

USE OF WEB-BASED INFORMATION SERVICES IN COVID-19 ERA BY STUDENTS OF NNAMDI AZIKIWE UNIVERSITY AWKA

Ngozi Perpetua OSUCHUKWU¹ & Ugochi Iruoma EGWUONWU²

Department of Library and Information Science, Nnamdi Azikiwe University Awka^{1,2}
ngostary2k@yahoo.com¹, ugochiegwuonwu@yahoo.com²

Abstract

Purpose: This study investigated the students' use of the online information services during covid-19 lock down, source of information, how they want their library to serve them after covid-19 and challenges of assessing web-based information services.

Methodology: The online google form survey was used for the study. The LIS students of Nnamdi Azikwe University formed the population of the study. One hundred and thirty one (131) students responded to the online questionnaire.

Findings: The results showed that 82.7% did not receive information through the library portal on covid-19 throughout the lockdown. While 32.2% assessed information from social media, 26% received from NCDC and 25% from the internet. The findings also revealed that 33.1% wanted the university library to disseminate information after covid-19 through their emails and university website, respectively, while 23.6% requested for whatsapp mode. Their challenges of assessing web-based information included issues on discerning the right and authentic information, lack of wifi, poor network and internet accessibility and data subscription.

Originality: The study recommended more facilitation of information literacy, improved wifi accessibility, librarian's embrace on innovative web-services and more engagement of students through social media and other online services.

Implication: The implication is that the students may put vote of no confidence on libraries and librarians, thereby, reducing the relevance of the profession. It will also affect willful enrollment in LIS.

Keywords: library, librarians, web-based information services, covid-19

Introduction

Libraries are not new to changes in adaptation and adoption of new services but Covid-19 has undoubtedly brought total transformation to the already existing web information services of academic libraries. These changes are not just in sharing information but are also visible in the management and administration of libraries. Before our very eyes, libraries and institutions were shut down which was absolutely overwhelming and unimaginable with indication that anything is possible with global security. This left the libraries to flow with the tide and harken to the increased in demand for improved digital contents, digital curation, application of digital and specialized skills, deliberate need for upskilling, partnership and collaboration, scaling the dwindling library fund, demand for specialized user-centric library services, redesigning total library engagement

and demand for contactless services (Idris, 2020). As the students need information to protect themselves against covid-19 as well as keep abreast of their education, even from home, the libraries must deliver in the changing world. With covid-19, it is expected that web based information services accelerate the development and engagement of inclusive services to all their user groups.

The point is that library services are supposed to be the best source of information because of its authentic and accurate resources. It is also meant to supply all the resources students seek and need in guarding themselves against covid 19. In other words, students deeply depend on their academic libraries by making good use of the information resources. The web-based services were made possible through ICT and adoption of web technology. Oglesby (2020) defined web technology as the

methods by which computers communicate with each other through the use of markup languages and multimedia packages. As the world becomes a global village, libraries also key in with the trends for wider sharing. As Kumari (2016) pointed out, web based library service means the services provided through particular website accessible on internet which provide integrate access to the multiple databases.

Undoubtedly, covid-19 caused global changes in every sector including education and information which leaves the web based services to reach out to everyone for accessibility. This is best captured when libraries share online information services to the members of the academic community. Avert (2020) stated that there is a lot of misinformation circulating about what the new COVID-19 virus is, how it is transmitted, how to prevent it and how to treat it. What this indicates is that the libraries should provide adequate resources, authentic and accurate information with good user education and ICT training for students to enable them retrieve the needed health information against covid-19. In other words, the library builds the contents of its activities and information services, shares them via the website for facilitation of access to information as well as provides integrated access to the metadata of a library's multiple databases. However, it is not very clear how the students used these web-services during the lockdown in assessing vital information on covid-19 prevention. This study examined the students' use of web-based information services in covid-19 era in Nnamdi Azikiwe University, Awka, Nigeria.

Statement of the problem

The fundamental aim of web-based information services is to provide more enriching and wider online resources to users. This is the aim of migrating from manual traditional services to ICT and internet connectivity. It has the power to go beyond the primary library spaces to engage users and satisfy their needs with speedy access irrespective of location. However, experiences and observations showed that many libraries that were supposed to offer web based information services did not live up to the expectation of sharing updated information on

coronavirus. It becomes an embarrassment when the owners of information and controllers of information waveband cannot reach out to their students and users on topical issues. The tenets of web-based information services seem to be put to test by the emergence of covid-19 when the institutions and libraries were shut down without adequate notice. Thus, this study investigated the use of the web-based information during covid-19 to ascertain its effectiveness and efficiency in service delivery by Professor Festus Aghagbo Nwako University Library, Awka.

