |
| ]Fed. U\ni Kaashere Gombe | Mean | 2.6500 | 2.6321 | 2.7543 | 2.4764 | 2.2923 | 1.9531 | 1.9592 | 2.6754 | 2.2563 | 2.45 | 1.07 | 20 | P |
| | St d | 1.18210 | .94032 | .96655 | 1.04630 | 1.05631 | 1.31689 | 1.05006 | 1.10501 | 1.00525 | | | | |
| Fed. Uni Gaishua | Mean | 2.5643 | 2.2432 | 3.1667 | 3.1209 | 2.3287 | 2.4445 | 2.5223 | 3.0412 | 2.9664 | 2.49 | 0.89 | 25 | P |
| | St d | .84403 | .72842 | .66771 | 1.09240 | 1.06927 | 1.08321 | .74563 | .95987 | .85987 | | | | |
| ATBU Bauchi | Mean | 2.9796 | 2.8571 | 2.6735 | 2.7551 | 2.5306 | 2.4286 | 2.6531 | 2.5918 | 2.7347 | 2.57 | 0.78 | 49 | HP |
| | St d | 1.66445 | .79057 | .71844 | .66240 | .68014 | .54006 | .63084 | .70470 | .63821 | | | | |
| Fed. Uni Yola | Mean | 2.6538 | 2.7692 | 2.6923 | 2.7308 | 2.4231 | 3.4615 | 2.6538 | 2.6538 | 2.6923 | 2.59 | 0.70 | 26 | HP |
| | St d | .62880 | .76460 | .88405 | .82741 | .50383 | .64689 | .56159 | .74524 | .73589 | | | | |
| University of | Mean | 2.6186 | 2.7629 | 2.6598 | 2.5464 | 2.5155 | 2.5773 | 2.7216 | 3.4639 | 2.6804 | | | | |

| Maiduguri | St d | .69886 | .73276 | .65965 | .59548 | .64732 | .74771 | .71796 | .56017 | .75755 | 2.72 | 0.68 | 97 | HP |
|-----------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|-----|---|
| | Cluster Mean | 2.72 | 2.49 | 2.63 | 2.24 | 1.96 | 2.25 | 2.67 | 2.69 | 2.67 | 2.48 | 0.82 | 231 | P |

**NB:** (00 -.99) NP = Not Possessed, (1 -2.49)FP = Fairly Possessed, (2.5 -3.49)HP = Highly Possessed and (3.5 & above))VHP = Very Highly Possessed

Table 2 above is an analytical representation of the intermediate IC proficiency possessed among the federal university library staff in northeast Nigeria. The library staff of three universities possessed a fair ICT proficiency with their mean ranging from 2.09 to 2..49. Furthermore three university libraries have their staff possessing high intermediate ICT proficiency with a mean rating between 2.57 to 2.72. However, the cluster mean indicates that all the federal university library staff possesses a fairly intermediate ICT proficiency since the cluster mean shows 2.48 and 0.82 standard deviations. The University of Maiduguri Ramat library having the highest mean rating of 2.72 with a standard deviation of 0.92 is hereby declared the highest library staff that possesses intermediate ICT proficiency skills among the federal university libraries in the North East, Nigeria.

**Research Question 3:** Which university library staff possesses the highest advanced ICT proficiency among the federal university libraries in north east, Nigeria?

**Table 3: A Comparative Analysis of Advanced ICT Literacy Skills possessed by Library Staff in Federal Universities in North East ,Nigeria**

