Full Length Research

Emerging Trends in Re-Opening Library Services and Operations: During and Post Covid-19.

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This research investigates emerging trends in library services and operations in libraries in selected universities in southwest Nigeria. Due to restrictions during the COVID-19 pandemic, questionnaires were administered to librarians using google forms. Out of the 115-questionnaire sent 98 were returned. The result revealed that majority of libraries are ready to adhere strictly to precautionary guidelines set by the NCDC for re-opening, by conducting risk assessment and formulating policies that will give enabling environment for easy compliance on safety of staff and users and still meet the information needs of users. Although the libraries will face some challenges but increase in budget allocation would be necessary to meet the needs of library for provision of sanitation materials and implementation of new and upgraded policies. The research however recommends adequate orientation and awareness with the library patrons using various emerging technologies to curtail the spread of COVID-19 virus. The use of ICT constantly among staff should also be emphasized to prevent the spread of Covid-19. Sufficient budget allocation will enhance provision of necessary sanitation materials and other library services.

Key words: Emerging trends, Library services, Library operations, Post-COVID-19.

INTRODUCTION

New order of events has been and still being dictated globally by the detection of a new strain of coronavirus SARS-CoV-2 since the first infection was recorded. SARS-CoV-2 was first detected in December 2019 in Wuhan, a city with a population of about 11 million. There was an outbreak of pneumonia which the cause was not known. (WHO, 2020). The virus has since then spread to over 200 countries around the globe. It was characterized as a pandemic by the World Health Organization on March 11, 2020. (World Health Organization. 2020).

The approach before it was declared a pandemic was that libraries offer minimal services to library patrons to curtail the continuous spread of the infection. (IFLA-Emerging Library Trends: Post COVID-19, 2020). COVID-19 spreads through respiratory droplets of an infected person when they cough or sneeze into the air. When a contaminated surface is touched with hands and is used to rub mouth, eyes or nose it leads to infection. The best way to mitigate the spread of the infection declared by the WHO, 2020 is isolation of infected people, staying at home, maintaining social distancing of at least 6 feet between individuals in a place, avoid touching eyes, nose

and mouth, cover your cough or sneeze with your bent elbow or tissue. When tissue is used, it should be discarded it immediately into a trash bin, the two hands must be washed under a running tap for at least 20 seconds, alcohol-based hand sanitizer can also be rubbed on the hands.

On March 17, the Executive Board of the American Library Association (ALA) issued a statement recommending that libraries should close to the public due to public health concerns: "To protect library workers and their communities from exposure to COVID-19 in these unprecedented times, we strongly recommend that academic, public and school library leaders and their trustees and governing bodies evaluate closing libraries to the public and only reopening when guidance from public health officials indicates the risk from COVID-19 has significantly subsided". (Gretchen KaserCorsillo, 2020 COVID-19). This was done for few weeks during which different phases of easing the lockdown was considered and re-opening of institutions of higher education.

Leaders of countries and government after some weeks of lockdown of companies, industries, institutions of learning from primary to tertiary, closure and various other sectors of the economy due to COVID-19 began to consider gradual easing of the lockdown in phases based on overall assessment to revitalize the economy. This decision as suggested could be a four-stage process for re-opening, especially for the library - analyzing risks from surfaces, close contacts with people, the ways in which people use the libraries, and overall levels of infection in the region. (IFLA -- COVID-19 and the Global Library Field www.ifla.org › covid-19-and-libraries).

LITERATURE REVIEW

Coronavirus is an infective agent of zoonotic origin which causes COVID-19. Coronavirus causes respiratory tract infection and it also mutate as it infects which cause symptoms such as fever, cough with coryza, head and body ache, throat pain and shortness of breath. (Mynepalli Sridhar et al, 2020)

There are different types of libraries that serve different categories of people in the community where they are established. They sometimes perform functions similar to one another to achieve the purpose for which they are established in the community. The academic libraries are established to function and serve tertiary institutions and universities, public libraries serve communities, and cities, school libraries serve pupils from the lower kindergarten to the senior primary class, and special libraries offer services to designated establishment such as private business organizations, hospitals etc. there is also research library that are established in specific research institutions and offer services mainly to the

institutions and engage in publication of their research result for proper use. The mode of operation differs because of the different categories of patron but services such as collection building, users' services, technical services, ICT and administrative services are in operation in all. This makes the impact and challenges of COVID-19 not exempt on any type of library. (Rajan T.N., 2017).

Impact of COVID-19 on Libraries

Libraries play a very important role in the academic environment or any community where they are instituted. The teaching, learning and research functions cannot be overemphasized and the cultural and recreational activities that library encourage has great impact in the lives of library users. Measures, services and practices that were initiated during the crisis for teaching, learning, research, entertainment, socializing and all forms of connection must be sustained.

During the lockdown, some libraries provide remote access to databases that are restricted to on site use, promote or ease restrictions on digital content, introduce chat services for reader's advisory assistance with digital resources and basic referencing, virtual programming which include group discussions, collaborative projects. Several libraries also organize seminars, training, classes, and promote new ideas about the situation virtually. (Gretchen Kaser Corsillo, 2020).