Research questions

The following questions guarded the study:

1. Were the students served with information via the web during covid-19 by their university library?
2. What were the sources of information during covid-19
3. What new ways do they wish to be served after covid-19 pandemic?
4. What challenges affected their assess to web-based information during covid-19?

Literature review

Ideally, the web-based information are online services which include online library catalogs, e-databases, references, distance learning services, virtual classrooms, instant messaging services, virtual references, resource sharing and networking. It is simply the use of ICT and internet in different formats to disseminate information (Madhusudhan & Nagabushnam, 2012 and Kamba, 2011). According to Kumari (2016) web based library Services are mainly provided through the library portal which is a special kind of gateway to web based library resources. Interestingly, covid-19 health information are meant to be integrated into the already established platforms for students' utilization. As covid-19 came with the protocol of social distancing and limited group meeting, web-based information services become the best bet in conforming with the global health sustainability of the students and the academic community at large. It is expected to ensure adequate services bearing in the mind the

declaration of universal access to information on health which is meant to be affordable through modern communication technologies which libraries are parts of (Royston, Pakenham-Walsh & Zielinski 2020). These should come in wide varieties of formats like multimedia services, e-mail, compilation of reading list and bibliographies, voice mail, discussion group, bulletin board, chat sessions, online reference, web pages among others (Noor-Ul-Amin, 2013 and Siddike, Munshi & Sayeed, 2011). If these are truly offered, the students then have all the needed information on covid-19 for their protection and that of their communities.

Studies have shown that web-based information services were used in information dissemination during covid-19. For instance, Mehta & Wan (2020) reported on how the library has adapted some existing services into a digital format and explored new initiatives/practices. The world class information revolution is what is desired by library users, especially in the academic libraries where services enable users to browse through e-books, read articles, have easy access to resource persons, mentors, experts, researchers, professionals, and peers-all over the world (Noor-Ul-Amin, 2013). The implication is that when these technological services are lacking, the users may likely find alternative making the libraries irrelevant and mundane.

Undoubtedly, Covid-19 came like a bolt with information being streamed from wide varieties of internet sources and social media. But then, the library remains the acknowledged source for authentic and accurate information which is critical because of information overload and fake news. Libraries have disseminated information through their websites/webpages (Dadhe & Dubey, 2020) with various facilities and tools that make information available and accessible to users. For instance, FUTO processed CD-ROM with rich indispensable e-resources, offline/online databases to provide web-based information services to users (Anunobi, Nwakwuo, Oga & Bernard, 2012). With these tools, students are provided with information even outside the library. There are also interactive resources and interfaces where users communicate with librarians and feedback. Thus, the use of library web page,

web OPAC, e-mail, bulletin board, ask a librarian, web form and web based user education are highly required for effective response mechanisms on covid-19 (Kumari, 2016). IFLA also pointed out that libraries should link information technology, education and culture in contemporary library service (IFLA, 2020).

Similarly, Obeidat (2020) reported on his study on evaluation digital library services during covid-19 pandemic: using users' experiences in academic institution, Jordan that the participants indicated the Internet provided many benefits related to their research, the majority of graduate students agreed that they used services of digital libraries. In the same vein, Dadhe and Dubey (2020) reported that the National Digital Library of India (NDLI), an IIT Kharagpur initiative throws open its services to all, providing special COVID-19 related literature and information ranging from research writings, projects, funding, start-ups, datasets, multimedia contents under the single section 'COVID-19 Research Repository. Sources of COVID 19 information also included the Internet, World Health Organization (WHO) website, newspapers, Nigerian Centre for Diseases Control (NCDC) website, Network News (Omosekejimi & Oyovwe-Tinuoye, 2020). Indeed, the introduction of internet and the associated ICT have significantly influenced the way libraries provide web-based information services to their users and the way users choose to access information (Koteswara, 2013). It enables the facilitation of digital collections with connection to the web information, giving access to users both in online and offline modes (Ekere, Omekwu & Nwoha, 2016).

