The Contribution of Libraries in Pandemic Crises: A Careful Look in COVID-19 Times

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ABSTRACT

This paper explores the contribution made by libraries in information resource provision during the COVID-19 pandemic began at the end of 2019. Measures advocated for by public health experts have had a global impact on all activities. They discourage social convergence prompting people to work from home, avoid crowded places, close schools, and other social places, including libraries. General, institutional, and research libraries have been affected by the changes mainly by shutting down physical libraries and they have had to change their operations to ensure continuity of the services that they provide. Libraries have resorted to using technology and communication channels that uphold measures to ensure continuity of services. Libraries have also had to tailor their content and services to address the public need for information about the pandemic and resources to facilitate research. This research collected qualitative data using a content analysis tool. The data was obtained from online library websites of 20 libraries from the United States and analysed to create themes from the content and determine how the libraries are contributing to the COVID-19 response by providing resources for information. The research findings illustrate that libraries have played a vital role in the provision of valid information to the public, researchers, and health officers, continuity of learning, raising public awareness, emphasising the need to follow the public health measures, and overall provision of a platform to keep the public engaged even as they stay at home.

Keywords: *Covid-19, libraries, public health measures, pandemic, e-books, virtual, remote, e-learning.*

INTRODUCTION

The COVID-19 is a global pandemic announced at the end of 2019 by the World Health Organization (WHO). Furthermore, the infection is new and hardly any information about it existed prior to the pandemic, requiring researchers to work around the clock in finding out more information about it. Consequently, it has led to the adoption of strategies and measures to curb its spread and contain it, hence, affecting the normal way of life and social interactions. Some of the measures taken by states are staying home to enhance social isolation and distancing, and to maintain overall hygiene thereby protecting one's self and other people from getting infected.

Social interaction places, including libraries, have been closed in adherence to the public health measures. Libraries collect information sources and provide the resources through different channels to the public, who either needs such resources for education, information, or personal knowledge and development. On 17 March, 2020, the American Library Association (ALA) recommended the closure of all libraries since they did not have the capacity to enhance social distancing and other public health measures (1). They have had to devise ways of conducting their operations virtually. Hinchliffe and Wolff (2) stated that libraries had to rely on real-time data and observe actions taken by other libraries to continue with operations. In the United States, institutions of higher learning moved to e-learning and virtual working environment (2). The two authors of this article (2) started a live survey where libraries and librarians suggested strategies that they were employing to ensure continuity of services. The survey is still ongoing and its main aim is to provide real data for libraries to learn from each other about effective continuity strategies. Since the Coronavirus is a virus that was previously not known, the public is constantly looking for information released by public health officials and researchers (3). Information is a direct input in the fight against the virus. Public health officials seek information to be able to set the measures to be followed in line with stopping the spread of infections. The uncertainty revolving around the pandemic has made the public seek more information about it to reduce anxiety levels. According to Wang and Lund (3), one successful way of handling pandemics is by availing

information to the public and using social media for advocacy and outreach. Moreover, the public adheres better to the measures when they have information on the pandemic and researchers are able to dig for more data. However, with technology and diverse communication channels, there is a thin line between sharing and access to valid and invalid information (4). Libraries are offering remote and virtual services that reach more people compared to when they are operating from a physical location. One of the advantages of relying on library information is that it has gone through different reviews before being released to the public, which makes it more reliable. Ultimately, due to the extent of this global pandemic, governments have called upon everyone to play a part in creating awareness about the pandemic. The aim of this research is to identify ways in which libraries have contributed to the global response and fight against the Coronavirus pandemic by meeting the information needs of various stakeholders.