Staff also employed various technologies to give access to patrons to ensure safety for all. During this period of full closure, librarians all over the world promote use of digital libraries, increase the number of e-book users can borrow, raise awareness of digital offers through pages of their websites (WHO -COVID-19 and the Global Library Field, June 19,2020, https://www.ifla.org/covid-19-and-libraries). During this period, several publishers gave free access to some journals and electronic-materials/resources that users would have to subscribed. Various virtual learning opportunities opened up on the internet. Subscription rates reduced greatly for those that required it for access to information resources. Though libraries are closed to offer in-person library or visits by library patron but it has used its digital infrastructure that has been built for over two decades to offer high level services and some additional when students and faculty members moved online (Jodi Heckel, 2020). Libraries have supported users with technology-enhanced learning (TEL), promotion of digital libraries and dedicated support for students, work remotely to give access to users. While physical branches may have shut down, many libraries still offer a wealth of digital content for those who have internet access elsewhere (Boone Ashworth, 2020). Access to the library digital offers more than doubled in many cases. In some countries, the offer increased by

from 1,000% to 1,500% in relation to statistics recorded before the outbreak of Covid19. Comparative statistics concerning the use of digital platforms in March-April 2020 compared to the same period in the previous year show that the use of platforms - such as divibib and Overdrive in Germany, MLOL in Italy, etc. - has increased exponentially during the Covid-19 crisis with an avalanche effect of library websites pointing to national digital platforms and a dense interchange between collections and connectedness. (EBLIDA, 2020).

According to Gretchen Kaser Corsillo, 2020, one complicating factor throughout the current crisis has been the lack of formal pandemic policies for libraries. Because the COVID-19 phenomenon is unchartered territory in terms of its level of imminent danger to staff and patrons and the uncertain duration of its resulting library closings, few libraries possess codified procedures for how to deal with a situation of this magnitude. This problem is not unique to public libraries; organizations across many industries are being tasked with learning as they go. "To reduce the impact of a pandemic on your operations, employees, customers and the general public, it is important for all businesses and organizations to begin continuity planning for a pandemic now." (Gretchen Kaser Corsillo, 2020).

Users could not visit the library in-person but the library has been able to use digital services to promote access to electronic resources. The core functions of the library were and are sustained. This also led to increase the rate of development of digital services to a great extent, though an unplanned development but that which will yield long term positive results. It will also help develop pandemic planning document that will give guidance to plan continuity of operations and services for the future in case of such occurrence.

The situation is a global crisis and different countries approach it as the National Center for Disease Control gives guidance. There has been a period of gradual easing of lockdown in some countries in preparation for re-opening of the economy, and institutions of higher education which comes in different phases. There is no one size fits all in the process of re-opening, so decisions and plans differ all over the globe. It is therefore, expedient for each country to consider what is best and applicable to their situation and the possibility of allowance to evolve plans. Library practices have been, and will be, driven by three factors: a) national health regulations, which vary from one country to another within the general framework provided by the World Health Organisation; b) risk perception, which is different whether the library is based in Estonia, where half of all hospitalised Covid-19 patients were in the Saare island, or in Italy and Spain; c) the size and the arrangement of library spaces, which differ from one library premise to another.(EBLIDA, 2020).

Library Re-opening Protocols

The concern about re-opening of workplaces, institutions, schools and companies require that employers and employees consider measures, facilities and technological inputs that should be put in place to allow for minimal risk of transmission of COVID-19. There is an urgent need to have clear information as to re-opening of libraries. The fact that COVID-19 interacts and stays on surfaces of some materials and can be active on such for some time which could cause a spread when a staff or patron comes in contact with such material must also be put into consideration. It has been established that Coronavirus can last for a long duration on different surfaces ranging from hours to days. Recent studies showed that it can last about three days on a plastic surface as well as on stainless steel surface. (Q & A on Covid-19", 2020. European Centre for Disease Prevention and Control). Policies that guide the operation and the structure of governance differs from one library to another. The importance of vaccine to prevent the continuous spread of COVID-19 cannot be overemphasized but according to Prof. Martin Bachmann "how long enough can we keep it down before we get a vaccine? He said this may take up to a year and this means that 60–70% of the population would have had exposure to the virus. According to Prof. Paul Kellam- as countries that have a growing epidemic locally are working hard to get the novel coronavirus -SARS-CoV 2, under control for the next 2 to 3 months, then we have to work out how we get people back to the life that they were used to, and how to get the economies running properly. "At the moment, that is something that we have got to think about and work quickly toward, but it looks like we are going to be in this for the long haul" (Ana Sandoiu, 2020.COVID-19: How long is this likely to last?) To ensure safe handling of materials, the Cleveland Clinic found out in a research, that the virus can survive anywhere between three hours and seven days, depending on the material. The virus typically lasts on common surfaces: • Glass – 5 days. • Wood – 4 days. • Plastic and stainless-steel – 3 days. • Cardboard – 24 hours.(Ohio Library Council,2020. Public Library Reopening Best Practices under COVID-19). According to WHO, 2020 (Update-20-epi-win-covid-19) the virus can stay on surgical gloves and on paper 4 to 5 days. (Update 2020. How COVID-19 spreads, download ...www.who.int › coronaviruse › risk-comms-updates ›u.)

