INTERNATIONAL JOURNAL OF APPLIED TECHNOLOGIES IN LIBRARY AND INFORMATION MANAGEMENT

http://www.jatlim.org

Libraries and their Professional Role in Selective Dissemination of Information During COVID-19 Pandemic

Fibi M. Minakaro
fibiminakaro@gmail.com
Deputy Librarian Adamawa
State Polytechnic,
P.M.B. 2146, Yola

Abstract
The library is the known and trusted custodian of information resources all over the world with a duty of acquiring, organizing, preserving, storing and making information available to those who need them. Librarians as information custodians are intermediaries who have an enormous role to play in selective dissemination of COVID-19 related information and resources to the public through various virtual media channels available to them, especially as most people may not come to the library or because the library may be closed in this situation of COVID-19 pandemic. This paper aims in particular to x-ray library services and the professional roles of librarians in selective dissemination of information during covid-19 pandemic. It shows the pivotal professional role of Librarians through library services in Dissemination of Information. The paper therefore, recommended that libraries should establish working relationships with health agencies and communication organizations with the objective of cooperative developments of collections, referrals and information shared and learning for users and a new breed of reimagined librarians.

Keywords: Libraries, Librarians, Professional Role, SDI and Covid-19

1.1 Introduction

Scientists and health professionals are working day and night, tirelessly to limit/curtail the spread of COVID-19. COVID-19 is a new strain of virus that has not previously been seen in humans with symptoms such as fever, cough, loss of smell, tiredness, muscle pain and mostly difficulty in breathing (Okike, 2020). Initially detected in Wuhan, China, in late December 2019, the COVID-19 virus has spread rapidly to all regions of the globe. Like previous pandemics such as SARS and MERS, COVID-19 is of zoonotic origin. COVID-19 can be transmitted easily, even when infected persons are asymptomatic. This complicates case detection and diminishes the incentives for many infected individuals to reduce their activity level. Mortality from COVID-19 is concentrated among older persons and the medically vulnerable, generating a behavioral negative externality from the young to the old and a tension between the welfare of the productive majority and that of the most vulnerable population groups (World Bank Group (2020). To date, the virus has spread fastest in cities, accelerated by the combination of more intensive economic

activity and denser population. Emerging evidence shows however that mortality patterns align with economic disadvantage. This may reflect the fact that, in many cases, the poor cannot afford to adopt distancing measures. Poor people may also have worse baseline health and limited access to medical care.

According to the World Health Organization (WHO) (2020), as of 24 April 2020, there were close to 3 million confirmed cases globally and since then has risen substantially. As scientists and health professionals search for solutions to COVID-19, librarians have the important role of selective dissemination of COVID-19–related information and resources to the public through various virtual media channels available to them, especially as most people may not come to the library or because the library may be closed during the COVID-19 pandemic (Okike, 2020).

Selective Dissemination of Information (SDI) is a type of current awareness service meant to keep the user abreast with the latest developments in the field of his interest. It is a personalized service meant for the individual or a group of users having identical information needs. It is a quick service which provides the pinpointed and exhaustive information to the users. It involves the screening of the document and selecting the information according to the specific information needs of each user or group of users (homogeneous). The main objective is to keep the user well-informed and up-to-date in his area of interest (Anjaian, 2013).

There are many services offered by the library. Library and information services refer to those services, which are provided by libraries and information centers to facilitate the dissemination and the use of books and other information resources in the library. In so doing, users' needs are met. The well-known existing library services are cataloguing, classification, circulation services, reservation, renewal, new arrivals, current contents, current awareness service, selective dissemination of information, indexing and abstracting, reference service, document delivery, inter library loan, externally purchased database, CD-ROM databases, access to other library catalogues, access to online databases, internally published newsletters, reports and journals, bibliographic services, and so on. All these services have changed their modes to an extent, taking the dynamic web environment into account (Adeyinka and Rachel, 2012). This paper therefore seeks to explore library services and professional role librarians play in selective dissemination of information during COVID 19 Pandemic.

1.2 Objectives of Selective dissemination of information (SDI)

Some of the objectives of selective dissemination of information (SDI) services according to Saxena and Yadav (2013) are as follows:

i.   To provide current information on a predefined area of interest.

ii. To receive, scan and provide the literature / information to the right users at the right time.

iii. All the current information which is relevant to the interest of the user must be brought to the notice of the user (notification).

iv. All the relevant information which is published elsewhere in the world (in English or other languages) should be located through various sources.

v.   To achieve current requirements through the scan of current material such as journals, current awareness bulletins and other important resources.

vi. To save the time of the user.

vii. No irrelevant documents should be brought to the notice of the user. Only the

selective and relevant documents should be brought to the notice of the user.

