

## **Use of Collaborative Technologies for Knowledge Sharing among Academic Librarians in Akwa Ibom State, Nigeria.**

by

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### **Abstract**

*This study investigated the use of collaborative technologies for knowledge sharing among academic librarians in Akwa Ibom State, Nigeria. Five objectives and research questions were raised to guide the study. Survey research design was employed. The population for the study was 45 librarians from four academic libraries in Akwa Ibom State, Nigeria. All the librarians were sampled using census sampling technique. An instrument titled “Collaborative Technologies and Knowledge Sharing Questionnaire (CTKS)” was used for the data collection. Professionals in library and information science validated the instrument. Cronbach Alpha formula was used to establish the reliability of the instrument. Data were analyzed using frequency and percentages. The result of the study revealed that email and WhatsApp were highly used by librarians for knowledge sharing while wiki, webinar and blog were not used for knowledge sharing. The study concluded that for librarians to effectively adjust to this paradigm shift of information service delivery, there is the need for collaborative technologies to be utilize in its fullest for knowledge sharing. Based on the findings, it was recommended among others that academic libraries in Akwa Ibom State should train and retrain librarians on effective use of collaborative technologies for knowledge sharing.*

**Keywords:** *Use, Collaborative technologies, knowledge sharing, academic librarians, Akwa Ibom state*

### **Introduction**

Collaborative technologies are web applications that facilitate interactive creation, analysis, and sharing of information among users. They could be seen as online platforms enabling users to collaboratively create, analyze and share information in real-time. Al-Qahtani and Aksoy (2022) described it as tools or software designed to facilitate working in groups and holding real time meetings in the office and remotely. Ayanbode and Nwagwu (2021) viewed it as hardware devices or software programmes that help users communicate to accomplish a common purpose. Nazim, Munshi and Ashar (2020) maintained that they are second-generation development and design through the web that aims to facilitate communication and to secure information sharing, interoperability and user centred design. It is used by wide spectrum of information users for knowledge sharing.

Librarians use this tool to share knowledge with colleagues in real time. According to Muhammed (2022), collaboration by librarians can help avoid duplication of effort and provide efficiency savings, streamline work processes and free up time for more value-added activities. It can also

increase the profile, visibility, credibility, and influence of the library and library staff internally and externally. On occasions, library staff learn new skills and behaviors during collaboration work and these can subsequently be applied to the individual's work in his/her own department or institution.

The different collaborative technologies used in libraries are wikis, blogs, instant messenger, RSS Feeds, mashup, YouTube, video conferencing/ zoom webinars, cloud computing etc. Ucar (2022) described them as blogs, wikis, email and other social media platforms. Belay (2014) viewed them as instant messaging tools, cloud storage tools, file-sharing tools, video conferencing tools, wiki tools and social networking tools. This study investigated the use of five collaborative technologies. They include: E-mail, WhatsApp, Wikis, Webinars and Blogs.

E-mail is perhaps one of the most used tools for collaboration. It is a system of sending [written](#) messages electronically from one [computer](#) to another. Pexton (2022) defined it as a system for sending messages to one or more recipients via telecommunications links between computers using dedicated software or a web-based service. Essentially, both parties need an email account before messaging are made possible. According to Aloysius, Awa and Aquaisua (2019), e-mail is one of the fastest ways to notify users of existing resources and services available in the library. Librarians used the website to interact and share knowledge with colleagues from other institutions.

WhatsApp is an instant messaging app that provides cross-section messaging and Voice over Internet Protocol (VoIP) services. WhatsApp provides delivery notifications, highlighting when a message is sent and delivered to the recipient's device. Library user's sends instant text messages, audios, videos, images, any document file on WhatsApp. Librarians also used this application to provide information on upcoming conferences, seminars, library news, hyperlinks of e-books, e-journal and other important announcement and reminder on a particular issue. Stephen (2019) corroborated that librarians used WhatsApp to share photos, status with their patrons.

Another collaborative technology used in knowledge sharing is wiki. A wiki is a publication format that facilitates collaborative documentation and knowledge management. A typical wiki consists of a set of webpages that can be edited by a user community through a web-based interface. Each page addresses a particular topic. Pages can be added and edited overtime as users deem fit. Roxburgh et al (2022) noted that the breadth and comprehensiveness of wikis make them powerful collaborative tools.