The new normal in library operation and services include policies that define access to library collection, re-configuration of office settings and reading rooms to allow for at least two-meter social distancing which may reduce physical social interaction and cultural integration, availability of sanitization facilities and materials. Some new trends in library services and operation post Covid-19 include a more solid digital trend, increased demand

for digital access to resources, use of artificial intelligence to ensure contactless library services and operations.

This paper therefore, explores and addresses some re-opening guidance for libraries, technological, and innovative services that libraries are developing and will deploy to meet and satisfy users demand when they re-open, bearing it in mind that re-opening process will vary across the globe. This will help mitigate the spread of the Coronavirus Disease 2019 (COVID-19). Library management are to consider re-opening preparation based on type, size, structure, location and modes of operation of their library.

Pre-preparation for re-opening

Consultation and meetings at the management level could be considered to assess the present situation in the country/state and formulate policies that will serve as guide for staff, library users and handling of library materials. They will strategize implementation process to mitigate if not eliminate the risk of COVID-19 infection and transmission as the times are not yet normal. Inspection of the entire workplace, environmental mapping, how to continue to operate library core services- more of digital access and limited in- person access. A draft of formulated policy and other decisions reached should be written to serve as future reference. This strike team will make the policy flexible to accommodate new and necessary changes.

Management will make it of great importance to communicate with staff what is being done to ensure their safety and comfort after resumption (New workplace operating policy(ies) and what their new duty(ies) are). Communication can be done through mails, text messages, and organization media platform(s) like (WhatsApp). Management should train staff on new standards that is expected of them, health checks and precautionary measures to ensure safety and responsibility.

Staff must ensure he/she understands the new workplace policies and ask questions where necessary and evaluate their health status. Provision of cleaning materials and disinfectant should be in abundance for use. The strike team should also be alert to World Health Organisation, National Centre for Disease Control for best management practices, cleaning strategies and changes that may occur and further research results and how often the policies will be reviewed to suit their workplace and condition.

Workplace and Facility Preparation

Since the library-reading rooms has not been put to use for some weeks, including some offices. This makes it imperative for management to consider best cleaning strategies and guidelines as recommended by the country's Centre for Disease Control. All spaces and surfaces need to be thoroughly cleaned and disinfected. Spaces in the library include offices, reading rooms, restrooms, conference rooms, break rooms, browsing spaces (ICT spaces), cafeteria, reception or common areas. Screening station that includes tap and soap for washing hands, waste basket, hand sanitizer, temperature check machine, disinfectant wipes and personal protective equipment (PPE) can be set up at the entrance of the library. (aiha.org, 2020. Reopening: Guidance for General Office Settings)

Office Space preparation

Office seats can be reconfigured, including workstations as needed to preserve recommended physical six feet social distancing. Amenities that are handled with high contact frequency, such as water coolers, coffee makers, and bulk snacks can be temporarily replaced with alternatives such as touchless sensor water dispensers or requesting workers bring in their own water bottles/coffee mugs; providing individually wrapped snacks. Staff should be encouraged to use virtual meeting tools, including phone and virtual teleconference, in lieu of in-person meetings, whenever possible. If in-person meetings are essential, consider limiting meetings to 10 people or less depending on local, state, and federal guidelines. Virtual meeting should be encouraged where it is feasible, and where it is not limited number of people should be involved and should be conducted in a quick manner. (aiha.org, 2020. Reopening: Guidance for General Office Settings). Regular cleaning of surfaces should be at increased intervals. Good ventilation system should be ensured at workplaces.

Reading Rooms

Temperature check should be done for all library users at the entrance of the library. Check-in door handles, entrances and tables should be cleaned with disinfectant often. Disposable (paper) library identifier (different from the library identification card for each user) should be given to users who have access into the library rather than the usual ones that is re-used for all library users. Good ventilation system should be ensured in all reading rooms. Computers used by library users at the ICT units should be cleaned before another user can be granted permission to use it again. Disinfection of reading rooms should be done on daily basis. Running tap and soap or hand sanitizers to wash and rub hands should be provided at strategic points in the library. Limited number

of users should be allowed into the library at onset to ensure compliance with rules and guidelines Reading tables and chairs should be arranged to ensure distance of at least 6 feet between readers. Some libraries are using ticketing system to limit the number of users in the library, some only allowed 200 users with an app allowing other users to know when spaces are available in the library. In Geneva and Japan, some libraries also use seat reservation systems while some use the option of limit time in the library-where they open for one hour followed by short breaks after which they re-open. (IFLA - - COVID-19 and the Global Library Field, 2020 www.ifla.org). Use of face masks and hand sanitizers should be made compulsory for users to ensure responsibility. The use of signage should also be used to ensure proper instructions are followed by library users.