2.1 Review of Related Literature
2.2 The Concept of Selective Dissemination of Information (SDI)

Selective Dissemination of Information (SDI) was originally a phrase related to library and information science. SDI refers to tools and resources used to keep a user informed of new resources on specified topics, including the current-awareness services used to inform users about new library acquisitions. SDI services pre-date the World Wide Web, and the term itself is somewhat dated. Contemporary analogous systems for SDI services include alerts and current awareness tools or trackers. These systems provide automated searches that inform the user of the availability of new resources meeting the user's specified keywords and search parameters. Alerts can be received a number of ways, including email, RSS feeds, voice mail, Instant messaging, and text messaging (Reitz, 2004). Selective Dissemination of Information (SDI) is defined as the system in which selectively and automatically compiled information about new documents is disseminated to researchers, scientists and others who need these documents/information or supplying each user or group of users with a reference of documents or abstracts relating to their predefined areas of interest. It involves notifying the material that matches the interests of the client (Edem, 2014).

Selective Dissemination of Information was a concept first described by Hans Peter Luhn in the 1950s for the scientist/engineers of IBM. According to him, the Selected Dissemination of Information is the service within an organization which concerns itself with the channeling of new items of information, from whatever sources, to those points within the organization where the probability of usefulness in connection with current work or interest in high. Judith Holt Connor defines SDI service as a manual and automated service which attempts for a personal service (CAS) selecting for each individual that are relevant to him(Connor, 1967).

However, software was developed in many companies and in government to provide this service in the 1950s and 60s, which allowed distribution of items recently published in journal abstracts to be routed to individuals who are likely to be interested in the contents. For example, the system at Ft. Monmouth automatically sent out (by mail) a different set of abstracts to each of about 1,000 scientists and engineers in the army depending on what they were working on. The selection was based on an "interest profile," a list of keywords that described their interests. In some organizations, the 'interest profile' was much more than a simple list of keywords. Librarians or information professionals conducted extensive interviews with their clients to establish a fairly complex profile for each individual. Based on these profiles, the information professionals would then distribute selectively appropriate information to their clients. This labour-intensive operation, while initially costly, over time was made less so. A survey at the time (1970s) indicated that a large number of projects were affected by the SDI service. The software was developed by Edward Housman at the Signal Corps Research Laboratories Technical Information Division (Connor, 1967).

2.3 Characteristics of Selective dissemination of information (SDI)
According to Pal (2013), the following are the characteristics of Selective dissemination of information (SDI) service:
i.   It is a computerized assisted service.
ii. SDI is concerned with current published

information.

iii. The source of current information may be available both within the organization and outside it.

iv. The new / current information should be disseminated to the users such as researchers, scientists, managers, etc. within the organization.

v. The channeling or directing of this information depends upon the nature of this interest.

vi. One of the important things in SDI service is that only current and specialized information which is highly relevant to the user's interest is to be selected by the computer for dissemination.

2.4 The Library, Librarians and their Professional Role in Dissemination of Information

The library is a combination of both collection of information sources, resources, services and the structure in which it is housed. Libraries have become a focal point in learning, teaching and research activities of a learning community. The library plays a major role in sustaining education through acquisition, provision and dissemination of information materials (Omeluzor and Ogo, 2018). Library services imply both availability and accessibility of library resources, facilities and services to the user and the willingness and ability of readers to use the facilities and services (Reitz, (2004).

Thus, library resources provide the information needs of the illiterates, and the semi-literates that constitute the bulk of the population in the developing countries and unite all who enter its house to partake full in its intellectual activities. The institution serves as the society's memory, standing the same relationship as the human memory does to the individual. The society draws from the libraries in the same way that an individual draws from his memory to meet his varied needs (Liah Shonhe, (2017). Information is power and access to information is indispensable to individual advancement as well as corporate educational development. Individuals need the library for effective learning for lifelong education. The aim of basic education is to equip individual with such knowledge, skill, and attitude that will enable them to live meaningful and fulfilling lives, contribute to the development of the society, derive maximum social economic and cultural benefits from the society and discharge their civil obligation (Liah Shonhe, (2017).