In recent years, one collaborative technology that has broken every barriers of communication is webinars. A webinar is a seminar or other presentation that takes place on the internet, allowing participants in different locations to see and hear the presenter. University of Ontario (2023) described it as an online event that is hosted by an organization to a select group of individuals via the internet. A webinar allows a librarian from a particular library share videos, web pages, audio and other multimedia contents with other librarians situated from distance locations. Ayanbode and Nwagwu (2021) stated that webinars are useful collaborative technologies and are useful tools for efficient information.

Blog is another emerging technology used in knowledge sharing. It is an easy-to-publish web page consisting primarily of periodic articles posted by date, usually with the newest entry at the top.

Blogs has a great potential in the present web world. It is a very effective synchronous tool for sharing and communicating the information. Libraries in the 21st century cannot ignore the potential of this great tool to communicate ideas, opinions, resources and news. According to Aacharya (2021), blogging could be an efficient and effective alternative for information and knowledge transfer, resulting in a more productive workforce in libraries

As custodian of information, it therefore becomes imperative that librarians should actively use these collaborative technologies for knowledge sharing. Knowledge sharing is the exchange of employee's knowledge, skills, and expertise. Sirén (2022) noted that knowledge sharing is an organized process that makes use of a variety of communication tools to disperse knowledge among a group of people who belong to the same profession while taking into consideration the proper time, place, and form. Based on the aforementioned place of collaborative technologies in knowledge sharing, the extent to which librarians in knowledge sharing use these technologies remain a delusion. It is against this background that this study investigates the use of collaborative technologies for knowledge sharing in university libraries in Akwa Ibom State, Nigeria.

Akwa Ibom state was created on May 23rd, 1987. It is located in the coastal southern part of the country, lying between latitudes 4°32'N and 5°33'N, and longitudes 7°25'E and 8°25'E. The state is located in the South-South geopolitical zone, and is bordered on the east by Cross River State, on the west by Rivers State and Abia State, and on the south by the Atlantic Ocean and the southernmost tip of Cross River State. Akwa Ibom ranked as the highest oil- and gas-producing state in the country. The states are located on a tropical region, known for heavy rainfall. Major occupations are agriculture, fishing and extraction of raw materials, such as limestone, gold and oil. There are approximately 5 million people in the state. The major ethnic groups are Ibibio, Annang and Oron.

### **Statement of the problem**

Despite the astonishing rate of information proliferation due to the emergence of information and communication technology (ICT), there still exist a paucity of knowledge among librarians in Nigerian university libraries. This knowledge gap had been attributed to the inability of librarians to use collaborative technologies to share knowledge. Muhammed (2022) buttressed that librarians have not fully exploited the varied benefits of collaborative technologies because it has not been used completely for knowledge sharing. The implication of lack of knowledge sharing affects the competencies of librarians, hinders librarians from keeping abreast with emerging issues in librarianship, reduce the self-esteem of librarians and affects the level of patronage of the library due to poor service delivery. It is against these backdrops that this study seeks to ascertain the extent to which collaborative technologies are used for knowledge sharing among academic librarians in Akwa Ibom State, Nigeria

### **Research Questions**

The following research questions were presented to guide the study:

1. Do librarians used email for knowledge sharing in academic libraries of Akwa Ibom State?

2. Do librarians used WhatsApp for knowledge sharing in academic libraries of Akwa Ibom State?
3. Do librarians used wikis for knowledge sharing in academic libraries of Akwa Ibom State?
4. Do librarians used webinars for knowledge sharing in academic libraries of Akwa Ibom State?
5. Do librarians used blogs for knowledge sharing in academic libraries of Akwa Ibom State?

### **Review of Related Literature**

Collaborative technology is a tool or software designed to facilitate working in groups and holding real-time meetings in the office and remotely. This technology reduces the costs and time associated with facilitating group work or performing tasks that require collaboration between different departments. Gayawan, et al. (2022) defined collaborative technologies as web-based services that allow groups of professionals to create a semi-public profile within a bounded system; articulate a list of other users with whom they share a connection; view and traverse their list of connections and those made by others within the system. Uche, Angelina, Udo-Anyanwu and Adaora (2019) viewed collaborative technologies as a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of user-generated content. Mahura and Birrola (2021) described these technologies as combination of powerful online collaboration software that make it possible for real time communication and collaboration between teams regardless of where they may be.