Evolving Role of Libraries and Librarians

According to Nitecki and Davis (4), the role of libraries and librarians has evolved greatly in the 21st century. The study is relevant to this research because it addresses the new library roles in information provision, which are adopted in the global response against COVID-19. Traditionally, libraries were restricted to issuing books only and managing physical libraries where people would converge to access books and other information resources in print copies. Librarians' roles revolved around the selection and maintenance of physical information materials but their role has changed now and is not limited to physical materials but also involves digital databases and electronic materials. According to the study (4), one current role of librarians is to publish information in a way that is accessible and understandable for the public. Librarians are trained to accurately communicate information and in a clear manner to a diverse audience. Currently, many people are able to access the information online unlike in the past where there were physical and time constraints. Katooyon and Abrizah (5) agree with Nitecki and Davis (4), and state that librarians are the drivers of change in institutional repositories by availing the research output to the public domain. They conducted the study in a United States university and noted that librarians bring in information organisation and communication skills to strengthen the documentation and sharing of researchers' findings. According to the study, librarians also provided guidance to the institution faculty and students on

ways to document their reports and research papers. Ogungbeni et al. (6) state that libraries provide a platform for scientific collaborations by enhancing the exchange of resources by researchers to the public and among themselves. According to the study, collaborations have been enhanced by the availability of libraries that provide research resources and materials. Allen & Taylor (7) state that libraries are also at the forefront of offering e-learning courses. Mainly, this has been enhanced by the growth in information and communication technology systems. The study further demonstrates that libraries are vital in the acquisition of 21st-century skills since virtual libraries can be accessed anywhere, cultivating a reading culture. Ogungbeni et al. (6) made similar findings and highlighted that e-learning had increased the literacy levels of the current population. According to the study, the current society is more know-ledgeable and creative owing to the enhanced access to library materials. Allen & Taylor (7) agree with the findings and add that libraries have risen to the challenge of not solely providing printed materials, which had weakened their role in embracing technology, which is vital in providing both academic and general research material. According to their study, libraries also offer internet connection and physically distribute materials. Consequently, it is evident from the literature that the evolution of the roles has been made necessary and successful through the rise in technology.

Role of Libraries in Pandemics

According to Feather et al. (8), libraries provide information on the pandemic to raise public awareness. The study also states that the availability of relevant information during pandemics helps in reducing anxiety among the public, which is important in the prevention of new infections. Knowledge from various research materials is crucial in helping public health officials come up with prevention measures. Wang & Lund (3) conducted a similar study on the role of libraries in pandemics and found that libraries are fundamental sources of reliable information during the COVID-19 pandemic. In the study, the authors highlight that libraries are in a better position to gather, evaluate, publish, and share information with the public because of reliability, knowledge, and experience in conveying information without causing panic or anxiety. Majid and Rahmat (10) agree that when information is availed in a timely and accurate manner during pandemics, it helps in containing the spread. They conducted a study on the H1N1 pandemic in Singapore and found that the public was in need of valid

information on the outbreak and they searched for the information to take precaution and stay vigilant. However, a major challenge was that most of the participants could not understand some of the terms used during public communications making them search for more information on the Internet where Google trends came in handy. Wang & Lund (3) say that librarians are trained to teach the public on how to tell credible sources from non-credible ones and valid information from invalid data. Ma et al. (9) support the statements and add that due to the handling of information, which includes interactions with publishers for most of their career life, librarians are in a better position to advise on the credibility of sources. Feather et al. (8) equally emphasise the credibility of information dispersed to the public domain.

Majid and Rahmat (10) also highlight that libraries form a multi-stakeholder society since they are involved in all sectors and perform tasks to streamline processes in these sectors. Allen and Taylor (7) add that they work alongside different people to deliver services in the private and public sectors. Ma et al. (9) agreed with the findings and conducted a similar study by examining 268 articles on health information professionals' roles. The findings from the study show that libraries are collaborating with researchers and play the role of research assistants and outreach agents to communicate research findings to the public. Researchers are working to find a vaccine and treatment for COVID-19 and libraries are playing an important role in availing required information to facilitate the study and publishing the findings from the research availing it to the public. According to Latif et al. (11), databases are proving information on COVID-19 to create public awareness. The study adds that users are able to access library services, such as electronic books, to keep them busy during the pandemic period reducing their anxiety and psychological effects of the change in lifestyle. Allen and Taylor (7) similarly had found that libraries provide e-learning platforms. Due to the closure of schools, the library has been resourceful in allowing students to continue with their studies from home and learn new skills thereby combating boredom. Consequently, it is evident that libraries are very resourceful during pandemics.