Librarians and information professionals disseminate information as often as they have access to authoritative information resources. Dissemination of information is the transportation of information to the intended recipients while satisfying certain requirements such as delays, reliability and so forth. These requirements vary, depending upon the information being disseminated (Hamilton, 2013). According to Dhawan (2018), information dissemination is a proactive information service designed to educate and inform various groups of users on social, economic and educational issues, problems, and opportunities of interest to them. It requires systematic planning, collection organization, and storage of information for its delivery to the target. Bello and Aghadiuno (2019) defined information dissemination as the channel through which facts are linked to the rightful individual seekers and organizations. All these may not be achieved without the necessary technology in place.

However, technology has impacted the way we access and handle information resources, thereby improving quality of information we have at our disposal. It is pertinent to note, based on a study by Shonhe and Jain (2017), that potential library users have positive attitudes towards technology;

they have competent skills to use mobile technology and they access information daily using mobile technology. It is observed that changes in user information needs have put more pressure on the delivery of library services. Nkiko and Iroaganachi (2015) observed that information accessibility and utilization presuppose removal of all barriers in format, content, cost, distance, time and language for effective dissemination to the targeted audience. This means that information resources should get to the user in the easiest format in a timely matter.

Librarians of today are expected to manage digital libraries, organize digital knowledge and information and disseminate digital information owing to the fact that the world has become a global village as a result of the internet (Okike, 2020). Pal (2013) explained that librarians of this era of information explosion need to also acquire new psychological, praxeological, social and professional capabilities. Similarly, Sreenivasulu (2000) contended that the ultimate goal of a digital librarian is to facilitate access to information just in time to the critical wants of end users and additionally to facilitate electronic publishing.

In this era of information explosion where thousands of bits of information are chunked out on daily basis, librarians are expected to collect, organize, store and disseminate the information for consumption of the users. In the current global pandemic, there are new ways to deliver information both real and fake; it is left for librarians to sort out the real information for their users to avoid misinformation. It is expected that librarians work independently to deliver service-oriented, researcher-centered applications, instructional programmes, projects and services (Okike, 2020). Taitet al. (2016) explained that the tools and resources used to supply required information and transform it into knowledge have changed, but the librarian's role has remained unchanged. Especially now, it seems necessary to reflect and redefine the characteristics of a modern librarian that would best serve all users. Hence, librarians may be indispensable in the era of the information dissemination because they play a distinctive and dynamic role in providing easy access to authoritative information at the right time and disseminating to the user in appropriate formats based on local user needs. Librarians must also possess high level of security to prevent hackers from users' personal details and the type of information they accessed. Okike and Adetoro (2019) in their study found that it is pertinent that librarians re-tool and up-skill themselves in information and communication technology to ensure secure information systems.

2.5 Librarians and Library Staff

The role of librarians is unremittingly evolving to suit the current social needs and technological developments. The 21st century libraries operate in the digital world therefore librarians are required to intensify their skills to remain relevant in their profession. The 21st century librarian's roles and skills according to Jain, (2013) and Verma, (2015) include roles of knowledge workers/brokers, digital curators, end user trainer/educator, web organizer and designer, interface designer, knowledge manager/knowledge broker, knowledge mapping, researcher, change agents, website builder and publisher, Sifter of information resources, content manager, consortia manager: strategic planning, systems development and project management, marketing and presentation skills, technical, managerial and information technology skills, advocacy (act as a lawyer e.g. concerning issues such as copyright law and intellectual property rights), consultant, service orientation, collaborator, mentor, leader, financial manager, subject experts and policy makers (Liah Shonhe, 2017).

The typical library staff consists of three levels of employees: professional librarians, support staff, and part-time assistants. The proportion of each of these in any given institution depends on the type of library, its budget, and the types of users it serves (Negi, 2014).). Professional librarians usually constitute the smallest number of a library's employees. In addition to their managerial work, professional librarians assume primary responsibility for providing reference assistance, developing and managing the collections, and overseeing cataloging/classification. Non-professional support staff commonly assumes most of the responsibility for directly serving library users. Their activities include essential functions such as inputting, coding, and verifying bibliographic and other data; ordering library materials; assisting with catalog development; performing circulation duties such as checking out books to users; and performing other services vital to the library's daily operation. While part-time staff members typically shelve books, perform low-level clerical duties, and carry out other relatively simple but essential tasks (Dhawan, 2018).