Consequently, these technologies have been used for knowledge sharing by librarians in academic libraries. It facilitates group communication between librarians in real time. According to Ayanbode and Nwagwu (2021), collaborative technologies can be useful tools for efficient information sharing and can facilitate knowledge sharing in both the time and space dimensions. Mousa, Jammal, and Ahmad (2019) noted that collaborative technologies help to remove the barriers of time, space, and location for librarians who are ready to share their knowledge. Perieran and Mohiya (2021) reiterated that collaborative technology is changing how librarian learn and share knowledge with colleagues from within and distance location.

Ahmed, Khan, Thitivesa, Siraphatthada and Phumdara (2020) affirmed that the use of collaborative technologies facilitates knowledge sharing activities, which are essential sources of practice in the modern academic libraries. Tiwari (2022) supported that collaborative technologies lowered obstacles to knowledge sharing activities and could save time while collaborating with colleagues using the device or programmes. Kagan et al (2022) maintained that since its emergence as a means of real time communication, librarians the world over had been using different collaborative technologies for information sharing.

### **Methodology**

Survey design was adopted for this study. The study area is Akwa Ibom State, Nigeria. The population of the study consisted of 47 librarians from four (4) academic libraries in Akwa Ibom State, Nigeria. All the 47 librarians were sampled using census sampling technique. A structured questionnaire titled “Collaborative Technologies and Knowledge Sharing Questionnaire (CTKS) was used to elicit responses from the librarians. Library and information science professionals validated the instrument. The researchers administered the questionnaires. Two (2) of the

questionnaires were invalid. Representing 95.7-response rate. Frequency distribution and percentages were used to analyze the research questions.

**Table 1: Distribution of Population of the Study**

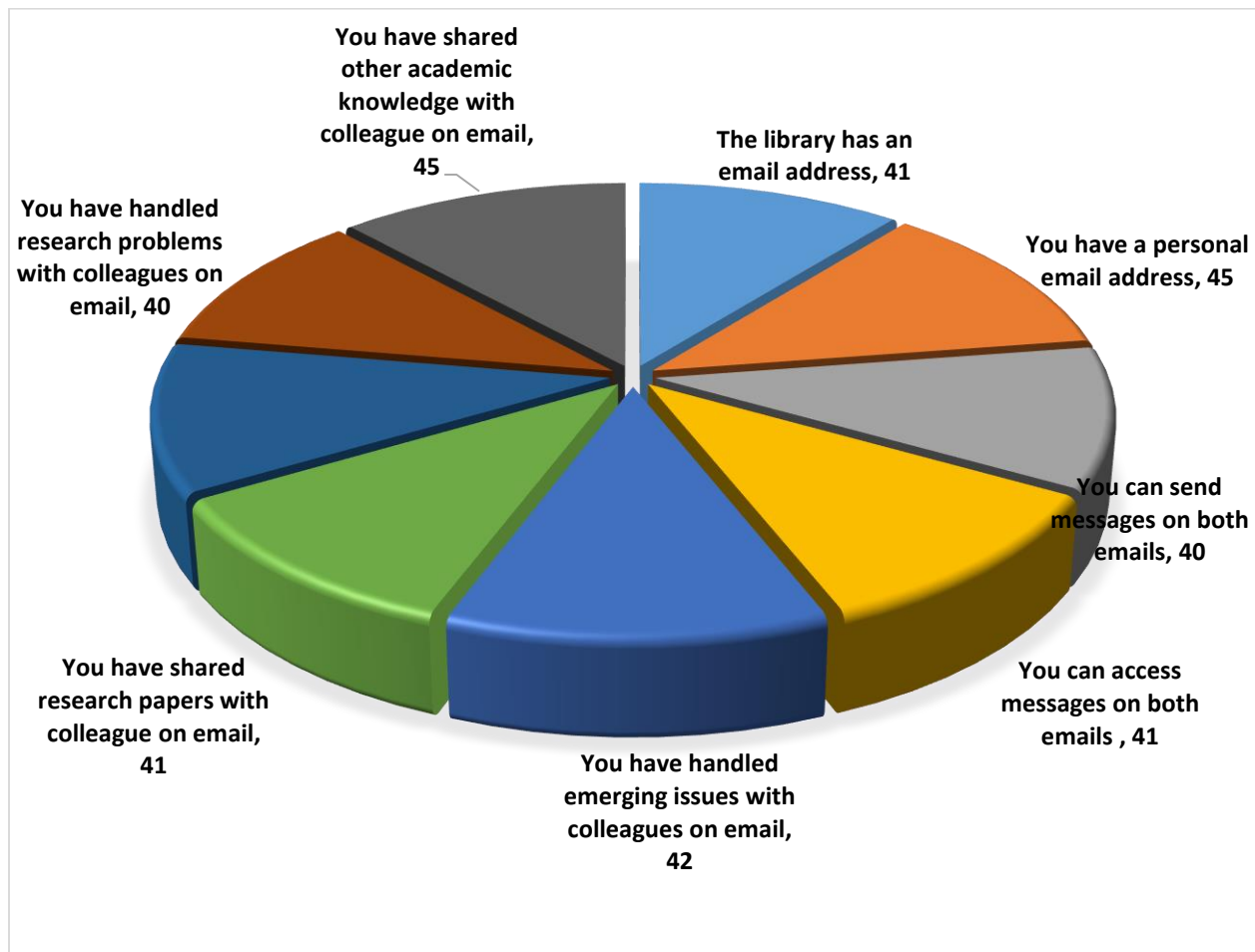
S/N	Academic Libraries	Librarians
1.	University of Uyo, Uyo	27
2.	Ritman University, Ikot Ekpene	3
3.	Akwa Ibom State Polytechnic, Ikot Ekpene	11
4.	Federal Polytechnic, Essien Udim	6
	<b>Total</b>	<b>47</b>