The truth is that post covid-19 must carry the students along in designing their web based information services. The libraries must know the students' needs and serve them adequately. Clearly, covid-19 has re-defined the demand for reliable e-resources and the academic libraries must enlarge their trails to first-rate e-books and other educational contents. As Falt and Das, (2020) put it, students are engaging en masse with e-books and e-learning; and researchers are drawing chiefly on electronic journals. As the public awareness of covid-19 goes on, innovative web-based information services are

outlined with interacting more with their students (Idris, 2020). This can only be done when those contacts used in registering students in the library would really be used ideally. Today's librarians must learn to re-learn and become more competent in developing content that appeal to their users, especially in health information for that is the basis of living.

Hence the contents must be research driven as many studies are focusing on topical issues which will be streamed in students' projects and assignments through document delivery, as well as maintaining end user supply and services, feedback mechanisms and listings in the databases. Reserachers have identified e-services and trends to enable and connect with students. Example, Facebook live series, webinars, online lectures, virtual book discussions, ebooks, e-resources, digital library, e-services, virtual exhibitions, sharing via whatsapp, instagram, twitter (Adeleke, 2020; Gaur, 2020; Oyelude, 2020 and Asif & Singh, 2020) must be largely extended. Report also showed the wave of web services across library institutions. A gateway to over 48 million e-books and knowledge products across disciplines with nearly 3 million regular users access the web-services in National Libraries in India. Again, the [Europeana](#), a pan-European-Union virtual library, granted its half-a-million users access to almost 58 million digital contents every year (Falt & Das, 2020). The essence is to fine tune technological based srVICES and promote online resources for extensive delivery.

However, accessing web-based informations services comes with challenges. One of such challenge is the unreliable access which includes URL problems, slow loading, internet connection problems, information transfer, etc (Osuchukwu, Otubelu, Anike & Oraekwe, 2019). There are also Internet/data issues, erratic fluctuation and disconnection of information which affect easy flow of information. These frustrate users as the slow-loading web page causes non-satisfaction while seraching as well as put dent on capability of

librarians. Another factor is the users' apathy to the use of web because some students may not really know where and how to search for the information. Some websites and pages are simply not user friendly. This is the reason Kumari (2016) stated the need to organize some training for users to use special equipment. This factor wastes time and energy, thus is contrary to the 4th law of Ranganathan that stated, "save the time of the user". Thus, when students and other users cannot connect because of unending loading and initializing, the whole services are side tracked and ignored. Infrastructure is also experienced. Examples are the the inability to acquire smart phones and regular subscription, the erratic power supply which affects access and causes break down of equipment and systems errors (Anunobi, Nwakwuo, Oga & Bernard, 2012). Again is the challenge of managing eruption of information over the internet which has become more demanding and problematic (Omenugha & Nwadike, 2020). This causes burn out and difficulty in choosing the right information.

Methodology

This study adopted online survey. This was chosen because of the coronavirus pandemic that shut down institutions. The students were at home so the questionnaire were designed and shared through the class whatsapp platforms. The course reps of each level were enjoined to post the the questionnaire in their different class groups. The questionnaire was designed to capture the objectives and the research questiones. The responses were tailored to obtain Yes or No, while others were to tick the appropriate boxes as they affected the respondents. The participants were from Library and Information Science Department of Nnamdi zikiwe University, Awka. There are about 360 students covering 100 to 400 Levels of regular and CEP students. A total of 131 students responded to the online survey. The results were analyzed in simple frequencies and presentages. They were presented in diagrams and Table below.