3.1 Dissemination of Information Strategies during COVID 19 Pandemic: *Librarians Role*

The birth of technology and continuous ICT developments are changing libraries in terms of information acquisition, storage, organization, maintenance and the methods of rendering services (Fagbola, Uzoigwe, & Ajegbomogun, 2011). Librarians have to reach user populations and their need for up-to date relevant information. When this is done, there can be limitless access to the library and information resources by millions of users and information seekers and their optimal use. Echezona (2007) explained that by delivering high-quality services, libraries and information centres have contributed immensely to ensure greater access to information resources.

According to Shonhe and Jain(2017), publishers presently provide a wide range of resources that are accessible through mobile technology. For example, in a research conducted by Okiy (2010), it was revealed that students and lecturers in learning institutions increasingly demand and prefer access to electronic sources and networked information from their respective libraries. In the quest to meet up with the needs of library users during this COVID 19 Pandemic period, libraries can use various information dissemination techniques as suggested by Shonhe (2017) such as personalized collections, SMS/text notifications, QRcodes, online reference services, social networks, websites, mailing lists and OPACs. Most of these techniques are self-service techniques which involve the use of technology such as laptops, smartphones, PDAs, MP3s, computers and many more. Below are just a sample of existing digital strategies but many new opportunities continue to be developed:

i. Personal space/My Library: is a self-service platform where library users manage their personalized accounts with custom-made collections. Here users can set up and manage their profile, preferences for catalogue searches, receive alerts on reserved items, check their records, track interlibrary loan request, renew borrowed items and document delivery requests (Verma & Verma, 2014).In respect of this, librarians are able to send customized scanned documents, images, audio books and e-books to library users' personalized accounts.

ii. Short Message Service (SMS) notifications: It entails the use of mobile telephony systems to disseminate

information in the form of text messages and multimedia content such as videos, images and audio files. Libraries use this service to alert patrons regarding outstanding fees, renewals, provision of call numbers, interlibrary loan, issue return notification, items on hold and new arrivals (Kumar & Chitra, 2008; Kumar, 2014; Negi, 2014; Wang, Ke, & Lu, 2012).Thus, librarians can use this service to alert patrons regarding the latest information on happenings around COVID 19 on how to stay safe or other related information. In a study conducted by Shonhe and Jain (2017), most respondents prefer to access library collections or resources through mobile devices (Okike, 2020).

iii. Quick Response (QR) codes are two dimensional barcodes that direct users to the desired websites (Library success, 2014). It is time saving technology that acts as a pointer to indexed or programmed URLs. The barcodes contain information about an item to which QR code is attached. Users with smartphones use their camera features to scan images and decode the information (Saxena & Yadav, 2013). Quick Response (QR) codes can be used by libraries on a certain topic or subject area. Verma and Verma (2014) contended that QR codes are akin to mobile tagging.

iv. Online reference services: Using mobile reference service technologies, brief responses to customer enquiries such as opening hours, call numbers, and dictionary definitions can be provided instantly in real time (Liu & Briggs, 2015; Saxena & Yadav, 2013; Verma & Verma, 2014).Online reference services can be used for research outreach. According to

Barnhart and Pierce (2011), online platforms allow librarians to create a bond with patrons and improve their efficiency through provision of a 24/7 reference and information service.

v. Library web sites are being used in various libraries for marketing purposes and announce news or upcoming events to their clients. With the influence of mobile technology, libraries are transforming websites into mobile friendly interfaces (Nalluri & Gaddam, 2016; Negi, 2014). Hence, library websites can be used effectively to share information, links, share updates and announce news.

vi. Social media networks: information professionals also make use of the social platforms for information dissemination. Social networks are more appropriate for use on marketing information and delivering personalized information resources to groups of people or individuals. SMS notification can also be used through the use of social media networks (WhatsApp, Imo) and other web applications such as Google SMS, twitter, Facebook and Pinterest (Prabhakaran & Kalyani, 2014).

vii. Mailing lists: This is the most common method of information dissemination. Using email in library services is paramount and allows for groups of people to receive personalized information at the same time. Mailing lists to targeted fusers can be used by libraries to receive personalized information at the same time.

viii. Online Public Access Catalogues and networked databases: due to online

presence of catalogues, users are able to retrieve and access information resources in a timelier manner. Current OPACs can be accessed through the use of mobile technology such as cell phones. Library users no longer need to be within the library walls for them to access OPACS and library databases.