**Source:** (Office of the Librarian of the Respective Institutions under Study, 2023)

### **Data Analysis and Results**

**Research Question 1:** Do Librarians used Email for Knowledge Sharing in Academic Libraries of Akwa Ibom State?

**Pie-Chart of Frequency Distribution and Percentages of Librarians use of Email for Knowledge Sharing in Academic Libraries of Akwa Ibom State**

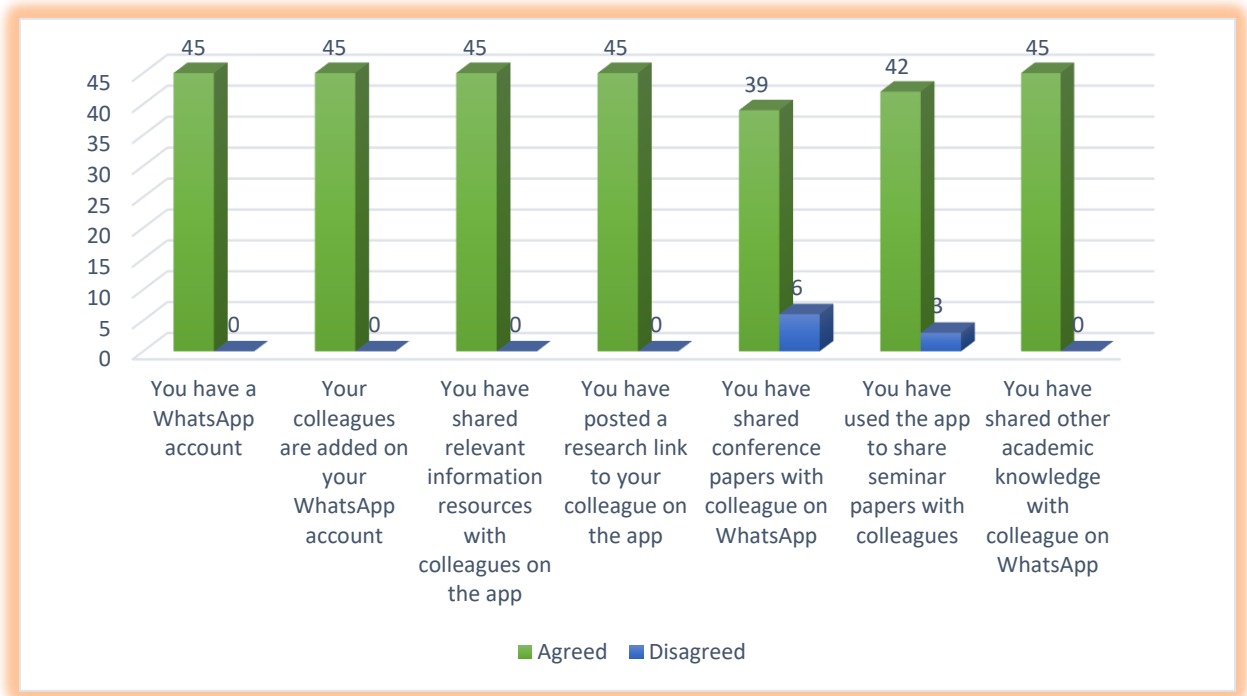


**Figure 2: Email used for knowledge Sharing**

Data obtained in table 2 above indicates that librarians used email for knowledge sharing in academic libraries of Akwa Ibom. Over 90 % of the librarians agreed that they have shared research papers, handled research and other emerging issues with colleagues on email. All the forty-five librarians (100%) agreed that they have forwarded relevant inform resources as well as shared academic idea with colleagues on email.

**Research Question 2:** Do Librarians used WhatsApp for Knowledge Sharing in Academic Libraries of Akwa Ibom State?

**Table 3: Bar-chart of Frequency Distribution and Percentages of Librarians use of WhatsApp for Knowledge Sharing in Academic Libraries of Akwa Ibom State**