Findings

Figure 1: Characteristics of the respondents

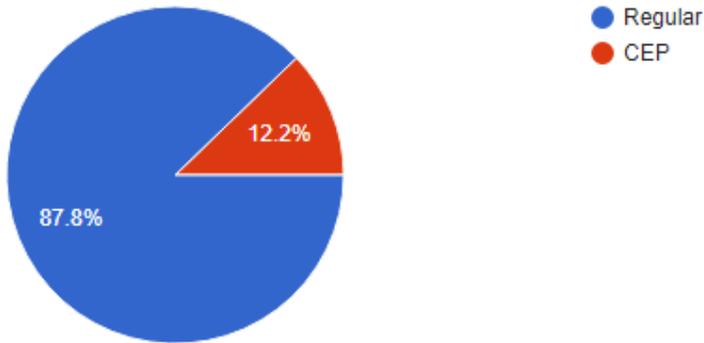


Figure 2: Sex distribution

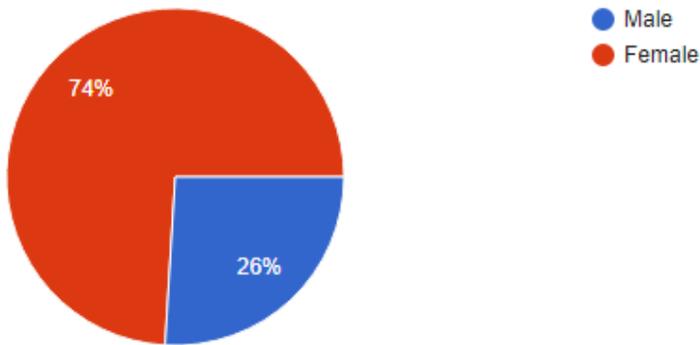


Figure 3: Age Distribution

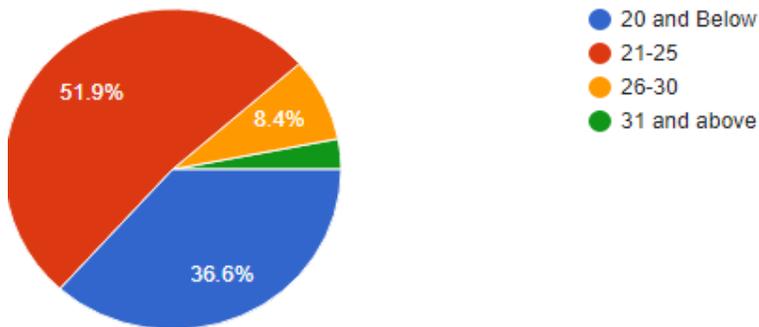


Figure 4: If the students were served with information via the web during covid-19 by their university library

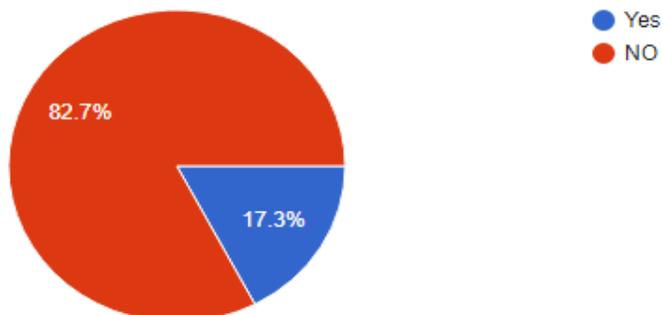


Figure one shows that one hundred and thirty one (131) students responded to the online survey. While 87.8% (115) represented regular students, 12.2% (16) represented CEP students. It shows that both regular and CEP were included in the study.

From the figure 2 above, 74% represented female while 26% represented male students respondents

Figure 3 shows that 51.9% were between 21-25years, 36.6% were below 20years while 8.4% were between 26-30 years and 3.1% were from 31 and above.

The response rate showed that 82.7% answered no. while 17.3% answered yes on being served with information via online during the covid era.

Figure 5: The sources of information the students used during covid-19

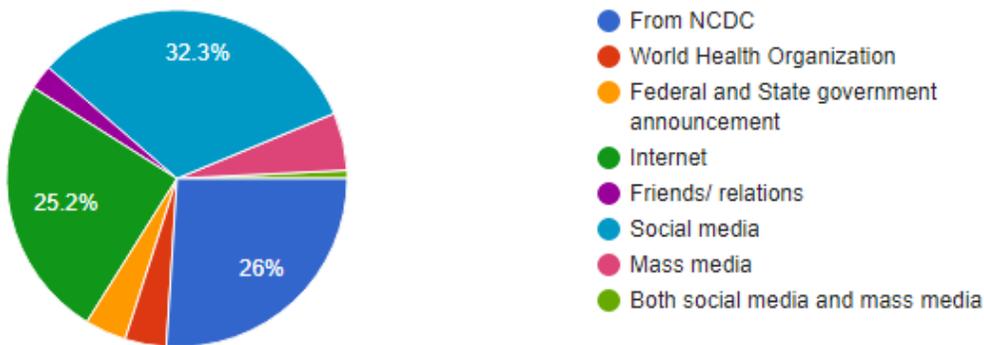
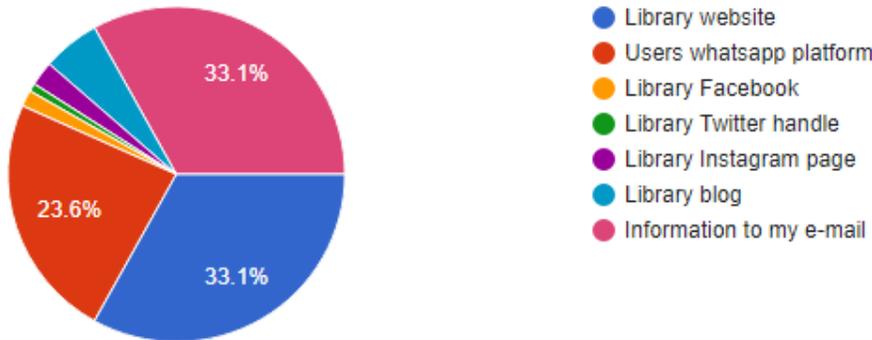