At the Circulation and Reference Desk

All returned materials should be placed in quarantine for a considerable period of time before staff processes and redistributes to the public. Management can consider putting book loan on hold for some time to avoid exposure of information materials to COVID-19 and online access should be made easy for library users to reduce user traffic at the Circulation Section. Registration and clearance should be allotted time frame and all safety precautions should be strictly adhered to. All enquiries should be done making use of e-mail or phone calls, chat with a librarian using number(s) that has been made available to users at the circulation and reference desk.

Restrooms

Trash can(s) should be made available in all restrooms. Toilet lids must be closed before flushing the toilet Hand washing before and after use of toilet. Disposable paper towels should be used in the toilet. Signage to show these instructions should be put at the entrance or a place where users can clearly read it in the restrooms. Cleaning of restrooms at this period requires double effort. Re-opening recommendations can be use as guide and fit to each library needs.

Statement of the Problem

The decision to reopen a campus raises not only logistical and health and safety concerns but also concerns about how best the libraries should achieve the academic mission both during the COVID-19 pandemic and in its aftermath. (AAUP: Guidance for Reopening Campuses,2020). The pandemic has unfolded several

weaknesses and unpreparedness of the library to face crisis such as the COVID-19 pandemic. A major challenge faced by library management all over the globe during the period includes how to mitigate the transmission of COVID-19 considering re-opening of libraries. For re-opening of libraries to be realistic, the logistics to ensure safety of staff, students and faculty members need to be prioritized; technical tools and feasible steps to ensure the library perform its roles and maximize available resources in terms of human and financial resources need to be considered. Communication among the different parties need to be prompt and clearly expressed, since their interdependence cannot be over emphasized and each day comes with something new during this pandemic. The library as an institution that offers services and that host a lot of other information materials in different formats can only consider re-opening after all necessary conditions set by the NCDC are put in place and the safety of staff and library users are ensured.

Therefore, it is important to examine the re-opening preparation of libraries to mitigate the spread of COVID-19 and the technical tools and innovation that would help to fulfill the academic mission of the community it serves.

Graeme Wood, 2020 asked "how do you operate institutions designed to mix people and ideas without also mixing viruses"? knowing surely well that restrictions in institution of higher education may look quite impossible including the library which does not only fulfil the teaching, learning and research functions but also cultural and social functions for students and faculty members. "If anything, the desire of the virus to propagate and the desire of the university to educate through the library are in dangerous harmony".

Objective of the Study

The library as an institution may not consider re-opening as fast as other partners or even schools are opened up. According to IFLA, 2020 "even if other services or buildings are re-opening, the specific nature of library services may make them unsuited to re-open until the situation has improved further". Ohio Library Council,2020, outlines four different phases of re-opening which are: Phase 1- Building closed to staff and public; Phase 2 – Building closed to public & open to staff; Phase 3 – Building open to staff and public with limited services; Phase 4 – Building open to staff and public with full services.

Though re-opening of libraries depends majorly on decision of the management. There are set of conditions for libraries to fulfill and guidance to follow as released by the National Centre for Disease Control and State Health Task Force on COVID-19 to ensure readiness for re-opening.

This paper aims to:

i.   Assess library management's readiness for re-opening post COVID 19,
ii. To assess preparation and adherence to precautionary guidelines set by the National Centre for Disease Control for library re-opening
iii. To examine some emerging/upgraded technological tools and services libraries may likely introduce to comply with COVID-19 guidelines.
iv. To examine some challenges that libraries may be faced with during and post COVID-19.

Research Questions

1. To what extent are library management ready for re-opening post COVID-19?
2. What is the adherence level to precautionary guidelines set by the National Centre for Disease Control for library re-opening post COVID-19?
3. What emerging/upgraded technology for operations and services do you wish your library put in place to enhance services and operations during and post COVID-19?

METHODOLOGY

The study used descriptive research survey. The population were 115 librarians. A researcher designed questionnaire was used to obtain information on emerging trends in re-opening library services and operations during and post COVID-19. Google form was used send link to librarians due the lock down at the time of this research. 115 librarians were selected as respondents from different universities. Only 98 (85.22%) of the questionnaire was properly filled and returned.

Data Analysis

This chapter presents the analysis, interpretation and discussion of findings from this research. This is based on the research objectives and research questions on the trends emerging in library services ad operation post COVID-19.