Conclusion

Libraries have been identified as one of the key elements for open access to information, which is crucial for better dissemination of information, especially in a time of great need for accurate health-related information resources in an ever-improving digital environment. Public and institutional collections and services may be intended for use by people who choose not to or cannot afford to purchase an extensive collection themselves, who need material no individual can reasonably be expected to have, or who require professional assistance with their research. In addition to providing materials, libraries also provide the services of librarians who are experts at finding and organizing information and at interpreting information needs. Libraries often provide a place of silence for studying.

Recommendations

This paper therefore, recommends that:

i. The librarian needs to be adapted and be knowledgeable in all fields of human endeavour and proficiency in using print and digital options for selective dissemination of Information during COVID 19 Pandemic.

ii. Librarians should assess the needs of various populations via relevant surveys and other ways of gathering data. As a result, librarians become adequately equipped to disseminate necessary information based on needs assessment to diverse populations.

iii. Today's libraries are operating in a more advanced technological era, and hence there is the need to remodel library resources and services to fit into the 21st century era.

iv. Every library should have a website that will enable information dissemination and access by all types of users.

v. Librarians and other knowledge or information providers should be equal the task of providing the right information, at the right time, to the right people, using the right techniques or tools.

References

Adeyinka, T. & Abdulwab O. I. (Eds.). Hershey, PA: IGI Global/Information Science Reference. pp364

Anjaian, M. (2013). Electronic Information services in digital environment: Need of the hour. *International Journal of Digital Library Services*, 3 (2) n. p.

Barnhart, F.D. and Pierce, J.E. (2011). Becoming mobile: reference in the ubiquitous library, *Journal of Library Administration,* 51(3, pp. 279-290).

Connor, J. H. (1967).Selective dissemination of information - review of literature and issues. *The Library Quarterly* 37 (4): 373-391. Accessed December 11, 2015, URL: https://www.jstor.org/stable/4305823.

Dhawan, S.M. (2018).Basics of information dissemination, available at:https://aladin.uil.unesco.org/paldin/pdf/course 02/unit_05.pdf

Echezona, R.I. (2007). The role of libraries in information dissemination for conflict resolution, peace promotion and

reconciliation, *African Journal of Library, Archives & Information Science,* 17(2, pp. 153-162.

Edem, N. (2013). Use of Information technology by Librarian is some selected Nigerian University Libraries. *Gateway Library Journals,* 11 (2), 25-37.

Fagbola, O., Uzoigwe, C., & Ajegbomogun, V. O. (2011). Libraries driving access to knowledge in the 21st century in developing countries: An overview. *Library Philosophy and Practice(e-journal).* Retrieved March 16, 2017, from http://www.webpages.uidaho.edu/~mbolin/fagbola-uzoigwe-ajegbomogun.htm

Hamilton, S. (2013). Stamping out poverty as well as books? How libraries can support development. Retrieved March 21, 2017, from: The guardian. com:https:// www.the guardian.com/ globaldevelopment professional snetwork /2013/mar/12/ libraries-power-global-development

Jain, P. (2013). A paradigm shift in the 21st century academic libraries and librarians: prospectus and opportunities. *European Journal of Academic Research*, 1(3), 133-147.

Kumar, A. (2014). Students' opinion about the success of mobile technology in libraries: a case study of Jawaharlal Nehru University (JNU), New Delhi. *New Library World,* 155(9/10), 471 - 481.

Kumar, V. V., & Chitra, S. (2008). Innovative use of SMS technology for the excellence in library services in Kerala.

IASLIC 23rd National Seminar On Library Profession in Search of a New Paradigm. Kolakata: IASLIC. Retrieved January 20, 2017, from: http://docplayer.net/22829433-Innovative-use-of-sms-technology-for-the-excellenceinlibrary-services-in-kerala.html

Liah Shonhe, (2017).A literature review of information dissemination techniques in the 21st century era. *Library Philosophy and Practice(e-Journal). University of Nebraska – Lincoln.*

Litzenberger, A. (2016), Characteristics of the 21st-century library, available at: www.eab. Com/research-and-insights/ facilities-forum/expertinsights /2016/ characteristics 21stcentury library.

Nalluri, S. R., & Gaddam, B. (2016). Mobile library services and technologies: a study *International Journal of Research in Library Science,* 2(2), 59-66.