Figure 6: New ways they wish to be served after covid-19 pandemic



In figure 5 the response rate here was 83.5%. It was shown that 32.3% sourced information from the social media, 26% from NCDC and 25.2% from the internet.

On the new ways the students wished to be served post covid-19 as shown in figure 6, 33.1% indicated information via the email and university library websites respectively while 23.6% wished to be served via the whatsapp platform.

Table 1:Challenges that affected students’ use of web-based information services during covid-19

S/N	Item	Frequency	Percentage
1.	data subscription	124	94.6
2.	Discerning the right and authentic information	106	80.9
3.	problem of searching the right sources of information	63	48
4.	Lack of wifi	79	60.3
5.	Poor network and internet connectivity	92	70.8

It was indicated in the responses that data subscription was a big challenge at 95.4%. This was followed by discerning the right and authentic information at 81.6%, problem of searching the right sources of information at 48.8%, lack of wifi 60.5%, poor network and internet connectivity 70.8%.

Implications of the findings

The studies have shown the dependency and imperativeness of web-based information services by the students. The assumption that every library practices effective web-based information services has been revealed to its true nature. This implies that improving on the programs of wider online engagement to the users at all times, especially during emergency like covid-19 is needed. What with the closure of schools and all learning institutions which should have made the library to stamp its mark and relevance in the society with its unalloyed expertise in information services. The fact that students clearly stated that they were not served showed serious omission and concern in times of needs, considering that they were home and needed to be kept up to date with accurate and authentic information. It is not too much for the libraries to follow back to back with NCDC and other authentic organization in extending quick updates to the members of the academic environment through the library portals and other web platforms. Nevertheless, the desired ways to be served as indicated by the students in the study are good points to be taken seriously by the academic libraries if they want to be acknowledged and respected as relevant institution in information dissemination. Now, if they do not rise up to the challenges of effective and efficient information delivery via web services, the outcome may make the students to put a vote of no confidence on libraries and librarians as well as alienate students from willful enrolment in the library schools. A profession that has no progressive population is heading fast to extinction.

Discussion of findings

The study has shown that both male and female students expressed their needs on the web-based information services of the university library. Although the number of the female is

higher than that of the male respondents, it shows the inclusive participation of the respondents in being involved in the discussions that concern their health and knowledge. Again the percentage age distributions of 51.9%, 36.6% and 8.4% representing the youngest populations of below 18 years to 30 years indicated a good sign of youths that are less susceptible to covid-19 infection. But then they need the authentic, accurate health information in order to help engage others against misinformation circulating around covid-19 (Avert, 2020).

On whether the students were served with web-based information during the lockdown, the glaring response of 82.7% in negative indicated that the university library fell below par in its duties to reach out via online to the members of its academic community during covid-19 era. Perhaps, the library staff need upskilling in redesigning total library engagement and demand for contactless services as Idris (2020) revealed in his work. Otherwise the interpretation will be that libraries have no value and nothing to contribute. This result, of course contradicts the study of Mehta & Wan (2020) who reported on how their library has adapted some existing services into a digital format and explored new initiatives/practices. If the university library portal, facebook, twitter, instagram, blog, website and email services did not connect with the users for accurate information on covid-19 throughout the lockdown, it is a source of worry.

The data on the sources of covid-19 information for the student disclosed the social media over the NCDC and the internet with 32.3%, 26% and 25.2%, respectively. It is not surprising that social media was rated highest considering the target population of this study and the volume of information that are posted every second on social media. This is the reason the university library should have explored this avenue to offer accurate and authentic information to their students instead of leaving them at the mercy of misinformation, disinformation and malinformation (Omenugha & Nwadike, 2020). Lots of unverified information must have been assessed on covid-19 and passed down to more confused people.