Data Presentation and Discussion

The data for the study was collected using Google forms as a result of the lockdown imposed after the outbreak of the COVID-19 pandemic in Nigeria. Link to the questionnaire was sent to 115 librarians from various academic and special libraries in Nigeria. However, 98 of the respondents properly filled and submitted the online questionnaire. Only these were included in the analysis.
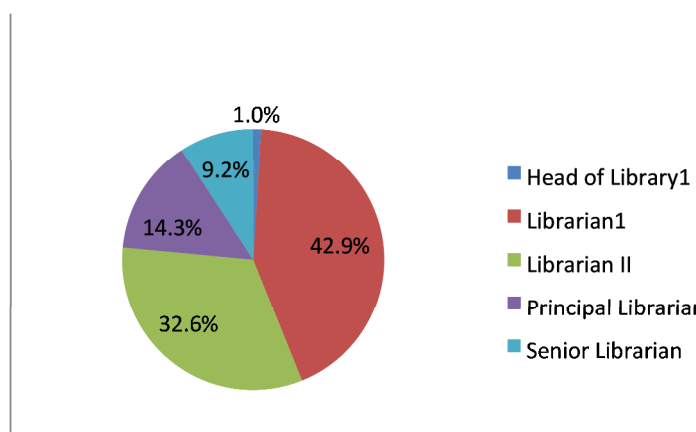
Figure 1. Official Designation of Respondents

Figure 1 shows the demographic distribution of the respondents (head of library, principal librarian senior librarian, librarian 1, librarian II). Figure 1 shows that the larger percentage of the respondents is Librarian 1. They are 43 in number which constitutes 42.9 percent of the total respondents. This group is followed by 32 (32.6%) of the respondents who are designated as Librarian 2. Furthermore, 14 (14.3%) are Principal Librarian while 9(9.2%) of the respondents are Senior Librarian. There is also 1 Head of Library among the respondents. These demographic shows that the respondents are aware of issues surrounding the preparation for, and reopening of their respective libraries post COVID-19.
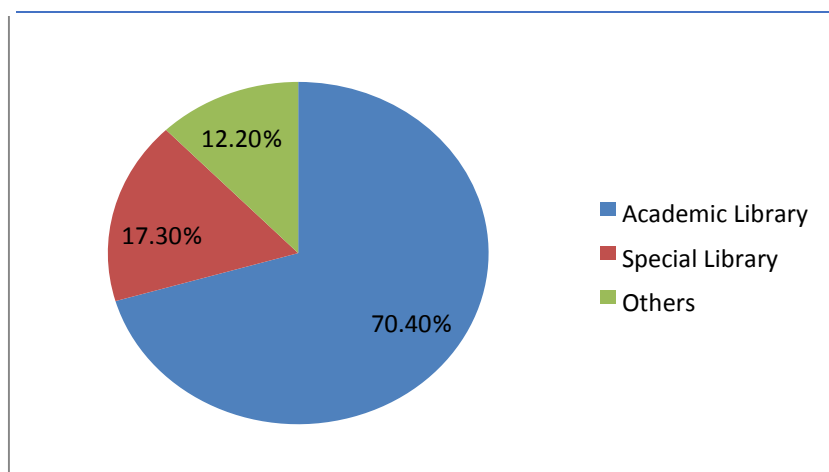
Figure 2. Types of Libraries

Figure 2 shows the type of libraries (Academic library, special library and others are- school library, research library and national library) to which the respondents belong. 69 (70.4%) of the respondents work in academic libraries while 17 (17.3%) work in special libraries. 12 (12.2%) of the respondents work in other types of libraries.

Research questions answered

1.   **To what extent are library management ready for re-opening?**

Table 1. How Prepared is your Library for Reopening?
Preparation for re-opening in your library

Preparation for re-opening in your library	Frequency	Percent
Not preparing for re-opening at all	46	46.9
Not sure about preparation for re-opening	22	22.4
Preparing for re-opening	30	30.6
Total	98	100.0

Data presented in Table 1 shows how libraries are preparing for re-opening after the COVID-19 pandemic. The result shows that majority 46.9% of the respondents in libraries are not preparing for re-opening at all. This could be as a result of the present extension of the lockdown imposed by the government on all institutions of learning. The least of the respondents 22 (22.4%) indicates that they are not sure about preparation for re-opening in their libraries. However, 30(36.6%) of the respondents indicates that their libraries are preparing for re-opening. This response can be understood in the context that many of the institution to which the libraries are attached are yet to resume any form of academic activities due to an ongoing industrial action by lecturers. (Ekwoaba and Danesi, 2020; Uzoh, 2020).

Table 2. Preparations your library is making to re-open
Adherence level to precautionary guidelines set by the National Centre for Disease Control for library re-opening post COVID-19?

Statement	SA	A	D	SD	Mean	Std. Dev
Risk assessment and new policy formulation	39 *39.8*	35 *35.7*	13 *13.3*	11 *11.2*	3.04	.994
Sanitation and redesigning of library spaces	40 *40.8*	32 *32.7*	14 *14.3*	12 *12.2*	3.02	1.025
ICT training for library staff	33 *33.7*	31 *31.6*	23 *23.5*	11 *11.2*	2.88	1.008
Re-organisation of library services and operations	34 *34.7*	22 *22.4*	25 *25.5*	17 *17.3*	2.74	1.115
Meeting and consultation with stakeholders	22 *22.4*	36 *36.7*	29 *29.6*	11 *11.2*	2.70	.944
Provision of sanitation facilities/ materials as specified by national health authority	30 *30.6*	25 *25.5*	24 *24.5*	19 *19.4*	2.67	1.110

*Percentage values are in italics

Table 2 shows Adherence level to precautionary guidelines set by the National Centre for Disease Control for library re-opening post COVID-19?