Challenges and Opportunities for Libraries During the COVID-19 Pandemic

Public health measures taken to contain the spread of COVID-19 presented both challenges and opportunities to libraries. According to the International Federation of Libraries Associations and Institution (IFLA) (12), one of the main challenges faced was the decision to restrict services or close the libraries, which needed to be done while considering the risk involved in each of the moves. The libraries had to come up with effective communication strategies that would meet the needs of their users and also conveniently reach the general public. Libraries Connected (LC) (13) stated that the challenge revolving around the uncertainty of the duration of closure made it necessary for the libraries to come up with strategies to prevent discontinuity of their services. Another challenge that libraries are still facing since their closure is the lack of funds to make the transition (13). According to LC (13), some libraries have had to close completely because they only had physical systems in place and transitioning to the virtual system would require a lot of funds. The author categorises the funds into software purchases, technology devices to support the learning, personnel to run the devices and access to electronic books, and the rights to share them online. However, to address this, some publishers have been lenient on their copyright issues to enable libraries to get more e-books and share them (13). IFLA (12) agrees with this challenge and states that some of the libraries have received donations from the public to improve their technical capacity to start running virtually.

IFLA (12) adds that another challenge was the decision on what services to offer and how they were to offer them while adhering to the public health measures. Mainly, the challenge arose due to the unanticipated nature of pandemics since libraries had no time to get public opinion on it. However, the Association of Research Libraries (14) notes that libraries have been able to mitigate this challenge by networking and using social media to get public opinion. From the article, libraries post content on the current COVID-19 situation, the importance of the measures and guidelines given by the health sector, and symptoms of the infection. Libraries also face the challenge where most people do not have access to a stable internet connection, hence, they are still locked out of the online services offered by libraries (14-16). Governments are partnering with data service providers to offer data at subsidised rates and it has helped some people access the services.

ARL (14) notes that following the closure of schools, institution libraries had to also be closed. The measure presented an opportunity for online learning. Consequently, institution and research libraries are offering virtual support to school

faculties and students on e-learning guidance and selection of resources. IFLA (12) made a similar finding and observed that most institution libraries already had e-learning platforms that were not very popular. However, the institutions' transition to e-learning initially faced criticism from different stakeholders but has been accepted after the uncertainty of how long the situation would last.

The African Library and Information Associations and Institutions (AFIA) (15) has diversified opportunities by providing links to platforms that provide online services. According to the article, libraries are providing information on the use of virtual platforms for meetings, which has facilitated workplace operations following the work-from-home safety measures. AFIA also provides links to free content on COVID-19 and highlights that sharing is one way of solving the pandemic. According to AFIA (15), libraries should provide equal opportunities to all, hence the need to update people of arising issues, such as closure or availability of online services to the public. Libraries have also been presented with the opportunity to use virtual exhibitions and e-books promoting digital content and activating their websites to be able to offer the service (12). The Association of Research Libraries (ARL) (14) agrees that technological advancements have made the transition easier. ARL (14) notes that research libraries are partnering with researchers, governments, and public health institutions to ensure that the information they give is available to the public and they can access it for future reference. Another opportunity highlighted by ARL (14) is that libraries are able to increase their number of users by increasing popularity using social media where users share the information that has been posted.