It has been made clear by the students that they desire to be served after covid-19 through their e-mails and university library website (33.1%, respectively) as well as the whatsapp platforms (23.6%). The indication is that if this wish is granted, the library will be more acknowledged and revered. After all, the library is supposed to be people and service oriented which researchers like Adeleke (2020), Gaur (2020), Oyelude (2020) and Asif & Singh (2020) strongly advised to largely extend its web-based services post covid-19 via ebooks, e-resources, digital library, e-services, sharing via whatsapp, instagram and twitter.

Findings of the challenges that affected students' web-based information services during covid-19, rating data subscription as the highest rate at 94.6% while discerning the right and authentic information at 80.9% and poor network and internet connectivity 70.8% simply summarized the the difficulties encountered with online information. It rhymed with other findings on affordable internet for assessing reliable information. Perhaps if NCC has become more strict on setting affordable and government structuring strong policy on communication and information, web services would be easy and fact.

Conclusion

The web based information services offer wide varieties of information to target users and their needed information. The covid-19 has redefined library and information web services and opened some loopholes that need to be bridged. Literature has shown that it is not just about clicking on the buttons to send out information but building relevant contents in different formats that suit every user. Thus, from the cost of electronic devices, data subscription, infrastructure, designing of the website, content generation and human resources, it becomes apparent that librarians brace up their technological savvy for good practices. Based on this, the study concluded that:

1. There is need to keep updating on the new lessons of covid-19 and create many online avenues for the students to access. In other words, the librarians must get smarter, the devices maintained and

users satisfied with good contents and attractive online spaces

2. The university library website must be made the number one source with relevant information at aall times for students' utilization.
3. The details of the students documented during library registartion should be put into use to enable connestion and sharing with the students at all times with new information on covis-19
4. The students must be encouraged through the web services to source for authentic information only and the good use of data for more satisfaction.

Recommendations

Based on the findings, the study recommended that the:

1. The librarians must sharpen their skills on web-based information services in order to take action and deliver effectively through all various online platforms at all times to enable the students access good information. It is the only way the library profession can be relevant and be sustained.
2. They must device initiatives to engage students in their own climes with ease. This entails signing up university library with different social platforms and enlisting the contacts of their users for easy connection.
3. There is need for partnering with other institutions and organization in enhancing their information services so that the students will depend and trust in their sources instead of unverified sources in some online sharing.
4. Covid-19 seems not to be in a hurry to disappear, therefore, more online services should be adopted to suit the needs and wishes of the users while governmet establish wifi services in public areas for easy online access.
5. The library management must support efforts that improve post covid-19 web information services for best practices

and global trends in facilitation of access to information.