   Summary of table 2 indicates that 74 (75.5%) of the respondents agreed that their libraries are conducting risk assessment and formulating new policies to conform with guidelines provided by health authorities which include temperature check for all library users and staff. Observance of temperature higher than the normal in any library user of staff will not be allowed into the library but will be referred to the health service (Tharakan S. et al, 2020). New policy includes compulsory use of face mask to gain access into and inside the library by patrons and staff and use of signs and different posters to indicate what, how where, when and so on of some issues that patrons may require. Also book loan will be suspended for a while until assurances of proper sanitation and care can be ascertained to prevent transmission of the infection through materials. The implication of this result is that librarians are majorly in agreement with the complex steps that must be followed for reopening of libraries and other public spaces (Crowe, 2020; Okike, 2020; Eric, and Partha, 2020). Similarly, 72(73.5%) of the respondents also agreed that their libraries are carrying out sanitation of reading rooms, office spaces, conveniences and library surrounding. Tables and chairs in reading rooms are being rearranged to allow for the compulsory 2m social distancing. Reading rooms have lesser capacity to accommodate patrons. This has started in some private institutions such as Lead City University, Ibadan, Nigeria. Also, 64 (65.3%) of the respondents indicate that their libraries are training staff on the use of Information and Communication Technology (ICT) for virtual services. This is very important to reduce contact among staff and with patrons. Some services and operations such as collection building, reference services, circulation may involve more virtual services than the usual in-visit. Furthermore, as indicated by 56 (57.1%) of the respondents, libraries are re-organizing their services and operations to meet the current requirements. No more crowd for inquiry, registration or clearance at the circulation table, designated phone numbers to book and appointment will be given out. Specific numbers of patrons will be attended to at working hours. 58 (59.1%) of the respondents also indicated that their libraries are having meeting with relevant stakeholders to ensure safe re-opening while the response of 55 (56.1%) of the respondents indicate that their libraries are making provision for sanitation facilities and other safety devices as recommended by national health authority. The implication of these results is that the libraries are actively following, introducing new policies and adhering to precautions and recommendations of local and international health authorities while also using the opportunity to reposition library services to be more dynamic post COVID-19. (NCDC, 2020; WHO, 2020; Rogers, 2020).
   Libraries have a lot to put in place to meet up with the new normal and still offer services that satisfy patrons. This is in line the finding of Winata, Fadelina, and Basuki (2020) who also found that it is no longer business as usual in Indonesian academic and Cox (2020) who predicted that the current pandemic will result in significant changes in services and operation in the library.

Table 3: Emerging/ upgraded technology and services your library may likely introduce to comply with COVID-19 regulations and enhance services.

Emerging/Upgraded technological tools and services	SA	A	D	SD	Mean	Std. Dev
Provision of remote access and mobile interacting lines	36 _36.7_	39 _39.8_	19 _19.4_	4 _4.1_	3.09	.851
Tele-libraries and online help desks	40 _40.8_	24 _24.5_	21 _21.4_	13 _13.3_	2.93	1.077
Automated door opening	24 24.5	39 39.8	30 30.6	5 5.1	2.84	.858
Provision of technical tool for curbside pickup and return	26 _26.5_	25 _25.5_	37 _37.8_	10 _10.2_	2.68	.980
Voice commands in elevators	29 _29.6_	24 _24.5_	29 _29.6_	16 _16.3_	2.67	1.072
Use of Artificial Intelligence	25 _25.5_	28 _28.6_	29 _29.6_	16 _16.3_	2.63	1.039
Upgrade and expansion of digital and virtual services	24 _24.5_	27 _27.6_	30 _30.6_	17 _17.3_	2.59	1.044

*Percentage values are in italics

   Table 3 shows emerging/upgraded technologies and services that are likely to be deployed by the libraries in order to respond to the demand of the current pandemic situation. 75 (76.5%) of the respondents agreed with providing remote access to the library collections and mobile interacting lines. This is followed by Tele-libraries and online help desk which is endorsed by 64((65.3%) of the respondents. Furthermore, 63 (64.4%) of the respondents agreed that libraries should install motion sensitive doors which automatically open for user and 53 (54.1%) agreed to voice command features in elevators and the use of Artificial Intelligence respectively, to limit touching of surfaces. 51 (52%) agreed to the provision of technical tools for curbside pickup of borrowed materials. The same percentage also agreed to an upgrade and expansion of digital and virtual services. The implication of this result is in agreement with libraries and librarians beyond the reach of this questionnaire. Experts all over the world have seen the need to deploy technology both to ensure the safety of information users and to expand the reach of library resources and services (Okike, 2020; Winata, Fadelina, and Basuki, 2020; Cox 2020)