| Institutional Libraries | Analysis | Skill to develop a website library services | Skill to se publisher to create packages for adverts | Skill of using ICT to use all Unicode characters for lib use | Skill of using ICT to prepare records' backup in the cloud | Skill to upload library books for online use | Skill to fix all faulty lib. ICT devices | Skill to access all library packages for lib services | Skill of using ICT to search for the authority files | Skill of using ICT to store information on robotic memories | Mean | St d | N | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fed. Uni Wukari | Mean | 1.7857 | 1.3571 | 1.2857 | 1.4286 | 1.8571 | 1.7143 | 1.4286 | 1.9286 | 1.4286 | 1.37 | 0.63 | 14 | P |
| | St d | .57893 | .49725 | .46881 | .51355 | .86444 | .72627 | .51355 | .91687 | .64621 | | | | |
| Fed. Uni Kaashere Gombe | Mean | 2.1043 | 1.6502 | 1.7756 | 1.8521 | 1.9076 | 1.9190 | 1.9553 | 2.0506 | 1.2967 | 1.84 | 0.87 | 20 | P |
| | St d | .78807 | .87509 | .80131 | .93330 | .78807 | .96791 | 1.05006 | .75915 | .83351 | | | | |
| Fed. Uni Gaishua | Mean | 1.6498 | 1.7265 | 1.6423 | 1.6807 | 1.9684 | 1.9214 | 1.9251 | 2.0075 | 2.3691 | 1.66 | 0.76 | 25 | P |
| | St d | .75719 | .93630 | .63770 | .62716 | .93452 | .81240 | .81240 | .70711 | .75719 | | | | |
| ATBU Bauchi | Mean | 1.7347 | 1.6735 | 1.6939 | 1.7959 | 1.7143 | 1.6938 | 1.5103 | 1.7143 | 1.7551 | 1.70 | 0.72 | 49 | P |
| | St d | .63821 | .80072 | .74173 | .73540 | .76376 | .71309 | .58175 | .73598 | .77810 | | | | |
| Fed. Uni Yola | Mean | 1.6923 | 1.8846 | 1.8949 | 1.7308 | 1.3446 | 2.0001 | 1.8462 | 1.7692 | 1.9231 | 1.79 | 0.76 | 26 | P |
| | St d | .73589 | .86380 | .81618 | .72430 | .65280 | .80987 | .73170 | .71036 | .79614 | | | | |
| University of Maiduguri | Mean | 2.1804 | 1.7835 | 1.7423 | 1.6804 | 2.7216 | 1.7732 | 2.7732 | 1.8763 | 1.8144 | 2.05 | 0.75 | 97 | P |
| | **St d** | .75755 | .66500 | .72569 | .77118 | .78717 | .69978 | .77062 | .78073 | .83329 | | | | |

| | Cluster Mean | 1.69 | 1.68 | 1.67 | 1.64 | 1.82 | 1.84 | 1.71 | 1..88 | 1.76 | 1.74 | 0.75 | 231 | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**NB:**    (00 -.99) NP  = Not Possessed,    (1 -2.49)FP  = Fairly Possessed,    (2.5 -3.49)HP  = Highly Possessed   and (3.5 & above))VHP  = Very Highly Possess


Table 3 above is a representation of the advanced ICT proficiency skills possessed among federal university library staff in northeast Nigeria. Based on the analysis, all the library staff possesses fair advanced ICT proficiency since their mean ratings range from 1. 37 to 2.05 indicating that there is low performance in the skills acquired by the whole library staff of the universities studied  However their standard deviation ranges from 0.63 to 0.83 indicates that the skill is cut across, meaning their challenges may not be far from each other.  Regrettably, all the federal university library staff possesses a fair advanced ICT proficiency being the highest skills acquisition level in the library domain. This concludes that the University of Maiduguri Ramat library staff having the highest mean score of 2.05 and standard deviation of 0.73 possesses the highest advanced ICT proficiency skills in federal university libraries in northeast, Nigeria.

**Research question 4:** What overall average of ICT proficiency of library staff of federal university libraries in north east, Nigeria

**Table 4:** A comparative analysis of the general ICT proficiency possessed by individual library staff of federal university libraries in  north east, Nigeria.