Nkiko, C. and Iroaganachi, M.A. (2015). Community-focused selective dissemination of information services for empowering women through information provision and utilization: center for learning resources as a catalyst for social change, *International Federation of Library Association (IFLA)*, available at: http://repository. elizadeuniversity.edu.ng/handle/20. 500.12398/141

Negi, D. S. (2014).Using mobile technologies in libraries and information centers. *Library HiTech News,* 31(5), 14-16.

Okike, B. I. (2020).Information Dissemination in an Era of a Pandemic (COVID-19): Librarians' Role. *Library HiTech News, Emerald Publishing*

Limited, 0741-9058, DOI10.1108/ LHTN-04-2020-0040

Okike, B.O.I. and Adetoro, N. (2019). Securing the information systems of libraries and the influence of tech-skills of librarians and users, Education and Information Technologies, 24 (2), pp. 1583-1602, doi: 10.1007/s10639-018-9842-z.

Okiy, R.B. (2010).Globalization and ICT in academic libraries in Nigeria: the way forward, *Library Philosophy and Practice (e-Journal),* available at: http://digitalcommons.unl. edu/cgi / viewcontent.cgi?article=1519

Omeluzor U. and Ogo E. P. (2018).Role of Nigerian libraries for sustainable educational system, information literacy and national development. Annals of Library and Information Studies. University Librarian, Clifford University, Owerrinta, Abia State, Nigeria. 65, pp. 122-127. Received: 28 November 2017; revised: 26 April 2018; accepted: 28 April 2018.

Pal, S. K. (2013). Role of librarian (cybrarian) in the modern library (cybrary): with special reference to research library, in Proceeding Research Libraries: Need of the Time, Aurangabad (MS), *Ajanta Prakashan,* Vol. 1.

Prabhakaran, A., & Kalyani, K. (2014). The thumb generation: ICT application in libraries. Journal of Library, Information and Communication Technology (JLICT), 6(1-2), 42-47.

Rao, K. N., & Babu, K. H. (2001). Role of librarian in internet and World Wide Web Environment. Informing Science, 4(1)

Reitz, J. M. (2004).Dictionary of Library and Information Science. London: Libraries Unlimited.

Saxena, A. and Yadav, R. (2013).Impact of mobile technology on libraries: a descriptive study, *International Journal of Digital Library Services,* 3 (4), pp. 1-58.

Shonhe, L. and Jain, P. (2017), "Information dissemination in the 21st century: the use of mobile technologies", in *Mnjama, N. and Jain, P. (Eds), Information and Knowledge for Competitiveness, Department of Library and Information Studies-University of Botswana, Gaborone,* pp. 425-447.

Sreenivasulu, V. (2000), "The role of a digital librarian in the management of digital information systems (DIS)", *The Electronic Library,* 18 (1), pp. 12-20,doi; 10.1108/0264047001 0320380.

Tait, E., Martzoukou, K. and Reid, P. (2016), "Libraries for the future: the role of IT utilities in the transformation of academic libraries", *Palgrave Communications,* 2 (1), pp. 1-9,doi:10.1057/palcomms.2016.70.

Uzuegbu, C. P., & McAlbert, F. U. (2012). Digital librarians and the challenges of Open Access to knowledge: The Michael Okpara University of Agriculture (MOUAU) library experience. *Library Philosophy and Practice (e-journal).* Retrieved March 18, 2017, from: http://digital commons.unl.edu/cgi/viewcontent.cgi? article=1814&context=libphilprac

Verma, N.K. and Verma, M.K. (2014). Application of mobile technology in the libraries, in *Singh, M., Singh, P.K. and Kumar, A. (Eds.), Libraries: Towards Digital Paradigm, Bharati Publishers & Distributers, Uttar Pradesh,* pp. 32-38.

Verma, M. K. (2015). Changing role of library professional in digital environment: A study *International Journal of Library Science,* 13(2), 96-104.

Wang, C., Ke, H., & Lu, W. (2012). Design and performance evaluation of mobile web services in libraries: A case study of the Oriental Institute of Technology Library. *The Electronic Library,* 30(1), 33-50.

World Health Organization (WHO) (2020), available at: www.who.int/emergencies/ diseases/novel-coronavirus-2019

World Bank Group (2020). Protecting People and Economics: Integrated Policy Responses to COVID 19. COVID 19 Coronavirus Response.