Table 4. Challenges libraries will have to face during and post- COVID-19

During and Post Covid-19 Challenges	SA	A	D	SD	Mean	Std. Dev
Availability of sanitation materials	42 _42.9_	34 _34.7_	15 _15.3_	7 _7.1_	3.13	.927
Implementation of new policies	41 _41.8_	33 _33.7_	18 _18.4_	6 _6.1_	3.11	.918
Insufficient budgetary allocation	33 _33.7_	40 _40.8_	19 _19.4_	6 _6.1_	3.02	.885
Space redistribution	41 _41.8_	31 _31.6_	19 _19.4_	7 _7.1_	3.08	.949
Personnel safety	27 _27.6_	53 _54.1_	14 _14.3_	4 _4.1_	3.05	.765

Table 4 outlines the emerging challenges libraries may likely face in designing appropriate services during and after COVID-19.   One of the major challenges, as indicated by 76 (77.6%) of the respondents, is the continuous availability of sanitation materials for the use of librarians and patrons. Another challenge indicated by 74 (75.5%) of the respondents is the difficulty in implementing new policies due to various administrative bottlenecks and red tapes. Perhaps one of the challenges as identified by 73 (74.5%) of the respondents is insufficient budgetary allocation which might hamper the implementation of the new measures. This is further shown in the response of 72 (73.4%) of the respondent that space redistribution is a significant challenge meaning that, without funding, it might prove more difficult to remodel the library building to meet the requirements of the new normal. Another key challenge identified by the respondents is personnel safety which is cited by 80(81.7%) of the respondent. Winata, Fadelina, and Basuki (2020) also observed that librarians are also at risk of infection due to interaction with multitude of library users especially when safety precautions are strictly followed by all concerned. Other challenges identified have also been reported in previous studies such as Mwanzu and Wendo (2017) who discussed the difficulties faced by African libraries in transforming from old fashion to modern, technology-driven spaces.

CONCLUSION AND RECOMMENDATION

This research examines emerging trends of library operations and services during and posts COVID-19. Libraries must prepare for the new normal as our institutions cannot remain lockdown forever but new ways to apply our technology and tools to carry out the same services and operations needed to fulfill the vision and mission of the library must be applied. While it is clear that majority of academic libraries in Nigeria are yet to be open for in-visit, they are to make comprehensive preparations for a safe reopening. The emerging trend is towards more community engagement, building synergy with parent institutions, health agencies and improving infrastructures, this indicates that the libraries need to emerge new and upgrade their system to meet the new normal and the guidelines provided by the National Centre for Disease Control for library re-opening (NCDC, 2020; WHO, 2020;).

Furthermore, Libraries are seeking to change from traditional manual services to a more technology-driven process in order to meet the exigencies of a changed environment. This is being done by formulating and upgrading of policies, practices and technology, to ensure library users' improved access to information resources even with reduced contact among themselves and the library staff as identified and advocated in related studies

(Rogers, 2020; Okike, 2020; Mwanzu and Wendo, 2017).

However, the progression of these trends is threatened by the usual challenges that have been plaguing libraries in Nigeria for decades. (Bello and Aghadiuno, 2019). This study also revealed challenges which include of weak policy implementation capacity, low or inadequate funding and lack of the necessary materials needed for a hygienic library environment among others.

This study however recommends urgent and intense awareness and orientation of the new normal especially among patrons and staff as using various technologies available to curtail the transmission of COVID-19. Library should ensure that new modifications are made clear to users. New trends to information service delivery should be encouraged such as use of dedicated mobile lines for interaction, appointments, facilities for curbside book loan and return should be put in place. Virtual meeting among staff should be encouraged where physical gathering can be avoided. Sufficient allocation of budget will also enhance provision of necessary sanitation materials, training of staff and other services that should be rendered to patrons and facilitate various operations in the library. Institution that have faculty libraries should decentralize some activities such as orientation for new students. Compliance with the new normal will help to satisfy the information needs of users' and enhance fulfillment library's mission.

REFERENCES

AIHA: "Reopening: Guidelines for General Office Settings". Guidance Document aiha.org. Version 3

BMJ Best Practice. 2020. https://bestpractice.bmj.com/topics/en-gb/3000165

Ana Sandoi, (2020). COVID-19: How long is this likely to last? Medical News Today.   COVID-19: Latest news and resources.

Bello, S.A. and Aghadiuno, P.C. (2019), Information needs, repackaging and dissemination: sustainable library services for national development, International Journal of Arts, Languages and Business Studies (IJALBS), Vol. 2 No. 1, pp. 176-186. available at: www.ijalbs.com/index.php/ijalbs/article/view/56/55

Boone Ashworth Culture (2020). Covid-19's Impact on Libraries Goes Beyond Books

Cox, C. (2020). Academic libraries will change in significant ways as a result of the pandemic (opinion) inside higher Ed", available at: www.insidehighered.com/views/2020/06/05/academicli braries will-change-significant-ways-result-pandemic-opinion (accessed 12 November, 2020).