| L Libraries | Rating | Basic ICT proficiency | Intermediate ICT proficiency | Advanced ICT proficiency | Mean | St d | N | Dec |
|---|---|---|---|---|---|---|---|---|
| Federal Uni Wukari | Mean | 3.01 | 2.09 | 1.37 | **2.16** | **0.74** | **14** | FP |
|  | St d | 0.79 | 0.80 | 0.63 |  |  |  |  |
| Federal Uni Kashere | Mean | 3.11 | 2.45 | 1.84 | **2.47** | **0.93** | 20 | FP |
|  | St d | 0.85 | 1.07 | 0.87 |  |  |  |  |
| Federal Uni Gashua | Mean | 3.17 | 2.49 | 1.66 | **2.44** | **0.82** | 25 | FP |
|  | St d | 0.82 | 0.89 | 0.76 |  |  |  |  |
| ATBU Bauchi | Mean | 3.11 | 2.57 | 1.79 | **2.49** | **0.77** | **49** | FP |
|  | St d | 0.83 | 0.78 | 0.72 |  |  |  |  |
| Modibbo Adama Uni Yola | Mean | 3.21 | 2.59 | 1.79 | **2.53** | **0.75** | 26 | HP |
|  | St d | 0.80 | 0.70 | 0.76 |  |  |  |  |
| University of Maiduguri | Mean | 3.55 | 2.72 | 2.05 | **2.77** | **0.76** | 97 | HP |
|  | St d | 0.84 | 0.68 | 0.75 |  |  |  |  |
|  | **Cluster Mean** | **3.19** | **2.48** | **1.74** | 2.48 | 0.80 | 231 | **FP** |

**NB:**   (00 -.99) NP  = Not Possessed,    (1 -2.49)FP  = Fairly Possessed,    (2.5 -3.49)HP = Highly Possessed   and  (3.5  & above))VHP  = Very Highly Possessed.

Table 4 above is a true reflection of the general ICT proficiency possessed among federal university library staff in the northeast, of Nigeria.  The average skills of the individual university libraries put together show that the University of Maiduguri and Modibbo Adama university library staff leads as their mean ratings show 2.77 and 2.53 with their standard deviation of 0.76 and 0.75 respectively. Regrettably, the four university libraries possess a fair skill generally and this shows that they are lagging.  Going by their general

cluster mean, of 2.48 and standard deviation of 0.80, there was fair ICT proficiency possessed in federal university libraries in the northeast, of Nigeria.

**Summary of Major Findings**
➢ Ramat Library of the University of Maiduguri has a mean of 3.55 and a standard deviation of 0.84 and possesses the highest basic ICT proficiency among the federal university libraries staff in the northeast, of Nigeria.
➢ The University of Maiduguri Ramat library having the highest mean rating of 2.72 with a standard deviation of 0.92 is hereby declared the highest library staff that possesses intermediate ICT proficiency skills among the federal university libraries in the North East, Nigeria.
➢ The University of Maiduguri Ramat library staff having the highest mean score of 2.05 and standard deviation of 0.73 possesses the highest advanced ICT proficiency skills in federal university libraries in the northeast, of Nigeria, and,
➢ Going by their general cluster mean, of 2.48 and standard deviation of 0.80, there was fair ICT proficiency possessed in federal university libraries in the northeast, of Nigeria.

**CONCLUSION**

It is strongly believed that ICT has provides librarians with the possibility to enhance how information resources are conveyed to the user community. With the advancement of information systems and the creation of new resources, library personnel have become indispensable advocates for the electronic setting. The evolving role of library staff is thought to benefit learners, lecturers, university administrators, and librarians directly. With ICT proficiency among the library staff, students can develop better knowledge, stronger critical thought abilities, more trust, and the capacity to transmit their experiences to their later-graduate lives. University researchers and administrators will gain fresh knowledge, access, leadership, and assessment abilities that will better help their professional development. Unfortunately, the inability of not have the required skills by the library staff is an alarm that their user communities have been deprived of online free accessed information resources, especially in research and developments that deals with current and exhaustive information.
Based on the above revelation concerning the insufficient ICT proficiency discovered as an impediment to the free flow of information in our libraries, it calls for the need to following recommendations:
➢ There is the urgent need to address the issue of proper training by the stakeholders (National Universities Commission, TetFund, University Library Committees, University Librarians, etc.) to the library staff that will enable them posses the minimum standard.

➢ There is also the need to strike a balance between the availability of ICT facilities and training for the library staff as one alone cannot stand or serve the need of the users.

➢ To have a functional library that serves the needs of their respective institutions' missions, there must be total and comprehensive eradication of half-baked ICT-trained library staff as this is the only way that can help in linking users to the world of information flow.

➢ The managements of the university libraries should create a sort of motivation to their staff  in order to get the best out of them through effective library operation that ensures effective service delivery to the user community

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