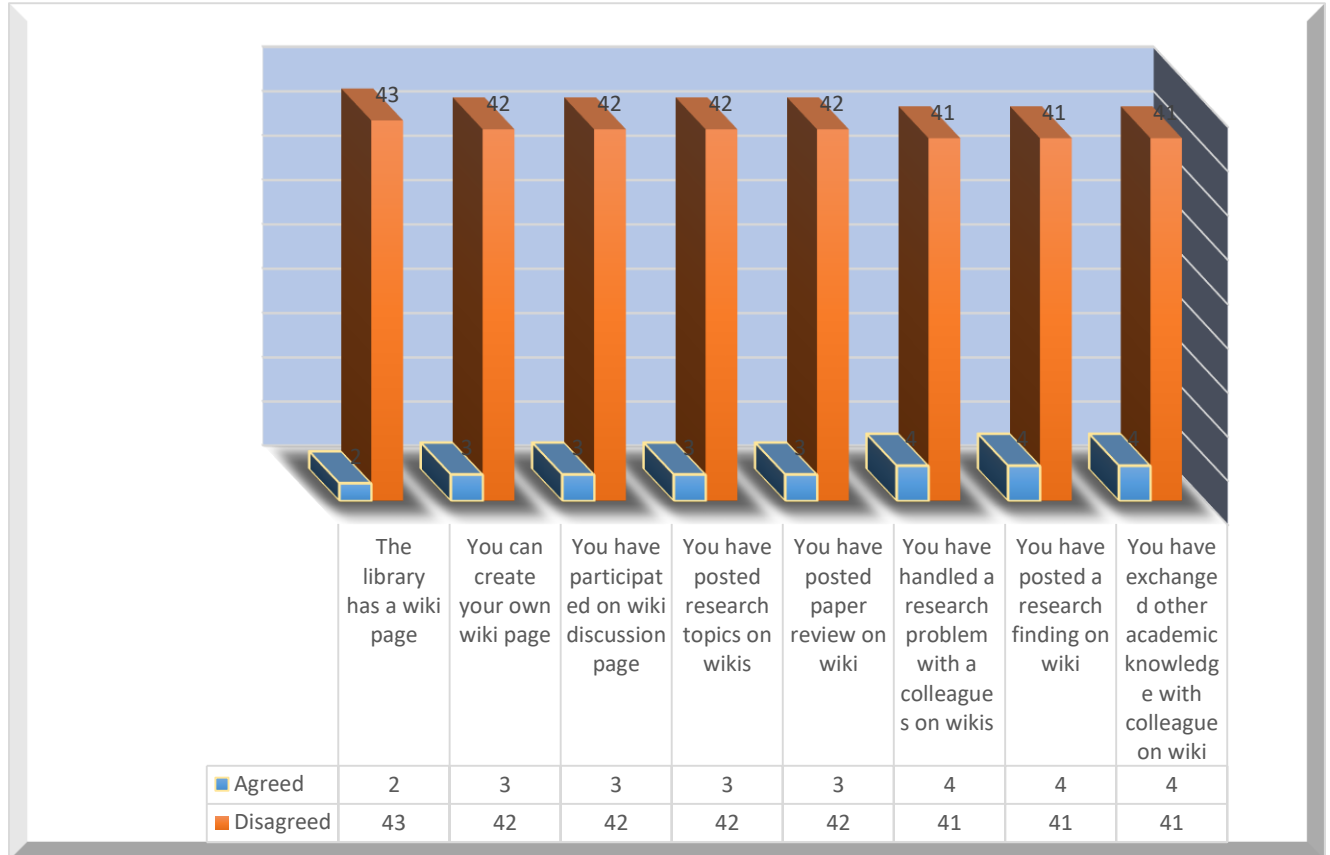


**Figure 3: WhatsApp used for knowledge Sharing**

Data obtained in table 3 above indicated that librarians used WhatsApp for knowledge sharing in academic libraries of Akwa Ibom. The result showed that all the librarians (100%) have WhatsApp account, their colleagues are added on the account and they used the app for sharing of relevant information resources with colleagues. The result further showed that librarians used the app for posting of research link, sharing of conference, seminar papers and sharing of other academic knowledge with colleagues.