To support the transition to the online environment, the Public Library Association (PLA) (17) held a webinar meeting where participants were taught how to use different software and technology to facilitate working from home. Library personnel have become more creative, innovative, and developed a collaborative spirit in sharing and implementing strategies, which has contributed to the success of the new systems. According to (18), Canadian libraries have found a good opportunity to train the public on the use of online library services. The article further says that the first step taken by the library was to increase public communication on the steps they were taking to be able to provide virtual services. The libraries have experienced an increase in usage after they started providing online services. According to (19), libraries

have also increased their presence on social media by means of outreach strategies on the pandemic and providing platforms to raise charity funds for the affected. An example is the Orange County Public Library which has been experiencing an increase in the number of orders for books by mail than prior to the pandemic. The Boston Public Library already had virtual systems in place but due to the current demand for services, they are working on adding the online inventory available to the public (20). Libraries are also providing psychological relief to those affected by enabling them to spend their time on the e-learning platforms or access their favourite pieces of literature (19). Some library websites are sharing job vacancies and offering entrepreneurial courses in relation to the people who have lost their jobs (20). Murphy (21) states that pandemics present opportunities for libraries to work together with publishers to ensure that resources are available to the public. The statement is supported by LC (13) where he identified that libraries are collaborating with publishers for the relaxation of copyright rules to enable them to have access to and share more electronic books. According to (22), libraries should be included in development frameworks because they provide information resources that constitute the guidelines. In getting a vaccine or treatment, (6) mentioned that they collaborate with researchers and deal with the publication and dissemination part of information.

RESEARCH METHODOLOGY

The research was conducted between February and May, 2020 using a qualitative content analysis of the information posted by different libraries after their closure about anything regarding COVID-19 and prevention measures taken. The methodology takes a qualitative approach because the data is not numerical and is in the form of texts (23). Qualitative analysis allows the researcher to arrange and identify themes, as well as group the responses or text according to the themes, and draw conclusions from the data. According to Erlingsson and Brysiewicz (24), content analysis is a research methodology that identifies trends and patterns from different communication in the form of texts or audio. The method is preferred in this study because the data is already readily available from the library websites and it does not require approval to access or use it (24). The method also allowed for a systematic way of analysing the data and assisted in making conclusions from the content (25). The data was collected from 20 public universities that are chosen using simple random sampling by

choosing from the list of public universities. Simple random sampling is cost-effective, reduces bias, and is not time-consuming (23).

Table1. *Public Universities in the Study (***Source***: by Author)*

Adair	Phoenix	Homewood	Burnham Memorial
Dallas	Memphis	Auburn	Crawford
Denver	San Francisco	Cannon falls	Gering
New York city	Indianapolis	Anoka County	Lawrence
Oak Land	Dallas	Brooks	Hastings

RESULTS AND DISCUSSION

The themes identified from the content analysis are information on the closure, provision of online materials, guidance on how to use virtual library platform, and information on how to use virtual meeting platforms, as well as statistics on COVID-19, measures of the public health officials, symptoms of COVID-19, and emergency contacts to reach the COVID-19 response teams.

Table2. *Themes identified from content analysis and percentage of websites where they are demonstrated, (***Source***: by Author)*

Information on closure	63%
COVID-19 statistics	15%
Symptoms of COVID-19	53%
Measures by Public Health Officials	58%
Emergency COVID-19 response team contacts	39%
Guidance on how to use virtual library	58%
How to use virtual meeting platforms	48%
Information of provision of online services	78%

From the results, most of the themes have been highlighted by over 50% of libraries. The least implemented themes are the availability of COVID-19 statistics and posting the emergency response contacts with the content being posted by less than half of the twenty public libraries. The highest number of libraries informed the public of the availability of online services and the closure of the library. The safety measures published by all the libraries are social distancing, washing hands to maintain hygiene, and wearing masks in public. Some of the libraries have gone the extra mile of using images to emphasise these safety measures. The information on the use of the virtual library helps the users access easily. The libraries that have information on virtual meeting platforms have given procedures for Google Meet and Zoom installation.