Crowe,Cailin (2020). The Effects of Coronavirus On Libraries And Services. Smart Cities Dive Apr 14, 2020. Available at: https://givingcompass.org/article/the-

effects-of-coronavirus-on-librariesand-services/

EBLIDA (2020). A European library agenda for the post-Covid 19 age [Work in Progress] Draft, May 2020 Document prepared by the EBLIDA Secretariat. Accessed July 9, 2020

Ekwoaba, J. O., &Danesi, R. A. (2020). Academic Staff Union of Universities Strikes and Employees' Job Performance in University of Lagos. *Ilorin Journal of Administration and Development*, *6*(1), 101-111.

Eric, Falt and Partha (Das 2020) Covid-19 put brake to academic activity, but digital libraries can ensure continuity. The Print, 7 April, 2020

Graeme Wood, (2020). There's No Simple Way to Reopen Universities

Gretchen KaserCorsillo (2020). COVID-19: The Impact on Public Libraries. A Publication of the Public Library Association.

Hammett, E.(2020). How long does Coronavirus survive on different surfaces?.2020. *BDJ Team* **7,** 14–15 (2020). https://doi.org/10.1038/s41407-020-0313-1

IFLA (2020). -- COVID-19 and the Global Library Field www.ifla.org › covid-19-and-libraries. Key Resources for Libraries in responding to the Coronavirus Pandemic. Accessed 7/5/2020

Jodi Heckel(2020). Survey of U.S academic libraries documents .COVID-19 pandemic responses by University of Illinois at Urbana-Champaign

Lara, E. (2020). How to sanitize collections in a pandemic", American Libraries Magazine, available at: https://americanlibrariesmagazine.org/blogs/the-scoop/how-to-sanitize- collectionscovid19/ (accessed 11 November 2020).

Lisa Peet (2020). How Reopening Campus Might Look by May 04, 2020| Filed in News)

MacGregor, T. (2020). The future of libraries in a social distancing world", Carnegie Mellon University in Qatar, available at: www.qatar.cmu.edu/news/future-of-libraries-social-distancing world

Mwanzu, A., &Wendo, D. R. (2017). Re-branding libraries to embrace open space and aesthetic reflections: a case of USIU-Africa as a benchmark of Kenyan libraries. Library Hi Tech News. Vol. 34 Issue: 1,pp. 6-10, doi: 10.1108/LHTN-10-2016-0045

Mynepalli Sridhar, MumuniAdejumo, Taiwo Hammed, Akinwale Coker (2020). COVID-19 Pandemic and other Viral Infections. Aguide for prevention, control and coping strategies in West Africa.

Okike, B. I. (2020). Information dissemination in an era of a pandemic (COVID-19): librarians' role. Library Hi Tech News.

Public Library Reopening Best Practices under COVID-19 2020. Ohio Library Council Q & A on Covid-19", (2020). European Centre for Disease Prevention and Control. Archived from the Original on 5 February 2020. Retrieved 23 March 2020.

Rajan T. N. (2017): Functions of Different Types of Libraries Rajiv

Suman, MohdJavaid, Abid Haleem , Raju Vaishya , Shashi Bahl , Devaki Nandan, (2020). Sustainability of Coronavirus on Different Surfaces. Journal of Clinical and Experimental Hepatology.

Rogers, A. (2020). Libraries re-opening soon with range of social distancing measures. London Borough of Bromley, availableat:www.bromley.gov.uk/press/article/1639/libraries_reopening_soon_with_range_of_social_distancing_measures

Tharakan S., Nomoto, K., Miyashita S., et al. (2020). Body Temperature Correlates with mortality in COVID-19 patients Care. Crit Care **24**, 298. DOI:https://doi.org/10.1186/s13054-020-03045-8. Accessed 25/2/20201

Uzoh, Bonaventure Chigozie (2020). Academic Staff Union of Universities (ASUU) and the Politics of Integrated Payroll and Personnel Information System (IPPIS) In Nigerian Federal Universities. *Economics and Social Sciences Academic Journal* Vol.2, No.8

Winata, A. P., Fadelina, R., &Basuki, S. (2020). New normal and library services in Indonesia: A Case Study of University Libraries. Digital Library Perspectives. AAUP: Guidance for Reopening Campuses,2020.American Association of University Professors (aaup@aaup.org) Nigeria Centre for Disease Control (2020), available at:www.ncdc.gov.ng/diseases/sitreps/?cat=14&name=An%20update%20of%20COVID19%20outbreak%20in%20Nigeria

World Health Organization. 2020. Available at: https://www.who.int/ith/2020-24-01-outbreak-of-Pneumonia-caused-by-new-coronavirus/en/

WHO CORONAVIRUS UPDATE 2020. Update-20-epi-win-covid-19.

WHO Update 2020. How COVID-19 Spreads. Download ...www.who.int › coronaviruse › risk-comms-updates ›u.

World Health Organization (WHO). Coronavirus. WHO; 2020 https://www.who.int/ health topics/coronavirus [Accessed 08 November,2020].