**Research Question 3: Do Librarians used Wiki for Knowledge Sharing in Academic Libraries of Akwa Ibom State?**

**Table 4: Bar-chart of Frequency Distribution and Percentages of Librarians use of Wiki for Knowledge Sharing in Academic Libraries of Akwa Ibom State**

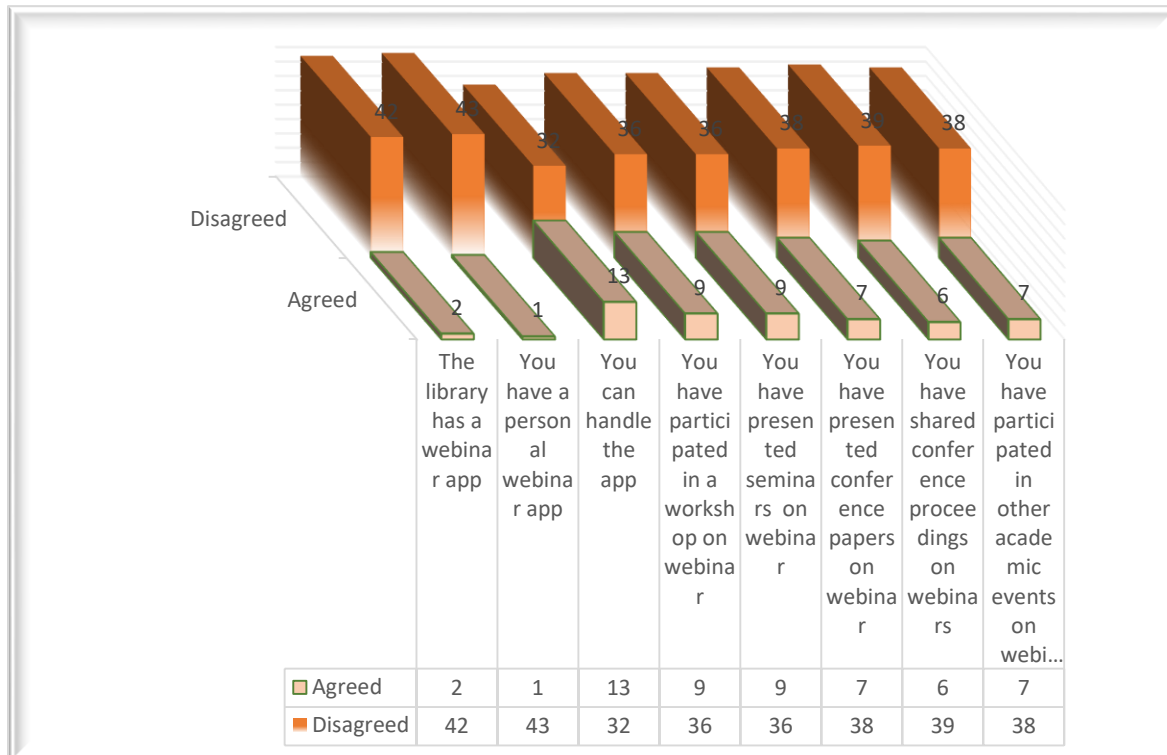


**Figure 3: Wiki used for knowledge Sharing**

Data obtained in table 4 above indicated the poor used of wiki by librarians for knowledge sharing in academic libraries of Akwa Ibom. Forty-three (43) librarians disagreed that the library has a wiki page. Forty-two (42) asserted that they have not participated and post research topics on wiki while forty-one (41) noted that they have not handled research problems, post research findings as well as carry out other academic activities on wiki.