Judging from the results, it is apparent that the libraries have taken the initiative to contribute towards the global response to the coronavirus. According to the study, updated websites show

that libraries are using the online platform for communications more than before. The finding is supported by similar findings from literature by Nitecki and Davis (4) and Katooyon and Abrizah (5). Communication using the website platform also shows that a high percentage of people in the 21st century are tech-savvy and would take the initiative of checking the website often. The libraries have provided information about the COVID-19 pandemic, which includes the statistics, symptoms, prevention measures, and emergency response contacts. With the help of such information, the library is able to connect with the public since the pandemic is a global issue and everyone is talking about it. Ongungbeni et al. (6) had highlighted that this move helps libraries stay relevant during this time and create awareness on the issue. Awareness is also created when visualisations are used to emphasise the importance of washing hands, wearing masks, and social distancing. Since libraries pass information to reduce panic and anxiety as mentioned by Wang and Lund (3), publishing of the COVID-19 statistics alarms the public. Information on statistics is better communicated by the Centre for Disease Control or Health Ministries. The libraries that are partially open have highlighted the measures they are taking to ensure the safety of users and their staff. Some of the libraries have also posted tutorials on virtual library access to ensure everyone has an equal chance of accessing materials. The finding signifies AFIA's (15) statement on libraries upholding the equality virtue. Posting the tutorials is also part of giving guidance and is one of the areas that librarians are trained in as highlighted by (15). There is also evidence that the institutions have taken the initiative to take up online services. ARL (14) had stated that libraries have become more innovative and this is an example of them starting to change. In addition, it is clear that libraries are multi-stakeholders as illustrated by Allen and Taylor (7) because they follow government directives and have the interest of the people in mind when publishing information on their websites. The training of the public on virtual meeting platforms is of benefit since most companies have asked their employees to work from home. The move also illustrates the diversity in services offered by libraries and their flexibility during the pandemic, which highlights their societal approach to addressing issues as mentioned by Latif et al. (11). In comparison to the response during the HINI pandemic, there is a great difference due to technological advances and more developed cohesiveness among systems and people, which were not very defined in the study

by Majid and Rahmat (10). The findings show that libraries have made significant contributions in creating awareness, finding alternative ways of continuing with activities by means of online services, guiding the public on virtual platforms, and publishing research content in the global response against the Coronavirus pandemic.

CONCLUSION

Overall, libraries have proved to be at the forefront in the global response against the COVID-19 pandemic and other previous pandemics. In every crisis or pandemic, there is a need for information resources regarding new developments, communication from health officials and researchers, and policies by governments. However, the contribution of libraries in the wake of COVID-19 goes beyond the provision of information related to the pandemic. They have created public awareness and have raised literacy levels among the public concerning the pandemics and also have given detailed information on the prevention measures to be taken. Furthermore, library skills in gathering, evaluating, and disseminating information have provided data that is reliable making the public less anxious and more alert and aware of the current situation. Libraries should put in place strategies to manage operations during pandemics due to their unanticipated nature. ICT has also contributed to streamlining the provision of services and communication channels making e-books and other content easily available. People should also be innovative and share ideas on how remote library services can be enhanced for efficient and effective service delivery as advised by the Public Library Association. Librarians have become guides when they offer training on the use of online platforms. Libraries have also become more innovative and flexible increasing use by more people who were previously not able to access the services due to constraints of time and space. The libraries are guiding people on the use of technology, which is associated with the skill set required in the 21st century. Furthermore, they have maintained social isolation and managed to make information accessible. Libraries have proved to promote equality by sharing the information on the public domain. Self-development is encouraged by different tutorials on the use of virtual platforms. The role played by libraries is not only limited to the public at risk of infection but is also accessible to people in quarantine facilities as they keep themselves engaged and up-to-date with resources on COVID-19. Moreover, even with the closure of libraries, librarians have updated online resources, virtual programming, and online renewal services to serve the public. People are also aware of the symptoms to look out for from the content on some library websites and the contact lines to report any cases making prevention a success. Libraries have found innovative ways to remain relevant and participate in the global response against COVID-19, observe the preventive measures, and accomplish more by encouraging self-development amidst the pandemic. In summary, it is possible to note that libraries have made a positive contribution in the fight against the pandemic. It is important that libraries have in their strategic plans robust and structured interventions for pandemic crises, taking into account that information resources are vital at these times.

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