6. There must be more facilitation of information literacy for successful internet searching of authentic information.

References

- Adeleke, A. A. (2020). Re-jigging Library services in response to the new normal. Webinar organized on 16th September 2020 by Ladoke Akintoye University of Technology, Ogbomosho
- Anunobi, C. V., Nwakwuo, O. P., Oga, M. C. & Bernard, I. I. (2012). The adoption of ICT for library and information services: The case of the library, Federal University of Technology, Owerri. *Nigerian Libraries*, 44 (1), 89-106 July.
- Asif, M. & Singh, K. K. (2020). Trends, opportunities and scope of libraries during Covid-19 pandemic. *IP Indian Journal of Library Science and Information Technology*, 5(1), 24-27 January-June
- Avert (2020). Coronavirus (covid-19). Retrieved on 14th December, 2020 from <https://www.avert.org/coronavirus>
- Dadhe, P. P. & Dubey, M. N. (2020). Library Services Provided During COVID-19 Pandemic: Content Analysis of Websites of Premier Technological Institutions of India. *Library Philosophy and Practice (e-journal)*. 4445. Retrieved on 26th December, 2020 from <https://digitalcommons.unl.edu/libphilprac/4445>
- Ekere, J.N., Omekwu, C.O. & Nwoha, C.M. (2016). Users' perception of the facilities, resources and services of the MTN digital library at the University of Nigeria, Nsukka. *Library Philosophy and Practice (e-journal)*. Retrieved on 26th December, 2020 from <http://digitalcommons.unl.edu/libphilprac/1390>
- Falt, E. & Das, P. P. (2020). Digital libraries can ensure continuity as Covid-19 puts brake to academic activity. Retrieved on 25th December, 2020 from <https://en.unesco.org/news/digital-libraries-can-ensure-continuity-covid-19-puts-brake-academic-activity>
- Gaur, R. C. (2020). IGNCAs response to covid 19 in promotion and dissemination of India cultural traditions and heritage. Webinar organized by IFLA ARL on 22 July, 2020 on IFLA ARL Meet 1
- Idris, O. M. (2020). Retraining for re-jigging library services during and post covid 19 era. Webinar organized on 16th September 2020 by Ladoke Akintoye University of Technology, Ogbomosho
- IFLA (2020). COVID-19 and the global library field. Retrieved on 22nd December, 2020 from <https://www.ifla.org/covid-19-and-libraries>
- Kamba, M.A (2011). Implication of ICTs in Libraries of Higher Education Institutes: A panacea catapulting library development in Africa *Desidoc Journal of Library & Information Technology*, 31 (4) 65-7
- Koteswara Rao, M (2013), *Digital Libraries: Challenges, Opportunities and Implications*. Paper presented at SIS-2014 Conference from 22-23 January 2014 at Madras
- Kumari, N. (2016). Web-based services in library and information science Nisha Kumari. *International Journal of Next Generation Library and Technologies*, 2 Issue (1), 1-8
- Madhusudhan, M., & Nagabushnam, V. (2012). Use of web based library services in select university libraries in India: A study. *International Journal of Library and Information Studies*, 2 (1). Retrieved from http://ijlis.org/img/2012_2_issue_1/1_20.pdf
- Mehta, D. & Wan, X. (2020). COVID-19 and digital library services – a case study of a university library. digital library perspectives ahead-of-print (ahead-of-print). Retrieved on 26th December, 2020 from https://www.researchgate.net/publication/342459353_COVID-19_and_digital_library_services_-_a_case_study_of_a_university_library/stats
- Noor-Ul-Amin, S. (2013). An effective use of ICT for education and learning by drawing on worldwide knowledge, research and experience: ICT as a change agent for education (A Literature review). *Scholarly Journal of Education*, 2(4), 38-45
- Obeidat, O. A. (2020). Evaluation digital library services during covid-19 pandemic: using users' experiences in academic institution, Jordan. *International Journal of Library and Information Science Studies*, 6 (3), 39-48, June
- Oglesby, K. (2020). What is Web Technology? - Definition & trends chapter 5 Lesson 33. Retrieved on January, 23, 2020 from <https://study.com/academy/lesson/what-is-web-technology-definition-trends.html>
- Omenugha & Nwadike (2020). Implications of misinformation and fake news in the covid-19 era in Nigeria: Roles of librarians to the citizens. In Anyaoku, E. N. & Osuchukwu, N. P. Nigerian

- Library Association Anambra State Chapter 2020 conference compendium, 114-124.
- Omosekejimi, A. F. & Oyovwe-Tinuoye, G. O. (2020). COVID 19 information seeking behaviors of Nigerian health practitioners: A study of medical doctors in Delta State. *Library Philosophy and Practice (e-journal)*. 4153. Retrieved on December, 23, 2020 from <https://digitalcommons.unl.edu/libphilprac/4153>
- Osuchukwu, N. P., Otubelu, B. N., Anike, A. N. & Oraekwe, I. N. (2019). Private and public university libraries: A comparison. In Chukwuma O, Nnadozie, Chimeziem P, Uzuegbu, Moses, C. Nwosu, Kingsly N, Igwe & Juliana O. Akidi. *University librarianship: Issues and perspectives in Nigeria*. A festschrift in honour of Professor Raphael U. Ononogbo. Lagos: Zeh Communications, 488
- Oyelude, A. (2020). COVID 19 pandemic experience in Nigeria. Webinar organized by IFLA ARL on 22 July, 2020 on IFLA ARL Meet 1
- Royston, G., Pakenham-Walsh, N. & Zielinski, C. (2020). Universal access to essential health information: Accelerating progress towards universal health coverage and other SDG health targets. *BMJ Global Health*, 1-8 doi:10.1136/bmjgh-2020-002475
- Siddike, A.K., Munshi, M.N. & Sayeed, M.A. (2011). The adoption of Information and Communication Technology (ICT) in the University libraries of Bangladesh: an exploratory study. Article delivered at the International seminar organized by Library Association of Bangladesh, 153-154. doi:10.5923/j.library.2013203.01