**Research Question 4: Do Librarians used Webinar for Knowledge Sharing in Academic Libraries of Akwa Ibom State?**

**Table 5: Bar-chart of Frequency Distribution and Percentages of Librarians use of Webinar for Knowledge Sharing in Academic Libraries of Akwa Ibom State**

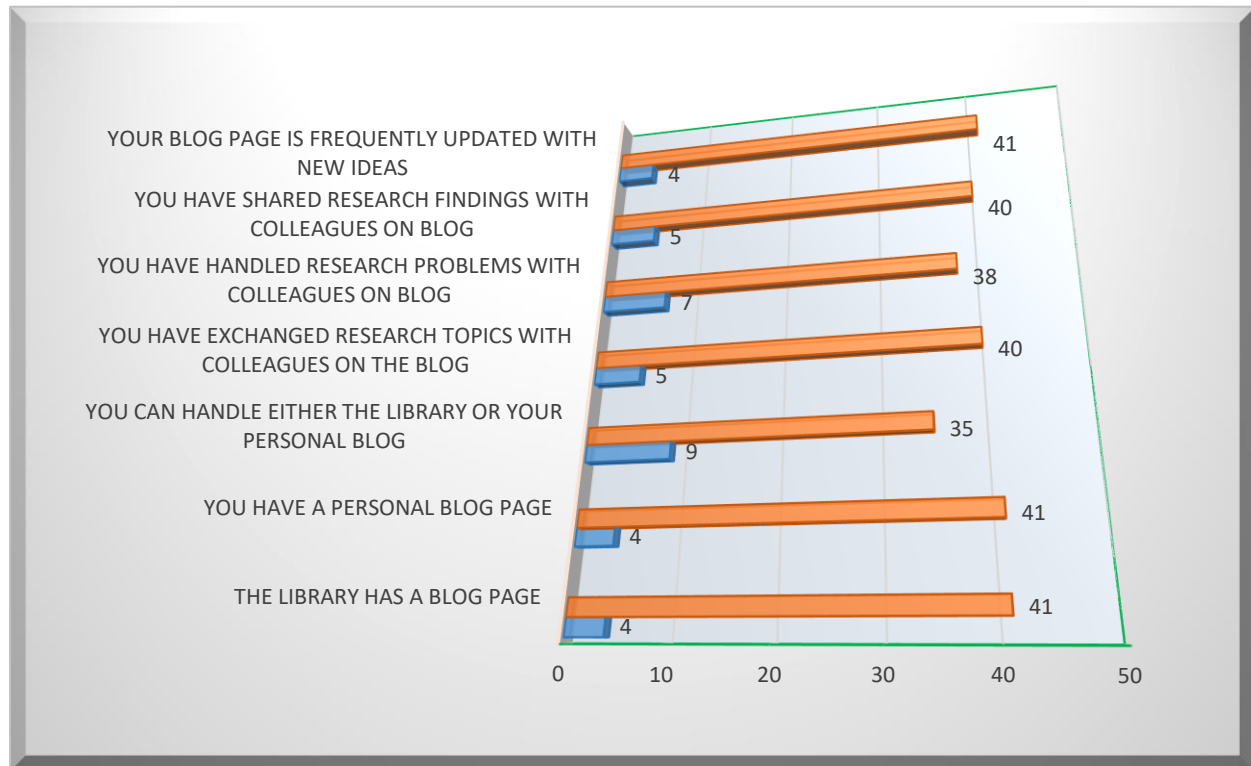


**Figure 4: Webinar used for knowledge Sharing**

Data obtained in table 5 above indicated the poor used of webinar by librarians for knowledge sharing in academic libraries of Akwa Ibom. Only two Librarians agreed that the library has a webinar app. Nine (9) agreed that they have participated in a workshop and seminar on webinar while seven (7) 15.6% and six (6) (13.3%) agreed that they have participated on conference, and shared conference procedings and participated in other academic eveeents on webinar.

**Research Question 5: Do Librarians used Blog for Knowledge Sharing in Academic Libraries of Akwa Ibom State?**

**Table 6: Bar-chart of Frequency Distribution and Percentages of Librarians use of Blog for Knowledge Sharing in Academic Libraries of Akwa Ibom State**



**Figure 5: Blog used for knowledge Sharing**

Data obtained in table 6 above indicated the poor use of blog by librarians for knowledge sharing in academic libraries of Akwa Ibom. Only four (4) (8.9%) librarians agreed that they own a blog page. Five (5) (11.1) agreed that they have exchanged research topics as well as shared research findings with colleagues on the blog. Four (4) (8.9) agreed that they frequently update their blog page with new ideas.

**Discussion of Findings**

The findings are discussed based on results obtained.

**Librarians use of Email for Knowledge Sharing in Academic Libraries of Akwa Ibom State**

Analysis of the data obtained on use of email for knowledge sharing showed that librarians in academic libraries of Akwa Ibom State extensively used email for knowledge sharing. Almost all of the librarians agreed that they have shared research papers, forwarded relevant inform resources, handled emerging issues in library and information science as well as exchanged other academic knowledge with colleagues on email. The result of this study is in agreement with Aloysius, Awa & Aquaisua (2019) study that email is used for knowledge sharing and marketing of information resources. The result of this study is further buttressed by Wedgeworth (2008), Yuvaraj (2013),

Oliveira (2019) and Taufiq-Hail (2021) studies that email is extensively used by academic staff for knowledge sharing.

### **Librarians use of WhatsApp for Knowledge Sharing in Academic Libraries of Akwa Ibom State**

Analysis of the data obtained on use of WhatsApp for knowledge sharing indicated that librarians' used WhatsApp for knowledge sharing in academic libraries of Akwa Ibom. Data showed that all the librarians (100%) have WhatsApp account, their colleagues are added on the account and they used the app for posting of research link, sharing of conference, seminar papers and sharing of other academic knowledge with colleagues. The result of this study is in agreement with Stephen (2019) study that librarians used WhatsApp to provide information on upcoming conferences, seminars, library news, hyperlinks of e-books, e-journal and other important announcement and reminder on a particular issue. Achala (2016) study corroborated that librarians used WhatsApp to reply to the user queries and carry out real time communication between colleagues.

### **Librarians use of Wiki for Knowledge Sharing in Academic Libraries of Akwa Ibom State**

Analysis of the data obtained on use of WhatsApp for knowledge sharing indicated the poor used of wiki by librarians for knowledge sharing in academic libraries of Akwa Ibom. The librarians asserted that they have not participated on wiki discussion, handled research problems, post research findings as well as carry out other academic activities on wiki. The result of this study contradicts Mansour and Monavari (2008) study that Wikis and other web 2.0 technologies are increasingly used in several academic libraries.

### **Librarians use of Webinar for Knowledge Sharing in Academic Libraries of Akwa Ibom State**

Analysis of the data obtained on use of webinar for knowledge sharing indicated the poor used of webinar by librarians for knowledge sharing in academic libraries of Akwa Ibom. Only few librarians agreed that they have participated on workshop, present conference and seminar papers as well as participate in other academic events on webinar. The result of this study is in agreement with Oweipere and Mayowa-Adebara (2022) study that lack of webinar skill and poor power supply hindered several academic librarians from using webinar for knowledge sharing.

### **Librarians use of blog for Knowledge Sharing in Academic Libraries of Akwa Ibom State**

Analysis of the data obtained on use of blog for knowledge sharing indicated the poor use of blog by librarians for knowledge sharing in academic libraries of Akwa Ibom. Result from the study showed that only few librarians asserted that that they have shared research findings as well as other academic knowledge with colleagues on the blog. The result of the study is in contrast with a study by Forcier (2015) that Academic Librarians frequently used blog for internal communication and knowledge sharing.

### **Conclusion**

As custodian of information, there is the need for librarians to keep abreast with emerging issues in academics. Therefore, collaborative technologies should be utilized in its fullest for knowledge sharing. Librarians in academic libraries of Akwa Ibom State, Nigeria do not extensively use collaborative technologies for knowledge sharing. Collaborative technologies such as wiki,

webinar and blog are not effectively used for knowledge sharing. This adversely affects their collegial interactions with scholars and other information users the world over.

### **Recommendations**

Based on the findings, the following recommendations are posited:

1. Management of academic libraries should provide collaborative technologies such as wiki, webinar and blog.
2. Librarians should be trained and re-trained on the effective use of collaborative technologies.
3. Management of academic libraries should provide constant power supply in order to enhance the use of email, WhatsApp, webinars blogs, wikis and other collaborative technologies.
4. Management of academic libraries should provide constant and reliable internet connections to facilitate the use of collaborative technologies for knowledge sharing.

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